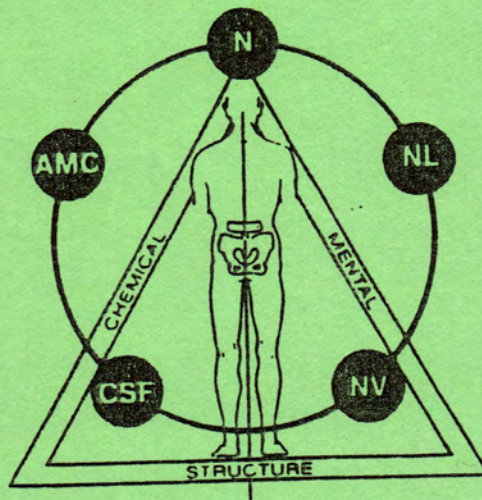


GEORGE J. GOODHEART, JR., D.C.

APPLIED KINESIOLOGY

RESEARCH TAPES
NUMBERS 1 - 120

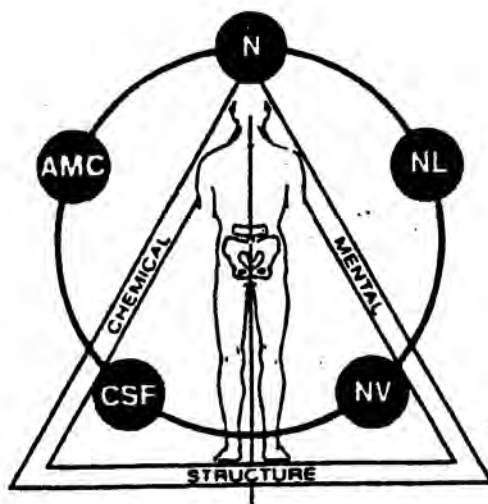


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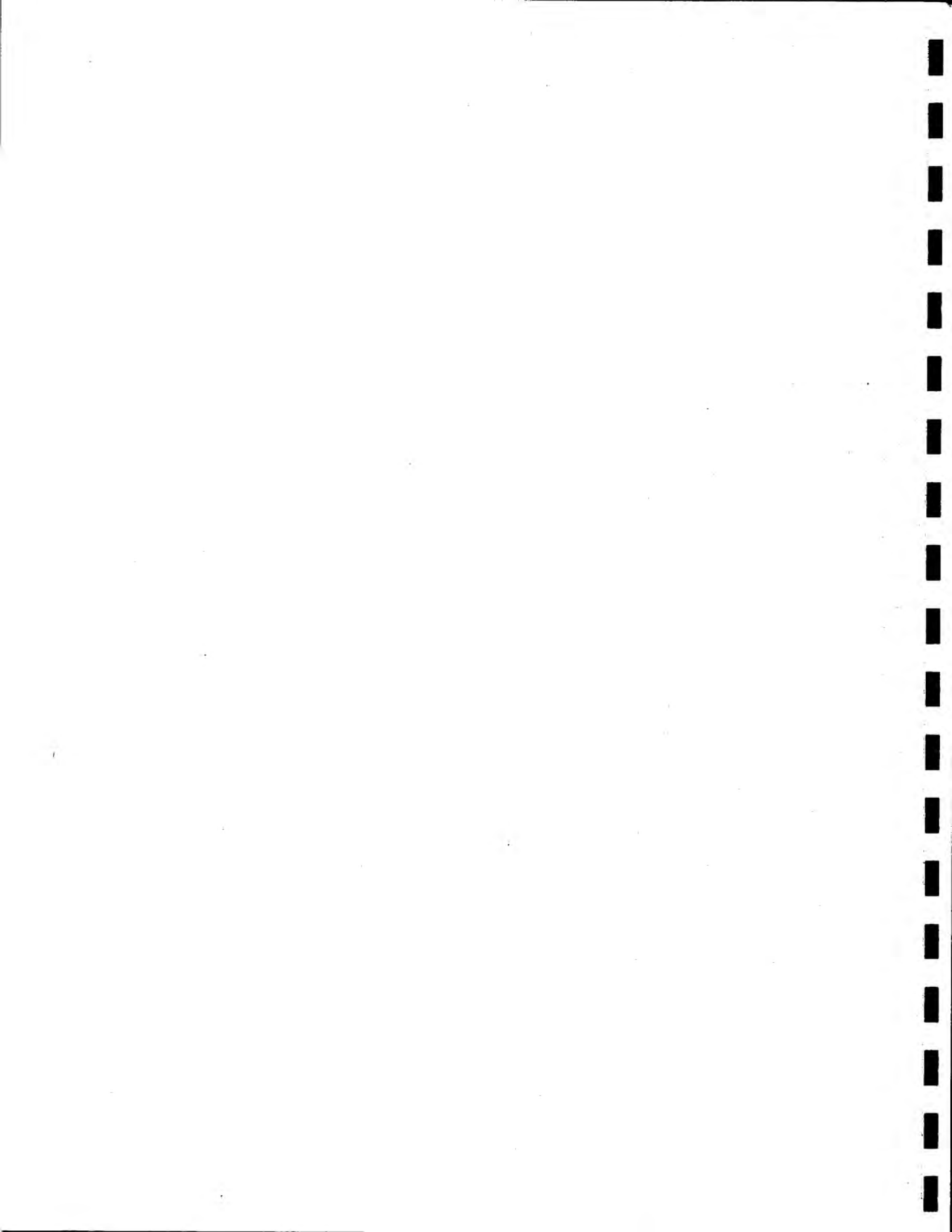
GEORGE J. GOODHEART, JR., D.C.

APPLIED KINESIOLOGY

**RESEARCH TAPES
NUMBERS 1 - 120**



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DR. GOODHEART'S RESEARCH TAPES

TAPE #1

Upper Cervical Faults

- We have found an upper cervical fault that ~~eludes~~ normal diagnostic criteria but is found with muscle testing.
- We analyze the posture, T.S. line, checking for cranial faults, etc.
- We then add one more factor assuming an upper cervical fault.
 - As Truscot has stated, "With the number of years H.I.O. has been taught, it should be proven superior . . . this is not the case.
 - He evolved a system with the upper cervical complex.
- With cranial corrections we aggravate the condition to get correction.
- I hypothesized in the case of the atlas if the obliques (superior and inferior) were tight on the left shoving the atlas right lateral if one were to contact the left side of the atlas here shoving it further away we might reawaken the involved muscles causing a temporary response. This is the key to our new technique.
- The pt is lying supine - after posture and other indicators have been checked.
- Now test a T.S. line indicator muscle. Then contact the side of the atlas 1st from one side - check a muscle - then from the other side - check a muscle - observing for a strengthening of the weak muscle. Now challenge from A. to P. and vice versa and observe for a muscle change check for inferiority and superiority. Look for challenges that cause the muscle to strengthen.
- This technique works for all segments in the body.
- You adjust in the direction which caused the muscle to strengthen.
- You are activating that aspect of the body which is trying to heal itself.
- One check for atlas anteriority or posteriority is for the patient to activate his extensor muscles extending their head back. The patient now rotates the head to the left or right. They will be able to rotate further on the side that is anterior and not as far on the side that is posterior.
- This test can be used to corroborate what you found with your challenge.
- As we go down along the spine we find less involvement with cervical position influencing muscle weakness. This continues until about the first lumbar where once again in the lumbar segments there is an increased involvement in mechanical involvement in influencing muscle weakness.
- We must recognize when we challenge the spine and cranium it always presses back opposite our challenge.
- Be sure to take out the rotation before adjusting the laterality.
- Balancing the neck muscles is paramount to a good response.
- We find cranial and sacral involvement in many upper cervical faults.

Blocked Eustacian tubes

Anecdotal - One of my patients after a ride in a jet showed some hearing loss. As the patient opens his jaw - half sitting up - we press the jaw firmly to one side in its most open position. This usually works well in small children with ear problems but did nothing to him. We found a double weak upper trapezius that responded to cranial technique. We applied this upper cervical challenge and N.L. drainage bringing his hearing back to normal.

Vitamin E

- Many sources of E are such poor sources and may actually contain much less than stated on the label.
- There is:
 - d-alpha-tocopheral - natural from vegetable oil
 - d-alpha-tocopheral - processed from vegetable oils
 - d-L-alpha-tocopheral - synthetic
 - d-L-alpha-tocopheral acetate - produced synthetically
- d-L-alpha tocopheral acetate - this is the standard reference substance.
- We have found in menopausal instances and when prothrombins are over 16 - the chromatin factor in standard processes E₂ is effective. Plain E works well in muscular disturbances.
- The body is intricately simple and simply intricate.
- E is probably the most intricate of the vitamin complexes.
- Wheat germ oil is the most well-rounded source of E.
- Vitamins A and E both help prevent degenerative changes and the formation of cromatin.
- It's stated by Rosenberg that the primary physiological action of E is in directing the activities of the cell nucleus.
- E₂ is good for vascular spasm and cromatin deficiency problems that occur basically with the skin.
- People who work with solvents or dentists - with their skin problems E₂ or wheat germ oil works well.
- Many causes of breast soreness is bowel involvement. Work the T.F.L. N.L.

Reading Referral - Southern Medical Journal 19460 - 1926, Rosenberg.

DR. GOODHEART'S RESEARCH TAPES

TAPE #2

The Ileocecal Valve

- or sphincter is between the small and large intestine.
- there are two forms
 - Labial - where the two opposing lips form a valve
 - Sphincter - which is under neuro and hormonal control. This is the emerging feeling of what the valve is.
- the fibers are similar to the colon - both the circular and longitudinal muscles allow function. The circular muscles are much stronger and have been hypothesized to close the sphincter.
- the longitudinal muscles are said to open the area.
- It acts like a turnstile to allow movement in one direction.
- The small intestine is one way in nature, whereas the colon reciprocates to help solidify the intestinal contents for fecal elimination.
- Any interference with the five factors of the I.V.F. may cause a retrograde opening at this area. This can be noted on x-ray.
- With valve involvement pain may come upon a patient quickly. It can mimic many things - or the patient will complain of nausea - lack of appetite - is thirsty - looks ill - ringing in the ears - sudden headache, etc.
- On rectal examination of patients with sciatic neuritis regardless of body side - we always found inflammation of the neurolymphatics in the right S.I. joint post cecally. I then also found this inflammation to be present in patients with chronic headache, sinus involvement or a meniere's type syndrome.
- Bowel movements can present a variety of complaints.
- Constipation usually is not a presenting feature.
- People will note the stool to be thin or in small pieces.
- With constipation fix what you find wrong usually - a T.F.L., pect. sternal, bulk substance, enemas taken slowly.
- We have found to diagnose the problem have the area of the right lower quadrant challenged: either push down and towards the right leg with a scooping action - weakness indicates an open I.C.V. - or up and to the left shoulder with a scooping action, indicates a closed I.C.V.
- With the patient in the prone position with the knee flexed testing the iliacus pushing the ankle from lateral to medial with an I.C.V. There will be a marked weakness. It seems to be weak only in this position.
- These patients all seem to have a response to half a breath held out. The sacrum may not be moving properly with respiration on the side of weakness. We work with the side of involvement of the weak iliacus pushing the sacrum lower 1/3 anterior with inspiration and backward with expiration.

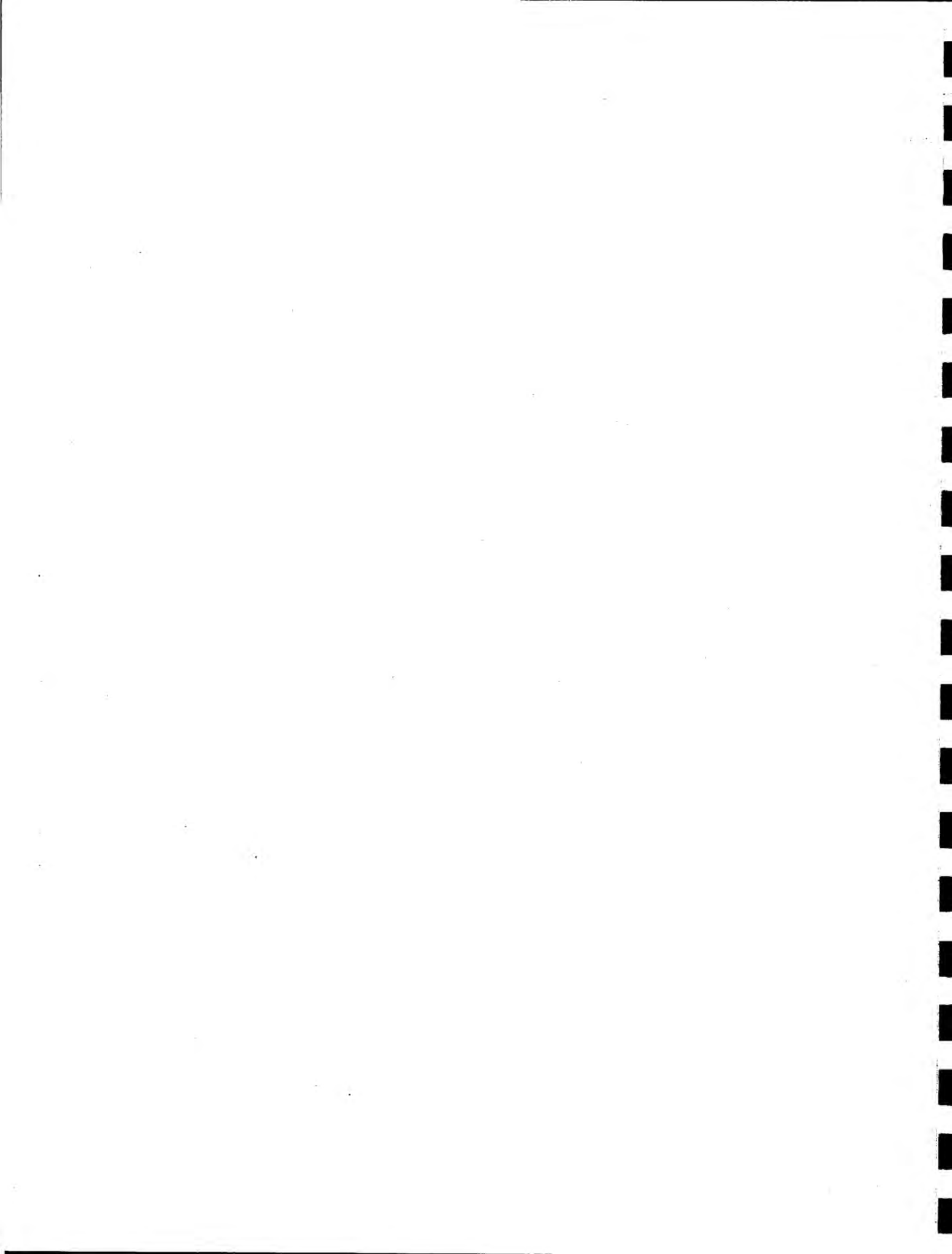
- We then do the N.L. reflex on the side of weakness of the flexed knee test just below the A.S.I.S along the antero medial aspect of the humerus and along the lamina of the 3rd cervical.
- You can apply the upper cervical challenge to see if it affects the flexed knee test.
- Look for a rotational fault of the first or second lumbar challenging this area like the cervicals.
- If lumbar 1 is posterior on the lt. Cervical 5 is usually posterior on the right, as Dejarnette has found. 4 with 2 etc.
- Take the patient off all raw fruits and vegetables.
- Chlorophyll complex, fat soluble, is the nutrition 2 x day to heal the mucus membrane.
- Fix an open valve by pushing on the valve area posterior and lifting up and to the left shoulder usually will bring relief to the patient.
- A cool slow enema after a bowel movement may help to tone the valve.
- Sometimes the patient may need vitamin B to bring up the sphincter tone.
- When there is chronic involvement of the I.C.V. and you are not missing an upper cervical or lumbar subluxation or fixation - sometimes these patients need change in their colonic flora.
- We measure stool pH which should be neutral if it's quite acid or alkaline we use Zymex or lactic acid yeast to chance the flora.
- The parietal descent seems to be involved with the half expiration associated with the weak iliacus test. One will note weakness of the anterior scalenes on the side of the parietal descent.
- Reread the article on the I.C.V. on page 75 of the reprints.
- Salivary pH runs about 7.8 and the valve works but with the pH at this level. Increasing natural fats and oils along with B helps this function but don't give it when the liver is sluggish. That's when the Zymex seems to work best.
- When the stool is too acid - below 6.8 - the valve is open. When it's too alkaline - over 7 - it becomes spastic.
- Look also for abdominal muscle weakness and group fixations of the lower cervical upper thoracics which can affect abdominal muscle tone.
- Recently I took a course in acupuncture sponsored by the M.S.C.A. consisting of a multidisciplinary group attending.
- Once you have identified the involved meridian via A.K. and once you have treated it by holding the first four points, two at a time, it is wise then to follow the entire meridian taking pain in a point away by manipulating the inferior point. Do this for the full meridian for any sore point on that meridian.
- If you do use needles, put it into the first point.
- A patient of mine with an I.C.V. and migraine headaches. We've reduced the frequency via the acupuncture points. Manipulating K₇ removed the pain behind her eye and cheek bone. The upper trap was the main muscle weakness in her case.
- With I.C.V. problems you'll find large intestine or kidney meridial involvement.
- The half breath out strengthening of the involved iliacus does not correlate with a parietal descent or weak scalenes. This weakness does respond to sacral respiratory technique on the side of the weak iliacus. We use a basic technique contact, moving it forward with inspiration and backward with expiration doing the opposite with the

pelvis, pushing the ischial tuberosity towards the sacrum and as we push the sacrum backwards we push the tuberosity towards the symphysis pubis.

- The new workshop manual has a lot on the I.C.V.

Reading referral: Man in the Trap - Ellsworth Baker - proposes muscular system is the holding point of much mental illness.

- Orson Bean - Me and the Organ discusses similar therapy.



DR. GOODHEART'S RESEARCH TAPES

TAPE #3

Fixations

- Occipital fixation complex is indicated by a bilaterally weak psoas
- Upper cervical fixation - Bilateral weakness of gluteus max.
- Lower cervical fixation - bilateral popliteus weakness.
- Cervical dorsal fixation - bilateral deltoid weakness.
- Dorsal fixation - bilateral teres major weakness.
- Dorsal lumbar fixations - bilateral lower trapezius weakness.
- Lumbar fixations - weakness of cervical extensors tested together.
- Iliac fixation - weakness of neck extensors tested individually.
- Sacral fixation - weakness of neck extensors bilaterally tested individually.

Occipital fixation.

- Found by bilateral weakness of the psoas
- The psoas is tested in the supine position with the leg lateral and elevated. Pressure is exerted downward by the Dr.
- Raising the leg another 30° brings in the iliacus, check for both weaknesses.
- The psoas attaches on four of five lumbar whereas the iliacus inserts on the internal aspect of the ilium.
- Sometimes a bilateral weakness if just that and not a fixation.
- Survey which portion of the occiput is high.
- Treat by first balancing the neck muscles, then adjust the occiput, challenge and adjust the cervicals.
- You must adjust the occiput on the atlas. Contact the high occiput side on the sorest point on the base of the occiput on that side. Usually S, o.t. occiput 4 or 3.
- Take a metacarpal contact at this point on the occiput side supine with no patient head rotation. Take up any slack and adjust to the low occiput side base of the nose. You traction with a chin contact of your indifferent hand.
- Retest the ilio psoas noting strength.
- We challenge for this by stabilizing the cervical spine with a fist contact, then challenge the occiput checking both sides.
- Always adjust the occiput from the high side to the low side. I would not adjust this by having the patient turn the head to the low side and adjusting the low side toward the vertex. This jams the mastoid giving a temporal jam into the parietal bone.
- If you encounter persistent upper cervical problems which do not hold correction check for possible dental pathology.
- Homuncular studies indicate the oral cavity require an enormous number of nerve cells.
- Sometimes with root canal work - crown or abscesses, persistent cervical problems show.
- These are the exception rather than the rule.

- Sometimes this tooth with the root canal or gold crown must be removed because of a toxic reaction.
- Respiratory assist. Not every muscle will respond to inspiration or exapration assist due to a lymphatic drainage problem, n.v., or other five factor problem.
- Out of the I.V.F. comes a nerve, blood vessel, lymphatic vessel, spinal fluid and acupunture meridian connector. All have a role to play. Some may be more involved than others.
- We must ask the body correct questions, it will never speak falsely.
- When my son was young, for dinner I'd ask if he'd washed his hands. He'd say yes, I'd say today. He'd say no. When he was older I'd ask, did you wash your hands today, he'd say yes; I'd say both, he'd say no.
- We must ask the body the proper questions to get the proper response.

Reading Referral: Dr. Frank P. Jones, Tufts University. Student Med. Copenhagen, Vol. 35, #2, April 1971. Experimental Study of Alexander technique. He says many people would rather suffer than recover by an unorthodox way.

The Alexander technique:

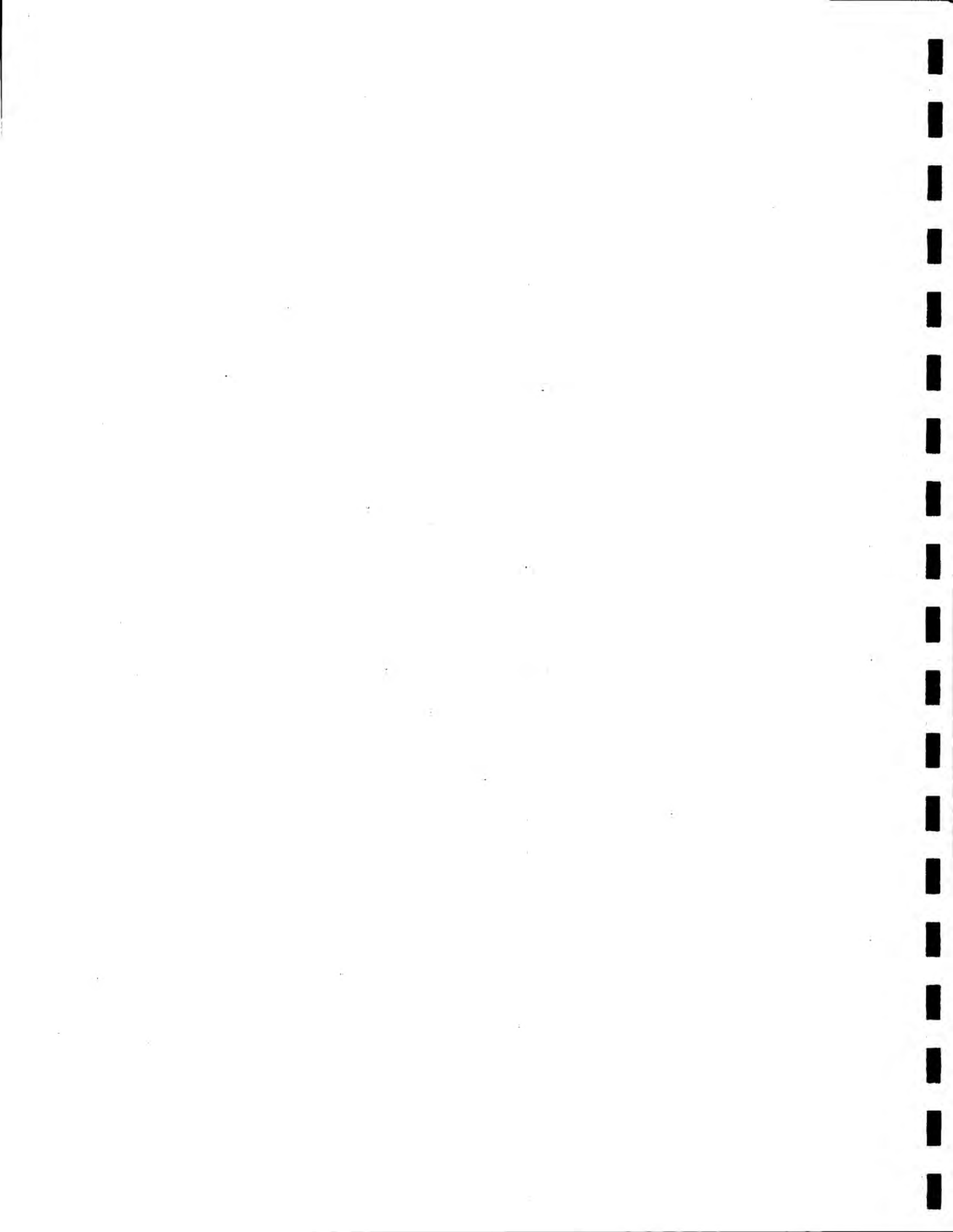
- Alexander was a man who could get no help from the medical profession and solved it himself.
- He was a voice teacher who had lost the ability to speak.
- Noting himself in mirros he noted postural changes that occurred with the loss of his voice. He would depress his larynx, lift his chest and retroflex his head. He attempted to prevent these activities. When he could inhibit this primary change he regained the rest of his voice and improved his general health.
- The article is a good one to read.
- They monitored eye level.
- Also re-read the article we printed on posture.
- They monitored a triangle from markers on the sternal notch, seventh cervical and a mark midway between the ear and the lowest point of the orbit.
- They noted many changes in this triangle with proper head posture.

Reading Referral: Howard & Templeton - Human Spatial Orientation, Published by John Wiley in London 1968, pp. 183-84.

- International journal of neurology, 1963, Vol. 4, head balance in sitting posture.
- Journal of psychology, 1961, #52, pp. 363-67.
- American Journal of Physical Medicine.
- Dr. Jones has articles in all of these
- Man's proper head position should be taught to him.
- The data collected according to Dr. Jones supports the following hypothesis: The organisms response to gravity is a feedback mechanism involving other reflex system. It is partially inhibited by learned responses which disturbs the tonic relation between head, neck and trunk. These learned inhibition can be inhibited.
- For information: The American Center for Alexander technique, 227 Central Park West, N.Y., N.Y. 10024 - (212) 799-0468 or, 931 Elizabeth St., San Francisco, CA 94114, (415) 282-8967 or, 853C 17th St., Santa Monica, CA 90403.
- To demonstrate a need for this we'll put a string horizontally across the tip of their nose and ask the patient to open their mouth. They

usually open their head and the string falls below their nose. It should not move.

- Alexander technique should be taught after muscle balancing has occurred.
 - We palpate the pect. muscles, gluteus and sacrospinalis muscles while the patient is standing, pain is noted in these areas with improper posture. We then have the patient put their hips over their heels - spread his chest wide with breathing, letting their shoulders down and getting the head up and forward. The above areas are no longer tender to palpation.
 - People don't exercise to get round shoulders or sway back.
 - The technique must become a part of the patient's life movements. The body has perfect neurological recall, we have to utilize the material that is there.
 - We observe the lateral plumbline - most of the time the external auditory meatus is 1 to 2 inches in front - we then balance the muscular structure as needed, upon observing the lateral plumb again there usually is a good response. If the head is still too far in front there is an occulo muscular reflex due to the old body position.
 - We fix this ocular fixation having the patient close their eyes, take a couple of deep breaths and put the patient's body where it should be. When the patient opens their eyes they'll now stand correctly.
 - Teach the patient. You should not be responsible for errors on the patient side.
 - Dr. Goodheart reads a few quotes on Alexander technique.
 - Many people do posturally absurd things due to habit.
- Reading Referral: Edward Meisel, Resurrection of the Body.
- Discusses Alexander technique and an alarm reaction.
 - Felix Manns' book on Acupuncture. Also Acupuncture by Mark Duke, published Pyramid House, N.Y.
 - Acupuncture does not require the use of needles; it requires contacts on the first four points.
 - The energies to get well must come from the individual himself. The patient's control of this determines the efficacy of the effort.



DR. GOODHEART'S RESEARCH TAPES

Tape #4

Cranial Faults

- We now know we can challenge out cranial faults like the upper cervical area.
- The primary sign of internal and external frontals is weakness of the anterior neck flexors.
- We've seen patients with signs of frontal involvement with anterior neck flexor weakness.
- In the instance of an internal frontal-wide orbit narrow nares side, challenge by putting pressure on the malar bone pushing medially toward the nose. Look for a muscle weakness of the neck flexors.
- To fix it go to the side of the wide nares and put distal pressure on the alveolar process using a rollout movement at the area of the molar teeth. Second, pull the pterygoid process downward on the same side and pressing the opposite pterygoid upward.
- Recheck neck flexors with and without challenge.
- The same shows with external frontals - with a change in the orbit but none in the nares. The narrow orbit side has a cheek bone pain on that side and the wide orbit has a painful eyeball.
- Challenge on the narrow orbit side and grasp the central incisor pulling downward. In the case of dentures, grab the gum testing the neck flexors for weakness.
- Correct with pressure just lateral to the cruxiate suture of the hard palate on the narrow orbit side pushing upward with different angles until you relieve the eyeball pressure.
- Works well with whiplash and cranial nerve involvement.

Idiopathic Scoliosis

- Primarily girls between 12 and 14 which don't respond to the usual measures.
- Look to the level of the iliac crest or 5th lumbar or one showing the most inferiority. Have the patient stand monitoring height or whatever factor your monitoring. There may be an adductor problem producing pelvic tilt, sacraspinalis, psoas and gluteus medius are usually involved.
- Regardless of muscle involvement, if you get a failure to hold following muscle balancing you can assume the muscle opposite the weak one has shortened and it needs to be worked on.
- Upon the patient standing muscle weakness may show due to the pelvis failing to stabilize. On the tight sacraspinalis side, low pelvic tilt side we attempt to level the pelvis with a lift. When you hit on the right lift size the muscles will strengthen.
- Look to this lift technique in your difficult low back or scoliotic patients.
- The lift is a static thing with no therapeutic value, you must still balance out the pelvic area.

- It helps maintain the patient between visits.
- Remember the long time weak muscle can set up a hypertonic muscle that needs to be lengthened.
- If the patient must sit a lot we recommend an ischial lift also for 2 - 3 hours per day.
- With this technique there is no question about the right amount of lift.

The Challenge Technique

- Use a T.S. line indicator, challenge for a direction of weakness. The opposite direction will strengthen it. Always adjust in the direction that weakens it.
- Anecdotal - a severe diarrhea problem that the atlas was left lateral and the axis was right lateral.
- The body pushes the segment in question back in the opposite direction of your challenge.
- You can use an intact muscle or an already weakened muscle.

Sole Lifts

- We haven't much experience using them versus heel lifts. This is used with sagittal fact syndrom.
- Our experience has been with heel lifts.

Hemoglobin Values

- Any time it gets above 15.6 we feel there's an iron problem, too much is in the blood and not enough in the tissues.
- We've observed anemia problems indicated by a bilateral T.F.L. weakness.
- In those cases of bilateral T.F.L. weakness not responding to our technique. Look for a lack of iron in the tissue. These patients act neuresthenic yet the indicators are there. Iron taken with high hemoglobin seems to push the iron into the tissues from the blood. Many nervous symptoms disappear and the patients get much more strength.
- Many of these patients will show a vague irritability and heart and respiratory rate, digestive and bowel changes which disappear with iron. Polycythemia vera seems to respond to this.
- We recommend enemas following a bowel movement to relieve the body of any toxicity, also giving Zymex or lactic acid yeast as needed to change the bacterial flora.

Iron and Iodine

- They seem to have an opposite effect.
- With T. Minor weakness look for iodine.
- Iodine will abolish the strength that iron gives to the bilateral T.F.L. weakness patient. It is contra-indicated in these patients.
- Some patients may need both iron and iodine in the presence of anemia.
- Iron has a tendency of squeezing things together and iodine makes things more fluid. Iron dries things out.
- Excess iodine is shown by excess mucus production.
- Patients with recurrent upper cervical faults will benefit from iron, also reoccurring S.I. subluxations.

DR. GOODHEART'S RESEARCH TAPES

TAPE #5

Challenge Technique (continued)

- The clavicle, the k_{27} point is an alternator point.
- We're aware of the spinal crossover rate of 85 and 15 allowing feedback and cross referencing of most neurological circuits.
- Check K_{27} in any neurological patient.
- Truscott and his associates have done much toward the upper cervical challenge technique.
- We have found on the side of laterality that frequently there is a clavicular fault that needs to also be balanced.
- Simply challenge the clavicle for direction.
- We usually find the proximal end needing to be adjusted downward on the side of laterality and adjusted superior on the opposite side.
- With the clavicle you adjust in the direction of strength. There is no rebound phenomena here.
- In the cases of rotation the clavicle goes anterior at one end and posterior on the other.
- This is quite important for upper cervical stability - both clavicle position and K_{27} balance. It's responsible for balancing and indexing downward flowing impulses and upward flowing impulses.
- We want to make sure this alternator circuit is in good balance.
- There is no cranial dominance influencing the lower part of the body.
- Balance the patient on what you have found posturally, T.S. line wise, and orthopedic patterns. If there is a failure of correlation. Check for that chronic hypertonic muscle that isn't releasing when you fix the weak muscle. Challenge the relative hip level with a lift on the low side and check a T.S. line indicator muscle. If there is a need for the lift it will respond dramatically. Sometimes a patient will also need a sole lift.

Anecdotal - patient with gout-like symptoms in hand that wasn't responding fast enough to our treatment. He showed a relative tachycardia with diminished second heart sound. The loss of the second sound indicates a lack of diffusible calcium. Using F made a dramatic difference in both the second sound and tachycardia within 20 minutes. I splinted the wrist on a temporary basis, gave a good response.

- Nutritional faults will show in the heart long before any other area.
- A loss second sound indicates a loss of diffusible calcium I've found super EFF responds faster than regular F. In arthritic patients we also supply acid calcium till the patient begins to yawn.
- An increased second sound indicates perihperal resistance, it's the reverse flow after the push that closes the valves.
- Look for increased cholesteral levels, increased peripheral resistance indicating general lack of calcium, portal hypertension, liver blockage.

Anecdotal - Patient with right pectoral sternal weakness associated with a

right inspiration fault. We found evidence for a lift in the left heel. He was wearing a lift. Since the sternal was weak we thought he'd be a candidate for Vitamin F. He also had a weak subscapularis with loss of the second sound. Cyruta fixed the subscapularis but didn't affect the pectoral sternal adding F did get a good response.

- The heel lift is to be used only on the low side after you have balanced the patient out.

Occipital Fixation

- Indicated by a double psoas weakness.
- When challenging the occiput stabilize the cervical spine with your fist.
- Look for when the patient has a psoas pattern, pain when getting up from a chair, feeling bent forward. This occiput fix is many times a key to many low back problems that are an enigma.
- Adjust the occiput in the direction that causes weakness keeping the head straight up using the most painful area along the suboccipital muscle area as our contact adjusting straight to the base of the nose.
- You'll find yourself generally adjusting from high side to low side.
- This challenge technique is intriguing. It is extremely productive in any part of the body including heel lifts.

DR. GOODHEART'S RESEARCH TAPES

TAPE #6

Acupuncture Therapy

- We have found we can turn specific meridians on by working the first four points on the chart in the 1971 manual.
- Using the second four points to the right on the chart we can turn the appropriate muscle or meridian off.
- Check the meridian that runs near where the patient has pain.
- Medial knee pain that doesn't respond to a medial torsion traction pull. Look to the kidney or liver meridian.
- Trace the meridian from beginning to end holding the lowest point of pain and working to the point above it till the point below becomes less painful moving upward.

Reading Referral: Atlas of Acupuncture, Felix Mann; William Heineman books. Available through T.A.O. Publishing Co., 303 B. Newberry St., Boston, MA.

- We treat in the same fashion as found before, using the meridian associated with the muscles we find weak.
- Finger pressure at the points on the 1971 chart is enough to turn on or off the meridian.
- i.e. for bladder, B54 S36 B66 and L1. Holding two points at a time.
- In the absence of painful spots on the meridian by running a hand contact along the meridian from beginning to end we could turn a muscle or meridian on. The opposite is true.
- The alarm points for specific meridians are organized in the 1971 manual.
- Superficial tenderness of the acupuncture point indicated the muscle is weak where a deep tenderness indicates the muscle is contracted.
- We've found thermal areas that are associated with different meridians.
 - medial knee - liver
 - lateral knee - stomach (S 34-36)
 - patellar aspect - spleen (Sp 9)
 - Lateral lower limb - gall bladder (G 33-39)
 - Medial asp. of achilles tendon - kidney (K7)
- Midway between the proximal and distal ends of radial ulnar space palmar surface - pericardium (circulation Sex) (H7)
- Olecrenon process on posterior forearm - triple warmer
- Base of metacarpals to tip of little finger - small intestine
- Large intestine 11 - large intestine
- Cold indicates weakness - warmth indicates increased tone, this should correlate with a pulse and alarm point.

Patients who respond to the weather.

- Dr. George Watson - written a book, Nutrition in Your Mind, U.S.C., Harper & Rowe Publishers:
- He's observed people can be divided in normal, fast and slow oxidizers. This is rate of cellular oxidation as opposed to general oxi-

- ation. It has nothing to do with thyroid function.
- We measure the oxyhemoglobin reduction time - the speed of this approximately 25 seconds has been correlated to certain functions. As there is a shift to carbon dioxide the spectrum shifts in the instrument.
 - He has observed patients with normal to low glucose but elevated CO₂ are fast oxidizers.
 - Slight glucose elevation with decreased CO₂ levels are slow oxidizers. They need a nutritional approach of low purine diet with high B, C, D and some minerals.
 - He's worked out a questionnaire that fits people into these categories.
 - Fast oxidizers respond to hypoglycemic routine and A.K. techniques. The slow oxidizer does not respond as well.
 - These slow oxidizers get up to 30 catalyn per day giving a better response.
 - Fast oxidizers need more fat than protein when a cold front is approaching. Slow oxidizers need more carbohydrates and less fat and protein.
 - Make sure the patient's water intake is adequate - not fluids - water.
 - When the patient is a slow oxidizer when they ingest catalyn their muscles will strengthen.

Abdominal Muscles:

- We've found challenging the 2nd, 3rd or 4th dorsals will produce weakness that may be hidden. Look to Vitamin E and tight pectineus if hernia symptoms are also present.
- This should also be looked to with lower back problems.

Teres Major

- When we get strength for a dorsal fix challenge it may be involved with a 5th lumbar fix that shows when it is challenged.
- A lumbar roll adjustment of the fifth lumbar does not respond well. Do a P. to A. adjustment with the thoracic section dropped.
- Shoulder outlet and cervical syndrome show this fifth lumbar fix.
- Look for in chronic clonic tonic intermittent torticollis patients.

DR. GOODHEART'S RESEARCH TAPES

TAPE #7

Acupuncture

- Following a meridian from beginning to end turns on a meridian and the muscle associated with it, i.e., k_1 to k_{27} turns psoas on.
- Following a meridian from the end to the beginning turns a muscle off unless this meridian already has too much energy.
- The Conception vessel is an exception, it strengthens going from the end to the beginning and weakens going from the beginning to the end. Any muscle that is associated with a cranial fault will be affected.
- The Conception vessel locks in cranial fault and upper cervical adjustments.
- The governing vessel turns on and off muscles associated with a sacral fault, it follows the pattern of off and on as a normal meridian, basically the hamstrings affected by a sacral fault.
- The governing vessel does not seem to lock the pelvis as a unit. It seems to lock only the sacrum.
- After you have fixed a cranial or sacral fault run the associated meridian for strength to lock in the adjustment.
- Temperature variances and acupuncture.
- I always wondered why bilaterally two muscles were hypertonic. After you've fixed the five factors of the I.V.F. you would cross crawl a patient or homolateral crawl if they're schizophrenic.
- We now go to the hypertonic muscle and treat the 2nd four points on the 1971 chart to weaken it; i.e., K_1 , Liv_1 , K_5 , and Sp_3 to turn off a hypertonic psoas in addition to running the meridian in reverse.
- Most muscles are hypertonic because its antagonist is weak.
- In acupuncture circuits there can be too much energy going to a muscle.
- For the kidney meridian, if there is warmth around k_7 this indicates overactivity of the meridian. Underactivity is noted by cold.
- Madam Hashimoto talks of this; the bladder area is around bladder S9 and 60; colon point Li_{11} area. Lung is around lung₆; stomach is around S34-36, spleen and pancreas is noted at Sp_6 . Heart is located between H_1 and H_9 on the forearm. Never reduce the energy of the heart, you're better off working with the small intestine which is on the other end of the teeter totter. Small intestine is between Si 3,4. The triple warmer temperature area is on triple warmer 4, gallbladder is between GB 33-39, liver is at liver 8.
- If you have a medial meniscus irritation that doesn't respond to a traction maneuver, look to the meridians on the medial aspect of the knee. Treat it through hot and cold or beginning to end tracing.
- Remember if the area is cold the meridian is under and an associated muscle will be weak. We treat it with the first four points on the 1971 chart.

- If the area is hot it is an over-active meridian, the muscle is strong and we treat it by the second four points on the 1971 chart.
- When you find a cold lung meridian many times the patient has symptoms of a cold. When it was warm they'd say they're chest was heavy and they were short of breath with a heavy mucus cough.
- With involvement at Li 11 they'll complain of constipation and dry lips whereas if the area seems warm, patients complain of shoulder pain, stiffness and dizziness associated with constipation.
- Coolness of the stomach area symptoms include a loss of appetite, no taste for food and their legs seem weak with warmth, they feel they over-eat, can't decide what they want to eat and they feel warm with lateral leg thigh pain.
- A cold area at the spleen, pancreas area gives the patient a craving for sweets, blanks in their memory, sleepy during the day, waking at night and having a good amount of gas; with warmth the appetite varies, they want to rest.
- There seems to be no special symptoms associated with the heart area except maybe fear and fatigue when the area is cold. With warmth the patient talks a lot.
- A cold small intestine area, they'll complain of their head hurting on one side with a lot of flatus without much odor. If the area is warm they'll have pain at the spheroid sinus, down the sides of the neck, shoulders and arm, there also seems to be a lot of noise in their gut.
- Bladder area coolness, there will be frequent urination with general spinal pain. With warmth there will be spinal pain primarily around the waist and down both legs.
- The kidney area when cold there is a lack of courage with decreased sex interest, with warmth there is a lot of intestinal activity and this person just keeps going with the urine being heavy colored.
- When the circulation sex area is cool, whose alarm point is at the xiphoid process, is cool the patient sleeps poorly with a fear of heights that normally isn't there, their head feels heavy. With warmth, the patient has a headache with upper abdominal distress and the patient shows light sleep.
- A coolness of the triple warmer area the patient feels cold all over, pain in the sinus areas related to the sphenoid. When the area's warm the patient perceives decreased hearing though it tests out normal.
- Gallbladder area coolness will have patient dizziness, chills and the patient sighs a lot (there is a relative acidosis), the patient feels awkward, with warmth he head and the stomach feel heavy with cramps and pain along the flank area.

DR. GOODHEART'S RESEARCH TAPES

TAPE #8

Challenge Technique

- You challenge a vertebrae with about 4-5 lbs of pressure in a certain direction. The direction which causes weakness is the direction you adjust that vertebrae.
- We have found Lovette brother relationships to hold true. When we find a cervical vertebrae needing adjusting it's lumbar counterpart will need adjusting also.
- There is a micro subluxation of the Lovette brother in the same direction.
- With a chronic rotation macrosubluxation of a cervical vertebrae we find the opposite rotation in the lumbar vertebrae.
- The sequence is C₁ - L₅, C₂-L₄, C₃-L₃ etc.
- To try and figure which was the primary one we would palpate the sorest one and adjust the least sorer one.
- If you find a macro subluxation of the counter rotating torque pattern simply challenge the hamstrings on the side of lumbar posteriority. If you challenge the lumbar and get weakness adjust into weakness.
- Challenge the cervical vertebra to see if one find weakness, then adjust in the direction that caused weakness.

Degenerative Nervous System Diseases

- They appear to be occurring earlier age-wise.

Roy L. Swank of Oregon did a monogram on M.S.

- He feels it's a series of microthrombix that causes M.S. causing a degeneration of the white matter.
- It appears to be related to fat intake primarily of animal and milk fat intake than total fat intake.
- He worked with low fat diets with people who had M.S. The original diet contained 30-40 gms of fat. Milk fat was included, then eliminated.
- He had 15 gms of animal fat -- 15 gms of other oils, soy, etc. along with 10 gms of cod liver oil per day.
- Protein intake was 50-60 gms/day.
- M.S. goes through periods of exacerbation and remissions.
- Swank felt that diet helped along with the fact that the disease was influenced by psychological factors.
- Early cases do especially well on a low fat regime.
- The r.b.c.s in people with M.S. are larger in size.
- A sludging was noted in the vessels of the eye on ophthalmic examination, especially after fatty meals. It's a potential factor of thrombi.
- Swank also showed a high correlation between high fat intake and intravascular aggregations beginning about 3 hours after a meal and peaked 3-6 hours later.
- There was found some protein that was present that disappeared 9-12 hours after a meal.

- This aggregation of cells after a meal occurs in lots of animals besides man.
 - There is noted in these diseases areas of demyelination occasionally with some capillary fragility. Slowing spontaneous hemorrhages.
 - Lipid relationship to myelin sheath - the Schwann cell surrounds the axon. Protein and fat are involved in this process.
 - Perhaps something is getting in between the layers of wrapping not allowing it to stay wrapped. Some sort of slipping factor, surfactant or "oil."
 - Lipotropic agents like fatty acids could get in.
 - The white matter of the brain and spinal cord are the areas affected.
 - Most of the areas of demyelination is around the central veins.
 - We suggest high quality fats like sesame oil, avoiding rancid fats like in instant coffee, potato chips, dried cereals, oil containing snack foods, etc.
 - We do urine creatinine levels, levels over 1400, we recommend Vit. E. 2,400 - 3,000 usually the patient is already taking some source of E. The source of this seems to produce the deficiency, we get them to reduce the intake to 20 units of a whole E complex per day.
 - One key factor is stopping chlorinated water for drinking, use bottled, not distilled or tap.
 - It was found on chickens when chlorine was in the diet the comb would bleach out, and the chickens would die from cholesterol deposition. However, it would reverse on removing the source of chlorine from the diet.
 - Chlorine is the precipitating agent of cholesterol. Avoiding chlorine would be a factor in reducing the chances of fat embolization sludging of R.B.Cs. and coating of R.B.Cs.
 - The use of chlorinated water in cooking appears to have no affect.
- Reading Referral: Dr. Joseph Brice, Coronaries, Cholesterol and Chlorine, Pyramid Books, N.Y., N.Y.
- Also work with normal N.L., N.V., etc.

Emotional Challenge

- We ask patients who may have emotional involvement to think about something that may be bothering them and test a muscle looking for weakness. We usually use the pectoral clavicular.
- The eye usually starts quivering if closed.
- We treat via the emotional N.V.s on the forehead for the pectoral clavicular.
- We then rechallenge the circuit by the patient thinking of the problem and we note strength of the pect. clavicular.
- Frequently on the next treatment date this weakness will reoccur. Do the neuro vascular contacts for 3 - 4 minutes, then run the conception vessel downward to lock it in.

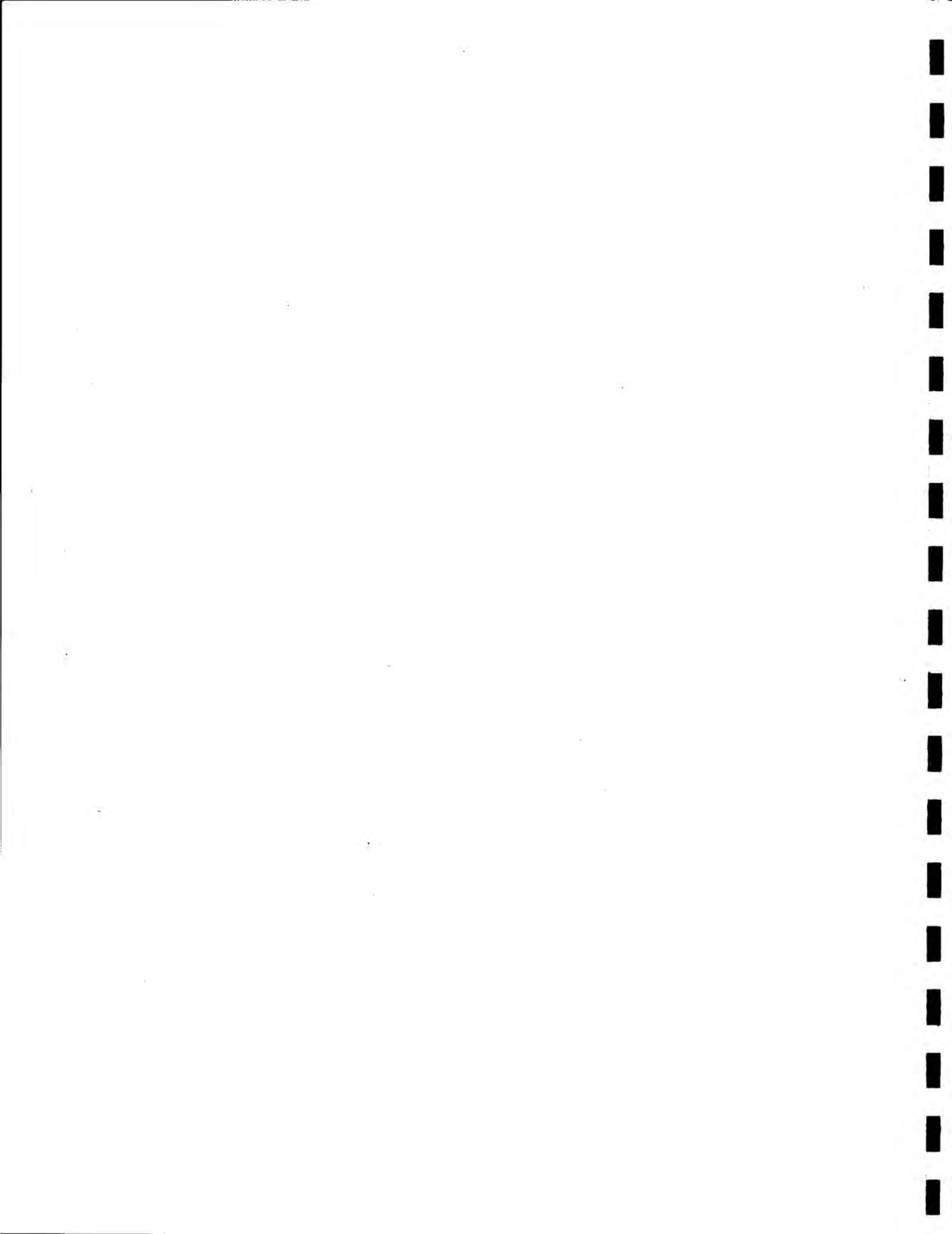
Frozen Shoulder

- Many of them are a problem with the subclavian muscle not pulling the clavicle away from the acromian process.
- Work k₂₇.
- Patient who has problem getting their arms behind their back.
 - Look for weak brachio radialis - flexes elbow and pronates forearm or supinates it to mid position.
 - Test with elbow bent, thumb toward ceiling, press downward into extension.

- The N.L. is over the whole pectoralis area and over the origin of the supraspinatus on the posterior.
- There usually is a contraction of the rhomboids on that side, not associated with a weakness on the other side, use the stomach acupuncture circuits to reduce the rhomboid contraction and do o.i. work to turn it down.

T.F.L.

- When you find a weak one that doesn't respond to the normal factors, look for a lateral cuboid.
- Weak adductors are found with a medial cuboid.



DR. GOODHEART'S RESEARCH TAPE

TAPE #9

Law of the Ligament

- We've worked with muscular imbalances via N.L., N.V., acupuncture, cranial, etc.
- In idiopathic scoliosis it appeared ligaments as well as muscles were involved.

Golgi tendon organs - work at the periosteal junction.

- It's like a three-way switch with muscle contraction, it's flipped on from neutral allowing the attachment to grasp the structure more firmly like the chinese finger torture so the muscle doesn't pull itself off the bone.
- The antagonist is relaxing so the golgi apparatus switches to the off position allowing relaxation.
- To restore a golgi apparatus to normal simply at both the origin and insertion press towards the belly of the muscle. This will strengthen a weak muscle.
- To turn down a hypertonic muscle do the opposite, get on the origin and insertion and push away from the belly of the muscle.
- You do the opposite in the belly of the muscle, pull apart to strengthen, push together to weaken.
- In idiopathic scoliosis we have found better results increasing the rotatore brevis strength than shutting down the hypertonic ones.

Visual Defects

- Look to cranial faults, especially cranial respiratory challenging.
- Monitor patients sight as a standard to work with.
- Have the patient take in a deep breath, check a muscle, then take in a little more if there is a cranial respiratory fault there will be a weakness. If not, have the patient blow the air out then blow out a little more and look for weakness.
- The spleno basilar junction flexes with inspiration and extends with expiration.
- With an inspiration fault we assume the spleno basilar junction is in a flexed position already instead of neutral so we pull the junction apart extending it, pulling behind the central incisors and getting in front of the mastoid processes and pulling apart in an A-P direction on expiration.
- On an expiration fault the opposite is true, we push up on the cruciate suture pushing the mastoid processes forward.
- It can be only one-sided working with only the mastoid process on the side of weakness.
- The extruded eye is on the high sphenoid side. We pull downward back past the molars on the high side with four or five respirations on the opposite side we press the opposite pterygoid process upward.
- In the prone position we check the sacrum positioning Lovette brother of the occiput using hamstrings as an indicator muscle.

- Have the patient breathe in, then a little bit more check for weakness, breathe out and little bit more, check for weakness.
- If hamstrings weaken with inspiration we assume an expiration fault and get underneath the lower third of the sacrum and push upwards with expiration.
- Weakness on expiration we assume an inspiration fault and we press the lower third of the sacrum forward with inspiration.
- Look for these in patients who noticed sudden changes in special senses, especially hearing and vision.
- Coxygeal challenge - it follows the sphenoid. Challenge the cocyx according to what you found on the sphenoid.
- If the left eye is extruded it's also usually the side of the wide eye. Challenge the cocyx on the high sphenoid, extruded eye, side from left to right, you will find a weakness, adjust accordingly and look to in low back problems.
- The challenge mechanism is one of the most useful single methods we can use.
- Many times we find a spinal inferiority in problem low back cases, usually if we find this the occiput is inferior also.
- You can challenge the spheroid by the challenge technique and checking an intact muscle.
- The extruded eye is usually on the side of the high sphenoid.
- Those of you using the category I & II S.O.T. techniques, there is total agreement with what we have found with our challenge mechanism.
- Category I with a dollar sign will be associated with muscle weakness. With an absent dollar sign on the right you will find a weak gluteus max on that side, or an absent crest sign will have a weak sacraspinalis on that side.
- Category II patterns on the side of the posterior ilium via the U.M.S. method (short leg, medial thigh and upper groin pain with pain over the obturator) you will find a weak sartorius or gracilis on this side. A posterior ischium shows (lower third of leg, lateral thigh and symphysis pain) you will find weakness of the vastus lateralis and lateral thigh muscles.
- The Lovette brother relation holds if C₁ goes left lateral so goes the 5th lumbar microfault to the 2nd lumbar when the lesions will be opposite one another.

DR. GOODHEART'S RESEARCH TAPES

TAPE #10

This is the first annual study group leader's tape.

Cranial Faults

- Challenge for an internal frontal
- Challenge the Lambdoidal suture to check its integrity.
- Some patients don't seem to hold their adjustments or good responses.
 - Look to inspiration and expiration faults where the patient breathes in or out and then a little bit more and check for weakness.
 - This respiratory challenge seems to be involved with special sense disturbances.
 - The body has a certain protocol - i.e., we were meant to breathe through our nose and swallow with our mouth - we have the option of breathing through our mouth.
 - We have found weakness when a patient breathes through the mouth vs the nose.
 - We call this fault found with mouth breathing an expansion head.
 - If you compress the glabella and E.O.P. together towards each other. (And it causes weakness.) To fix this do this compression with four or five inspirations through the nose, then recheck.
 - We also check the sacrum against respiration through the nose or mouth. The contact is on the sacral apex pushing forward with inspiration through the nares.

Cross Crawl

- We demonstrate the tight muscle to a patient with the foot turned in. We find many psoas's do not turn in well on the right.
- We show the patient the change that happens whether they physically do it or mentally do it.

Spinal Curvature and Recurrent Problems

- Eye movements relate to the movements of the head and neck.
- A simple procedure is to test the neck flexors then close their eyes, recheck - no change - now have the patient roll their eyes up, you'll find a weakness that is abolished by eyes looking down.
- This is not a normal reaction, it indicates the eye to muscle coordination is mediated by a cranial pattern - the glabellar technique where you use the simultaneous compression of the glabellar and e.o.p. towards each other.
- After doing this technique on scoliotic patients when standing we re-relate them to the plumb with their eyes closed while the patient mentally does the cross crawl.

Reading Referral: Moshe Feldenkrais, Awareness Through Movement.

Harper & Rowe.

- It's a series of ideas on exercise of the Alexander technique. It's very concise.

- Feldenkrais is a psychiatrist who believes one's attitude affects one's posture.
- Try turning your head in one direction while your eyes are looking in another direction - note the tight abnormal feeling. Note how much better it feels when the eye movement is the same as the head turning.
- He feels there are dynamics of equilibrium that can be shown to the patient. When you press down on the feet the center of gravity will go over them to get us up. This conscious pressing down on the feet usually occurs too soon, we see this in a lot of geriatric patients.
- We place the patient's feet on bathroom scales while sitting instructing them to get up. Watch the needle while they get up. Many times it goes past the patients weight. When you get up properly, the needle consistently rises to your correct weight and doesn't go past it.
- Avoid conscious leg movement with your forward movement to get up, think of tilting the feet and legs from the floor so the swing forward won't contract the thigh muscles, then get up. When there is no neck muscle tension with the forward movement, this is good.
- Teach the patient to get up taking the pressure off the floor.

Reading Referral: Resurrection of The Body, University Books of N.Y.

- It discusses Alexander technique.

Peroneus Muscles

- The tertius brings the foot up on the tibia bringing the small toe towards the tibia. We were calling this the peroneus longus and brevis, they plantar flex the foot with some eversion, the reflexes are the same.
- We must get our muscle testing techniques down to a science and consistent.

Felix Mann book: The Coupled points are essential for balancing the two sides of the body. These are especially useful in acute pain or injury to a muscle.

DR. GOODHEART'S RESEARCH TAPES

TAPE #11

Acupuncture

- Meridian therapy is electromagnetic in character.
- Luo points - connect 2 meridians.
 - Lung, large intestine Lung 7, Li8
 - Stomach, spleen - Stomach 40, Spleen 4
 - Heart - small Intestine - Heart 5, Si 7
 - Bladder and kidney - Bladder 58, K6
 - Pericardium - Triple warmer - P6, T5
 - Gallbladder - Liver Gallbladder 37, Liver 5
- Check an acupuncture chart for the positioning of these points.
- When you find a patient showing a classic pattern but you can find no weak muscle, challenge the acupuncture alarm point as described in the grey manual.
- Alarm points are spontaneously tender in a disturbance of a meridian.
- You challenge the alarm point with a good sharp thrust, then retest a muscle associated with that system. If it is having problems a weakness will occur.
- You then back up according to the 24 hour energy flow pattern as stated above, it goes Lung-Large Intestine, Stomach-Spleen, Heart-Small Intestine, Bladder-Kidney, Pericardium-Triple Warmer, Gallbladder-Liver.
- So if you find a weakness when you challenge the stomach alarm point go back to the large intestine alarm point and challenge it. The stomach gets its energy from the large intestine from the midday - midnight law governing energy flow.
- The cycle starts at 3:00 a.m. with the liver, from 2-4 a.m., 4-6 a.m. lung, 6-8 a.m. large intestine, etc.
- We usually find things to back up to the lung meaning the energy stops there and is not flowing forward unimpeded to the other meridians.
- So we couple the two points in this instance. We'll hit Lung 7 on one side, if the weakness is bilateral we would do it on both sides, or it might be different on each side. Stimulate the two points with pressure for 20 to 30 seconds.
- You can now check your original indicator - example stomach and you rechallenge the stomach alarm point you will find no weakness.
- Now go to the associated point on the bladder meridian. Lung is at Dorsal 3, 4; C is at Dorsal 5,6, etc. You can look these up on a chart.
- You will always find a vertebral challenge in the area of this point. Sometimes it's hidden but after balancing with the two points the vertebrae will challenge. Adjust in the direction of the weakness.
- There may be other vertebral involvement.
- Thank you, Dr. Beardall, for this alarm point challenge.

Cranial Fault

- We found another fault associated with respiration.
- On a patient with idiopathic hypertension we found this.
- With hypertension the C.S.F. pressure usually decreases. As the C.S.F. decreases the venous pressure increases to compensate.
- When I tested a T.S. line muscle that was strong I had him breathe deep through his nose. The muscle tested strong but with a deep breath through the mouth a weakness occurred.
- The body should have an option of nasal or oral respiration. In a defense mode the body will tolerate only nasal respiration and the mouth for drinking and eating. It allows no option.
- We found the glabella wasn't moving properly with oral respiration. The cranials should move with either type respiration.
- We challenge by pressing the glabella towards the posterior occipital protuberance together.
- You fix it by pressing these two towards one another while the patient breathes in through the nares.

Ocular Lock

- Have the patient roll their eyes in a direction and look for weakness.
- This, many times, accompanies spinal curvatures.
- Most patients with the above cranial fault also show this ocular lock.
- Fix this as above. Where the patient has adapted to oral respiration, fix it with oral inspiration.
- The sacrum will usually show the same fault.
- With the patient prone and testing a hamstring, have the patient breathe in through the mouth and look for weakness. If they have this, have the patient breathe through the nose while we put a forward pressure on the lower 1/3 of the sacrum. Nine times out of ten it's oral which causes weakness.

Zygomatic Lock

- There appears to be a zygomatic lock at the zygomatic suture that occurs with a sneeze.
- Challenge it by having the patient take a deep breath and pretend to sneeze.
- You separate the suture yourself and observe weakness also.
- Approximating the suture may show weakness.
- Look to in recurrent I.C.V. And recurrent sneezing patterns that's not an allergy pattern. Sometimes it's involved with hiccups.

Reading Referral: Dr. Mary Austin, Text Book of Acupuncture Therapy, Drs. Supply Center, 24028 Union, Dearborn, MI (313) 278-2840.

- It has an excellent discussion on acupressure.

Central Nervous System Degenerative Disorders

- I observed sometimes as a patient might stand facing in a different direction they might be weaker or stronger.
- I noted on one patient who turned 360 degrees one way in 90 degree increments, then turned 360 degrees in 90 degree increments the opposite way that some postural problems got better.
- It appears in some people when they face the direction of their birth area, they will weaken.
- Having this type patient do the two 360 degree turns in opposite directions in 90 degree increments stops this.

Blood Pressure

- The oral respiratory loss and ocular lock seems to be involved in both high and low blood pressure problems.
- It seems to accompany a banana head.

Reading Referral: Francis Nixon, Born to be Magnetic, P.O. Box 718, Chemainus, B.C. Canada.

DR. GOODHEART'S RESEARCH TAPES

TAPE 12

Walking

- It is a system of facilitation and inhibition.
 - As one's left foot goes forward, the psoas and quadriceps are facilitated but the hamstring and glutens max are inhibited. The rt. arm forward muscles (pect. clav., deltoid, and Biceps) are facilitated but the Lat. Dorsi and Post Delt. are inhibited.
 - The reverse is true of the opposite side.
 - To show this, have the patient step forward on their left foot putting wt. on it and the rt. Lat. Dorsi will weaken.
 - It's a good way to show patients why some muscles become weak.
- Reading Referral - Walking and Limping - Discusses gait - Ducrouquet wrote it.

- Many times we find a weakness on standing that wasn't there when the patient was lying.
- Gait - We observed it's usually the foot involved with these weaknesses. Look to the Golgi tendon organs of the foot. At the insertion of the Flexor Hallucis Longus activating the G.T.O. may weaken or strengthen the neck flexors which foot reflex-wise is associated with the sinuses.
- These points are extremely useful in gait disturbances and those who spend most of their time on their feet.
- We found if we pressed on the bladder areas of the left foot it would affect the tertius on the right and vice versa.
- Look to these reflexes in whiplash problems and gait problems.
- When you find a weak pect clavicular and opposite psoas, tested together, go to Liver 3 on the side of the weak psoas and stimulate this point. The muscles will now test strong. It normalizes the crossover pattern.
- Check the supraspinatus and opposite medius or T.F.L. Simultaneously, if they weaken go to Stomach 3 on the weak leg side and stimulate it.
- Check the triceps and opposite gluteus max simultaneously, Spleen 3 is the point to stimulate on the weak leg side.
- We use these as gait reflexes to balance out the gait.
- Check also the glut. medius and opposite abdominal muscles. You do so with the patient sitting, they push the leg toward you and you push the abdominal. We treat the N.L. reflexes and sagittal suture, we haven't found its own reflex but Stomach 3 sometimes responds.
- Look for this in antalgic patients.
- Patients showing gait involvement usually need k_{27} switching done.
- Gait reflexes are Liver 3 - opposite extremity forward flexion.
Spleen 3 - opposite extremity extension.
Stomach 3 - opposite extremity abduction.

Alarm Points - We tap them to find a muscle weakness. If we get a weakness we back the energy up to find the problem.

- We have found Heart 3 to be the alarm point for the supraspinatus. We feel it is the alarm point for the conception vessel.
- We think the alarm point for the governing vessel is at the atlas.
- The adductors seem to be the muscles for the governing vessel.
- The associated points are B16 for the governing vessel and the conception vessel is at B17.
- Look to these points as normal acupuncture therapy commands.

Occipital Atlanto Counter torque - it's a cranial fault.

- We've found in chronic clonic tonic torticollis they usually have a fixation of 5 L on S-1 shown with challenging and testing T. majors.
- Another fault with inspiration the occiput move forward and we assumed the atlas moved backward. We have found this to be the case.
- In some patients this movement is not equal bilaterally.
- We use A T.S. line indicator. We push the mastoid in one direction while pushing the atlas in the opposite direction and check for weakness. If the counter torque pattern is present the muscle will weaken.
- To fix, press them in the direction which caused weakness with the right phase of respiration.
- This helps many people maintain a normal position of the head.
- This is sometimes involved in upper cervicals that won't hold.
- When you challenge alarm points looking to where the energy stops, treat the two points involved and go to the associated point on the spine.
- Supplement nutritionally as needed.

Reading Referral - Francis Nixon's Book: Born to be Magnetic, Box 718, Chemainus, British Columbia.

- We have found the vivaxis technique to work well, especially in M.S., sinus and allergy patients.
- It has helped my healing potential.

Reading Referral - Mary Austin's Book: Textbook of Acupuncture Therapy, Drs. Supply, 24028 Union, Dearborn, MI 48124; 313-278-2840.

DR. GOODHEART'S RESEARCH TAPES

TAPE #13

Ileocecal Valve - Located between the small and large intestine and found in many people.

- Its function is to close off the garbage area from the restaurant area, It's supposed to be a one-way valve.
- An open valve gives multiple symptoms - Sciatic and neck pain, headache and any time there's severe pain somewhere.
- The flexed knee test is positive.
- Stimulate the kidney meridian.
- Look for subluxations at L1 and L2, check the Lovette Brother.
- When the valve is closed many of the symptoms are the same.
- This patient has to get up because if he sleeps longer he gets a headache or I can "work it off."
- When it's open, you close with pressure in and up to the left shoulder, when closed, do the opposite.
- We note weakness of the Rt. Rectus Abdominus - Do a k_{27} switch procedure if you find it on the left.
- We find weak quadriceps on the right also.
- Check for a respiratory fault, we usually find breathing through left nostril will cause weakness with an interosseous cranial fault. Forced unilateral nasal expiration will induce the weakness.
- B₅₈ is the acupuncture point.
- The kidney meridian is the one involved with ileocecal valves.
- We find an anterior 3rd lumbar with the closed valve, we challenge the Lovett Brother C₃. Look for anteriority as the indicator.
- Also look for a subluxation at L₅, the associated point for the small intestine.
- The interosseous lesion should be fixed or the valve will return.
- This is the only cranial fault that when you fix it, it immediately fixes the associated spinal fault.
- It's caused at birth by a jamming down of the parietal bone compressing the occiput on itself.
- The squama of the occiput will rotate in a clockwise direction. The Squama is a circle and the condyles are projecting downward from the circle as the squama rotate clockwise and the condyles hang up the squama passes by the condylar parts causing a compression at one condyle location and decompression at the other depending on the rotation.
- There is also a fault with the occiput and atlas. We challenge the mastoid up and the atlas down and reverse this procedure on both sides looking for weakness.
- In this particular instance we adjust in the direction that causes strength. We're exaggerating the cranial fault.
- i.e. with a high rt. occiput. we push the rt. occiput up and the lt. lower while the occiput squama hand follows the same position.
- Occasionally we also have to fix the occipital atlanto counter torque

pattern challenging the occiput against the atlas simultaneously. Adjusting in the direction that caused weakness with the right phase of respiration.

- You challenge the mastoid in one direction and the same side atlas in the opposite direction simultaneously.
- We find these faults in patients with tumors, but it's not consistent.
- The relief of pain is phenomenal.
- The nutritional support is Vit. D or u.v. 7½ min per side for a total of 15 minutes.

Calcium Metabolism problems.

- Especially in osteoporotic females.
- It has been observed that if you regulate the amount of calcium going into an animal; it has been found out animals excrete more than they ingest.
- It is believed the body can transmute silicon into calcium giving calcium as the base product and adding silicon to it.
- We find calcium disturbances in patients with a closed valve.
- We give them thymus which is a rich source of silicon and antigastrin which also has a high level of silicon. Some patients need this instead of D and calcium.
- You usually see the response to thymus and antigastrin after the patient has ingested some Vit. D.
- Horsetail is also an excellent herbal source of silicon.

Occular Lock - It is produced by the patient moving their eyes in certain directions. If it presents one direction will cause a weakness whether the eyes are open or closed.

- With a head tilt, one eye gimbals up and one gimbals down.
- Look for atlanto occipital countertorque.

DR. GOODHEART'S RESEARCH TAPES

TAPE #14

Reading Referral - International Journal of Neurology - edited by Carl Pfiel, Vol. 15, 1972, Academic Press.

- The physiological pathways through the vestibular nuclei by Victor T. Wilson.
- It deals with the labyrinth and its influence on extraocular muscle.
- The eyes deviate according to head position.
- The reflexes are compensatory movements or those producing compensatory positions.
- There are two pathways between the vestibular nuclei and extraocular muscles.
 - The direct pathways ascending in the M.L.S. others go through the reticular formation.
- Ipsilateral rotation produces contralateral deviation of the eyes by means of contraction of the ipsilateral internal rectus and contralateral external rectus.
- Normally there should be no ocular lock or past pointing patterns.
- If so, it could be a primary disturbance - we work the areas for a k₂₇ switch.
- Patients with ocular lock also show occipito atlantal fixation, it is part of the atlanto occipital counter torque pattern.
- Challenge out the occiput atlas simultaneously in opposite directions. We fix in the direction that causes muscle weakness with the phase of respiration that abolished it. Moving the mastoid process moves the occiput.
- Fixing sometimes was short-termed, that's when we found the fixation pattern of the occipital atlanto region.
- Look for in ocular lock, counter torque and or past pointing pattern.
- Anecdotal. A patient with retinitis pigmentosa who saw only in yellow and her vision was 20/200. We used magnetic patterning vivaxis. We found a counter torque pattern which did not respond so we assumed it was a fixation. When we fixed the fixation, there was a remarkable change in vision and color.
- We have found in patients with weak neck flexors or pect clavicular, when they think of the color yellow, the muscle becomes very strong.
- If you treat the N.L. while thinking of the color yellow the muscles become stronger. This is another sign of an occipital atlanto fixation pattern.
- Apparently colors have an affect on our body.
- The organ relates in a simple R-O-Y-G-B-I-V pattern on the back from the shoulders down - Red at the shoulders; Orange, Yellow, Green, Blue, Indigo and Violet being at the pelvis. It is opposite on the front of the body.
- It seems reasonable since we are affected by other spectrums on the electro magnetic system that color should also affect us.

Auriculotherapy

Reading Referral - A Treatise on Auriculotherapy - P.M. Nogier,
Publ. in France, 1972, 57160 Moulins-Les-Metz, France

- Blacksmiths used to treat low back pain with a burn to the ear.
- It was found that auriculotherapy was popular in certain areas of Europe.
- It appears to be the connection between the acupuncture and nervous system.
- The external ear is like a baby upside down with the head at the lobule abdomen facing forward just as if the baby is upside down with the back towards the back of our head - Look to a chart for specifics.
- The ante helix helix area is the beginning for the cervical dorsal spine.
- The spine goes along the antehelix.
- They look for tender spots in the ear and adjust accordingly on the body.
- You can use the end of an orange stick; any blunt ended object to palpate these points.
- Muscle weakness can also be predicted by tenderspot on the ear.
- It has been found to be useful in sciatica.
- The leg is in the area of the navicular fossa, the upper limb is in the area between the gutter of the helix and the helix.
- The ribs are in the area where the helix joins the antehelix.
- The glandular zone is at the notch of the concha.
- The head is the lobule.
- You can abolish a muscle weakness by activating k₂₇ and the area of soreness on the ante helix.

Reading Referral - Acupuncture Therapy Current Chinese Practice --

Leong TE - Tan, Margaret C. Tan and I/ZA-Veith - Temple Univ. Press, 1973., p. 108, it goes into Auriculotherapy.

- They also show acupuncture anesthesia points.

DR. GOODHEART'S RESEARCH TAPES

TAPE #15

- Sat., March the 30th, Mrs. Goodheart expired. I apologize for the delay in getting the tapes to you.

Fixations

- C 1,2,3 - Weak bilateral gluteus maximus.
- C 4,5,6 - Weak bilateral popliteus
- Cervical dorsal junction fixation, weak bilateral deltoids.
- Dorsal fixation, bilateral weakness of the Teres Major.
- Lumbar fixation, bilateral weakness of the neck extensors.
- Iliac Fixation, weakness of the neck extensors tested singly.
- Sacrum fixation, neck extensors weak tested individually Bilaterally.
- Fixation of 5 L on S 1. Teres Major weakness when the area is challenged.
- Check the muscles for bilateral weakness in the clear, if strong have the patient T.L. the area in question, look to see which way the spinous processes move more readily to, using the transverse processes as levers. The side the spinous processes move readily to is the "side of lesion," i.e., spinous processes move readily to it. but not to the rt. It's like the rt. transverse processes are rt. posterior.
- On the so-called posterior side we press on the facet line from P to A seeing which side resists the most. Adjust the upper on the middle segment if the posterior side is stiffer or adjust lower on middle if the "anterior" side tests firmer.
- If neck extensors test strong, challenge the S.I. but thrusting lateral on the P.S.I.S. and retest for weakness. If the muscle weakens, adjust that S.I. as if it was fixated.
- When a patient complains of sciatica pain without disc involvement, look to S 1 fix and or bruised S.I. ligament.

Carpal tunnel

- Look for radial ulnar spread.
- Check for carpal tunnel in the palm up or palm down position.
- Some carpal tunnel syndromes are complicated by a capitate hamate syndrome, radial ulnar passbys and other carpal subluxations.
- Look also to the cervical dorsal area, shoulder and elbow for entrapment also.
- The area of involvement will therapy localize.
- A subclinical S.I. fix will give neck extensor weakness when the patient therapy localizes that S.I.

Gravity factor - Wheat Germ Oil

- Look to in patients who respond in the office but get worse once home.
- Check indicator muscles in different positions: standing, sitting, etc.
- Also check the muscle against respiration in the different positions.
- If expir. causes a weakness use pressure on the cruciate suture with inspiration while pushing the mastoids forward.
- If inspiration causes weakness on expiration, push the mastoid back and pull the incisors forward.

- Look to charts for stress receptor, turn off areas.
- Work these areas in the direction challenged that caused weakness with the phase of respiration that abolished it.
- Contact us for a copy of the receptors.
- Dr. Eldridge in Washington has found similar points.
- With stress receptors we are turning off the turn-offer, which, if we don't fix will turn off the turn-onner we activate. The N.L. and N.V. reflexes are turn-on switches.
- You challenge a stress receptor in a direction looking for weakness then find a phase of respiration that abolishes it. Fix it with that phase of respiration in the direction which caused weakness.
- If a turn-offer (stress receptor) is on it will turn everything off.
- When you find a patient that for whatever reason can't be adjusted, challenge for the direction of subluxation and look for a phase of respiration that abolishes it. You can fix this segment non-traumatically by pushing in the direction that challenged weak with the phase of respiration that abolished it.
- Use whatever nutritional substances test o.k. for you.
- We've found lower doses of a good quality E work better than high doses.

Ileocecal Valve

- Spastic valve gives weakness of the Rt. quadriceps and Rt. rectus unless the patient is switched.
- Also look for an anterior 3rd lumbar with overactivity in the kidney meridian.
- It is helped by decreasing roughage in the diet.
- And nutritionally calcium orotate and lactic acid yeast help.
- Orotic calcium is the acid source of calcium present in breast milk and it's absorption is better.
- Structurally the anterior 3rd lumbar appears to be a compensation, look also to 5L sacral subluxation.
- There is a turnoff point adjacent to the posterior occipital protuberance one-half inch lateral on the base of the skull.
- You must fix the stress receptor or the valve will return.
- Also, do not neglect to challenge the mandible. If it shows weakness on challenge, balance the masseter and buccinator muscles.

DR. GOODHEART'S RESEARCH TAPES

TAPE #16

Category I - A Dejarnette Classification

- It is a torque of the pelvis with no osseous slip of an ilium.
- The two ilium torque opposite one another one forward, one back.
- With patient prone measure relative leg length and heel tension, the tight side will show weakness to a muscle when the patient points that foot down. The short leg side is the side the ilium has gone posterior, the long leg is the posterior ischium side.
- You block the patient under the anterior ischium and anterior ilium in the prone position.
- Palpate the gluteal region and find which side is more tender. This is the dollar sign, lateral to the S.I. Dejarnette speaks of.
- We find it quite often on the left.
- The entire spine compensates causing first rib head pain which is usually what brings the patient in.
- Challenge simultaneously the ilium and opposite ischium together for a weakness.
- There may also be a fixation pattern so challenge for this also.
- There is a cranial fault associated with the temporal bone involving a counter torque challenge by pushing the mastoids in opposite directions simultaneously.
- Fixing the temporal counter torque really locks the correction in.
- Look for these in 1st rib head problems, brachial neuritis and shoulder outlet syndrom.

Extremity Adjusting - You adjust in the direction which causes strength on on the challenge.

- This is reverse of a vertebral challenge.
- With tennis elbow you can have the patient T.L. looking for the areas of involvement.
- When you challenge and find weakness you adjust the extremity opposite that challenge that caused weakness.

Shooting - The Dr. can point his hand at an area of the patient's body and observe a difference if the Dr. forcefully blows all of their air out.

- It demonstrates the electrical energies of the body.
- It is useful in treating small children with, use surrogate testing. Test the parent's muscles that are intact normally. Then test the muscles again while they hold the child observing for weakness.
- You can challenge reflexes, cranial faults, subluxation, whatever you wish to challenge on the child and look for weaknesses in the parent's muscles.
- Breast-fed infants and mothers spiking while in R.E.M. sleep are similar on EEGs.

Muscle Testing - P. 21 of the 1973 Cranial techniques. Selection differential for Category I procedure. Dr. Dejarnette checks arm muscle strength with fossa pressure looking for weakness. If so, it indicates a category fault.

- It is the single most useful tool we have.

Cancer - We have found no indicators for malignancy.

- Some feel B₁₅ and B₁₇ along with chymotrypsin may be needed nutritionally.
- The interosseous cranial fault is probably the most common we find in all patients.

Parker - At the last meeting Dr. Erhardt was there along with me. He put on a good presentation on disc lesions.

- He noticed a wedge pattern.
- It is like the bunion technique where the spinous process either moves to or away from the wide side of the wedge.
- As the annulus is stretched by the wide side of the wedge, it bulges; try an exaggerate the lesion making the wide side wider.
- The area will T.L. and challenge. You can use a double thumb pressure to the transverse processes. Taking the one above pushing it away from the one below or pushing the two together looking for weakness.
- If you get weakness pulling apart that's how you treat it stretching the side and decompressing.
- If it challenges out pushing the two together, fix it that way.
- You can do this between any two segments using the transverse processes or spinous processes to challenge that level.
- You don't always end up opening the narrow end of the wedging.

Associated Points

- They will challenge for a direction.
- If the area makes a little click setting up to adjust - do adjust the area further the click was not the adjustment it was related to the associated point.
- Also check the Lovette Brother.
- Sacrum relates to occiput, L₅ to C₁, L₄ to C₂ etc. going to the middle.
- I may have made a mistake on the last tape caling it Liver 3, Spleen 3 instead of Stomach 3 and Gallbladder 43.
- The gait reflexes are across the top of the foot.
- GB₄₃ - involves testing the rectus vs. the opposite medius is especially useful in lower back problems.
- Look to gait reflexes with chronic lowbacks.

DR. GOODHEART'S RESEARCH TAPES

TAPE #17

Therapy Localization - Patient places their hands over an area of involvement and muscles are tested. If the muscle weakens then we can challenge a spinal segment in the usual fashion or find what's causing the weakness if they're T.L. another area. The Dr. doing a challenge to the spinal segment can then adjust the segment in the direction of the challenge.

- We have found this to be quite practical.
- With Lovette Brother sometimes they won't show individually, they must be T.L. at the same time. Then you challenge in the usual fashion and many times adjusting one only, fixes both segments.
- A patient with all the symptoms of hypoadrenia, BP, dilated pupils, Rogoffs sign, 17 ketosteroids level, yet the sartorius or gracilis tests strong, T.L. to the N.L. reflex and the muscle is now weak. This is a 51% - - 51% strong, 49% weak.
- Look for a 51% when you suspect an involvement yet the muscle tests strong, in the clear. Have the patient T.L. the reflexes and re-check the muscle. Activate the reflex until the muscle tests strong in both instances.
- In a post. ilium, if the hand is placed at the P.S.I.S. and a muscle is tested, it will test weak. This indicates a Category II. If the patient is in a Cat. I counter-torque pattern you need T.L. to both S.I. ligaments to show a weakness.
- Once you fix the problem the T.L. will be abolished.
- Acupuncture points that are involved will T.L.
- In a closed I.C.V. the kidney meridian is overactive and B₅₈ the luo pt. must be stimulated. It will T.L. in a closed I.C.V.

Cranial Stress Points - turn-off points. These are neuro vascular turn-off points. They are different from the N.V. turn-on points which are the Bennet reflexes. The turn-off points have been found to turn off muscles when stimulated.

- These turn-off points will T.L.

Hand Reflexes - They don't seem to respond the same as the cranial turn-off points.

- These reflexes are treated as the turn-off points by pressing in the direction which causes weakness with a phase of respiration that abolishes that weakness.
- Copies of these points are available in the 74 research manual.
- If you find no T.L. to the spine, yet say the thyroid itself does T.L., then check a nutrient to check for strength. Also, with the patient's other hand, they can T.L. other areas that may be involved with the thyroid. For instance, while the one hand T.L., the thyroid and shows a weakness, the patient can place the other hand over other areas, such as the spleen, kidney, adrenal area looking for a neutralization of the thyroid T.L.
- The spleen is frequently found in a hypothyroid problem.
- We recommend you test all nutrients through an oral pathway.

- We have used lead gloves and lead over the body area to be T.L. yet it seems not to influence the system weakness still shows up.
- The hand does seem to T.L. at times even though it is not in contact with the skin.
 - It could be from acupuncture energizing the response we get or an aura of the individual.

Reading Referral - Pyramid Power - Patrick Flannagan, p. 44 in particular.

- We must think also of Francis Nixon's vivaxis work to explain T.L. also.
- If either hand is used to T.L. the roof of the mouth, if there is a cranial fault the indicator muscle will weaken.
- We check this weakness against respiration seeing which phase abolished the weakness.
- You fix the cranial fault in the direction of weakness with the phase of respiration that abolishes it.
- i.e., T.L. to the roof gives weakness, this indicates a sphenoidal fault. Here inspiration abolishes the weakness. So you press up on the cranial suture while the patient breathes in 4 or 5 times.

Pelvic Classification (DeJarnette)

- I. - Not subluxated but torqued pattern. One ilium is in a non-subluxated direction and the other ilium is in the opposite direction.
 - When a patient is prone the short leg is on the post ilium side.
- II. The ilium is in a subluxated form which can be singly or bilaterally present.
 - One factor we sometimes neglect is a weak latiss. dorsi in low back patients. One will usually show in the clear or with challenging. If you fix the lat. a lot of time the pelvis no longer T.L.s.
 - We use the Dejarnette blocks for treating Category I faults. Put it under the acetabulum of the long leg side and under the anterior sup. iliac spine on the short leg side. Balance out the gluteus max-minimus-piriformis-latiss.-sacrospinalis and hamstring muscles.
 - In a Category I the first rib heads are an area of much subjective pain when pressed on.
 - If the gluteus max is weak there will be pain in the dollar sign areas on that side. Adjust the weak side first and the strong side second.
 - If pain persists after treatment, check for fixation.

Sacral Wobble

- The sacrum moves forward with inspiration and backwards with expiration.
- Due to the insertion of the piriformis and iliacus and the alternation of flexion and extension as Illi talks about we find the sacrum actually wobbles.
- As the sacrum moves forward with inspiration on the pt it wobbles forward and backward according to the patient's handedness.
- We have the patient T.L. the sacrum with one or two hands and if positive we press the sacrum's upper 1/3 forward on one side and pull the A.S.I. backwards on the other side to challenge the wobble.
- If we get a weakness we pull the A.S.I.S. towards the ceiling and push the lower 1/3 of the opposite side of the sacrum forward with inspiration while the patient is in the prone position.
- The opposite is true with an expiration sacral wobble fault, on one side we use a logan basic technique lifting the sacrum to the ceiling and the opposite hand on the sacral apex on top pushing down.
- You will usually find an occipital atlanto counter-torque.

- Challenge them simultaneously forward on the atlas and backward on the occiput.
- The counter-torque of the occiput plus atlas is usually on the same side as the sacral wobble.
- You would fix in the direction of weakness with the phase of respiration that abolished it.
- The coccyx usually also needs to be adjusted in the above circumstances.
- The pelvis moves forward with expiration and backwards with inspiration as per Reikian thought. Can be used to prevent ilium subl. with the sexual act.
- To help augment a Category I adjustment while the patient is on the blocks, run the governing vessel from the lips to the coccyx make your adjustment, then run the governing vessel from the coccyx to the lips to lock the correction in and we give R.N.A. 3x day for one week to reactivate body memory.
- We find anterior dorsals go along with pelvic problems, you can adjust the patient in the standing or lying position.
- Work on the Levator costalis in the area of recurring anteriorities. The muscle runs from the back of the rib up to the transverse process of the vertebrae above. In the grey manual the picture and not the narrative is correct.
- Find a direction of pressure that causes weakness when challenging the Levator Costalis and find a phase of respiration that abolishes this challenge, fix the muscle that way with pressure in the direction of weakness with the phase of respiration that abolishes that challenge.

Five Finger Factors - Nerve, Blood Vessel, C.S.F., Acupuncture Meridian System and Lymphatic.

- Under acupuncture we have turn on or off points, alarm point challenge, connector points and the vivaxis as explained by Francis Nixon. This area is where your mother carried you before birth.
- The vivaxis center will give patients a weakness when facing towards this direction of where their mother carried them.
- To fix it the patient stands in a direction other than towards the vivaxis area and brings everything into adduction, feet and legs together. Arms at sides with fingers straight and together. Then we tap the cranium, pelvis, spinal area having done that we have the patient face their vivaxis spread their feet apart - level their head, close their eyes and take a couple deep breaths. They then perform a 720 in two directions in the following matter. Beginning in the direction of the vivaxis the patient breathes in, holds the breath, turns 90° to the rt. then exhales. Breathe in, 90° to the right, exhale, breathe in, 90° to the right, exhale then now do the opposite in a counter-clockwise direction until the patient is 90° off from the vivaxis direction. Four turns to the right, three to the left.
- On a lateral plumbline the patient will rock forward when facing the direction of vivaxis and backwards when facing away from it.
- In chronic energy loss patterns look to vivaxis and complete the channeling as described above and the muscle will now test strong.

Cross Crawl

- We have found a respiratory phase as the extremities are brought up the patient breathes in and exhales on letting them down.

- The patient turns the head away from the side of residual hypertonicity.

Video Cassettes

- Some are being made for Applied Kinesiology, contact us for the information.

Schizophrenia

- In addition to Niacin, it has been found by Dr. Hoffer that many patients show allergy involvement.

Fixation

- If there are no cervical fixations showing, put pressure on the head, if there is a gravity factor, the fixations will now show. Adjust in the usual fashion and rechallenge.
- Octocatosonal is the factor nutritionally missing.

DR. GOODHEART'S RESEARCH TAPES

TAPE #18

Therapy Localization - Can therapy localize with one hand or better with two hands. Using the index fingers for more specific areas.

- You then can challenge the area in question for a subluxation.
- Adjust the vertebrae in the direction of challenge which caused weakness.
- If the ilium is posterior, it shows with one or two hands, touching the one ilium.
- A Category I shows with one hand on each ilium.
- Look for Latiss. Dorsi weakness in a Category I. You may have to use the turn off points to find it. They are in the '74 manual or contact me.
- Therapy Localization to the eye usually needs opposite hands touching the opposite eyes. I believe due to the switching across at the optic chiasm.
- The temporal, plus nasal fields of opposite eyes come together and go to the side of the occipital cortex area opposite that of the temporal field side.
- There usually is inspiration assist cranial fault involved. If so, push upon the cruciate suture and push the mastoid processes forward with inspiration.
- When working with an area that T.L.s to find an area of subluxation associated with it have the patient take their hand to the various spinous levels and look for the ones that abolish the positive therapy localization. You then adjust these areas as indicated by challenge and see if the original area still shows a positive T.L.
- If you find, for example, a pos. T.L. to the thyroid, go to the different glandular areas, and if one abolishes it, give that nutritional substance that abolished the T.L.
- We have found many thyroid problems are imbalances of the spleen.
- We recommend oral challenging of nutritional supplements. The Feb. 1969 Science Article by Morley, Keer, Sebastian, Rossmount and Grossman documents this.
- Therapy localization doesn't tell you what it tell you where. Then you do a challenge to the vertebral level. We challenge with a torquing challenge. Many times it a clockwise torque.
- The patient can T.L. the T.S. line points and you will get a weakness on the points that are active giving a weakness of the involved muscle.

five element theory - The organs on the inside of the large circle are the basic river of energy. They get their energy all the time. The outer organs function intermittently.

- On p. 111 of Mary Austin's book, Acupuncture Therapy, there is a good depiction.
- Example: A weak Latiss. Dorsi in the clear on the high shoulder side but the T.S. line indicator isn't there. You can treat it and it will get stronger but the clinical response isn't there. Sometimes you have to balance the acupuncture energies putting the energy from a meridian that has too much to one that has too little.
- If the T.S. line indicator agrees with what you find go ahead and treat it. If there is no weakness with a T.S. line indicator go to the opposite acupuncture organ, i.e., Liver-gallbladder. You will find a weakness in this opposite organ muscle group.
- It isn't necessary if one organ goes up that the other goes down, we use the five element theory when we have one up and one down.
- If you find the opposite organ of the T.S. line indicator weak go to the connecting point for those two organ systems if it therapy localizes treat it. If this point does not therapy, localize back the acupuncture energies up via the alarm points until you find the meridian involved and treat that connecting point. Also, go to the associated point, treat it and or adjust that level.

Reading Referral - Healing Ourselves, Publ. by Swan House, Naburo Murromoto, especially page 16.

Refer to previous diagram on five element.

- The top one represents the torque and speech; Joy, Heart, Laughing.
- #2 represents flesh, mouth and taste plus sympathy; spleen, singing.
- #3 represents nose, small and skin; grief, lungs, weeping.
- #4 represents kidney, bones, ears and hearing; fear, kidney, groaning.
- #5 represents muscles, eyes and sight; anger and shouting.
- The same energy flows are present here.
- In a patient with grief you help it with sympathy.
- In a patient with grief to take away from it you make the patient angry and it takes away some of the grief.
- You can relieve anger by making the patient more sympathetic.
- To allay fear make them more joyous.
- Use those inner arrows to move energies this way.
- The main energy flows through the inner organs.
- The outer border flows intermittently, these are all hollow organs.
- You'll also notice how the wrist pulse points line up with the two sides of the chart.

Fixations

- The antigravity factor octacosanol is present in wheat germ oil.
- When you fix a fixation we recheck it by challenging it with gravity. A simple pushing down on the head will simulate the gravity factor. Wheat germ oil will neutralize this effect.
- A fixation is not something out of place, rather it is something stuck in place. To bring this putput movement into an area the patient is therapy localizing.
- In difficult cases test the patient in different positions.

Treatment

- In some patients N.L. activity has to be done for up to 4-5 minutes.
- In hip problems with a weak T.F.L. test the muscle while they T.L. the reflex along the muscle many times a weakness will show.
- We know now how long to do the N.L., do it until your indicator no longer shows. This is true for any of the reflex points.

Metromedia Tapes are available on A.K.

DR. GOODHEART'S RESEARCH TAPES

TAPE #19

Therapy Localization (T.L.). An area of disturbance will give you a muscle weakness when the patient places their hand over an area vertebral or otherwise. You can T.L. in wt. bearing or non-wt. bearing or with one hand or two over an area. Put movement into an area you T.L. to identify a subclinical fault.

- There is a torque pattern to fixing the N.L. reflexes when you find a weakness with T.L. to an area have the patient move their hand in a clockwise or counterclockwise position. You rub the reflex in the direction that maintained the muscle weakness.

Five-element Theory - If you find a T.S. line indicator that should show weakness but the muscle is strong but the muscle opposite it on the five-element chart is weak, then you use the five-element theory.

- The five element theory allows you to back the energy up like in the 24 hr. clock technique. Back up the energy to the source that it comes from.
- Find a muscle weakness, have the patient T.L. to alarm points till you find the one that strengthens it. Go to the passage point or luo point for those two meridians. The one the weak muscle is associated with and the alarm point. Stimulate the luo point and associated point for the alarm point. You can challenge for a direction to stimulate it in when a patient T.L. to a luo point and a muscle weakens, rub in the direction that maintains the weakness. Challenge any reflex point or acupuncture point for a direction.

FIVE-ELEMENT PICTURE

- Organ energy flows in a clockwise direction.

Reading Referral; Mary Austin's book on the Five-Element Theory.

- Two hand T.L. is sometimes needed to bring a fault out.

Disc Lesions - Will T.L. with T.L., one hand to the spinous process and the other hand to the one above or below it. The hands are "stacked" so the area between the hands overlies the disc area. Treat it as you have been taught.

- You can challenge out a direction by simultaneously separating the spinous processes. It usually shows on separation. We treat the patient seated or prone and as the patient breathes in the inferior of the two spinous process is pulled down and the superior vertebrae is tractioned cephalad with expiration.

- Acupuncture pulse points will also T.L.

- Example: A patient showed weakness over the kidney-bladder pulse point yet there was no muscle weakness in the clear for either meridian the weakness showed for the PSOAS when the patient T.L. the N.L. reflex for the PSOAS. Look to all factors of the I.V.F.

- Anecdotal: A patient came in with staples to stop smoking in their ears. The acupuncture circuits could not be turned off until the staples were removed.
- We see a lot of patients with eye problems. Retinitis pigmentosa, diabetic retinitis, macular degeneration, optic atrophy, cataracts, etc. If you therapy localize the same hand to the same eye you get little to show T.L. opposite hand to opposite eye and weaknesses will show. I can only account for this by the crossing over at the optic chiasm and the different fields of vision crossing there.
- We usually find a cranial fault that abolishes the challenge, we push the mastoids forward while pushing the cruciate suture upward with inspiration. If expiration abolishes it you do the opposite by pushing the mastoids back and front with both forward with expiration.
Thumb - Heart, small intestine, circulation, sex and Triple warmer
- Joy and laughter emotionally.
Little finger - Spleen, stomach. Sympathy and signing.
Next finger - Lungs, large intestine. Grief and weeping.
Next finger - Kidney, bladder. Fear and groaning.
Next finger - Liver, gallbladder. Anger and shouting.
- The main circuit travels around the periphery.
- There also is an inside flow of energy.

- Joy → Grief; Fear → Joy; Anger → Sympathy; Grief → Anger.
- Patient overcomes with grief find someway to make them angry you'll pull the energy out of the grief area.
- A forever fearful person -- make them laugh.
- Those who are perpetually angry -- find something for them to do for someone else.
- They represent the five-element on an emotional level.
- Anger is hard on the liver but grief neutralizes this.
- Too much joy is bad for the heart but fear contracts too much joy.
- Worry is injurious to the stomach but anger counteracts.
- Grief is injurious to the lungs which joy counteracts.
- You can stimulate the liver in a person with grief.

Reading Referral - Healing Ourselves by Naburo Moromoto - Susan House Book, publ. by Avon.

Slipped Occiput - Can show with T.L. or challenge a direction.

- Test a muscle while the patient sticks their tongue out to one side or the other. The side which causes weakness is the side of laterality.
- There usually is a sacral pattern which shows with one hand T.L. to occiput and the other to the sacrum. You can find it with a logan basic challenge and treatment is usually on the side of the occiput laterality.

DR. GOODHEART'S RESEARCH TAPES

TAPE #20

Reading Referral: McGarey, William A. Gabriel Press, Arizona, p. 19.

- He talks of the figure eight energy pattern on the body.
- On page 21 he talks of its use on burns and its results.
- Burkhart from Russia along with Minoka and Tanny from Japan worked with the figure eight concept with the meridian being in four quadrants.
- They treated diagonally opposing quadrants with wires that allowed only one way energy flow. They would drain the energy away from the area of pain.
- The only way for the energy to flow this way is for it to go from one arm to the other or one leg to the other.
- E therapy in England in the 30's and 40's was based on this observation.

Reading Referral: Otic Force, Carl Van Reichenbach. It's a reprint of an older book, publ. by Hutchinson and Co., London.

- Dr. Stillwell observed if you passed your hand diagonally in one direction over a patient's chest you could induce weakness but if you did so in the other direction or very slowly it would have no effect. We didn't know why at the time, now I think we know why.
- This indicates that the quadrants are not equally in balance if you can cause a weakness.
- You correct a weakness by starting, say with your left hand on the pts. Left shoulder and right hand on their right hip, then move the left hand to the left hip, then the right hand to the right shoulder, then to the left shoulder crossing at the umbilicus to the right femoral head then to the left femoral head and then the right shoulder. The patient will now test strong.
- This figure eight flow of energy crosses at the umbilicus.
- Many of the alarm points follow the conception vessel which may equalize the two sides.
- The flow is not the same for everyone.
- SP 21 is the great luo point. It is used here. If the patient T.L.s to SP 21 on the left, the weaknesses above don't show.
- Put an acu-aid on SP 21 to help balance this out.
- We believe this acts as an antenna balancing the energies and puts us in balance with the earth's energies.
- If you cover an acupuncture point you're treating with lead the results of the treatment are loss indicating the energy is coming from the outside, not the inside.
- Check both anterior and posterior involvement.
- Felix Mann states each of the meridians have a luo point, to connect the coupled meridian.
- SP 21 is the great luo point connecting all the meridians.
- Chung Muo - its luo point is Cx6, the master point is SP4.

Pulse Points

- Therapy localization works to these points on the wrist.
- This allows us to diagnose where a problem with the meridian may be at.
- This is one area of the body when the Dr. may therapy localize and look for a weakness.
- Having found which one is involved we test the muscles associated with the organs of that point looking for a weakness and treating the stimulation or sedation points as needed.

Pelvic Categories - They will therapy localize.

- A Category II shows weakness with one hand over one SI joint only.
- A Category II with a posterior ilium shows pain in the upper groin; pain over the obturator and pain over the medial thigh on the short leg side. There will be pain over the first rib head on the same side.
- With an anterior ilium there is pain in lower groin; over the pectineus pain along the lateral thigh and ischium on the long leg side.
- A Category I is shown by one hand on each S.I. joint simultaneously, The crest sign - it's an imbalance between the sacral spinalis muscle which therapy localizes with both hands on one sacral spinalis muscle group. The dollar sign - involves the gluteal and piriformis. Also the latissimus dorsi -- fix them prior to the correction.
- When you find one sacral spinalis group tight work the N.L. for the opposite group to balance them out.
- For the Category I you block under the acetabulum, on the short leg side in the prone position and another block under the A.S.I.S. on the long leg side.
- The most painful side is usually opposite the dollar sign.
- We try to adjust the less painful side using the intact S.I. joint to affect the S.I. joint on the other side.
- You use light thrusts to align the boots.
- A lot of patients come in with neck or shoulder pain that responds to a Category I adjustment which relieves the first rib head pain.
- The sacrum plays a major role in low back problems and is influenced by the piriformis.
- We test the piriformis weight bearing with the patients on their knees.

This brings out many hidden piriformis muscles.

Conception Vessel - Governing Vessel pulse points.

- They are located just above the standard wrist pulse on the lower hand.
- We test the supraspinatus and adductors to look for a weakness, CV₂₄ being the conception vessel alarm point and G.V.1. being the governing vessel alarm point.

DR. GOODHEART'S RESEARCH TAPES

TAPE #21

Pelvic Categories

- Category II ileum on one side subluxates you will get positive therapy localization to one S.I. joint. Adjusted as posterior ilium or posterior ischium as challenged out.
- A posterior ilium shows pain at the upper sartorius attachment, medial thigh and over the obturator on the short leg side.
- A posterior ischium shows pain over the lateral thigh, lateral groin and is on the long leg side.
- A double hand contact simultaneously over both S.I. joints is a Category I unless each joint individually also shows a weakness which may indicate a bilateral Category II fault.
- In a Category II we also find disturbances with the sartorius, gracilis and sometimes quadriceps.
- Look for weak hamstrings with a posterior ischium.

Category I

- Produced weakness by double hand simultaneous T.L. to the S.I. joints.
- Find, in the prone position, which is the short and long limb.
- There usually is first rib head pain on one side, this is the last fixed point where the body can compensate for the pelvic torque.
- You'll usually also find a banana head cranial fault, have the patient T.L. to the sphenoid one hand on each temple simultaneously and note muscle weakness.
- Do not test the hamstring with the leg past 80°, the patient can lock the knee joint if they get the leg up higher than this.
- If the two hand T.L. to the sphenoid shows weakness it will be negated by a 1/2 of breath. You'll usually see an extruded eye on one side and usually the banana head will be on the side opposite the painful crest side or buttock side.
- Fix the banana head exaggerating the lesion. If the extruded eye is on the right side and the most painful buttock side is on the left if the occiput is low and the extruded eye is on the right for example we take the occiput down and the frontal bone up together getting the maximum correction at the 1/2 breath.
- Then recheck for the banana head. Sometimes this will negate the Category I, most of the time it doesn't.
- Fix the Category I by putting the block under the acetabulum of the short leg and under the ASIS of the long leg in the prone position.
- The sorest buttock or crest sign side is the side of lesion. You adjust the good side in the direction the block wants it to go. Never adjust into a block.
- You're taking the intact S.I. joint and taking the ilium and sacrum together to align with the boots on the other S.I. side.
- The opposite ilium may lightly have to be worked on for the final alignment, not for mechanical positioning but to torque the pelvis back to proper position.

- Example: right short leg, long left. Block right acetabulum and left ASIS adjust right PSIS forward and then left ischium anterior on the left lightly to finish the alignment. For visualization you place one square over right sacrum and another square over the right ilium, then place one square over the left sacrum at the same level as the squares on the right. These are all the intact boots, then on the left ilium place one square above or one below the left sacrum square. In this sample adjust the right P.S.I.S. anterior aligns the three intact squares up to the upper left square.
- Balance all the muscle weaknesses first, then make the proper correction.
- On the dohr sign side or sore buttock side check the gluteals, hamstrings, T.F.L. and piriformis on that side.
- When a crest sign is present the sacraspinalis will therapy localize with two hands touching that sacraspinalis group. The side of therapy localization to the sacraspinalis may or may not be the intact side.
- Placing both hands over one S.I. joint and finding a muscle weakness indicates the side of lesion. The intact side will not show a weakness with two hand T.L. to it.
- Always adjust the non-compromised side.

Figure Eight Mechanism

- You can turn muscles on or off with acu-aids or your hands with the four sedation points for a meridian.
- If with hand movement from the lower left abdomen to the upper right quadrant you induce weakness indicating the energy flow was from upper right to lower left. You would be able to turn a left muscle off but not a right side muscle indicating the energy is flowing in the direction we thought.
- Visualize a figure eight on the front of the body crossing at the umbilicus and each quadrant should have its full component of energy.
- The direction that is flowing with diminished strength is the one that we can show weakness in.
- SP 21 is the point that also abolishes the above weakness.
- SP 4 is the Chung Mo, master point that abolishes any weakness with the figure eight energy flow. Also look to Cx₆, it's coupled point on either side.

DR. GOODHEART'S RESEARCH TAPES

TAPE #22

Auriculotherapy - Dr. Perlman gave a demonstration of it with a patient showing a weak right rectus and quadriceps indicating an I.C.V. He then, with a needle, treated the auriculo therapy point for the I.C.V. giving a good response.

- A lead piece abolished the strength the needle caused indicating it's like the needle is acting as an antenna bringing energy in from the outside.
- Putting lead over the ear induces muscle weakness of all the muscles on that side. The strength returns when the lead is removed.
- It appears the ear is an auxillary antennae for energy that some people need. Some people showed no weakening with lead over the ear.
- If the ear was pulled out in radial directions it would abolish this lead glove effect.
- Certain ceramics will show the same weakness as the lead.
- There appears to be a cranial respiratory fault involved. Have the patient go through phases of respiration challenging them with the lead in different positions. Sometimes the weakness will show with the lead in either position.
- Have the patient turn their head to one side or the other and breathe in or out looking for weakness. If weakness is present this indicates the ear needs stretching out.
- Crumpling the ear induces weakness or abolishes the above correction.
- We found if we covered both sides with lead there was an increase in strength which, if you then also cover SP 21, it would cause weakness.
- Acupuncture energy is affected by both reception and transmission.
- The increase in energy comes from outside the body.
- A positive magnetic pole stimulating the stimulation points would turn a muscle on. A negative pole to the same four points caused weakness. This indicated the electromagnetic character of the energy.

Nutrition - Please test via the mouth. Testing vitamins otherwise jeopardizes our position.

- We are not at a good stage to bring parapsychological phenomena into our techniques. If you wish to use them do so at your discretion but please don't teach it.

Occiput - A closed fist posterior T.L. to the upper neck will bring out a slipped occiput.

- Challenge the occiput while you make sure the cervical spine is intact. Adjust in the direction which caused weakness.
- With a lateral occiput you can also challenge for a direction with lateral protrusion of the tongue.
- When the tongue is protruded to the side of the laterality muscles will weaken.
- If there is an occipital fixation, not side slip, of the occiput on the atlas. If the patient keeps their head on the table but either puts

the chin to their chest or back into the air, one direction will cause a weakness indicating an occipital fixation.

- To correct this, with the patient's head on the table, you contact both sides of the head with your hands and have the patient flex and extend the head several times while you resist that motion.
- This is very useful in reoccurring headaches and cervical strain also with dizziness that comes with head movements.

Categories

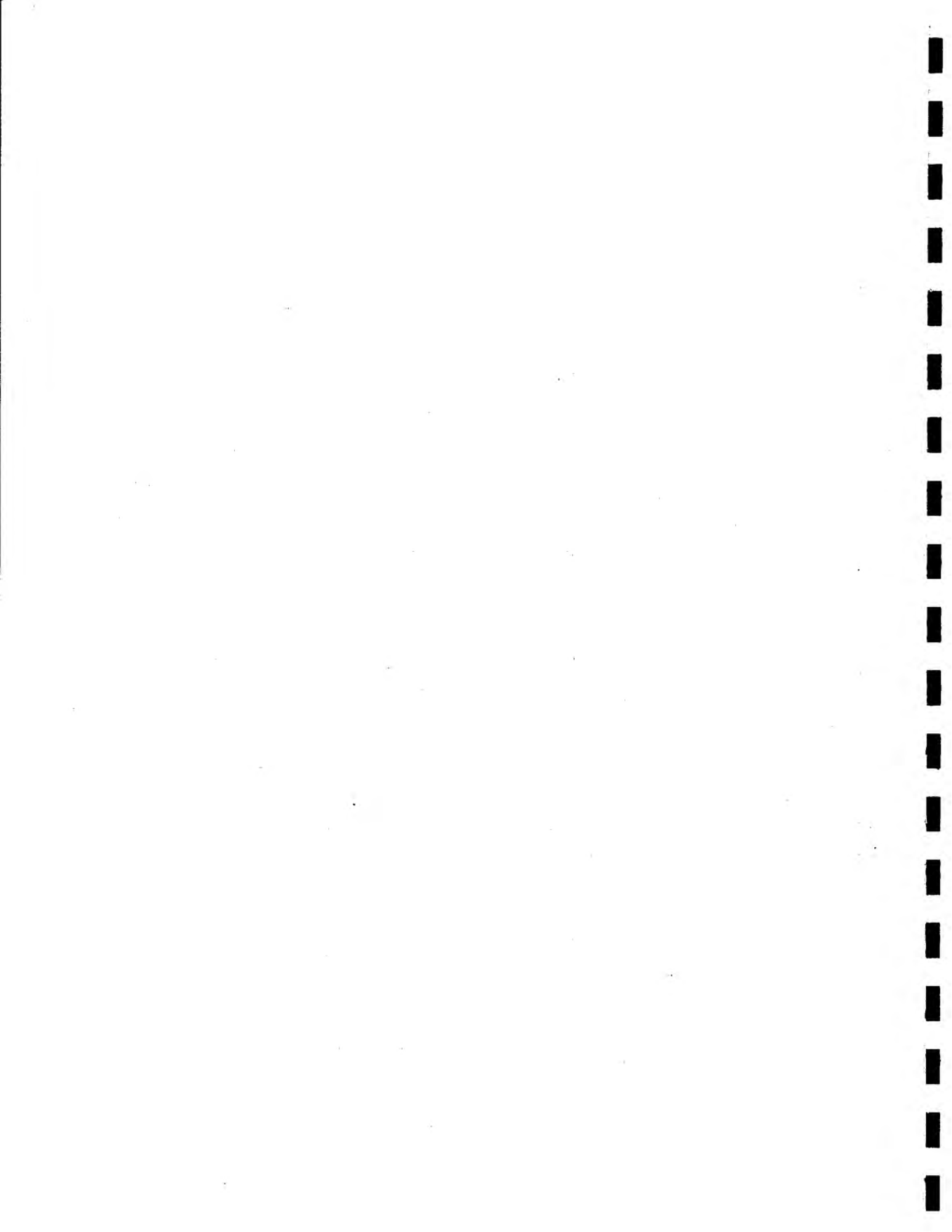
- A Category I is indicated when both S.I. joints therapy localize together. You will also find a weak piriformis or in weight bearing in a knee position. Test for inspiration and expiration assist. Nutrition is E or E2.
- Then correct the factors for the piriformis.
- Test for double hand T.L. to the sacra spinalis muscle groups. When a side is found weak test it for the five factors of the I.V.F.
- Block the patient in the prone position. On the short leg side place the block under the acetabulum and the other block goes under the A.S.I.S. of the long leg.
- Note the side with the weakness of the piriformis or sacral spinalis muscles. Then Dbl therapy localize each S.I. joint individually the one showing weakness is the involved S.I. joint side. The involved S.I. joint side should correspond with the weak piriformis or sacral spinalis.
- Go to the intact side and adjust that side not adjusting into the block. i.e., block under acetabulum push P.S.I.S. forward taking the intact side to match the involved S.I. joint.
- Look for reduction of pain at the first rib head on the involved S.I. joint side.
- Always adjust the non-involved or intact S.I. joint side with approximately 10 thrust with 5 lbs. of pressure. Look to the first rib head side for reduction of pain.
- Occasionally the first rib needs to be adjusted and it will therapy localize and challenge for direction.
- Adjust the rib in the direction which causes weakness.
- Look for a banana head which is usually on the opposite side of the involved joint. Fix it in the usual manner looking for the high sphenoid or extruded eye. Take the extruded eye side and push forward and upward.
- Look also for a gravity fix, have the patient or someone push downward on the head and look for a muscle weakness.
- Treat it like an ordinary upper cervical fix.
- See which way C₁, 2, 3 move more easily. The way it moves more easily is the way it is. If it moves easily from right to left it is posterior on the right.
- Challenge the facets on both sides, the side giving the more resistance is the side of identification.
- If the posterior side is the stiffer side adjust atlas on axis. It's a posterior fix.
- An anterior fix you adjust C₃ on C₂.
- Some Category I patients will not therapy localize in the clear, have them wet their back or fingers for therapy localizing.
- Wetting the area will enhance therapy localizing.
- Do not adjust the involved side of the Category I patient.

Reading Referral - 1974 Vol. 3, #4, Journal of Orthomolecular Psychiatry, Canada.

- Read the article on sugar metabolism.
- It was noted children with glucose handling problems responded when given chromium, 150 micrograms were given per day of trivalent chromium. Look for Zn and Cu also.
- Bilateral Teres Major weakness indicates a Dorsal fix.
- Unilateral Teres Major weakness represents mineral deficiency.
- We give allorganic trace mineral.

Reading Referral - Maurice Messegue, Of Men and Plants, McMillan.

- Origins and Properties of the Human Aura, OSC Bagnal University University Books, N.Y.



DR. GOODHEART'S RESEARCH TAPES

TAPE #23

Reading Referral: Neurological Anatomy, Brodall.

- He talks of the pre and post ganglionic fibers of the autonomic system.
- Sympathetic - preganglionic afferent neurons have their origin in the spinal cord - Thoracolumbar would be their classification.
 - Vertebral and post vertebral ganglia location.
 - Preanglia are before a major ganglia
- Parasympathetic is classified cranial sacral.
 - Situated in the wall of the organ they supply or in close proximity to it.
- Postganglionic fibers are unmyelinated and mediate vaso constriction
Secretion and pylorrection are present in spinal nerves.

Reading Referral: Breakthrough to Creativity, Chafeeka Caragula

- She talks about energies that people can see there were seven major vortices hooked up with different glands of the body. Five are along the spine. She describes these on page 124.
- You'll recall the figure eight energies and its treatment.
- Making a rapid hand pass diagonally across the patient's anterior body would induce weakness in one direction. Usually this would be in a direction opposite the way the energy was flowing and in a weakened state.
- SP21 on the left is the only place to negate this.

Reading Referral: C.W. Leadbater, The Chakras - A Quest book.

- He talks of the nervous system and its relation to some of these parapsychological phenomena.

Chakras

- Some patients with indigestion that you don't find weakness of small intestine, stomach or heart, sometimes they show fatigue patterns but the adrenal system tests well.
- Recalling the Chakras, have the patient therapy localize them one at a time along with another five finger factor and look for weakness.
- It's usually the sacral Chakras with the adrenal system. The Dr. contacts the Chakra and involved acupuncture alarm point with the other and holds for approximately 30 seconds, this abolishes the weakness.
- The sacral Chakras posterior at L₅ S₁ is involved with the adrenal system.
- Fixing sacral faults usually influences anterior dorsals.
- There is a sacral center at the junction of the sacrum and coccyx concerned with reproductive organs.
- There is a solar plexus center associated with the pancreas, stomach, liver, gallbladder. Located at the level of the first lumbar. To challenge, place one hand at L and the other hand over the concerned alarm point.
- On the left side of the body in the vicinity of the spleen is another, separate of the spinal centers, it connects up with the spleen alarm point.

- The heart center is at the level of the 2nd thoracic with a secondary area over the area of the thymus, it influences the heart, circulatory system and the vagus nerve.
- The throat center comes out at the 2nd cervical, it is connected with the respiratory apparatus and upper alimentary canal. Lung I is the alarm point associated with it.
- There is one at the glabella associated with the pituitary - challenge it with one hand over the left eye or E.O.P. and glabella.
- Testing the right eye and vertex is associated with the upper brain.
- Do therapy localize palm up and palm down. It may make a difference on some patients.

Reading Referral: Magnetism and Its Affect on the Living System, Albert Roy Davis, Exposition Press-Hicksville, NY, especially Chapter 12.

- Therapy localizing palm up and palm down may bring out many hidden faults.
- George Eversaul in Nevada wrote an excellent monograph that has helped with circulatory disturbances. He found thermometric equivalents with certain problems.

DR. GOODHEART'S RESEARCH TAPES

TAPE #24

Reactive Muscle - We found on a patient his rectus abdominus would weaken after we tested the right quadriceps. If we tested just the rectus or just the quadriceps they were strong, but if we tested the quadriceps on the right and then quickly tested the abdominal the rectus abdominus was weak.

- This indicated the spindle cells on the quadriceps were too high and needed to be turned down.
- We pressed the belly of the muscle together turning down the spindle cell. It did not weaken the quadriceps but it took the reactive weakness in the abdominals away.
- You can bring the reactivity back by strengthening the spindle cells in the quadriceps.
- Occasionally you have to use the golgi tendon to turn it off but usually it's the muscle spindle cell.
- Some Reactive muscle patterns to date.
 - Contralateral hamstring → Latissimus dorsi.
 - Homolateral Rhomboids → Deltoid
 - Right splenius capitus → Right piriformis - Look for in Category I patients.
 - Lat. head of gastrochemius → same side popliteus - Look for in knee problems.
 - Opposite rectus abdominus → opposite gluteus medius.
 - Gluteus max → homolateral pect. clavicular.

Reading Referral: Ultra Secret

- Deals with the British Breaking the Germans' cipher code during the war.
- We are breaking more codes of the body that we can establish with muscle testing.
- Therapy localizing doesn't tell you what, it just tells you where something is.
- Computers do not make decisions for you, they allow you to make a decision.
- The body allows you to make the decision.
- The weakening effect only lasts for 20-30 seconds.
- This pattern helped Bob Laniers knee who played for the Pistons.

Chakras

- Located primarily at ganglia locations.
- Chakras are centers of importance - it literally means wheel. The ganglia seem to be the physical part of the philosophical idea.
- The ganglia have an activity all their own as the alarm points do.

The Conception and Governing Vessels

- The alarm points in general are located along the conception vessel except for large intestine, kidney, spleen, lung, gallbladder and liver.
- It appears the conception vessel may run upward or downward depending on the person. The majority seem to run upward as text have it.

- It would seem to make sense to complete a circuit between the governing vessel, from coccyx to upper lip, to the conception vessel that the conception vessel would run from the lip to the pubic bone but text have it from the pubic bone to the lip, just the opposite.
- Lawson Wood, in his old book on Acupuncture, says the conception vessel and governing vessel are reservoirs of used energy.
- It appears lead interferes with acupuncture energy.
- Placing lead along the body randomly, it causes no muscle weakness. Place it over both lips in the median line there in an immediate blow out indicating perhaps the energy leaves by way of the oral pharynx.
- When you get in your car in the summer you roll your window down to let the hot air out before letting the cool air in.
- Sometimes there's a block in the ability of the conception vessel or governing vessel to get rid of the old energy not allowing new energy in.
- When we find this lead over the lips will cause muscle weakness.
- We have the patient T.L. along the alarm points and mark those that show weakness, usually only one will show weak.
- The Dr. can T.L. along the patient's wetted spine looking for areas of disturbance. It usually was about the same level as we found on the front of the body.
- We then hold a contact at these points and it negates the above factors.
- Look to challenge the area of the sacral area for a structural fault.

Reading Referral: Dennis Lawson-Wood, The Chinese System of Healing, Health Science Press, Grayshot, Hind Lead, Surrey, England.

Figure Eight Pattern

- Read: Anatomy of Bio Magnetism, Albert Roy Davis, Green Cove Springs, Fl., 520 Magnolia Blvd. Also, Magnetism and Its Affect on the Living System.
- They explain the polarity of the body.
- Use both palm up and palm down when you can't find something to T.L. in difficult patients.
- The right hand palm (+) Back (-)
- Body front (+) Right back (-) Right body Front (-) Left Body Back (+) Left
- Left hand (-) palm Back (+)
- As a result this explains some of the laying on of the hands results.
- To stimulate use (+) on (-) to affect a discharge.
- We've been experimenting with his non-ferrous magnet. We can use it to the same affect to treat points as our hand indicating a bio-magnetic charge.
- We've known the acupuncture circuits to be affected by magnetic energy. We now know that body disturbance in general have magnetic involvement.
- You need at least a 300 gauss magnet.

Dr. Goodheart's Research Tapes

TAPE 25

Many patients exhibit a limited respiration.

- observe patients' lateral chest expansion with patient seated, standing and supine.
- observe both horizontal and vertical components.
- one side will have decreased movement, usually on the right side.
- the psoas muscle is the reactive muscle to the diaphragm ipsi laterally. There is failure of leg to turn in on one side, usually the right. Shut the psoas down. Do muscle spindle activity into the belly of that psoas.
- the best way is to put the leg into the psoas muscle test position. This brings the psoas up, then work the muscle spindle complex. Approximate your fingers into the belly of the muscle. Re-establish parameters. Leg turn-in should be equal now. Rib cage has better lateral movement, increased sensation of ventilation, abolishes 3rd cervical and 3rd lumbar forced expiration therapy localization. Check both reactive muscles, and phrenic irritation at 3rd cervical with forced respiration.
- a dorso lumbar fixation is frequently found and requires an adjustment.
- if 3rd cervical and Lovett Brother 3rd lumbar therapy localize in supine position but not prone or vice versa. Check for weak psoas which causes opposite psoas to be hypertonic. Fix weak psoas thru five factors of I.V.F. and this will balance things out.
- if hypertonic psoas is primary, the 3rd cervical will therapy localize in both supine and prone positions.
- respiratory muscles also pull rib cage up.
- the diaphragm pulls the ziphoid and insertions along ribs to give a vertical and horizontal cage movement.

The Diaphragm itself

- Goldthwait and other anatomist call it a second heart.
 - it aids in venous return from lower extremities, pelvis, and abdominal viscera. With diaphragmatic movement, contracting and descending it pulls the Inferior Vena Cava open, dilating lumen and propels venous blood. With relaxation, it hastens venous flow once again.
 - no other muscle is more important and no other muscle is more affected by the emotional stresses of life.
 - reading referral, "NEURODYNAMICS OF VERTEBRAL SUBLUXATION" by Gordan Homewood. (section on the diaphragm)
 - analogy
Equilaterality is loss if one muscle group loses its tonicity.
- this triangularity is the normal pattern.

We frequently find psoas and abdominal muscles weak. Look for the diaphragm weakness of one side or the other of diaphragm. The diaphragm is difficult to test. You can use Timed Vital Capacity, Breath Holding time is influenced by fixations. Look for diaphragm neuro-lymphatic activity over entire portion of sternum and 10th rib on the right.

Structural Faults

-3rd cervical will therapy localize in the clear and/or therapy localize with different phases of respiration. Usually 3rd cervical lamina left posterior with expiration is the lesion.

-Adjust Lovett Brother 3rd lumbar using forced respiration properly with phase of respiration that showed lesion. It augments adjustment.

Note: This is not like working with anterior vertebral subluxation muscle patterns where one challenges the muscle, finding a direction which causes a weakness, then have the patient breathe to find a phase of respiration that abolishes that challenge. Here respiration augments the therapy localization and the adjustment, one uses that same phase of respiration when you adjust that segment which has been challenged out.

-fixing the above will increase vital capacity, breath holding time and it will abolish the Lead Square Effect.

i.e. -muscle weakness produced by placing lead over the patient's lips covering the Conception Vessel and Governing Vessel which indicates failure of acupuncture energy to leave so energy can't come in fast enough.

-Lead Square Effect

-use pre and post ganglionic technique to fix it (tape 24)

-have patient stop breathing in any phase of respiration if weakness shows, producing the same blow out pattern as lead gives, then double check for proper effectiveness of treatments.

-diaphragm acts as pump anatomically and also keeps acupuncture energy flowing.

-Body Energies	Right side front (+)	Back (-)
	Left side front (-)	Back (+)

-diaphragm acts as commutator for biomagnetic activities.

-diaphragm reflexes N.L.

-6 thru 8 costal interspaces just lateral to sternum anteriorly bilaterally.

-posterior, bilateral rib tubercles 6 thru 8.

-T.M. joint challenging is useful.

-the T.M.J. is ubiquitous. It is involved with many things.

-Fred Stoners' secretary suffered dental trauma showing weakness of neck muscles without a cause, bothering her more sitting and standing. Symptoms were absent lying down. It sounded like a S.I. joint problem but it wasn't. The patient therapy localized to the T.M.J. and it was negative, but weight bearing got a response. We found the neurolymphatics using this patient. We

- first used the neurolymphatic for the masseter lateral to the coracoid process. Others are located para sternally between 2nd thru 5th ribs anteriorly and posteriorly, 2nd thru 5th rib tubercles.
- the T.M. joint may fire off impulses keeping other lesions, especially upper cervical fixes and mid thoracic areas in a state of high facilitation.
 - so in difficult patients don't neglect to therapy localize the T.M.J. in all positions (supine, prone, weight bearing, open, closed, laterally, deviated with head rotation, etc.)
 - some anecdotal problems: migranes, Tic Delerou, dental problems, sinusitis, torticollis, extraordinary weakness and neuromuscular problems.

Therapy Localizing

- do both palmer and volar surfaces.
- sometimes S.I. joints will therapy localize one palmer, one volar.
- sometimes S.I. joints will therapy localize supine without the normal U.M.S. pattern (upper attachment of gracilis, medial thigh pain and short leg side indicating a post ileum) or U.L.L. (upper attachment of pectineus lateral thigh pain and long leg side indicating of a post Ischium). This indicates flare or rotation of P.S.I.S. in external or internal positions.
- P.S.I.S. internal or external positions.
 - foot rotation; see which way it moves the best internally or externally.
 - find weakness if post ischium or ilium is not present and if patient inspiration abolishes weakness, P.S.I.S. moved medially or internally on sacrum, is in direction of corrective thrust. If expiration abolishes weakness it means P.S.I.S. has to move away from the sacrum and this is adjusted in that direction with respiration or simply with a structural adjustment.

Reactive Muscle Testing

- Frozen shoulder treatments
 - subclavian neurolymphatic activity by activating the neurolymphatic reflex at K-27 vigorously. Also, origin insertion to subclavian.
 - problem putting hand behind the back, i.e., reaching to fasten a brassiere.
 - Test teres minor then anterior deltoid, then retest teres minor. Anterior deltoid if reactive will blow teres minor. Do spindle cell activity to anterior deltoid. Press thumbs into belly of muscle approximating them, repeatedly. Rechallenge the deltoid and then the teres minor. It should now test strong. Recheck patient's reaching behind the back.

Conception Vessel and Governing Vessel

- they are storage units of used energy.
- patients blocked by Lead Square Effect or exhibit Blow Out on respiration cessation, these patients will be energized by pre and post ganglionic techniques and diaphragm techniques as previously discussed.

- reading referral: "POSTURE AND MATURE BEHAVIOR, AN AWARENESS THROUGH MOVEMENT" by Feldenkraise, established the possibility of emotional stress and peptic ulcer.
- Hans Selye showed gastric erosions are rule of alarm reaction. All of these stress responses sometimes seen in hypoadrenia represent response to stress. The diaphragm is a stress organ. With diaphragm flattening you get increased abdominal pressure; if one side is weak, it develops visceral ptosis. Patients get into flexed positions as direct result of emotional state. This drooping of thorax approximating margin of abdominal musculature allows bulging of the abdominal wall primarily in lower portion of pubis.
- look for secondary K-27 alternator factor at dorsal lumbar junction.

DR. GOODHEART'S RESEARCH TAPES

TAPE 26

Attention Study Group Leaders:

- We are getting good responses from the schools. In teaching Applied Kinesiology, teach what is accepted A.K. procedures, not N.N.O.T. Especially with regards to nutritional testing. We have a basis on the Lingual Receptors. Laying of vitamins on the body may be used in your practice, but please don't teach it. There is validity to the technique. I'm not critiquing those who presented the information. Parapsychological techniques are practical, but in teaching please stick to a standard A.K. procedure. We don't want to hamper our positions with the schools.

Kinesiology Study Groups

- When offering something in another leader's home state or area, work with that person. Get the person's permission from the state you'll be speaking in. Give it as a dual presentation or with that state's leader's consent.

The Diaphragm

- Many patients show respiratory disturbances. Observe the expansion of the patient's rib cage laterally and monitor other factors like Vital Capacity, etc.
- Attaches posteriorly at the Lumbar area anteriorly, at the xiphoid process and along the Costal margins.
- When it contracts, it contracts from A.P. and the Rib cage should expand laterally.
- In many instances the lateral movement doesn't occur equally or it may switch sides in moving from supine to prone.
- Usually the left side moves and the right side doesn't.
- The Lumbar spine must counter-rotate with flexion and extension. I'm sure it's a function of the K-27 junction. I'm sure it's also a function of the pyramidal decussations and also a function of Cerebral dominance used in Cross Crawl activity. I feel there is an auxillary K-27 unit at the Dorso Lumbar junction.
- Subluxations with therapy localization, unless motion is introduced into vertebral fixation patterns, they won't therapy localize nor do they seem to appear on the T.S. line.
- Therapy localize the Dorso Lumbar area with forced respiration to identify Dorso lumbar fixations.
- This seems to be the syndrome: the patient has many complaints, will therapy localize to 3rd Cervical usually on forced expiration existing in prone and supine, sometimes it's present in prone or supine only. Many show the Lead Square Effect. These same patients will exhibit weakness on temporary cessation of breathing. In this case pre and

- post ganglionic techniques must be done. The neurolymphatics are located between the 6-8th interspaces. There is need for attention to the sternalis muscle and the 10th rib tubercle on the right and the reactive muscle testing on the side of decreased lateral movement. This is usually accompanied by a Dorso Lumbar fixation.
- Review of the Diaphragm anatomy is in Gray's and also Homewood's book.
 - The 12th Thoracic is a transitional Vertebrae from the Lumbar Lordosis to the Thoracic Kyphosis.
 - D.D. Palmer stated this area was the sight of many subluxations and also the apex of a compensatory rotary scoliosis that exists in a relatively healthy individual.
 - Anecdotal: a patient with severe prostatourethritis. Corrected diaphragmatic problem and there was an immediate change in the pattern and the temperature was normal within 24 hours.
 - Homewood: "No other muscle is as important to the structural and functional integrity of the human as the diaphragm and none other is more adversely affected by emotional stresses of life."
 - External Rotatores, Piriformis and Psoas.
 - The Psoas muscle is reactive contracted on the side of diminished costal lateralization. Go to the Spindle Cells of this Psoas.
 - foot turn in sould now be equal. Costal movement should be equal and abolishes therapy localization to the Cervical Column with forced respiration. It's a reflex subluxation of 3rd Cervical. If you don't fix the Psoas the 3rd Cervical isn;t primary so it will return. You must fix all factors.
 - Working the Spindle Cell: Put the extremeity into position as if testing the Ilio Psoas. This works better than the DeJarnette technique of just pressing into the belly of the muscle with the flexed knee in a lateral position.
 - Reading referral: "UNDERSTANDING THE SCIENTIFIC BASIS OF HUMAN MOVEMENT," by Canal and Gardner. Chapter 14. Williams and Wilkin.
 - Reactive muscle testing is Spindle Cell Activity factor primarily. We can reinitiate the weakness by treating the Spindles the opposite way, putting pressure into the belly of the muscle pulling our thumbs apart. Doing the above will once again turn a muscle we treated correctly back into being reactive. If one, however, fixes the reactive muscle and has the patient chew Ostogen (a veal rib source) one cannot reset the Spindles to return the muscle back to being reactive.
 - The mode of action of the Ostogen is conjectural since it contains active phosphatase. It probably contains the components of Spindle Cell activity.
 - One can use the Spindle Cell of a muscle's antagonist to strengthen a muscle.

Shock absorbers of joints

- If a joint fails to do its part as a shock absorber, the force is then directed to the next joint up, producing problems.
 - Dave Drum, thanks for the input.
- In recurring problems, check this out. Having an indicator muscle, strike the bottom of the patient's foot a few times and recheck the indicator muscle. If there is a failure of shock absorption of the Talus joint or any joint of the foot, a weakness will occur.

- We usually test a muscle near the area of involvement because the patient can relate to it better.
- Foot reflexes are a different factor and are basically a G.T.O. aberration.
- Gravity Fixation Pattern (73 and 74 manuals) check for when the problems return with weight bearing.
- If the foot fails to absorb its fair share, it sends it on to the knee and causes stress to these joints.
- There may be Femoral head fixations, S.I. joint fixation or structural disrelationship of the L.S. joint. They can all be elevated by mild trauma. The foot seems to be the prime factor though the patient doesn't say so.

Have a patient therapy localize to the T.M.J., finding involvement, don't fix it. Check for a pelvic category. Having corrected the pelvic category and rechecking, have the patient jump up and down with the knees extended and see if it doesn't reinitiate the previous categories. If so, fix the category again and also fix the T.M.J. this time. Now have the patient jump again and the category should not return. The T.M.J. modifies this response.

- Presently there is no nutrition for this lack of shock absorption reaction, perhaps it's octacosanol.
- A lateral Talus will initiate a Psoas weakness. Have the patient walk in an exaggerated pronation pattern with lateral Talus, the Psoas will weaken.
- Dr. Doss suggested with lateral Cuboid there's a weakness of the T.F.L.
- Medial Navicular there is adductor weakness.
- Tarsal Tunnel Syndrome.
 - When the retinaculum tarsi impinges post tibial nerve produced by posterior movement of OS Calcis. This is corrected by thrusting forward to the Mid Malleolar Line the os calcis.
- Reading referral: JOURNAL OF ORTHOMOLECULAR PSYCHIATRY. 2135 Albert St., Regina, Saskatchewan, Canada S4P2V1. Volume 4, #1 1975. Article on Trace Minerals, by Eliz. Lodge Reese and Josephine Campbell.
- Therin Randolph: for allergic reactions uses 2 level tsps. of Sodium Bicarb and one level tsp. of Potassium Bicarb orally in 8 ounces of water.
- Science: "NEW ROUTE TO THE BRAIN," by Abraham Hoffer.
 - Basis of our lingual vitamin testing.
- Found surface contamination didn't hold up in people with exposure to toxic metals. Lead was the same in scalp and pubic hair regardless of the surface contamination.
- As calcium is increased in the diet, it may clinically deplete other nutrients.
- When a patient tastes the nutrient that represents brain function and makes it credible to the patient.
- Reading Referral: "ESSENTIAL TRACE MINERALS IN MAN," by Schroeder and Bollassa. Journal of Chronic Diseases 1966.
 - Leg Perthes Disease in man perhaps is caused by a Manganese deficiency.

- Patients respond well to reduction of weight bearing, etc., and also Manganese with Calcium supplement. It seems to take longer in older patients especially.
- Also in the same issue: An article on SUBCLINICAL LEAD TOXICITY AS MEASURED BY INCREASED BLOOD PRESSURE. Shortened reaction time, lower Lactic acid dehydrogenase.
- How to get the Lead out: Trace Minerals. B6 Niacinamide seems to be the best method and Phosphatase (as in Ostogen) seems to help.
- Nutridyn is putting out a Chelated Liver with Iron and Copper, a Brain with Zinc and a pancreas with Zinc and Chromium. Multitrophin has all glandular materials and all Trace Minerals.

DR. GOODHEART'S RESEARCH TAPES

TAPE 27

Some Information on Adrenals

- Adrenalin destruction pathway
 - adrenalin which then breaks down to adrenochrome going to leuco-adrenochrome and adrenoleutin (the last two are poisonous).
 - Leucoadrenochrome must balance adrenalin. High adrenalin with decreased leucoadrenochrome will result in the patient becoming anxious, tense and schizoid.
 - In the schizoid patient, adrenochrome interferes with the eventual breakdown of acetecholine (ACH) and this increase of ACH at the synapses cause irritability of the brain, while simultaneously slowing down the oxidation rate of glucose which can't be stored in the brain. These all add up to the patient exhibiting low energy, fatigue, and paradoxial hyperirritability seen in schizophrenia.
- Apparently with the number of back commplaints increasing at an alarming rate, stress of emotional nature is not readily associated with back pain. In reality, however, there is direct relationship. Under stress the adrenals which are basically chromatin tissue, pour adrenalin into the blood stream to cope with the stress situation. The fight or flee mechanism takes place. Adrenalin contains certain components that interfere with the normal upkeep of ligamentous tissues (basically manganese) allowing ligaments to stretch more than they should, especially if there's been any previous damage. This stretching tears sensory nerve fibers giving pain. Muscles then go into a state of spasm to stabilize affected area to allow the ligament a chance to heal.
- In these cases rather than the patient showing the leuco-adrenochrome adrenoleutin affect which sometimes occurs, this patient won't show a positive therapy localization to the S.I. joint. They will only show therapy localization to the S.I. joints when testing the sartorius or gracilis.
 - these patients usually are showing classic signs of hypoadrenia, decreased BP, dilating pupils, a positive Rogoff's sign and a disturbed sodium balance.
- In these types of patients, have them therapy localize the S.I. joint supine, testing the sartorius or gracilis.
 - highly tense and successful individuals under stress with low back problems that don't show a category in the clear, will many times show this particular syndrome.
- Nutrition for this syndrome is Whole Adrenal up to one per hour. Whole Adrenal seems to work better under these conditions rather than Drenamin. Sometimes use Drenatrophin. Do work the neurolymphatics and the neurovascular reflexes even though they will not show positive in the clear.

-Patients with this stress syndrome with ligamentous weakness showing as explained above, exhibit ligamentous insufficiency at the occipito-atlanto area. This is demonstrated by therapy localizing to the S.I. joints and checking the patient's neck flexors. Usually, this simple test is negative. Now, stress the occipital atlas area, compress vertex and/or have the patient move the head to the left and right with the patient therapy localizing to the S.I. joints. Retest the neck flexors. A weakness will show which will be abolished by treating the adrenal reflexes for a prolonged period of time.

Biofeedback Instruments

- Since the meeting with George Eversol, we've been using a B.F.T. machine in the office.
- We originally placed the thermister where we wished to get a reading, measuring absolute temperature, then we'd measure the variable of the temperature response we'd want, but it was time-consuming. On one patient it was found that T.S. Line indicator, neurolymphatics, and neurovasculars were treated, we could get the temperature response we were looking for. We found a good response with treating neurovascular reflexes getting temperature increase on the body when treating a T.S. Line indicator neurovascular. If there is a temperature decrease, then there is a structural fault and the neurolymphatic or C.S.F. needs stimulation.
- This technique is especially good with vasomotor problems, vasoconstriction problems and possibly vasodilation.
- We can now use the thermister to monitor how long to treat a reflex point. It now helps us if we haven't treated a point long enough, just to create a 51% muscle response.
- The B.F.T. response works well to reinforce the positive change taking place with the patient (Pavlovian Conditioning).

More on Diaphragmatic Problems

- Last time we discussed the respiratory assisted therapy localization to the cervical column, finding primarily, forced expiration brings the lesion out at C-3.
- With diaphragm problems, we also see dorsolumbar fixations, fixing it on expiration. We also fix the reactive psoas muscle on the poor leg turn in side, accounting for the weak diaphragm on one side and the decreased lateral thrust.
- If after treating the hypertonic psoas, the cervical column no longer therapy localizes, challenge the cervicals out the old fashion way to insure good cervical correction. Also, check for rib fixations.

The Nasal Cycle

- Reading referral: "THE DEFINITION OF TERMS IN RHINOMYNOLOGY AND SUGGESTED STANDARD SYMBOLS," published by the American Academy of Ophthalmology and Otolaryngology.

- The book discussed the nasal cycle basically indicating patients breathe through both nostrils but they alternate approximately every 20 minutes.
- Page 16 points out that in septal deflection, the narrowed side may allow better airflow than the resection of a turbinate even though the airway is now wider.
- It has been found we can therapy localize palm up and palm down. Why? It's simple. Postulate that the right nostril is positive and causes a positive ionization and the left nostril is negative and causes a negative ionization. Then it is the ionization that gives the impression that there is more air or oxygenation rather than the actual area of the airway. The turbinates are what ionize. Take a simple cranial fault for example, an inspiration assist, you'll find, in many instances only one nostril will show a response. We've found if a patient shows a weakness with palm down, it will only be abolished by the right nostril taking a deep breath. Left nostril breathing with palm down giving a weakness will show no response. The same is true with expiration. If volar surface therapy localization causes weakness, be it inspiration or expiration assisted. One nostril breathing will abolish the weakness. This is true on patient ionically switched.
 - they will show volar therapy localization.
 - unswitch them with umbilical coccygeal stimulation simultaneously for 30-40 seconds. Patient will now show ionization in the proper fashion.
- We have found with expiration assisted faults, treating in and using the basic contact on sacrum, with use of right nostril breathing is of great value.
- Anecdotal: clonic tonic intermittant torticollis, patient being debilitated. (We used respiratory assistance on the right mastoid breathing out through the left nostril, got total relapse with no motion.
- If patient therapy localizes palm down, it's the right nostril. If it's simple respiratory assist, simply challenge and see which nostril helps. Have patient actively inspire more through one nostril than the other for 4-6 minutes per day.
- Reading referral: "THE LAW OF THE RHYTHMIC BREATHING," R.F. Fenowich Co., 18 E. 17th St., N.Y., N.Y. Published in 1908.
- We now have normal, adequate and responsible information (vis a vis the cervomechanism of the nose and good evidence on chemical testing and muscle testing) that right nostril produces positive ionization and the left negative. I believe the ionic exchange travels down the bladder meridian, crosses over and comes back out.
- This phenomenon seems to have nothing to do with oxygen. You get different responses if you block the nares with finger verses lead. Here again we're trying to show the diaphragm is a commutator so if we regulate diaphragm activity, as we have discussed previously, you regulate the cervomechanism allowing the body to have a springboard to health.

-Anecdotal: a patient in Chicago had a blocked left nostril for 20 years. The patient was umbilical K-27 switched, and umbilical coccygeal switched.

-He had duodenal neurolympahtic blockage on quadriceps and rectus abdominis, one on one side and one on the other. These were reversed, and the left nostril opened, but the right nostril closed. On therapy localization to the 6th cervical standing, both nostrils opened. He had had many adjustments to the 6th cervical. They opened after our adjustments since he had been ionized properly.

-Another patient with muscular degeneration showed improvement with right nostril inspiration and left nostril expiration. We were able to show it was the positive ionization and not the other corrections we did that helped this patient.

DR. GOODHEART'S RESEARCH TAPES

TAPE 28

Reading referral: "THE MIND," by John Rowan Wilson. Published by Time Life Books, N.Y.

- Homuncular Diagram on page 38. The diagram was used by Penfield the neurologist, responsible for most of the brain mapping. He showed an extraordinary amount of brain tissue is responsible for the face area (about one half). A large amount is also associated with the hands, then the feet and then a little for the trunk and extremities.
- Dr, Willie Mae in New Mexico works with T.M.J. equilibrium, yet his waiting room looks like a trauma clinic. Patients vary from all over the world with a myriad of complaints.

Clicking Jaw

- Requires attention to the Masseter and the Buccinator muscles. Therapy localization to the jaw and putting it in different positions checking for a weakness.
- Work the neurolymphatic reflexes lateral to the Coracoid Process of the Scapula, post atlas interspinous space bilaterally.
- One must level the Occiput first, so the T.M. sling is level.
 - Check by observation. Check for laterality via x-ray, challenging the tongue's lateralization. The side of the Occiput laterality will show when the patient deviates his tongue to that side.
- When the patient therapy localizes to the T.M.J., do so with the patient supine, prone and weight-bearing.
 - If it's negative, then have the patient open and close the jaw quickly and retest.
 - If it's negative, then have the patient laterally deviate the jaw or protrude or retrude or open or close, etc.
 - When we find a weakness, find the side of involvement by the patient therapy localizing in the position that induced the weakness with only one hand at a time to one T.M.J. The one side showing the weakness is the side of involvement.
 - Local neuro-lymphatic reflex points for the T.M.J. are at the 2nd, 3rd, 4th, and 5th intercostal spaces parasternally and likewise over the Rib tubercles posteriorly.
- If the patient chews something hard after working the reflex points, the weakness will reappear. You must fix the five factors.
- Upon examination, we usually find the lesion to lateralize to the left primarily on closing.
- Then go to the Spindle cell of the Masseter and Buccinator using simultaneous contacts to both muscles, one thumb on one muscle and one on the other.
 - thumbs are apart approximately one half laterally and one half vertically.

- Thus far we haven't had to work the Temporalis.
- Repeat therapy localizing after treatment when the patient stands, check for lateralization and which side is involved. Treat External Pterygoid.
- I recently spoke at the Academy of General Dentistry. It was a multi-disciplinary meeting and my approach was one of Kinesiological techniques.
- I used an Anatomical specimen marked and a leaflet from Hawkins' book to demonstrate to them the T.M.J.
- We found, along with the patients' complaint, Bruxism, etc., palpation of the external Pterygoid for spasm was used.
- It attaches to the Condyle and the Sphenoid which produces a cranial fault with the Sphenobasilar Symphysis.
- Many of the dentists were found to have inspiration and expiration faults getting good responses with all of them.
- Occasionally a S.I. joint problem will respond to T.M.J. work. Not every S.I. joint patient will respond to T.M.J. work.
- If a subluxation exists, there must be a means by which the body corrects it. We feel the Jaw plays a major role, being a computer constantly computing the position of the teeth that occurs with speaking, swallowing, breathing, etc.
- There is proprioception in each tooth indicating a computer mechanism.
- The computer must first be level, done by leveling the Occiput left and right and forward and aft.
- Check for Atlanto Occipital fixation by having the patient flex and extend the head while the neck is flat on table and then have the patient flex and extend the head with the neck flexed off the table, checking for weakness in all cases.
- When the T.M.J. is properly fixed, many T.S. Line indicators disappear.
- One of the first doctors I worked on at the meeting was a Doctor of Medicine with a low back problem. It disappeared after equilibrating his T.M.J.
- Closure muscles are usually involved, being the Masseter and Buccinator. The Temporalis is also a closure muscle but we haven't had to work on one yet. Don't neglect it, though.
- On your anatomical specimens, draw in the insertions of the muscles. It will help you with teaching and understanding it yourself.
- Weight bearing and non weight bearing positions do matter. Check it out on yourself feel your teeth, weight bearing, and then note them lying supine. Note the retrogressive movement when supine.
- Paul White: Thank you for indexing the first 24 tapes. It was a great effort.

DR. GOODHEART'S RESEARCH TAPES

TAPE 29

The T.M.J.

- It's a source of both information and therapeutic endeavor.
- We have found on therapy localizing to both T.M.J.'s, many patients exhibit weakness. In finding a weakness, check further for lesion being open, closed, lateralization or with retrusion protrusion, etc. Once found, check for a side of involvement with single hand therapy localizing to one side, then the other T.M.J.
- The Jaw is opened by gravity and the external Pterygoid.
- The Jaw closers are the Masseter, Buccinator and the Temporalis.
- Patients showing T.M.J. therapy localizing will show it primarily on closing. Do Spindle cell into the Masseter and Buccinator, one thumb into each muscle simultaneously. Thumbs being side by side one half inch apart opposed to each other approximately one half inch.
- Sometimes G.T.O. activity must be done also.
- An open T.M.J. lesion.
 - Go internal and contact the belly of the external Pterygoid.
- On patients exhibiting Lateralization. Treatment is to Masseter and Buccinator if patients' exhibit it on closed Jaw. Treat the external Pterygoid if it's on Lateralization with the Jaw open.
- The Acupuncture circuit for the T.M.J. is the Stomach.
- Therapy localize the T.M.J. in the weight bearing position also, due to the gravity factor.
- Check also for an inspiration and expiration lesion necessary because of the origin of the internal and external Pterygoids on the Sphenoid.
- The proprioceptor receptors in the teeth are part of a vast computer network as indicated in Homuncular studies in Gray's. The number of nerve cells devoted to the Jaw is vast as compared to any other part of the Body.
 - This is why Dr. Willie May, who does T.M.J. equilibrium, is so famous.
- Also check the patient with the Jaw retruded and extruded.
- The external Pterygoid opens the Jaw, protrudes the Mandible and moves the Mandible from side to side.
- The Temporalis closes the Jaw. Posterior fibers retracts the Mandible along with the Masseter and the Internal Pterygoid closing the Jaw.
- Biting is primarily done with the Incisors, Masseter, Internal Pterygoids, and to some extent, the Temporalis.
- Biting with the Molars puts all three of these muscles into action.
- Opening of the Jaw is done with the External Pterygoid. Pulling the Mandible forward and rotating it about the center of rotation assisted by the Mandibular Sling.
- Protrusion of the Jaw is done by the External Pterygoid. The Pterygoid Internal assists as a synergist in this action.

- If the External Pterygoid acts only on one side, it acts by pulling the corresponding side of the Mandible forward and the opposite condyle remains relatively fixed allowing side to side movement.
- The Mandible is retracted by the post fibers of the Temporalis.
- Test any weakened muscle against respiratory assistance.
- The neurolymphatic reflexes for the T.M.J. are at the 2nd, 3rd, 4th, and 5th intercostal spaces anteriorly and the same posteriorly.
- One must treat the External Pterygoid internally.
- Reading referral: The "Medical Tribune," Wednesday, October 8, 1975 issue.
 - The article on Rheumatoid Arthritis by lymphocytic depletion.
 - Synopsis: lymphatic drainage is essential to the function of normal tissue. If there is a breakdown in lymphatic drainage this will lead to lymphatic changes. If it leaks out of a system it may form adhesions.

The Diaphragm

- With forced inspiration, the Diaphragm, the Levator Costorum, the Internal and External Intercostals and the three Scalene. S.C.M., the Trapezius, Pectoralis Minor, Seratus, Posterior Superior, the Rhomboids, the Vertebral Column Extensors, the Seratus Anticus all activate.
- The Abdominal muscles during normal respiration via the Herring Brewer reflexes operate by being inhibited during inspiration and are assisted during expiration.
- Obtain a standard, i.e., Vital Capacity.
- Pyramidalis muscle tenses the Linea Alba, and receives the nerve supply via the 12th Thoracic. It is 7 cm. in length and occasionally it's doubled.
- The Rectus Abdominus is crossed by three fibrous bands or tendinous intersections (inscriptions) passing transversely, obliquely across the muscle. Sometimes there are two below the umbilicus.
- Observe peoples "pots." A majority of people have a lower pot. Treat via the origin insertion of the upper portion of the Abdominals into the belly of the Rectus, then retest the Abdominals against forced expiration. Recheck the Vital Capacity. Some have an upper pot. Do origin insertion to the lower third for them. Some have a general pot. This is perhaps associated with increased weight. Do general spindle cell to the mid belly of the rectus.
- Perhaps the abdominals via the pyramidalis are divided into sections.
- Many patients show an expiration fault when tested against the abdominal muscles only. This indicates perhaps there is a fault with the Herring Brewer reflexes.
- Most diaphragm problems are on forced expiration.
- Sometimes the oblique muscles are also involved and will need appropriate o.i. work done.

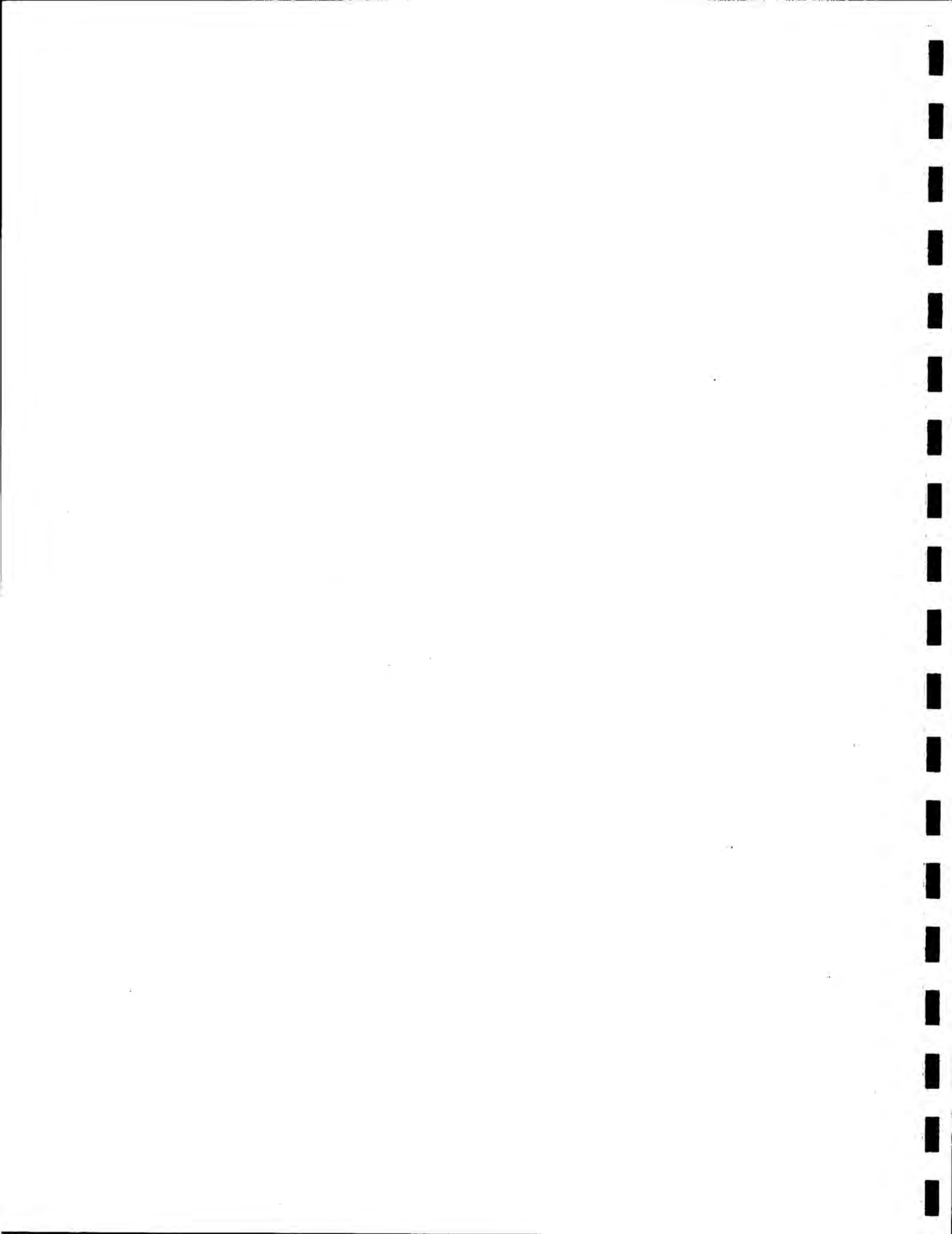
Biofeedback Use

- We use the 302s made by Biofeedback in Garden Grove, Cal., on Trask Ave.
- The present long sessions of Biofeedback training having pts. Auto conditioning themselves piggy backing the physiology onto the psychology is too long.

- We have found that prolonged N.V. contacts to be extremely useful in raising the temperature.
- The temp. of the index finger should be between 93 and 94.
- We monitor this finger after the temp. has leveled out. We then treat a T.S. line indicated N.V. and other Bennet Reflexes observing for the temp. to rise.
- As you increase the temp. you re increasing the blood flow to the part in question.
- When the Temp. decreases when treating a proper reflex this indicates the lymphatics, acup., or structure needs treating.
- Failure to change the temp. indicates the reflex you're using is not appropriate for that situation.
- Anecdotal: Young male with a fracture of the 5th lumbar having no bladder control. His Penis temp. was 92.8 above the symphysis pubes it was 87. Working the N.V. reflex caused a drop in temp. When the N.L. reflex for the bladder was treated the temp. increased 7 degrees with ability to spontaneously void urine.
- Put thermister on the area of involvement and use the appropriate neurovascular reflex and auxiliary contacts. (Copies are available.) Look for an increase of temperature.
- Anecdotal: A Shoulder patient with 8 degrees difference between shoulders after all the muscles had been balanced, the patient still had pain. Neurovascular points were held for 8 minutes. Temperature was balanced and the pain was diminished. Patients can hold the points at home. Piggy backing the psychology onto the physiology showing the patient when he holds those contacts, the temperature increased.

John Diamond introduced us to Bach Remedies

- Remedies of Dr. Edward Bach derived from wild flowers.
- Simple and easy to use affecting the personality.
 - i.e., those that are fearful, uncertain, lonely, etc.
- The remedies are from wild flower extracts. Two drops of extract are added to some fine brandy and the rest of the one ounce bottle is filled with distilled water. The dosage is 4 times per day for the mental side.
- From Nelson and Co., Ltd. 73 Dukes St., Grouner Sy, London, England, W1.
- Reading Referral: "THE 12 HEALERS AND OTHER REMEDIES," from C.W. Daniel Co., 60 Muswell Rd., London, England, N.10.
- The book is also available from the Mayflower bookshop.
 - 23136 N. Woodward Ave., Ferndale, MI. 48224
 - Phone number is 313-548-1941.
- Reading referral: "THE BACH REMEDIES REPERTOIRE," BY E.J. Weller.
- Reading referral: "THE BACH REMEDIES NEWSLETTER" from Edward Bach Healing Center, Mount Vernon, Sutwell Rolingford, Berkshire, England.
- Other reading referral: "THE BENEFITS OF THE BACH FLOWER REMEDIES," by Jane Evans. "HANDBOOK OF THE BACH FLOWER REMEDIES HEAL THYSELF," by Edward Bach. "BACH FLOWER REMEDIES," by Nora Week and Victor Bulen.
 - These are all available from the C.W. Daniel Co.
- They work well with people, especially those with despondency or despair.



Temperal Tap

-Reading referral; "PSYCHOLOGY OF CONSCIOUSNESS", by Robert Ornstein. Published by W.H. Friedman and Co., 660 Marcus St. San Francisco, California 94104 or 58 Kings Rd., Redding, England RC13AA.

-Thank you Pete Negurian for recommending it.

The beginning came from a European News Week article on a Czech doctor who was using temperal bone manipulation to influence smoking. We tried unsuccessfully to relate this or the T.S. Line to smokers, nonsmokers, etc. and we found he was deceased.

-Reading referral; "SLEEPING THROUGH SPACE", by Alexander Cannon M.C. Published 1st in 1934 by Ryder and Co. Paternester House, Paternester Row, EC4 London, England.

-The original idea of temperal tapping was outlined by him.

-In later parts of the book, an old Chinese technique is discussed, where childrens' temperal bones were tapped who were encouragable and didn't respond well to training.

-We tried the technique and found it was unsuccessful.

-In attempting to correlate together the T.M.J., the temporalis and the Homuncular Activity of the T.M.J., it became obvious that 98% of the T.M.J. problems resolved themselves to one side or the other. Many related themselves to the Masseter or Buccinator muscles. They were reactive to the external pterygoid. The Temporalis muscle which closes the mouth was hardly ever involved.

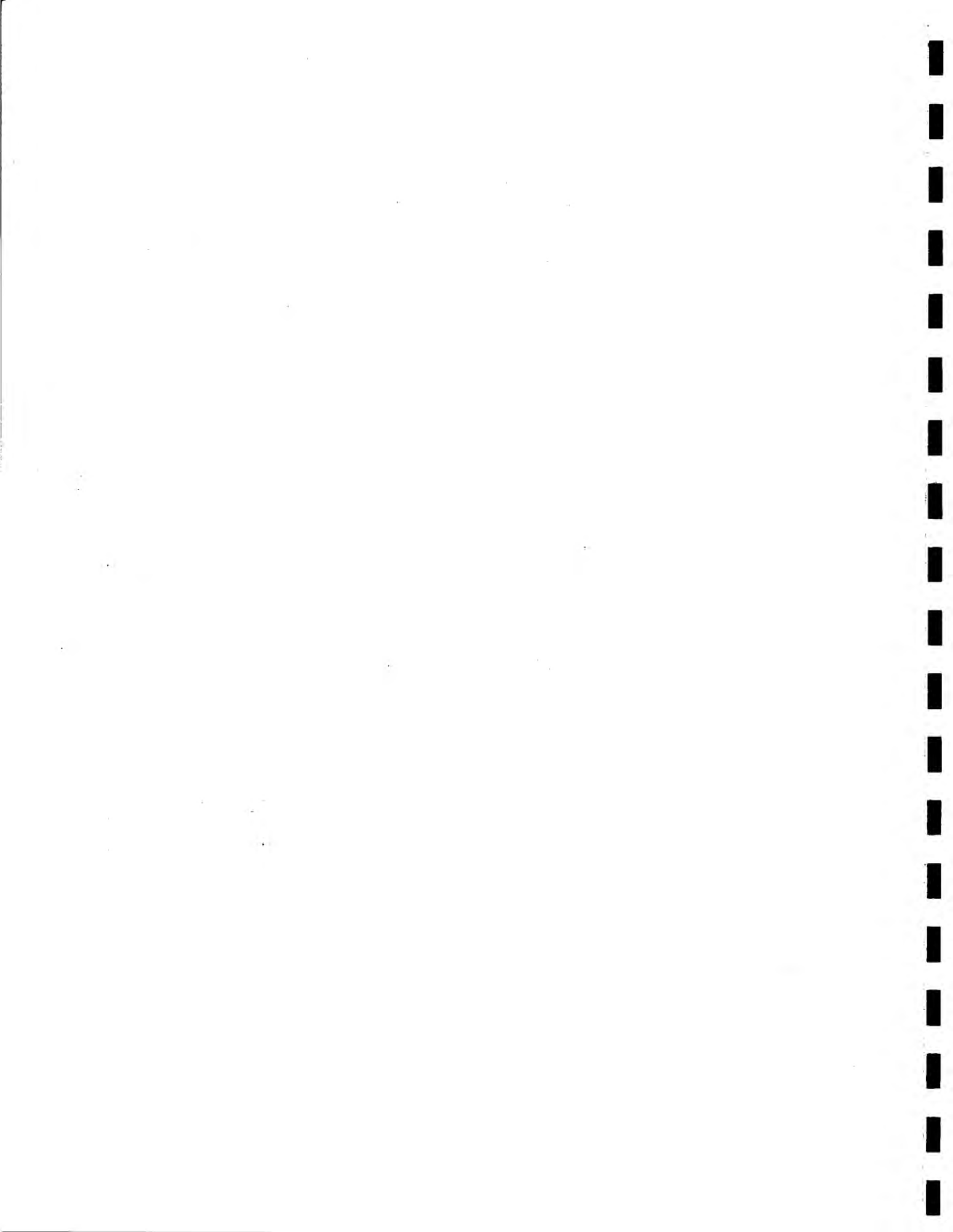
-Perhaps the Temporalis muscle was the monitor for the computer activity of the T.M.J. Homuncularly the number of brain cells associated with the T.M.J. is enormous, for example, 3,000 to the T.M.J., 300 to the Sciatic nerve and whole leg. This is therefore the means by which we get through the filter. For example, if you're given wrong information about yourself, you will disagree. (Ie; "You are 26" tall") There is a filter which accepts or rejects and we can bypass the filter.

-Test a muscle. Tell the patient, "Don't do me any favors, this muscle will test weak. "Test it. It will be strong. Now once again tell the patient, "Don't do me any favors, this muscle will test weak." While you are saying this tap vigorously and quickly with your right hand along the patients' left T.S. Line from front to back and the muscle will test weak. This will not happen if you word it that way and tap the patients' right side, only the left. The patient can make his own muscle weak by saying it will be weak while tapping HIS left T.S. Line with HIS left hand.

-The temperal tap can be used for therapy for an unacceptable habit. Be careful of semantics! The patients' left side takes positive input and the patients' right side takes negative input.

- ie. Left: "You get along fine without smoking, eating, drinking, etc."
Right: "There's no need for you to smoke, eat, drink, etc."
- For proper use, the doctor taps the patients' left side with the doctors' right hand with positive input statements. Patient can tap the left side with the left hand with the same statement.
 - The doctor taps the patients' right side with the doctors' left hand with a negative statement. The patient can tap his right side with his right hand with a negative statement making sure to follow T.S.Line from the ear forward then back to the mastoid.
- When a patient sets his jaw, you can't penetrate the filter indicating this is a function of the T.M.J.
- Sometimes a patient taking a deep breath negates this potential.
- In patients' with chronic temporalis hypertonus, you can't get through the filter.
- The temporal tap can be used to monitor the 5 factors of the I.V.F.
- To check if you've treated a reflex long enough or if other factors are involved. A muscle tests strong, have the patient retherapy localize the reflex and temporal tap the patients' left T.S.Line. If the muscle now weakens the reflex needs longer treatment or another factor needs to be fixed.
- The left side is the audit section of the temporal tap.
- The right side is the audit section for the patient needing pre or post ganglionic activity.
- This system allows you to double check whatever factors you've been trying to accomplish.
- This system does not work off a doctors' mind set. The patient must understand what you are trying to say. For example, you can't tell them that their muscle will test weak in french. Unless the patient understands french, it won't work. You can have the patient read a written statement in their own language while you tap and it will work.
- This system can be used therapeutically. For example, put patient on blocks correctively and temporal tap them, and the correction takes place. If it doesn't, treat it in the usual fashion.
- Fixations don't normally therapy localize unless there's a respiratory involvement. Have the patient therapy localize an area of fixation.
- Useful for diagnosis, monitoring five factors of I.V.F. and behavioral modifications.
- Some uses of temporal tap are musicians with particular passage problems and athletes who can't overcome a certain effort.
- When using temporal tap, therapeutically or on an audit basis there is no need for audition, the tap alone is enough.

- Input is both on an audio and/or video basis. It is important to understand, it has nothing to do with what you're mind is thinking.
- This technique has extraordinary potential.
 - reading referral; "COMPLEMENTARITY IN BIOLOGY QUANTITIZATION OF MOLECULAR MOTION", by James Isaacs and John C. Lamb. Published by John Hopkins Press, Baltimore, Maryland.
 - my thanks to John Diamond who recommended it.
- Covering the T.S.Line with lead seems to stop it.
- Tap the T.S.Line as rapidly as you can. This is the stimulation that works. Also, the back of the hands works as well but on the opposite side, indicating a biomagnetic effect.
- The temperal tap helps to cement a correction. For example, if a patient says, "I'm feeling better.", have them repeat it and tap their left side while they say it.
 - some good papers from the winter meeting are:
Jerry Deutches' Ligamentous Concept and Earl Colums' Hamstring Muscle Reactive to Sacralspinalis.



DR. GOODHEART'S RESEARCH TAPES

TAPE 31

The Audit Potential of the Temporal Tap

- Audit the five factors of the I.V.F. by having the patient therapy localize to one of the factors and temporal tap the patients' left T.S. Line with your right hand and re-evaluate a muscle. If any of the factors need further attention, the muscle will weaken.
- You can re-challenge an area you adjust and temporal tap the patient if there wasn't sufficient structural setting, a muscle will weaken.
 - Thank you, Carl Hawkins, for presenting your material on this, on A Vertebral Basis.
- Contact any two reflexes and temporal tap. If a weakness occurs, it indicates a need for nutritional support. Have the patient chew appropriate nutrient and re-temporal tap. The patient should respond with strength.
- The temporal tap can be used to alter behavioral habits (Tape 30).
 - use temporal tap, tapping the patient's left T.S. Line with the doctor's right hand or the doctor's left hand on the patient's right T.S. Line or the patient's own left on left or patient's right on right, using a positive statement on left, (You'll get along fine without smoking.") and/or a negative statement on right, ("There's no reason for me to smoke.")
- This must be reinforced because the habit has reinforced the habit. It's a Pavlovian Procedure. Many people don't know that Pavlov's dogs after no longer being stimulated with meat powder but just the bell, eventually stopped salivating and once again the dogs had to be reconditioned.
- The temporal tap is ineffective when the temporalis is in a hypertonic state.

Pelvic Findings

- Category I shows when a patient therapy localizes with one hand over each S.I. joint simultaneously, it fixes with blocking.
- Category II shows with one hand only on one S.I. joint at a time, fix it osseously.
- S.I. Respiratory Fix will therapy localize with one hand on the sacrum and one hand on the iliac crest. If weakness shows have patient inspire. If it abolishes the weakness fix it by having the patient breathe in. The sacrum is pressed forward coincident with inspiration and the ischium is pushed superior towards the ceiling. With expiration, abolishing the weakness a basic contact is taken and simultaneously the ischium is pushed from posterior to anterior coincident with expiration.
 - Patients' complaints may be one of fatigue, postural hypotension or a low back that just won't fix.

The T.S. Line is Reproduced in the Dental Area.

- Starting with the T.S. Line at the psoas, this represents the lower teeth at rearmost (erupted or nonerupted) molar. We run forward until central incisors, then up to upper central incisors (neck flexors). Then backwards to rearmost (erupted or nonerupted) molars, represents trapezius area as on the T.S. Line.
- Therapy localizing to the teeth, unless dental pathology is present, is of little value.
- Therapy localize to appropriate T.S. Line indicator muscle and stimulate. Therapy localize the tooth associated with it. Usually nothing happens, but while doing this, have the patient lightly tap their teeth together. There's immediate weakness of the involved muscle.
- Each tooth, therefore, is also associated with an organ system.
- This is in parallel with what Dr. Willie May has said for some time, that the teeth and vertebral segments are related.
- Therapy involves challenging the tooth or area where tooth was if removed, for a direction that causes a weakening of an indicator muscle. Find a phase of respiration that abolishes it and treat it just as you would a vertebra, by pressing in the direction which caused weakness with the phase of respiration that abolished the weakness.
- If a caudal or cephal direction is involved, a dentist may be needed to alter that challenge.
- The edentulous person will challenge, because the nerve is still present.
- Remember you can't therapy localize till the two jaws are in opposition to one another.
- If a muscle shows on the T.S. Line and you check all the five factors of the I.V.F. and they're all negative, temperal tap the patient while patient therapy localizes to a reflex point and if weakness shows, that reflex or neurological tooth needs treatment. Check tooth involvement by having the patient bring their teeth lightly together while checking the muscle in question.
- If it is a 10 percenter, it will only show against the organ tooth muscle that are related.
- If tooth is a major source of irritation to the nervous system, when you challenge the tooth any muscle will go weak.
- If the tooth is somewhat involved, seek some dental help. Also be sure the occlusion isn't off, buxism, T.M.J. or other factors aren't involved.
- The jaw computes much information and the teeth are the terminals in a vast computer.

More T.M.J. Information

- One would assume the spindle cell of the Buccinator is in the belly of the muscle. This doesn't seem to be the case. The spindle cells seem to operate from up to down rather than from front to back. It must act as a jaw closer as well as a cheek compressor.
- Thank you, Dave Walter, for the slides and book presentation which is an excellent visualization of the concepts of Applied Kinesiology.

DR. GOODHEART'S RESEARCH TAPES

TAPE 32

The Homuncular Activity of the T.M.J.

- Pages 94 and 95 of the 1976 workshop procedure manual diagram The Motor Homunculus, by Penfield and Rasmussen. There is also a Sensory Homunculus.
- Page 73. Another diagrammatic representation of the Homuncular nucleus showing the number of brain cells devoted to an area.
- Over half of the sensory area is directed to the oral cavity.
- Over half of the motor area is directed to the oral cavity.
- Every time our teeth come together, our entire nervous system is programmed. It's dependent upon the positioning of the teeth, mandible and maxilla. The teeth are like terminal endings or stations on the computer.
- The jaw muscles are the most responsive muscles due to this large homuncular bias.
- Willie May was the first to give computer representation of the T.M.J.

T.S. Line

- Represented in the teeth.
 - Lower erupted or nonerupted molar (Psoas)
 - 2nd molar (sartorius, quadriceps, gracilis)
 - 1st molar (pectoralis major, sternal, hamstrings)
 - 2nd Premolar (quadratus lumborum)
 - 1st Premolar (gluteus maximus)
 - Canines (T.F.L.)
 - Medial and Lateral Incisors (piriformis, adductors, gluteal medius)
 - Upper erupted or nonerupted molar (middle trapezius)
 - Medial and Lateral Incisors (neck extensors and flexors)
 - Canines (subscapularis, deltoid, sartorius)
 - 1st Premolar (coraco brachialis, popliteus)
 - 2nd Premolar (pectoralis clavicular, diaphragm)
 - 1st Molar (latissimus dorsi)
 - 2nd Molar (abdominals)
- These do therapy localize. Some T.M.J. correcting may be needed before utilization. Occasionally the teeth may need to be put into apposition. They also may have Lovett Relation of a lower and upper tooth.
- Anecdotal: patient with C-3, C-4 fracture with loss of function below that level, having the right foot temperature monitored, all efforts to change the temperature were ineffective until the 1st Premolar was contacted as the T.S. Line indicator indicated. The acupuncture indicator

caused the best change.

- Thank you, John Diamond, for your input. He suggested therapy localizing with the tongue and it's effective.
- The tongue is a Relay Reset Mechanism. If the tongue is placed against the upper teeth, any weak muscle will test strong. The minute the tongue is removed, weakness returns. So, have the Relay Reset (tongue against the upper teeth) when one is fixing any factor of the I.V.F. for correction, it reduces the time needed to treat the factor.
- The only effect like this on the mandible is for therapy localizing.
- One can show the function of the Homuncular nucleus by doing a gait test. Have the patient take a step with the left foot and test the right latissimus and it will test weak. If the individual pulls his jaw back (putting the temporalis into spasm) while doing the above, the latissimus will test strong.
- We have at our disposal a switchboard, which is never busy, always functions and is capable of remarkable numbers of impulses.
- In patients with T.S. Line involvement, one finds the involved tooth challenging for a direction on said tooth which will cause a weakness. When this is found, find a phase of respiration that abolishes said challenge and fix it by pushing the tooth in the direction that caused weakness with the phase of respiration that abolished it.
- Anecdotal: a patient with Parkinson-type shaking, which came on following a hysterectomy, was set up to monitor her temperature. When the T.S. Line was palpated, the temperature increased when the Pect. Clavicular was contacted. I held the contact there with the temperature increase. When the neurovascular center for the pect. clavicular was contacted the temperature increase augmented by the patient placing her tongue in contact with her upper teeth.
- The T.S. Line can be used diagnostically and now therapeutically holding a light contact on the T.S. Line area involved with the patient contacting the upper teeth with their tongue and we continue to use the auxiliary contacts.
- The T.S. Line is the externalization of the Homuncular nucleus. Piggy-back that with the tongue reset mechanism of touching the upper teeth with the tongue.
- Anecdotal: A patient with Tic Douloureux got an 8 degree temperature increase while the patient was touching her upper teeth. When she removed her tongue it dropped 6 degrees and the pain returned. Upon putting the tongue back, it went up 8 degrees again and the pain dissipated

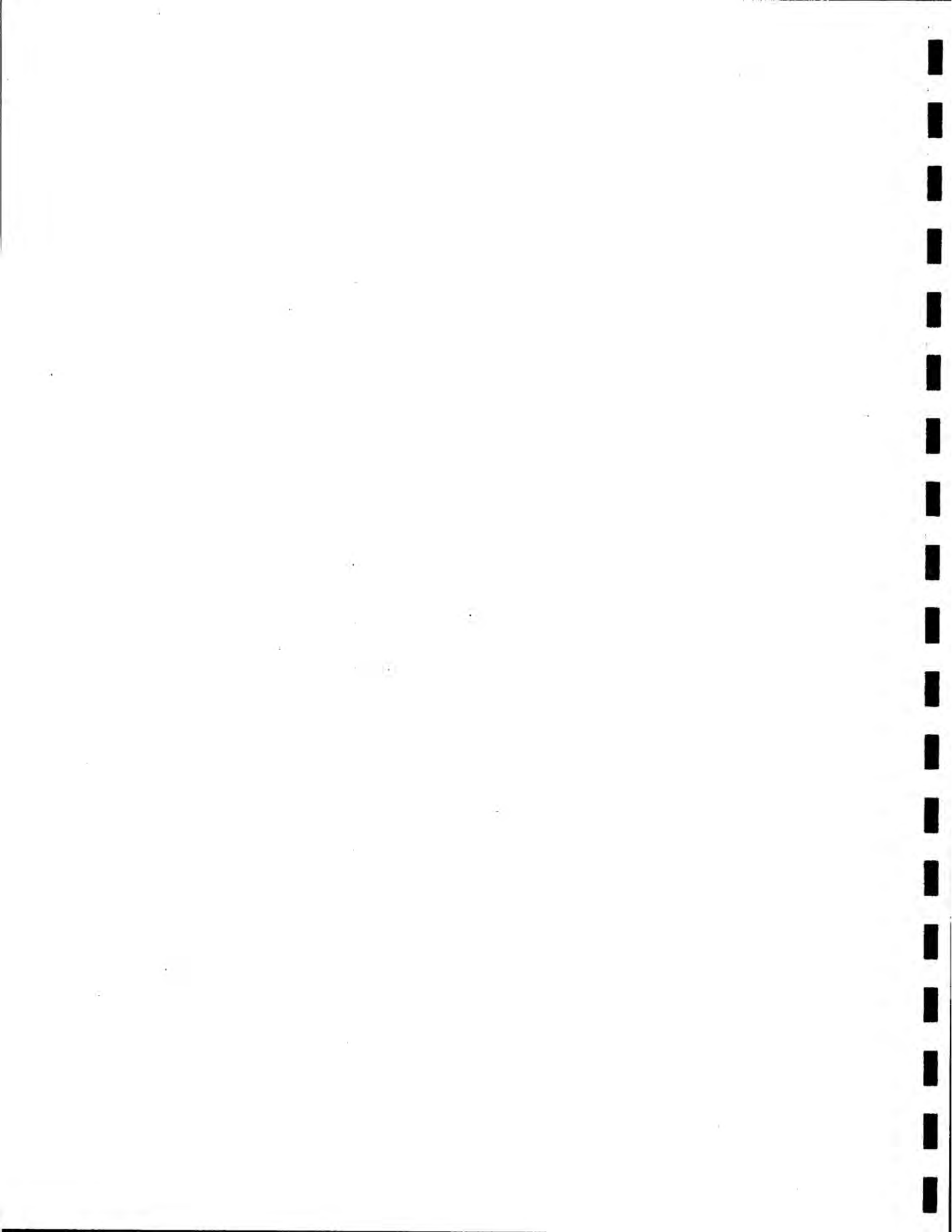
Gag Reflex

- Use temperal tap to decrease it, with the dentist's right hand on the patient's left. ("You get along fine without gagging.") With the dentist's left hand to the patient's right T.S. Line, ("There's no reason for you to gag.")

T.M.J.-(continued)

- The T.M.J. is a Ball and Socket joint. All the Ball and Socket joints seem to have a relation to one another.

- The rest of the Flexion type joints have continuous proprioceptive firing. Ball and Socket joints fire at intervals to let you know the positioning of the joint.
- As a result, if you have a patient with a negative T.M.J., but who has an articular problem of the Femur, Humerous or T.M.J., therapy localize one T.M.J. and contact the appropriate other joint (Femur or Humerous) in dysfunction. First check that none of the joints themselves don't therapy localize in the clear. In a reflex pattern associated with the T.M.J., when you therapy localize the two joints together, you will get a positive reaction. Having found it along with the direction of the Jaw movement that caused it (i.e., open or closed, etc.), put the involved limb into a position which neutralizes this reaction and fix the T.M.J. with the extremity in question in that position. Usually this will abolish the pain that a patient experiences while a joint is in motion.
- We have found the T.M.J. to be useful when dealing with difficult or slow responding patients.
 - Reading referral: "NEUROLOGIC ANATOMY IN RELATION TO CLINICAL MEDICINE," by A. Brodal. Read pages 194 and 195 on Homuncular Nucleus.
 - It may be as logical to apply the above to hinge joints also.
- Patients who show therapy localizing an area of the spine but on specific therapy localization showed negative.
- Also patients who therapy localize negative with hand over cranial bones but positive with two hands over cranial bones indicate resonance.
 - The frontal bone resonates with the cervicals.
 - The front portion of the Parietal resonates with the upper 6 Dorsals.
 - The middle portion of the Parietal resonates with the lower 6 Dorsals.
 - The posterior portion of the Parietal and including the Temporal resonates with the lumbar.
 - The Occiput resonates with the sacrum.
- Therapy: Once identification is made (have the patient therapy localize those areas of the head and/or spine), check it against respiration finding the phase which relieves it, also check it against ionization. Run that portion of the cranial bone through its normal range of motion with that phase of respiration and do the same thing simultaneously with that area that is involved in the spine.
- One is trying to get all of the cells to live and die at the same rate and that is basically HEALTH.



DR. GOODHEART'S RESEARCH TAPES

TAPE 32-B

(For all those attending I.C.A.K. Seminar in Detroit)

Resonance Theory (continued)

- An old chiropractic technique enlisted doctor placing hands over these areas. He felt the patient receive energy. It wasn't successful, yet the basis is reasonable.
- The patient therapy localizes to a cranial bone and muscles are tested. If the muscle weakens and the cranial faults are corrected, respiratory assistance is used to find a phase of respiration which abolishes it. Then phase one more step with specific nostril for ionization.
- Patient does the same with the appropriate area of the spine.
 - Frontal: Cervical
 - Front portion of the Parietal: Upper dorsal
 - Mid parietal portion and temporal: Lower dorsal
 - Post portion of Parietal: Lumbar
 - Occiput: Sacrum
- If positive, doctor runs the appropriate segments through their proper range of motion with the proper respiration and ionization.
- We want to get all the cells to live or die at the same rate which is HEALTH.
- Anabolism: growth - more cells live than die = children.
- Metabolism: Gives normal size patterns = adults.
- Aged: More cells die than are produced.

Cloacal Reflexes

- Reading referral: "SPINAL TOUCH," by Rosenquist.
- Concept from Hurley and Saunders' "Aquarian Age Healing," before Hugh Logan's Basic Technique.
- Reflexes were talked about in the old N.C.A. journal.
- Found in animals that conjugate in sexual union.
- Cloacal means "sewer, "a primitive sex organ in lower animals."
- Lower animals touched in non-cloacal area, the animal moves away. If you touch them in a cloacal area they move towards the probe.
- They are a centering device.
- Light technique used by Hurley and Saunders in the early 30's, Dejarrette contacts and Logan's Basic Technique all utilized activity of the cloacal reflex.
- Located para-rectally and the middle half of the buttocks on either side.
- Patient therapy localizes this area lightly with no tugging to the area palms down or up. Test appropriate muscle for weakness, then therapy localize for one side. This is the side of inactive cloacal reflex.
- It works like an automatic pilot.

- It is perhaps involved with idiopathic scoliosis in young girls, due to sexual relations of reflex and the onset of puberty in young girls. In a failure to cycle properly the corresponding cloacal that is inactive allows for inappropriate centering information and the scoliosis develops.
- Usually the anterior buttocks is inactive reflex that needs treatment, one-sided or sometimes bilaterally.
- Make certain that patient isn't picking up a Category I, Category II, or Sacral involvement with their therapy localizing.
- Patient therapy localizes to medial buttocks, find a weakness and a phase of respiration that abolishes that weakness.
- Treat the patient on the side of the weakness exerting pressure on the lower portion of the gluteals. The farther the patient is from the center of the plumbline the closer the contact is to midline. With a minimal lateral distortion the contact is closer to the mid buttocks. The direction of the contact can be found by the patient pulling the buttocks until a direction of strength is found. The greater the distortion, the more vertical the contact; the less the distortion, the more diagonal.
- Vitamin E is the nutrient of choice.
- Thank you, Dr. Rosenquist, for the information.

Spinal Scoliosis

- Sacral spinalis and reactivity to the hamstring as presented by Earl Colum.
- Briefly, the patient attempts to arch the back backwards and then the hamstrings are tested. If weakness occurs, one must find the level of reactivity in the sacral spinalis group.
- One finds these areas by using a strong indicator muscle. Then challenge the area of the muscle by first, approximation of the thumbs and then second, by the separation of the thumbs. When one finds a weakness, you treat that area of the muscle with the phase of respiration that abolished that weakness.
- The couple above, along with cloacal activity, intrinsic and extrinsic muscle work to get maximum function, measuring the patient's height before and after. For success of the treatment, it should increase at least $\frac{1}{2}$ inch.

The Patient Who Can't Read or Study. They Fall Asleep or Fail to Comprehend the Written Word.

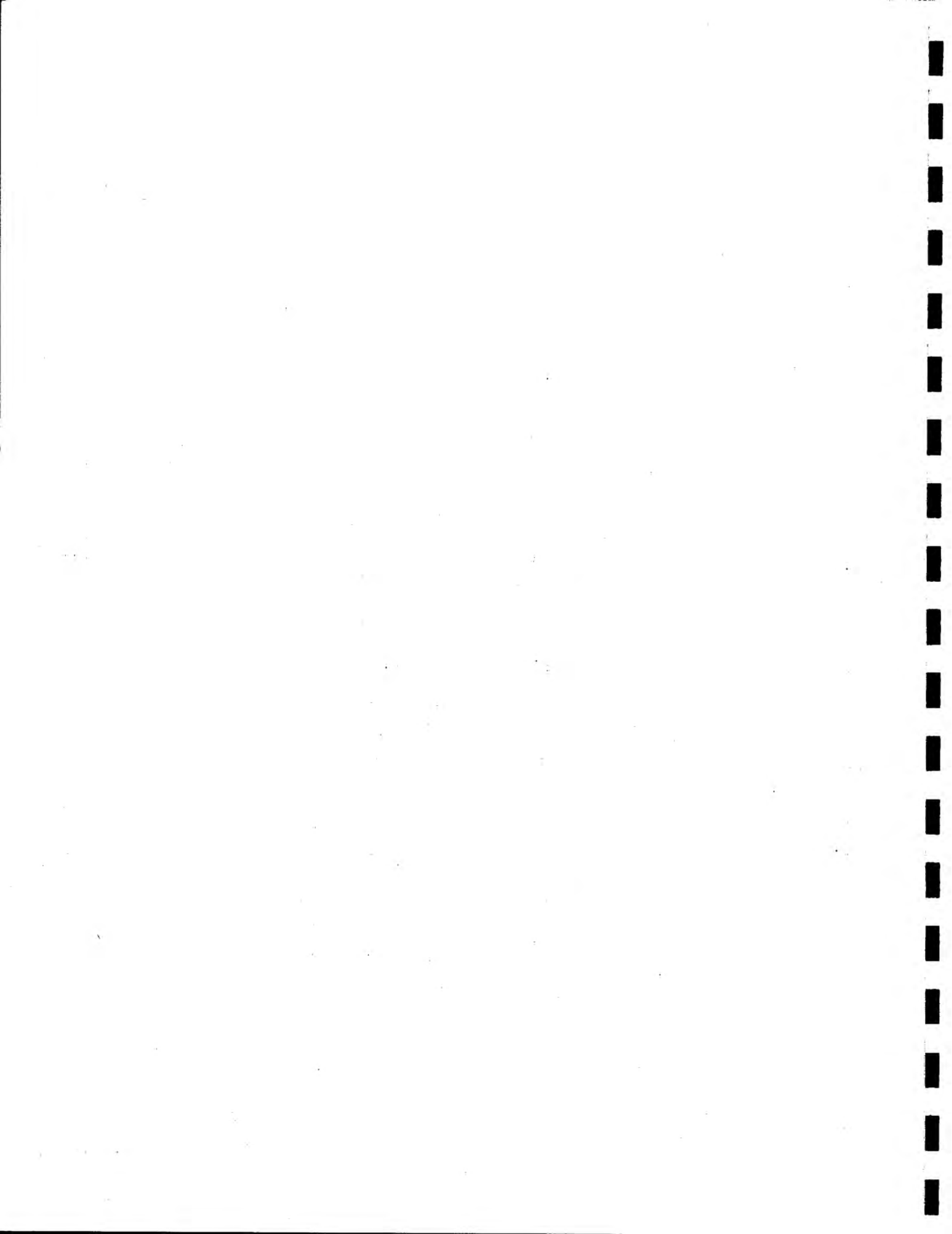
- Hypoglycemia, Hypothyroid, and patient's refraction.
- Test for a variant of ocular lock.
- Have the patient read something testing a muscle, weakness occurs. That won't occur if the patient reads a passage backwards.
- Reading is a voluntary nystagmus.
- Many patients have ocular lock through no fault of their own.
- Stimulate umbilical K-27 to unswitch the patient. This is a particular switching invoked by a habit pattern. Ocular lock technique assists the individual in abolishing this syndrome.

With Recurring Dental Treatments

- Use zinc, zypan or Pantrophic Extract (N.D.)
- Reading Referral: "THE SECRET OF SPIRIT THOUGHT MAGIC," Frank Rudolph Young, published by Parker Publishing Co., West Nyack, NY. Describes ancient Chaldean Technique used as Temporal tapping.
 - Thank you, Dr. Tucker.
- Discusses release phenomenon of Jackson.
- Reading referral: "MENTAL AND ELEMENTAL NUTRIENTS," by Carl C. Pfeifer. Keats publishers, New Canaan, Conn.
 - breakdown of essential nutrients, toxic effects of heavy metals, etc.
- Light, humorous reading.
- Serum Zn-----100 mg/%
- Serum Cu-----110 mg/%
 - .-no higher or lower. Most labs have wider ranges.

After Structural Correction

- Temporal tap and rechallenge to check the adjustment
- Use Ostogen as nutrient in reactive muscles and Zinc also.



DR. GOODHEART'S RESEARCH TAPES

TAPE 33

Article: "ANTHROPOLOGY AND REFLEX TECHNIQUES", August, 1948 N.C.A. (now it's the A.C.A.) Journal, written by Ronald Watkins, D.C., 60 Somerdale Square, Ontario, Canada.

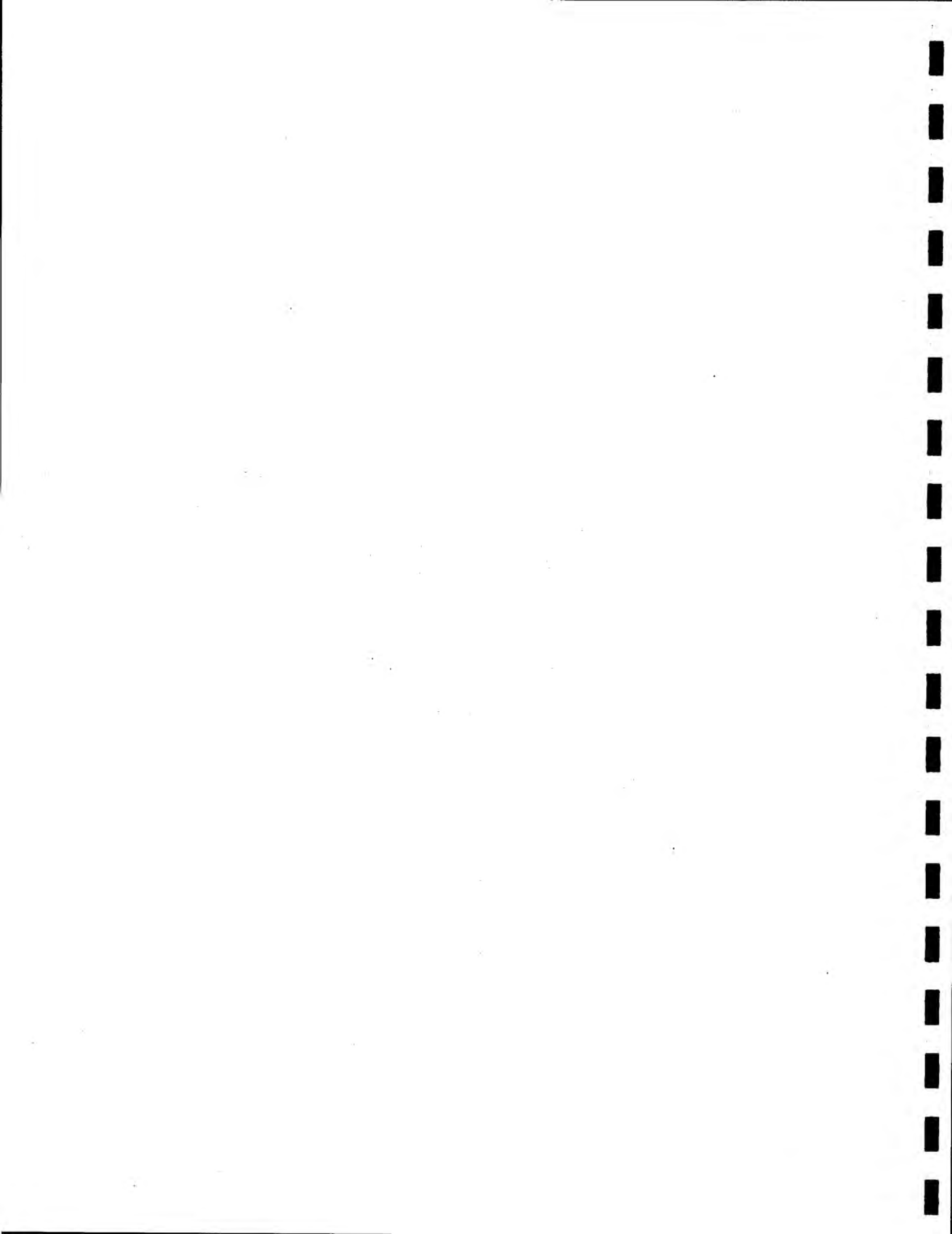
- discusses cloacals.
- on humans the Conscious erotic zone is genitally located.
- The Subcortical, Sacral, Postural Reflexes are anally centered and are activated by light perianal contacts. These are the neurological basis of all pelvic reflex techniques.
- Reading referral: "AQUARIAN AGE HEALING," by Hurley and Saunders.
- used light perianal contact, Logan Basic and some S.O.T. techniques. Also, use perianal contacts.
- Watkins worked with cows using perianal touch medial to Ischial Tuberosity; the cows moved toward it.
- If the contact was lateral to the tuberosity, the cow moved away from the contact.
- Cloacal: means sewer.
- these reflexes are both perigenital and perianal.
- they're centering reflexes to keep the spine straight.
- Reading referral: "BIOLOGY TODAY," from C.R.M. Books, Delmar, Cal.
- has good review of cloacal and homuncular nucleus.
- page 307 there is a diagram of snake cloacals.
- the centering for sexual conjugation is instinctive.

Labyrinthian and Neck receptors which are hooked up with the tonic Labyrinthian reflexes (T.L.R.) and the (T.N.R.) Tonic back reflexes.

- Reading referral: "UNDERSTANDING THE SCIENTIFIC BASES OF HUMAN MOVEMENT," published by O'Connell and Gardner's Book.
- They make a good case for the T.L.R. which are supplemented by the Labyrinth and Righting Reflexes whose purpose is to orient the head correctly with gravity. There's a whole series of Righting Reflexes which are dominated by the equilibrium Reflexes.
- We have a system of pelvic alignment, Cloacals, and a system in the head hooked up with the T.L.R. and the Visual Righting Reflexes to serve to keep the head in the center of the pelvis and to keep the occiput centered to the sacrum and to keep L5 centered to C11-Movement of the endolymph in angular and Rotary motions of the head. Stimulate the ampulla of the canals situated in line with the movement giving impulse to antigravity muscles as Gardner and O'Connell talk about.
- The supine position or position of the head as such stimulate the extensors and inhibits flexion while the prone produces the opposite response.
- These Labyrinthal reflexes are basically postural in character and are important in the differential distribution of muscle tone.

- Imagine a person taking a step with the right foot. All the muscles bringing the right foot and left arm forward are facilitated and their antagonist are inhibited and vice versa for the opposite extremities. Yet many patients show they are in this position even though they are in a prone or supine position.
- We find a high percentage of people, it's just as though their body thinks they're taking a step with their right foot or left foot. With right foot step, the right foot doesn't turn in as well perhaps due to hypertonicity of the lateral rotators, psoas or piriformis. Or weakness of opposite piriformis or psoas when found with facilitation of the pectoralis group on the opposite side. Also the anterior tibial and peroneal muscles will be strong on the side of the facilitated lower extremity. The opposite anterior tibial and peroneal muscles are weak and the converse being true for the gastroc soleus and post tibial.
- If this is found, have the patient therapy localize the cloacal reflexes, placing the hands over the groin area and test an appropriate muscle. Then do the same for the post cloacals over the medial third of the buttocks (noting which side is weak any combination is possible). Then have the patients therapy localize the mastoid processes which are hooked up with the T.L.R. and observe for positive therapy localization. If they are positive, then have the patient therapy localize the supraorbital foramen just above the eye. These are for the visual Righting Reflexes. Note on which side weakness occurs. If the patient Double therapy localizes with the eyes closed the weakness is abolished.
- We can jump start the patient if our hands are wetted. This was found with pts. that were sweating vs pts. that were not sweating. It is something like wetting the reflexes at the T.S. line or wetting the hands to augment a therapy localization.
- Use appropriate basic contacts for cloacal threatment.
- If you get a negative therapy localization to a spinal area, put the patient in a walk position with one leg and opposite arm forward and re-challenge areas in question.
- Hold the Cloacal reflex involved with the mastoid or the Supraorbital area involved for approximately 30 seconds with wetted hands.
- This treatment just puts the plane on course, and it doesn't land or take off. It's like setting the Automatic pilot.
- This is a synchronization technique of the Cloacal reflexes to the T.N.R.'s visual righting reflexes and T.L.R.'s allows the alignment of Lovett Brothers to occur.
- In a nutshell, analyze the patients' leg turn in pattern with decreased leg turn in, opposite triceps shows weak and opposite pectoral clavicular test strong, opposite anterior tibia and peroneus tertius is weak. Ipsi peroneus tertius and anterior tibia are strong. You get a pattern which looks like the patient is stuck in a walk pattern with one foot or the other forward. You may be looking at the beginning of that movement with the foot forward or the end with the opposite going backward.
- Having found this patient, therapy localize to Cloacal areas palm up and down and over the mastoid processes and the supraorbital foramens.
- Then wet your hands and contact the appropriate Cloacal reflex with the appropriate mastoid or supraorbital area involved. Areas are held for 30 seconds.
- With eyes closed the above pattern will disappear.
- Not a primary treatment, it's a good post adjustment technique.

- Reading referral: "THE RESURRECTION OF THE BODY," by Edward Meisel. Published by University Books New York.
- appendix #3, Frank Jones discusses methods of changing postural sets, working with different head and neck reflexes.
- they talk of secondary effects of respiration on head and neck reflexes.
- head and neck reflexes are affected by the eyes position in the orbit.
- H. Deklein, Dutch publications in 1920, demonstrated how the head and the neck reflexes are affected by the eyes' position in the orbit. When the eyes moved down, the head was dorsiflexed. It was the ventriflexed with the eyes up and the same shifts in eye position took place when the head was fixed and the trunk was moved. Ross did the same thing with human infants in 1927.
- Ross' research was in Germany in O. Geburtstrauma und Gehorjen in Acta oto Larngeologia, 1927 1173108.
- T.M.J. therapy localize if negative. Have the patient chew something and this will bring many faults out.



DR. GOODHEART'S RESEARCH TAPES

TAPE 34

Reading Referral: "TOUCHING," by Ashley Montague. Published by Perennial Library, Harper and Row Publishers.

- Page 16 discusses washing of mammalian mothers is more than washing, it helps the newborn survive turning on the gastro-intestinal and genito-urinary systems. Cutaneous stimulation is needed.
- The skin is not just a covering, it is a senses organ of high importance.
- There are higher ab titer in rats that are handled since infancy. The rats in general are healthier.
- It was found that de-fleaing hedgehogs was not good for them. They may be providing a skin circulation stimulus.
- Montague says, "No organism can live very long without external cutaneous stimulation."
- Tactile deprivation in infancy usually leads to behavioral problems in later life.
- Superior Plastics in Chicago, Illinois, used to have a good model of the different sense organs--The "How We Live" series, The "Anatomy of Touch".
 - "The Anatomy of Touch" shows the five types of nerve endings:
 - Cold-----Krause Receptors
 - Touch-----Meisner Receptors
 - Warmth----Raffin Receptors
 - Pressure--Pacinian corpuscles
 - Pain-----Beaded (fast pain)
- We've all observed a weak Latisimus on the side of a high Shoulder. Checking all five factors of the I.V.F., opposite hamstring being reactive to it, etc.
- How does a muscle know to let go when another is contracting?
- If you find a high shoulder laterally that isn't weak, try stretching the skin over the area of the Latismus, pulling the skin in a caudal and cephal direction simultaneously then test the muscle again and if it weakens, it indicates it's the skin that tells the muscle to release.
- With movement, the skin is stretched to varying degrees, telling the structures within the amplitude, direction and speed of the movement taking place.
- Normally, the skin does not respond to a simple stretch unless there is an involvement.
- Analogy: Someone's dropping something off at your house at one. When he comes the doorbell doesn't ring an neither one knows the other is there. Sometimes the skin is like this. We've got to reset the doorbell, reactivating the skin receptors.
- We found many areas of the skin where it stretches, particularly with certain movements.

- We found a gravity factor to skin. Patient with a high shoulder and you can't find a weak Latisimus by usual methods. Stretch the skin over the belly of the Teres Minor. It would cause a weakness, but if the patient's position was now in an antigravity position, this challenge was negated. We had the patient go to various reflexes and pull down towards the feet. This would immediately bring out the weak Latisimus. We then activate those circuits.
- Explained why in organ dysfunction without an associated muscle weakness why we wouldn't find it. Now challenge the skin as an imperfect receptor. Have the patient pull in a direction over the various reflexes to bring the weakness out.
- At this moment footward seems to be the optimum direction.
- Having a patient therapy localize to a muscle neurolymphatic reflex abolishes the skin stretch over that muscle. Meaning the skin reflexes are not functioning due to a blockage or lymphatic congestion. Due to the neurolymphatic activity other reflexes may be necessary.
- Use therapy localization using skin stretch as an added diagnostic feature.
- When making a structural adjustment, challenge the skin above it. Many times the skin has to be moved in the opposite direction of the correction. Sharply tug the skin over a segment in the direction which causes strength.
- Give the skin a tug exactly opposite to the direction that caused weakness. Tug in the direction that caused strength on skin pulling.
- In extremity techniques we adjust in the direction that causes strength, the reverse being true with the vertebrae. The skin in these areas is tugged sharply in the direction that abolishes the skin challenge and activates the skin itself with the sharp tugging in the direction of strength.
- Reading referral: "UNDERSTANDING THE BASES OF MOVEMENT," by O'Connel and Gardner. Published by Williams and Wilkins.
 - They discuss existence of Raffini Spray endings. The proprioceptive chapter, page 209.

DR. GOODHEART'S RESEARCH TAPES

TAPE 35

Reading referral: "The Once Daily" (a dental Newsletter), #74, Nov. 1976.
Edited by Jerry Mittleman.

- Has three articles on Kinesiology.
- The Once Daily Inc. Box 4018, Grand Central Station, New York, NY 10017.
- A two-year subscription for \$45, individual copies are \$3.
- One-year subscription for \$26 which includes patient education materials.

Reading referral: "MYOFUNCTIONAL THERAPY IN DENTAL PRACTICE" by Daniel Garlaner.

- The second edition deals with abnormal swallowing patterns.
- Published by Bartell Dental Book Co. Inc.
- 112 Crown St., Brooklyn, NY 11225.

Reading referral: "An Educational Program for Patients with T.M.J. Dysfunction: Clicking and Its Prevention," by Nathan Allen Shore.

- He wrote "T.M.J. DYSFUNCTION AND OCCLUSAL EQUILIBRIUM,"
Published by J.B.L. Lippincott Co.

Reading referral: "THE HEALING MIND," by Dr. Irving Oyle.

- Information on Cross Crawling and the Temporal Tap.
- Published by Simon and Schuster by Pocketbooks. 1 West 39th St., New York, NY 10018.

The Homunculus

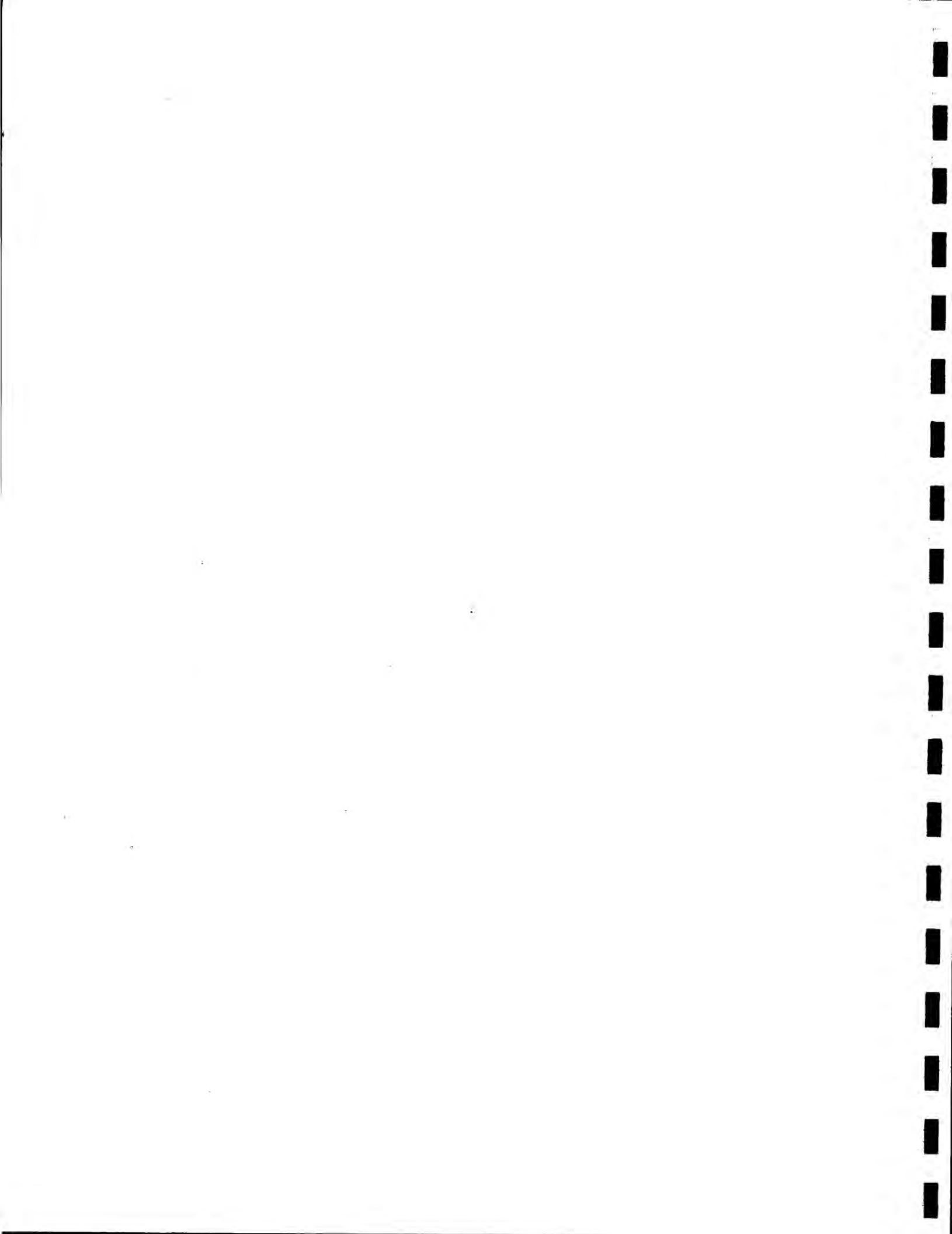
- 50% of the Brain cells (motor and sensory) are devoted to the Oral cavity area.
- 1976 research manual depiction of both motor and sensory Homunculus.
- Therefore the T.M.J. in terms of the number of Brain cells is the most important joint in the body.
- You can challenge the T.M.J. by the usual methods. Therapy localize with open, closing and lateralization, standing and sitting, etc.

Reading referral: "The Journal of the American Society of Psychosomatic Dentistry and Medicine," by Roy Mittleman.

- He discusses the T.M.J. problems causing many problems.
- The Jaw opens slightly on Inspiration and closes on Expiration.
- You can see this by having the patient hold posterior aspect of Ramus. Test a muscle negative with no fault, then the patient inspires. Test a muscle negative. Now deep breathe the patient. Pushing anterior muscle weakens, indicating you're preventing the Jaw from moving.
- The Maxilla moves up with Inspiration and down with Expiration.
- You can prove the Maxillary movement by having the patient grab the Central Incisors, pulling downward during the inspiration and the muscles weaken.

- The Glossal Muscles and their role:
 - The above patterns can be neutralized with tongue movement. If during the inspiration challenge above preventing Mandibular movement, the patient places their tongue behind the upper teeth, the challenge is abolished.
 - If when holding the Jaw forcibly open, and having the patient expire, the patient puts their tongue to the hollow of the mouth, the challenge will be abolished.
 - It's like the Tongue is a shear pin on the shaft of an outboard motor. As a result, any disturbance of the Tongue, T.M.J. or throat are important.
 - Another way to demonstrate the importance of the Tongue position is to put a Lead Square over C.V.1 or over any patient which doesn't weaken the patient placing the Lead over it. If a weakness occurs over these patients, Tongue placement on the roof or floor of the mouth neutralizes it.
- We follow Garlaner's suggestions on deviate swallow patterns and that the orbicularis oris should take between 3-5 pounds on a straight pull.
- Vas magian: muscles alive. In addition to the External Pterygoid opening the Jaw, the digastric also functions. It is a Suprahyoid muscle.
- Reading referral: "HEAD, NECK AND TRUNK," by John Warfel and published by Lee and Feiberger. Page 36 has pictures of digastricus. Its function is to raise the Hyoid bone on the base of the Tongue and to steady the Hyoid bone.
- It has a joint origin: the Mastoid notch of the Temporal bone and the digastric fossa of the Mandible. I feel it's responsible for the Jaw's unique involvement with respiration.
- Like Willie Mays said, "If the bones of the Skull move to pump the C.S.F., then the Mandible is the handle of the pump."
- The Tongue is the only muscle having only one end. This interests us with the Throat muscles and their rotation with the Tongue.
- There are six muscles associated with the Hyoid, the Mylohyoid, Stylohyoid, Geniohyoid, Digastric, Sternohyoid, Omohyoid, Thyrohyoid, and the Sternothyroid.
- Muscles are attached to the Hyoid, and going downward, Sternohyoid and the Sternothyroid.
- Muscles are attached from the Hyoid to the chin digastric and to other areas: Geniohyoid, Omohyoid and the Throhyoid.
- Omohyoid goes from the Hyoid back to the Scapula.
 - Its inferior belly attaches to the Scapula.
 - Its superior belly goes into the lower body of the Hyoid.
- Challenge the Hyoid in different position (i.e, move Hyoid from right to left and you get a muscle weakness which means you're testing the Stylohyoid on a reaction basis). Go to the belly of the Stylohyoid and do Spindle Cell activity to it.
- Reading referral: "THE BODY REVEALS," by Ron Kurtz and Hatar Pretera. Published by Harper and Rowe Quicksilver Books.
 - Talks of the body and removing excess chatter from the Nervous System when the body is in health.
- The Hyoid is directly related to the Tongue, and therefore the Homunculus nucleus, and is an important factor in many T.M.J. problems.
- Putting the Tongue into the Relay Reset in inspiration and to the floor of the Mouth on expiration effectively reduces most cranial faults and works even better when done with proper ionization.

- A good thing to teach those Dentists and Chiropractors who do not wish to get into cranial fault correction.
- Reading referral: "TOUCHING," by Ashley Montague and published by Perennial Books (paperback). The section of Harper and Row deal with the skin.
 - when we test reflexes, have the patient give a slight tug to therapy localize and this puts into the circuit the skin receptors which may be needing treatment.
- Why constipation can be such a problem is because the normal skin receptors are off.
- We know of normal constipation factors:
 - rectal reflexes, use of bile, proper amount of bulk and water, the right level of vitamin B, exercise, regular time.
- We do have problems finding patients who are constipated if we were not told they were. These patients do not show a weak T.F.L. consistently.
- In a patient who shows constipation without any of the usual signs, the patient therapy localizes over any area of the Large Bowel, then with the other hand therapy localizes the lips, breast tissue and the perineum. Where weakness is found, challenge the skin in that area for a direction that causes weakness and a direction that causes strength and tug in the direction of strength.
- In Utero there is no defecation but with the relative short birth time the skin receptors are not turned on. So in mammals the mother licks the perineum. Many humans don't require this, but some do.
- These circuits are hooked up with six areas.
- In your difficult constipated patients, try one hand anywhere on the Large Bowel and the other on the Lips, breast or perineum. In area found involved, have the patient tug in different directions till the direction of strength if found, then tug the skin in that direction that abolished the weakness.
- It is not a substitute for proper biliary function, Vitamin B, and the other normal factors.
 - Thank you, John Diamond, for this.



DR. GOODHEART'S RESEARCH TAPES

TAPE 36

RNA

- 1971, The Grey Research Bulletin. Dr. Benjamin Frank talked about RNA.
 - A new approach to Degenerative Disease.
 - He has written a new book by Dial Press. 1 Dag Hamerschold Plaza, New York, NY.
 - Reading referral: "DR. FRANK'S NO AGING DIET," which deals with RNA and DNA activity.
- We check for RNA need by doing cerebellar testing of standing on one foot with eyes closed. With lack of circulating RNA, patients won't be able to keep their balance.
- With a tape recorder you can erase the tape or turn the volume down to hear nothing. We can treat a patient the same way, erasing the symptom pattern or merely turning the volume down. In both instances the patient is pleased since the symptoms are no longer there.
- There seem to be a couple of ways patients respond. They get well gradually or get well quickly. Some plateau or did well, then it returned.
- I was treating a patient who therapy localized to an S.I. joint when I noticed accidentally that after the patient therapy localized for approximately two minutes the left S.I. joint didn't therapy localize and the weakness returned.
- I've also observed if you therapy localize the Corrugator Nasalis while frowning and then quickly therapy localize the Liver Acupuncture alarm point, the Pectoralis Sternal will test weak, but if you smile this doesn't occur. Perhaps this is a link between the Psyche and the Soma, the Acupuncture System.
- This is where the RNA concept comes from. Sometimes the Body forgets to remember to forget or sometimes the Body remembers to forget to remember.
- I had a patient I had a good history on who was three-quarters better but no structural problems were showing. With RNA orally structural faults appeared: Carpal Tunnels, I.C.V., and a Category II.
- Two patients I saw a couple of years ago who were feeling well when tested for their past problems were negative; however, when ingesting RNA the old problem reappeared.
- This is not an endorsement of routineism. It checks to see if the tape recorder has merely just been turned down or the tape erased.
- RNA will bring out symptoms with all the classical signs of that problem. It will not show a reaction of the facial muscles as discussed earlier with the frown. It remembers one thing and forgets another.
- RNA allows you to diagnose the problem more thoroughly.

- RNA is a memory and forgetful pill.
- (In reference to the face) Reading referral: "AN INTRODUCTION OF ORIENTAL DIAGNOSIS," by Michio Kushi. William Tara and David Elliot, illustrators, 12 Orpheus Street, London S.E.S. Published in Great Britain by Red Moon Press. Printed in Great Britain by Fraud and Co. Printers, Camberwellgreen, London S.E.S.
- Thank you to John Diamond.
- Reading referral: The American Journal of Acupuncture, Vol. 4, #3, Sept. 1976.
- Contains many diagnoses of reflex areas.
- Editor office, 1400 Lost Acre Drive, Felton, California 95018.
- \$45 per year and \$12 per copy.
- Thank you, Jerry Deutsch.

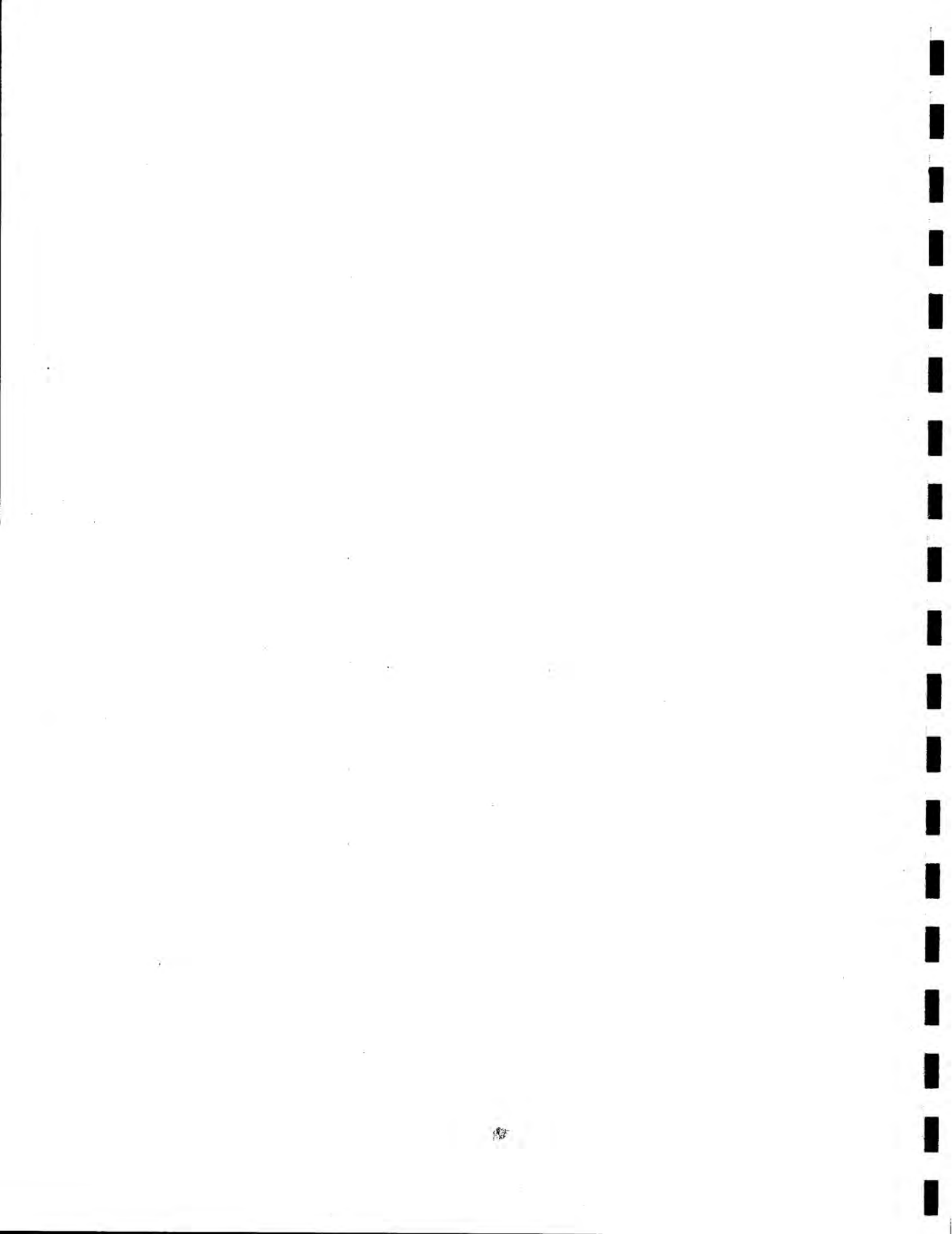
Opponens Muscle

- A high therapy localization technique.
- Opposition of the Thumb and the little finger is the highest muscular coordinate act that man is capable of.
- An article in "Brain and Man" stated that in Manic Depression there would be weakness of the left thumb in manic states and weakness of the right thumb in depressive states. Perhaps this was a left brain, right brain thing. I didn't find much confirmation of his observations.
- If opposition is a high faculty of man, perhaps it would be useful. "If you're treating a hairy patient who can't do this, get your money upfront because you're probably treating an ape."
- Putting the hand in that position of opposition and using the middle three fingers to therapy localize is a high gain technique. Check in patients that aren't therapy localizing well and for Receptor Tonus Nimmo technique. While working the trigger points, have the patient put their hand into opposition configuration. This works well to enhance the T.P.T. and also diminish the pain the patient is experiencing while doing the technique.

Hyoid technique

- We use two 3000 gauss magnets (positive on the right and negative on the left) of the Hyoid. If it is disturbed, a weakness will occur.
- Polarity is reversed in front and back as we already know.
- The magnets don't cause problems elsewhere unless on a disturbed acupuncture point.
- When you correct the Hyoid bone by the proper spindle activity, the weakness with the magnets placed on either side will no longer show.
- You don't need magnets to challenge the Hyoid; you can do it manually by stressing the Hyoid in different directions and then doing specific muscle spindle activity to the muscle involved.
- If the Hyoid problem reoccurs, it's an indication for Thymus supplementation. Occasionally some patients will need large amounts.
- The autoimmune situation is sometimes involved, showing an increased need for large Thymus dosages. So don't give up on Thymus supplementation if it looks like the patient is not responding, especially with autoimmune diseases like ulcerative colitis and things like that.
- The tablets we use have 620 mg per tablet.

- We recommend following the 100-hour syllabus session for teaching as set up by Dr. Walthers.
- The positive supporting factors of the foot are affected by squeezing the foot with the Flexors and Adductor Hallucis being set too high, requiring spindle cell activity. This aspect must be checked to bring out some hard-to-find gait reflexes. Fix the gait reflexes in the usual manner.



DR. GOODHEART'S RESEARCH TAPES

TAPE 37

- Reading referral: "WHO'S THE MATTER WITH ME," by Alice Steadman. E.S. Press, P.O. Box 8606, Washington, D.C. 20011.
 - The body is maintained by what you've eaten, digested according to your emotions at the time and functions as you think. They must be as one.
 - She has a good explanation why a person's pain is on one side or the other of the body.
 - People with pain on their left side had problems dealing with someone in their life who was a female.
 - People with pain on their right side had problems dealing with someone in their life who was a male.
 - We still have to fix what's there.
- Reading referral: "QUICK HEADACHE RELIEF WITHOUT DRUGS," by Howard D. Curren. Published by William Morrel and Co., 105 Madison Ave., N.Y., N.Y. 10016.
 - It costs \$7.95.
 - Accupressure techniques are included.
 - Six areas: Base of Skull, Zygomatic Sphenoidal area. Supra and Infra-orbital areas, Acupuncture area for Bowel in Web of the Thumb and the side of the hand.
 - Read the book!

Selenium

- Its relationship to Vitamin E.
- It is a very powerful antioxidant, approximately 100 times as active as Vitamin E.
- It's important in Glutathione Peroxidase (G.S.H. P.X.). It is important in the Heart and Blood Vessels. Selenium's primary role in GSH PX is the growth and maintenance of the Vascular beds.
- In lab animals it relieves a variety of things. It's relationship to E is in combination and how many products both use.
- Dr. Klaus Swartz did Trace Element Isolation research, finding the newer Trace Elements, Selenium, Chromium and Silicon. They are important and seem to be deficient in American diets.
- We use Selenium and E products with much better success in those patients who need the E, Nutri-Dyne has added it together. It's called Multitrophic Chelate.
- It's published effects on cancer, Blood vessel function, sexual problems, detoxification of pollutants, arthritis and the list goes on.
- A problem is Selenium has to compete with Sulphur which is increasing dramatically, especially in urban areas.
- Cooking does decrease it in foods. It is best found in Asparagus and Mushrooms.
- Asparagus craving indicates Selenium deficiency. We supply Selenium to these patients with good results.

Chromium

- Dr. Walter Mertz did much research on Nutritional Components.
- Some foods were high in Chromium, especially Brewers Yeast and Black Pepper.
- Essential for Insulin action and Insulin affects the body's handling of Fats and Proteins as well as Carbohydrates.
- The Chromium contents in foods, therefore, has an influence on digestion.
- There is accumulating evidence on these so-called newer Trace Elements are quite essential. Multitrophic Chelate is a good general base substance.
- Dr. Mertz suggests checking Chromium levels in Diabetes.
 - MEDICAL WORLD NEWS, May 19, 1972. Dr. Michael Hambridge said, "As many as 50% of our elderly patients have impaired Glucose Tolerance. Many of the said patients have returned to normal levels on 150 micrograms per day of Trivalent Chromium. The Biological active form as found in Brewers Yeast."
 - JOURNAL OF NUTRITION, April 1966. Schroeder reported circulatory abnormalities in Chromium-deficient mice.
 - THE NEW SCIENTIST, September 1973. Dr. Roger Lewen was working with Insulin Binding sites. Cells influenced by Insulin must have the proper receptors. These receptors could be masked when showing a need for Chromium.
- Insulin has an effect on cyclic A.M.P., a substance fundamental to cell division. A drop in cyclic A.M.P. along with some other changes indicate to begin cell division. These specialized cells know what they're going to be. Insulin not only decreases C.A.M.P. levels, but stimulates other Biochemical processes which proceed cell division.
- Insulin seems to have its hand on the switch of cell division.
- Lymphocytes in their quiet state have no Insulin receptors. Challenging them with an antigen turned them on and unmasked the hidden receptors.
- The widespread incidence of Hyperinsulinism would certainly indicate many people are deficient in Chromium.
- FOOD AND NUTRITION NEWS, November 1966. Dr. Mertz said our Chromium levels in our diets were minimal, if not substandard.
- Wholegrains and seeds have high concentrations in them. Brewers Yeast is one of the best sources of Chromium.

Zinc

- Two specialists are here in Detroit at Wayne State University.
- Phytate (cereal) sources interfere with its absorption.
- Oysters and Herrings are high in zinc and so is Ostogen.
- Well-known in Chronic Bacterial Prostatitis. 72% of these patients were helped with Zinc supplementation. Also Prostatic Enlargements were helped.
- Prostate accumulates Zinc. Many males show low Semen and Prostatic Zinc levels.
- We use Allorganic Trace Minerals and Multitrophic Chelate for Zinc source, especially with disturbances of special sense, for example: smell and taste. Supplement 3 times per day for one month. It will show a good response.

Melzack Wall

- Propose pain theory is a bit different from the Old Pain pathway.
- Gate Control Theory: Spinal Cord mechanism which controls the amount of input from peripheral nerves. The amount determined is from the ratio of the large and small peripheral nerve fibers.
 - small fibers conduct pain. Large fibers conduct sensation such as touch.
- Stimulating the large fibers can overload the system, thus inhibiting pain fiber input.
- Dorsal Column Stimulators work on this concept.
- Reading referral: "CURRENT CONCEPTS ON PAIN AND ANALGESIA," Burrows and Welcome Publishing Quarterly. Research Triangle Park, North Carolina 27709.
 - electrical analgesia.
- SCIENCE 1965, Volume 150, #3699. Melzack and Wall give explanation of their Gate Control System.
 - The large fibers conduct touch. Small fibers conduct pain and fundamental survival factors.
 - The large fibers have a negative feedback or keep closing the gate; without this, we'd never get to sleep because we'd be so conscious of the covers and everything else.
 - Small fibers conduct things at par, i.e., 300 get in and 300 get out. Substantia gelatinosa is involved here as a central control of pain and there must be a mode for it to operate.
- SCIENTIFIC AMERICAN, March, 1977. This article describes Opiate receptors in the brain. I'm sure there are Chemo-receptors sensitive to our own chemical analgesics.
- Phantom Limb pain is difficult to control. Melzack Wall works well.
- If you shock one arm and then the other quickly, there is a 100 milli-second interval needed to detect the shock in the second arm.
- Large nerve fiber impulses are effective in activating Central transmission cells, i.e., 300 impulses get in and 30 out. The substantia gelatinosa computes this. They hold the gate closed.
- Small nerve fiber volleys activate a positive mechanism which exaggerate the effect of an impulse. 300 come in and 300 go out. They hold the gate open.
- Melzack and Wall observed occasionally when the 'stump of a limb was tapped and phantom limb pain would decrease.
- We've found Temporal Tapping to occasionally relieve pain but not with consistency.
- Occasionally in Spinal Cord injuries, tapping the fingers would relieve the pain.
- Anecdotal: Patient with nonunion of Fractured Clavicle is very painful. The Acupuncture pulse showed Liver off when I tapped Liver 8 she commented on how the pain left but if I tapped the first sedation point, the pain returned.
- It works with decreasing gout pain.
- The tapping technique does have a therapeutic effect. It relieves the pain. Adequate diagnostic procedures and treatment must take place.
- Tapping neurolymphatics and neurovasculars is also effective in stimulating muscles (use only when normal responses fail).
- We used to use a tapping technique to challenge alarm points, then we would back it up on the 24-hour Law. We found many alarm points

- to therapy localize to tapping. Occasionally this occurs with the pulse points.
- Tapping seems to be a way of getting the attention of the Nervous System.
 - Long time ago a Doctor would treat a myriad of things with minimal Morphine dosages. He never exceeded his Morphine license limit. He got good results because he changed the pain enough that they would recover on their own.
 - We now have a method of assisting and controlling pain.
 - This is a principle of summation. So we close the gate via Acupuncture system so the pain can't get through. Using the first tonification point for the involved meridian.
 - Tapping is a way of getting the Nervous System's attention, especially by the nerve fibers.

Limbic System

- When stimulated electrically in man, it causes anxiety.
- In animals it used to be a smelling system. Animals sniff with a directional pattern which allows the left brain and the right brain to function.
- By way of the Limbic System, we've been looking for an alternative K27 circuitry at the bridge of the Nose. Simple tapping at the bridge of the nose has produced remarkable structural pattern changes.
- It many times is involved with a need for cross crawling.
- Many people have hypothesized an Ethmoid Cranial Fault; none have been found thus far.

DR. GOODHEART'S RESEARCH TAPES

TAPE 38

T.M.J. (This tape should coincide with your presence at the I.C.A.K. meetings.)

- Many times it will therapy localize positive. If not, one would do the normal things to bring it out: opening, closing, lateralization, phonation, etc.
- By accident we found sometimes if a table's headpiece is up, an open T.M.J. may not therapy localize. So be sure the headpiece is level with the table or lower.
- If the bones of the skull move as you breathe, then the Mandible is the handle of the pump.
- The Mandible moves with respiration. This can be shown by restricting Mandibular movement during respiration.
- Some patients open their head, they open their mouths by contracting the posterior neck muscles, lifting up the maxilla.
- This is why some open T.M.J. patients wouldn't wouldn't show because we were restricting movement of the head into extension with the headpiece being up.
- 30% of patients need dental equilibration.
- Nicholas Tinbergen received a Nobel Prize in 1973 for his lecture "Etiology in Stress Diseases" December 12, 1973, from the American Association for the Advancement of Science. #185, July 20, 1974.
 - He dealt with Alexander Technique and Posture, relating posture and Dentistry.
- Reading referral: "THE SENSORY LOMUNCULUS," by Penfield and Rasmussen, McMillan and Co., London.
 - Reproduced in G.E. Lammie's Dental Orthopedics, Alden Press, 1966.
 - Kathy Conable is trained in the Alexander Technique.
- Reading referral: "THE ALEXANDER PRINCIPLE," by Barlow. Published by Gallancz, London, 1973.
- Reading referral: "UNIVERSAL CONSTANT LIVING," by F.M. Alexander. Published by Dutton and Co., New York, 1971.
- Reading referral: "USE OF SELF," by J. Dewey. Published by Chatterton in 1932.
- Reading referral: "DENTAL STRESS AND DISTRESS," by A.C. Fonder, D.D.S.
 - Shows the importance of T.M.J.
 - Thank you, Dan Gleason.
 - It is available from University Publications, P.O. Box 47, Blacksburg, Virginia 24060. From the proceedings of the second meeting of the American Association for the Advancement of Tension Control. October 24-26, at the Chicago meeting.

Spleen 21 and Lab Values

- We've been able to change blood levels on patients during a treatment.
- We're aware of the pain control concept of the large nerve fibers carrying touch. Small nerve fibers carry pain and vital survival information. The large fibers travel slower but more directly getting to the spinal cord substantia gelatinosa first.
- The substantia gelatinosa computes ratio of the fibers entering into it.
- Large nerve fibers constantly fatigue out or tune themselves off so we're not always aware of the cloths on ourselves, etc.
- Small fibers remain on to protect us in case we touch a hot stove.
- Large fibers close the spinal gate but leave the gate open enough to allow vital survival signals to get through.
- If you hurt yourself you rub the spot activating large nerve fibers closing the gate to the painful fibers.
- 85% of the fibers decussate, 15% don't. What happens if for some reason the large and small fibers switched and the small fibers close the gate turning of the input?
- In 50% of post mortems it was found that in Diabetics that their pancreas was intact.
- Sp. 21 is a back-up for the substantia gelatinosa and K27 is a partner. Felix Mann states the Sp 21 is the "luo point of all luopoints, harmonizes right and left, up and down, inside and out of the body."
 - Treatment of disease by acupuncture - Felix Mann - William Heineman Books - 23 Bedford Square, London.
- We had a diabetic who had a blood level over 400 and she had Latiss. Dorsi challenging, A.F. Betafood, pancreatic support, chromium, low CHO intake. All the usual measures. Yet her basic leg complaints remained. She T.L. to spleen, SP2- we tapped SP21 left and SP2 and K27 right after the treatment, the sugar level dropped to 350.
- Tap SP21 along with the pain control point (that T.L.) via the pulse point along with K27 and the associated point as needed.
- If usual T.L. does not show check for atlas involvement with head turning during T.L. to pulse points. SP 21 is usually involved on the left.
- Take care of cloacal reflex associated with vision and head leveling.
- Check for major structural faults also.
- Changed P.MG. on patient from 440 to 380 after doing technique mentioned above.
- We do try to get the Lab error out in our samples and that patients
- have to be structurally cleared first.

DR. GOODHEART'S RESEARCH TAPES

Tape #41

Reading- The Ion effect by Fred Soykca with Alan Edmonds, E.P. Dutton Co., New York.

- If you stimulate any of the five senses you get an adrenalin response.
- Stimulation of another sensory apparatus like a baro receptor produces Serotonin which blocks 5 HIAA.
- There are many modern conveniences which produce excess positive ions (Air conditioners, heaters, automobiles). There is normally a 4-positive to 5-negative ionic ratio. With ionic changes there is a Serotonin response in ourselves.
- The Earth repels (-) ions and attracts (+). With certain winds (Hansen, Ford, Santa Ana, Chinook) or atmospheric changes with front changes 1/4 of the population will be affected adversely.
- An ionic challenge to these people will show a weakness in these people. Challenge patients with an airconditioner or portable heater to see if a weakness occurs that a neg. ion generator will abolish or vice versa.
- Usually it indicates a specific nasal respiratory cycle needs to be accentuated or a universal cranial fault is present.
- Shulman found a 1000 % increase in Serotonin in susceptible people during these winds. It wasn't the temperature or the humidity, it was the ionic change.
- Some people are barometers to weather changes. This temporary increase in positive ions affects them.
- Shulman found these people reacted adversely to the increase in Serotonin from the ionic change (migraines, pain, breathing difficulties, tension, anxiety) followed by exhaustion syndrome, a reaction to the heat and build-up of positive ions over the years giving an adrenal response which first stimulated then fatigued.
- Some responded with hyper-thyroid response. The thyroid is sensitive to positive ions and Serotonin.
- Check these patients for the nasal cycle, universal cranial fault, or glabella fault.
- Sheldon Deal has a good source for ion generators.

SP 21 - K 27 technique

- We've still been getting good lab changes in glucose, cholesterol, tri-clyceride and serum amylase etc. using the technique.
- Most patients positive T.L. to Lt Sp21 which is neutralized by the Rt K27 sometimes both, check associated point and the pulse point indicated and treat them with tapping.
- We haven't found a nutritional component yet.
- An anephric patient got a Hgb change from 3.1 to 3.9.
- Large fibers get to the cord first and turn of the gait so the smaller pain fibers can't get through. Large fibers have (-) feedback.
- Check SP 21 on both sides, against alarm points and associated points also. We've found no therapeutic value in tapping alarm points, they

augment the T.L. Also check connecting points.

-Correct all structural and I.V.F factors before this technique.

Christopher Hegarty - 30 Grande Paseo, San Rafael, CA 94903.

"New dimensions for today" for management techniques, Pottasium Bicarbonate.

-Useful for pancreatic function, it's a useful alkalizer with a Na ion.

-The pancreas produces bicarbonate so the proteolytic enzymes have an optimum pH range to work from a pH of 8-9

the proteolytic enzymes are useful in inflammatory reactions they are regulatory over the kinins which are non immunological as histamine is.

-The proteolytic enzymes can block a rise in kinins.

Reading- The physician's Handbook on orthomolecular medicine, Pergamon Press, Fairview Park, Elmsford N. Y. 10523.

-When you don't get the response you need with pancreatic enzyme support use the pottasium bicarbonate. Give the patient $\frac{1}{4}$ tsp 30 minutes after the meal if you feel the patient isn't getting good pancreatic support.

-Measure serum amylase and basophils, the basophils are in proportion to the histamine levels.

-With Histopenia, sometimes the patient is a slow oxidizer.

-Measure the salivary pH 30 minutes after a meal below 6.4 give alkalizer supplementation if its 6.7 one hour after meal you may need both acid and alkalizer materials.

Thymus

-It's hooked up with immunity and processes R.N.A. Sardines have the the highest source.

-Brain and muscle cells don't reproduce themselves.

-RNA from dying cells goes to the thymus for labeling and identification and is then sent to the parotid where it coats incoming food for re-use.

-The infraspinatus is associated with the thymus, the N.L. is at the 5th right interspace, the N. V. is at the angle of Louie. The acupuncture alarm point is just above that for the circulation sex on the sternum.

-Patient showing immunity problem may need support of both Thymus and parotid. Nutrition will show when both are placed on the tongue together but not individually.

-We have not found a consistent muscle response with holding substances in the hand.

-Please stick to oral testing of substances.

Weight change

-The SP 21 -K27 technique has given some weight loss along with fascial flushing of the Teres Minor.

-Check the axillary temperature if below 97.8. Re-check after the treatment, look for an increase which will occur within a minute.

-N.N.O.T. workshops should be labeled as such.

-New and not official technique.

DR. GOODHEART'S RESEARCH TAPES

Tape 42

Reading - Understanding the Scientific Basis of Human Movement, O'Connell and Garner

Muscle Contractions

- Isometric - the internal force generated in the muscle doesn't exceed the external, muscle length doesn't change and energy and tension are in equilibrium
- Isotonic - internal force exceeds the external force. The muscle length shortens 80% of maximal isometric.
- Eccentric - the muscle is already shortened it, then lengthens while maintaining tension acting like a brake. It controls movement doing "negative work" only. The initial length of the muscle influences the magnitude of the contractile tension from a stimulus. The greater the length the greater the tension capability. Singh and Karpovich say Eccentric exceeds isotonic and isometric motion on E.M.G. studies.

Muscle Fascia

- The epimysium sends perimysium septa into the muscle endomysia are individual fibers. We know the initial length of the muscle influences the contractile tension.
- The greater the initial length the greater the eccentric contraction.
- If the Fascial sheath is shortened the opposite is true.
- When doing a fascial flush one must also do the N.L. and N.V. for that muscle simultaneously. When done individually, the fascia will not release.
- Muscles are pumps for organs as documented in Hoffman, Mendell & Carpenter of Anglo European School.

The Thyroid

- Reading - Hypothyroidism, Unsuspected Illness by Broda Barnes, Thomas Y Crowell, N. Y.
- 40% of the population is hypothyroid.
- The normal axillary temperature should be 97.8 - 98.2.
- The teres minor is associated with the thyroid and will alter axillary temperatures.
- Allow biofeedback temperature probe to equilibrate and level out so as not to get a false reading.
- With fascial shortening of teres minor you will get a good increase in the axillary temperature when you fascially flush the T. minor and fix the other factors of the I.V.F.
- The gonads inhibit the thyroid and sometimes fascial release of the medius or piriformis is needed to get the required temperature increase.
- Diagnose the need by stretch, add the N.L. and N.V. activity and observe the clinical response.
- It will not T.L. and does not temporal tap.
- Quotes two series from Broda Barnes.
- Always check the T.M.J for fascial involvement when looking to increase the temperature, because of the homuncular involvement.

Muscle Types

- Slow; Red, sensitive to stretch smaller nerves, antigravity muscles adapted for continuous support and are emg active.
- Fast; White, faster than slow, have large nerve fibers.

Melzack Wall

- Each person's gate complex is specific for that person.
- Touch fibers close gate, pain fibers open it.
- So to get better diagnosis since T. L. stimulates touch fibers closing the gate use pinching to open the gate while T.L.
- Vertebral challenging is helped by above technique.
- Procedure T. L. if positive O.K., if not, try R. N.A. if still negative, use pinch or cold spray to enhance T. L.
- On SP 21 -K27 patients all dermatomes except one will show pinch enhancement. Dermatome of organ involved will show difference.
- Substantia gelatinosa is likely location of spinal gate. It connects to Lissauers tract and commisural fibers. It modulate nerve call transmission.
- Afferents from skin, viscera, and muscles are T cell modulated by spinal gate. Source; Puzzle of Pain by Ronald Melzack. Basic Books, N. Y. 156-58.
- You must open the gate to equalize nerve activity.
- Opening and closing the gates enhances clinical responses.

Factors following skin damage (8)

- | | |
|------------------------|---------------------------------|
| -Startle Response | - Head to eye orientation. |
| -Flexion Reflex | -Autonomic response. |
| -Postural readjustment | -Evocation of past experiences. |
| -Vocal response | -Behavior to diminish pain. |

Fast and slow muscle fibers - relative speed difference both are fast.

- | | |
|---------------|------------|
| 1 A | 1 B |
| Spindle | Golgi |
| 70-120 m/s | 70-120 m/s |
| Low threshold | |

- Beta have touch receptors.
- Delta 12-20 m/s Fast pain.
- C have 0.5. - 2 m/s Slow pain.

DR. GOODHEARTS' RESEARCH TAPE

Tape 43

I waited to start this tape until the Michigan Cranial Fascial Cervical Pain Dysfunction Society of the Michigan Academy of General Dentistry's Seminar was finished. A multidisciplinary approach.

Hypokinetic Disease

- Diseases produced from lack of exercise and over-stress.
- Lack of exercise makes the muscle weak and stiff causing tension and pain.

T.M.J.

- The Internal Pterygoid receives the same innervation as the Tensor Tympani muscle. Therefore, stress in the Internal Pterygoid is also transmitted to the Tensor Tympani muscle, accounting for some of the Tensor Tympani Syndrome (retracted drum, tinnitus and ear fullness).
- The Tensor Palatini muscle is innervated by the same nerve that innervates the muscles of mastication. The Tensor Palatini muscle is the muscle involved with the opening of the Eustachian Tube.
- Harold Gelb spoke of the myriad of problems the Jaw is involved in.
 - He was copious in his praise of A.K.
- Reading referral: "CLINICAL MANAGEMENT OF HEAD, NECK AND T.M.J."
 - Chapter 16 is on A.K. and is 25 pages long, written by George Eversaul.

Burt Hanike, the Chairman of I.C.A.K.

- He describes the San Diego meeting and the presentation of the papers and the problems with the time to present all the papers.
 - A questionnaire will be sent out.
- He talked of the I.C.A.K. computer.
- Teachers observe the standard lecture fee schedule, please don't undercut these.
- Please only teach one syllabus per weekend.
- Reading referral: "ORTHOPEDIC NEUROLOGY, A DIAGNOSTIC GUIDE TO NEUROLOGICAL LEVELS", by Stanley Hoppenfeld. Published by J. P. Lippincott.
- Reading referral: "JOURNAL OF INTERNATIONAL ACADEMY OF PREVENTIVE MEDICINE", Volume 4, #1, July 1977.
 - The article was by Arthur Knapp and was on observations of deficiency diets. D deficient low calcium animals developed eye diseases similar to humans. Myopia and progressive weakening of the Sclera was shown to occur.
 - Kerataconus, Cataract, Optic nerve atrophy and Retinitis Pigmentosa also were found to occur.

- He uses relatively high doses of Vitamin D with extraordinary success, 50,000 units intermittently.
- I was showing Rob Resnick a case of Retinitis Pigmentosa (loss of color and peripheral vision was noted), and we found the Quadriceps weak against the Neurolymphatic reflexes. With the Neurolymphatics the closer to the midline, the more lateral the muscle. It responds to Enzymes, D and Calcium.
- We have had good results with Retinitis Pigmentosa, Amblyopia (toxic or non-toxic), and Optic Atrophy.
 - Give 400 units of D, three to 12 per day. Use Sulkowitch Urinary Calcium levels, muscle tonus and reflex activity and/or night cramps all as indicators for dosage.
- Reading referral: "NEW DYNAMICS OF PREVENTATIVE MEDICINE", Volume 5. Edited by Leone Pomeroy from I.A.P.M., Suite 200, 10409 Town and Country Way, Houston, Texas 77024.
 - There was an excellent article in volume 5 by Dr. Schute with the Vitamin E Therapy concept.
 - There is F.D.A. recognition of Vitamin E usage for specific diseases and for prevention of nocturnal leg cramps, hot flashes, Erythrocyte integrity, prevention of Creatinurea, relief of intermittent claudication, Dupuytren Contracture, Peronies Disease, and Thrombophlebitis to mention a few.
 - It also shows the relationship of Vitamin E with Selenium.
- Vitamin E prevents oxidation of Vitamin C and works synergistically with Vitamin C and also synergists with Selenium.
- The effect of the combined product is better than individually.
- Veterinarians have been using E-Selenium products for lameness for years.

Pulse Point Therapy Localization

- Sometimes they don't show in the clear, so as in the '77 manual, you simultaneously therapy localize the alarm points and the pulse points at the same time.
- An author in an Acupuncture Journal who did most of his work at the National College of Chiropractic found meridian activity after death electrically. Electrical measurements were made on cadavers and he was able to show these electrical observations of the meridians on said cadavers.
- This impressed me because I thought it was the Acupuncture energy which traversed the meridians giving them their electrical identity.
- I developed another concept from this: the diaphragm is a pump for CO₂-O₂ exchange it also pumps lymphatic return, acupuncture energy and electrical polarity for the different parts of the body.

Right front = positive	Right back = negative
Left front = negative	Left back = positive
- Many times balancing out the Diaphragm and structural faults balances Acupuncture meridian faults.
- I observed to therapy localize the pulse points and have the patient just stop breathing for 5-10 seconds. Without the Diaphragm pushing the chi . The pulse points therapy localize if active this way. Don't have the patient take a breath, this primes the pump. Merely have the patient stop breathing. This helps find subclinical Acupuncture faults.

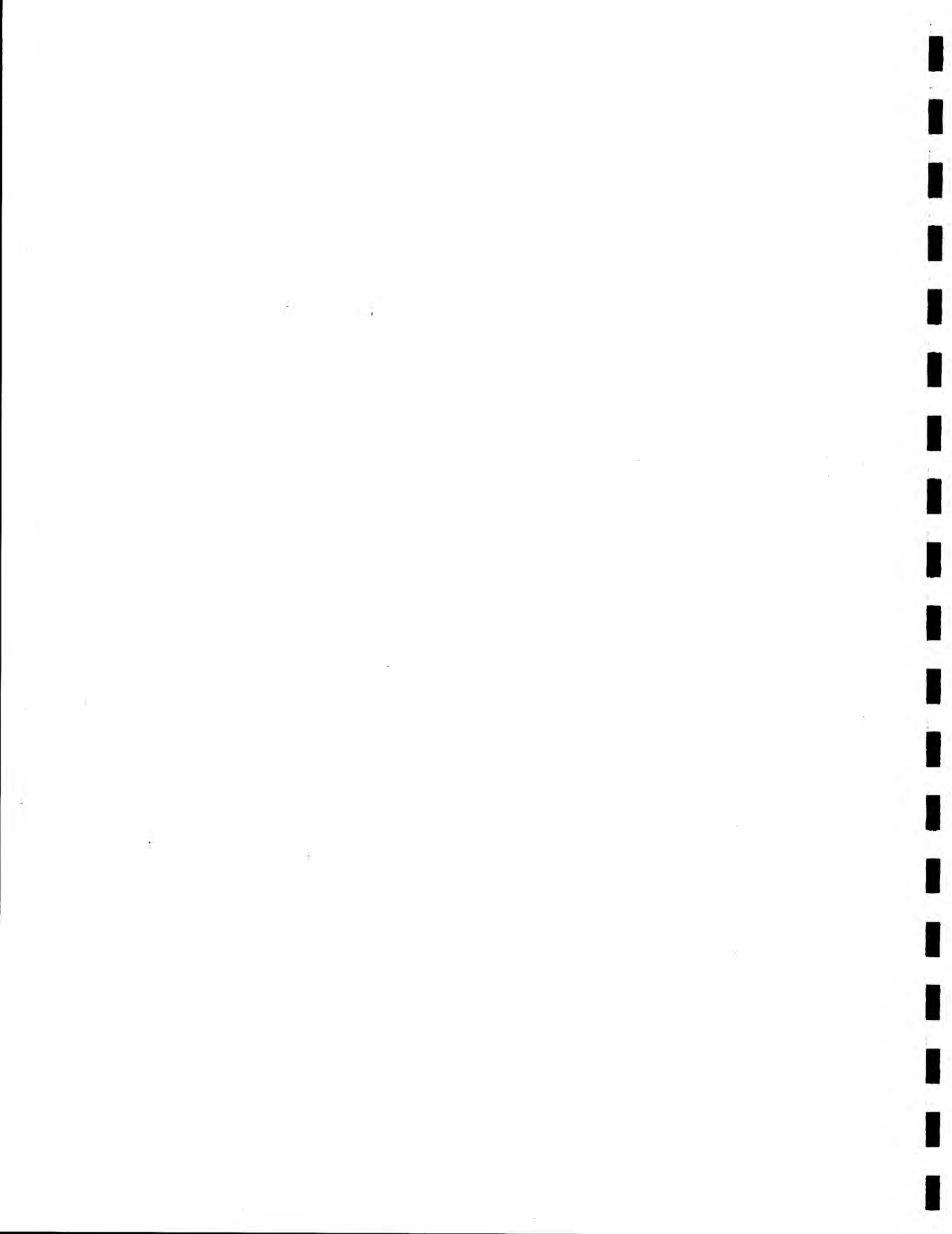
- Wetting the patients' fingers also helps increase the therapy localization to the reflex points.
- It's very useful in Melzack Wall technique where pulse points alluded us.

More on Acupuncture

- A Dr. Kou showed us some thermal active dye studies with both meridian and Auriculo Therapy. He would activate a body point and the point associated with that on the ear would change color and also vice versa if an auricular area was stimulated the point associated with that on the body would change color.
- We've used the Acumatic to find active points for Auricular treatment. We then found other materials will assist therapy localization to find small points such as in the ear. Wood is one of them. You can use the wooden Q-tip to the approximate points. When the right point is found, a muscle will weaken. You can also use wire for this purpose. We then tap that particular point.
- If you put lead over one ear, you get weakness on that side of the body. Put lead over the opposite ear only and you get weakness on that side of the body. Put lead over both ears, you get strength. If you then put lead over SP 21 then you get weakness indicating SP 21 is a major input of Acupuncture energy.
- Have the patient turn their head to the left or right with the appropriate respiration and if change occurs it indicates to pull the ear out in stretching maneuver. The ear is a booster mechanism.
- Look for the above things especially with hearing loss.

Muscle-Stretch Weakness

- Even though with these muscles the neurolymphatics and the neuro-vasculars don't therapy localize, fix them anyway to maintain proper balance. If you therapy localize the neurolymphatics and the neuro-vasculars simultaneously while stretching the muscle it abolishes the stretch response.
- The stretch response is different for gravity muscles versus non-gravity muscles, so check both a slow and a quick stretch. In the neck muscles, have the patient turn the head rapidly and then test the muscle, looking for muscle weakness. It works well, especially in adolescent myopia.
- With reactive muscles, nutritionally the body needs calcium and Phosphatase.
- For Fascial Flushing the vitamin needed is B-12, 5 mcg with stomach and liver factors. With B-12 you need both the intrinsic and extrinsic factors to assist absorption or else enormous amounts of B-12 had to be taken.
- Some patients also had Organic Trace Mineral material.
 - We give 15 mcg per day.
- If B-12 is masking the need for Fascial Flushing, put the body under a load and you'll find it to return.
- B-12 is essential to both RNA and DNA.



DR. GOODHEARTS' RESEARCH TAPE

TAPE 44

-Dr. Travell has found a trigger point for hiccupping at the uvula. She uses pressure with a spoon and restricts diaphragmatic motion to a minimum.

-Anti-stiffness factor in children, sometimes kids look as stiff as a board with occasional swelling of the joints is called the Wolzen Factor, and is basically found in unpasteurized cream and milk. It is useful to use in juvenile problems which occasionally produce stiffness and swelling.

Reading referral: Volume 1, number 5, of Postgraduate Medicine by Dr. Travell and Seymour Winkler. May 1952 concerning Myofascial genesis of Pain.

-She discusses trigger points and Ethyl Chloride spray.

Reading referral: MYOFASCIAL TRIGGER POINTS, A CLINICAL VIEW, by J. Travell from ADVANCES IN PAIN RESEARCH AND THERAPY, Volume 1, Published by Raven Press, New York 1976.

-Myofascial structures refer pain in predictable patterns which don't follow simple segmental distributions but are specific for a given sight of origin.

-Muscle that contains trigger points display weakness on active contraction.

-We've found that Fascial Stretch is the basis for myofascial trigger points.

-We use Flourimethane instead of Ethyl Chloride since it is not explosive and has no anesthetic effect.

-Flourimethane is made by Gebauer Co. in Cleveland, Ohio. "Stretch and Spray".

-It produces a good response for referred pain especially for headaches.

-The Ilio Psoas has a ventral dermatome to spray from the 10th rib to the Lesser Trochanter. It's good with patients that have problems flexing due to counter rotation problems.

-It also works well on hamstrings that show poor Straight Leg Raising.

-Spray along the muscle length, every $\frac{1}{4}$ inch with lapping in only one direction.

-Spraying works well to increase the R.O.M. and to decrease referred pain but not for visceral responses as with Teres Minor and the Throid.

-Between the 5th the 6th ribs on the right adjacent to the sternum is a trigger point for Paroxysmal Tachycardia.

-It's the skin on the outside which many times tells the muscle on the inside what to do. Stretching and spraying the skin resets those receptors to normal.

-Don't frost the skin, merely spray it without frosting.

Reading referral: "DON'T DRINK YOUR MILK" by Frank Osby.

-It deals with Lactase and Galactase deficiencies. Lots of blacks have Galactase deficiencies with the deficiency of these enzymes the associated sugars aren't digested.

Reading referral: "MECHANICAL HEADACHE" by J. Travell. It was re-

printed from HEADACHE, volume 2, number 1, April, 1967.

-It shows many T.M.J. muscle referral patterns.

I BELIEVE SOMETHING ELSE SHOULD PRECEDE THE FOLLOWING SENTENCE!

which is the identification for spray and stretch, the positive jump sign is that the muscle responds to the factor slow stretch ligament.

Interlink Reading: SCIENTIFIC AMERICAN, December 1976. The article was by Pierson about control of walking.

-Decerbbate animals, etc. are famous now.

-Slow Homolateral walking with slow tread going to contralateral movement at normal gait speed.

-This indicates that you don't need your brain to walk with. You need it to balance and to see wth.

Man despite the fact he is a Biped is really a Quadraped in his movements.

-There are centers in the Spinal Cord which are capable of initiating walking movements.

-When the flexors are stimulated there are flexor bursts to inhibit the extensor groups but the reverse is not true.

-On a patient it was noted that a contralateral flexion of his elbow got increase contralateral flexion of his knees. This was the beginning of Ligament Interlink, revenue sharing of blood supply, where does this crossover occur!

-Another patient with Carpal Tunnel problem who therapy localized to opposite ankle showed the abolishing of the Carpal Tunnel indicator but no other joint did it. If the patient opened or closed her mouth the movement would upset the circuit.

-The Hyoid was found to be interlink.

-Shove the Hyoid to the side to be treated.

Ligament Process

-Via therapy localization, find which contralateral joints therapy localize. Rarely is it Ipsilateral.

-Find a spot that is painful on both joints and ask the patient which point is most painful. Rub the least painful sport while the Hyoid is shoved to that side you're rubbing. There will be a decrease in pain.

-Toe-Finger; Ankle-Wrist; Knee-Elbow; Hip-Shoulder, contralaterally.

-No nutritional component yet.

-Get increase in R.O.M. and a decrease in pain. Fix what else you find.

-It works well in Arthritis and past traumas.

-It's in the 1978 manual.

V.O.I.C.E.

-This is an organization of independent Chiropractic educators.

-I.C.A.K. contributed \$1000 because of the C.C.E. requirements instituted recently indicating the C.C.E. is trying to regulate post-graduate education.

-See you at the I.C.A.K. Meeting.

DR. GOODHEARTS' RESEARCH TAPES

TAPE 45

Fascial Flushing

- Associated with muscle weakness brought on by a quick stretch before testing said muscle.
- To fix use Fascial Flush, N.L., N.V., B-12 or the specific nutrient for that muscle.

Blephar Spasm

- Look for occipitoatlanto Fixation.
- Look for Aterior occiupt - As you rock your head forward you'll note your lids drop.
- Patient noted it returned when she turned her head quickly, think fascial flush.
- Muscle weakness occurred when patient turned her head quickly. We did fascial flush with a good response. She could also see better after the treatment.

Visual Faults

- Look for fascial faults of the neck muscles.
- Look to correct a head tilt if present.
- Patients with a minor head tilt responded better than those with a major head tilt.
- Dan Klines report on Stabismus. I had suggested leveling the head and o.i. work on ocular muscles.
- Bielchowski - an ophthamologist who discussed normal vestibular righting reflexes. The head will tilt causing an opposite rotating of the eyes.
 - i.e., if head is tilted to the right the eyes are tilted to the left. By the intorquers of the right eye the Superior rectus and Superior oblique and the extorquers of the left eye the inferior rectus and inferior oblique. The opposite is true if the head is tilted to the left.
- In Vertigo Motor Palsy the head is tilted in that direction which elicits the non-paralyzed side.
 - i.e., in right superior rectus palsy, the intorquing affect of this muscle is defective so the eye is extorqued.
- Observe head tilt and fix via the 5 I.V.F. factors. Also Fascial flush and o.i. to the eye muscles treating the muscles on the lower aspect of the eye on the high side. Look also for lateral Atlas, occipital sideslip and occipital fixation.
- You may observe good visual responses.
- Use palpebral motion in working with T. M.J. patients. I.e., while testing T.M.J. in various positions have patient also open and close eyes.
- Also use eye movement when screening for occipitoatlanto fixation. While challenging for this have patients lateralize eye to left and right. We find more occipto atlanto than atlanto occipito. Correct in normal fashion

- The most difficult patients to observe a visual change were those who would go without glasses and wear contact lenses or nothing.
- Do o.i. technique on ocular muscles last, doing inferior muscles on low side first and superior muscles on high side second.
- Read article in Dan Kline's paper.
- Creativity and the Scientific Method. Quote by Hans Selye.
 - Most all schools teach by Francois Bacon's methods. He feels it's useless. The greatest discoveries have been made by those who never even heard of Bacon's methods.
 - A person who has made many discoveries is most likely going to make another one.
- We should improve the quality of life.
- In the '78 Research Manual on page 26 we talk about the article, The Control of Walking, on page 27, 4th paragraph. Its December of 1976, not 1977.
- On page 15 where we discuss acupuncture to post mortem detection of meridians and therapy localization.
- This lead us to T.L. with cessation of diaphragmatic motion to identify sub-clinical patterns.
- Sometimes the high gain T.L. position with the thumb and little finger touching is needed to improve the quality of the search technique.
- Bill Heath's presentation on the cranial fault which involved T.L. of the lateral portion of the occiput and the opposite diagonally of the frontal bone. He found changes in glaucoma pressure with it.
 - We found almost everyone had this cranial fault when a cessation of breathing took place.
 - We found phases of respiration abolished it.
 - We checked it against right and left brain activity and saw no correlation.

Thymus

- It's N.L. is at the 5th right interspace parasternally.
- It's N.V. is at the angle of Louis.
- The acupuncture point is about 1" below that.
- It was also found to be related to the parotid gland and muscles associated with glandular organs.
- It was found when the thymus N.L. was activated it would block a glandular related muscle weakness that was found. It would not affect a non-glandular related muscle.
- The thymus and Parotid are involved with R.N.A. labeling of food-stuffs.
- Glandular muscle weakness were found to respond when both parotid and thymus were placed on the tongue together but not separately.
- There are thymus/parotid substances on the market and when given it was noted they blocked the cross lead therapy localization discussed earlier to any right brain, left brain activity.
- It may be that under stress the thymus which is a single gland and the parotid which is a dual gland and the adrenals may not be functioning at their optimum rate left and right.
- This may be why some people respond to stress so well and others do not.
- Therefore, we balance the hyoid by reactivity against left and right brain activity and switching patterns.

-Read Hans Selye books with regards to stress.

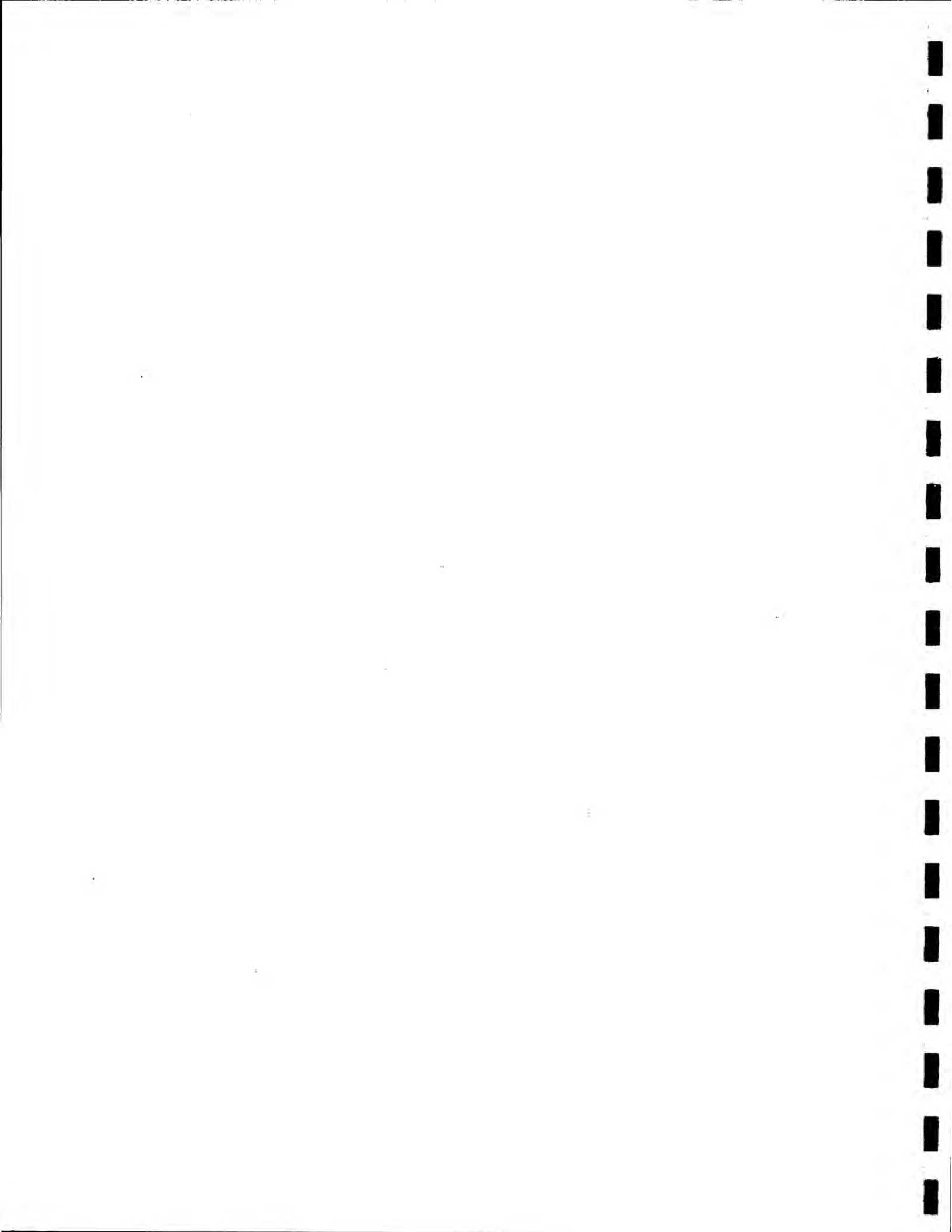
Reading referral: H. L. Newbold, REVOLUTIONARY NEW DISCOVERIES ABOUT WEIGHT LOSS, Rawson Associates, N. Y.

-If you get re-occurrence of left and right brain factors it just means the particular N.L. or N.V. needs to be treated longer or the Hyoid has not been balanced.

-Many times with right brain, left brain activity there is a subclinical Cat I or Cat II or subluation negative to normal T.L. but they show with right and left brain challenging.

-Jewelry A.K. Pins are available through Lance West in Toledo.

-G.S.F. by Nutridyn has worked nutritionally for right and left brain activity. I feel there is a different nutrient though.



DR. GOODHEART'S RESEARCH TAPES

Tape 46

Reading - The Asymetry of the Human Brain

March 1973 - Scientific America by Kimura, off-print 554

Split Brain Article in August of 1969 Scientific America, Gautinega, off-print 500.

Left and Right Brain

- We noted a muscle weakness or T.L. would be altered by either right brain (humming) or left brain (multiplication) activity.
- When patient shows negative to all other challenges for something, have patient do a right or left brain activity and if it shows positive it means you have to do further N.L. or N.V. activity and then re-test.
- With a positive N.L. reflex showing, have patient humor multiply. When you fix the reflex have the patient do that activity which abolished the positive T.L.
- Anecdotal; had spastic paralysis patient who was able to move extremities when activating one side of the brain or the other.
- Have the patient use that side of the brain that controls that limb while the patient tries to move that limb.
- There is a superiority of the right ear with preference to the left with speech.
- If you allow the patient to hear themselves through only one ear at times a weakness will occur. It means a longer reflex treatment time is needed.
- We've found left and right brain activity to be involved with the T.M.J.
- Have the patient T.L. the T.M.J and then activate one side of the brain, then look for weakness
- You can use left and right brain activity both in diagnosing and treatment.
- We found using left brain activity enhances the patient's ability to use the right side of their body.
- Right brain activity enhances use of the patient's left side of their body.
- We use it in gait problems...
- We find that it enhances our diagnosis when a T.S. line indicator muscle has not shown active to normal T.L. challenging.
- It is most useful when A 51% is found to reset to a reflex, then activate a side of the brain that abolishes that weakness while you treat that reflex.
- I have a patient who is deaf but who reads lips beautifully and we know the left brain, right ear is prejudiced to verbal sounds. Hearing her own voice did not affect her at all.

Respiration

- By way of the hering, Brewer reflexes the respiratory muscles are activated.
- Abdominal muscles relax with inspiration as the diaphragm descends with max inspiration. The chest then descends the neck flexors relax,

abdominal muscles contract and the diaphragm ascends.

- The time for the above should be equal for inspiration with expiration. 2 seconds in and 2 seconds out appears to be average.
- Many breathe 3 seconds in and 1 second out or the opposite, this means diaphragmatic function, respiratory function and accessory muscles must all be in sync with one another.
- If the diaphragmatic muscles show 3 seconds in and 1 second out, this shows atonic abdominal muscle involvement.
- As Wille May says, the mandible is the handle of the pump for cranial bone movement.
- We show this by restricting jaw movement while the patient breathes indicating a restriction of normal movement. It is involved with cranial bone movement and the pituitary substance abolishes this.
- Specifically patient pulling down on mandible with inspiration in an otherwise normal patient causes weakness.
- The auricular muscles, temporalis and epicranial muscles are also involved with respiration.
- Look to do G.T.O. to these muscles to lengthen them so they can function in place with respiration.
- Zygomaticas is involved with I.C.V. problems.

DR. GOODHEART'S RESEARCH TAPES

Tape 47

Cranial faults-continued

- Pyramidalis nasi - draws medial angle of the eyebrow down. It is usually contracted and needs G. T. O. activity to release it.
- All helps to get the phasing of respiration.
- Classic fault is with hyperventilator short gasps in and less breaths out; person needs to re-breathe their own air to bring back the oxygen CO_2 balance.
- Sometimes people are this way from cranial faults.
- The person who constantly sighs not taking in enough air breathing out too much, getting failure of abdominal tone.
- Person with 3 to 1 ratio of increase inspiration time the abdominal muscles are being given 3x their relaxation time leading to abdominal weakness disturbing pelvic position and affecting posture in general.

Hiccough

- Travell, Technique of Lifting the Uvula, Journal of the American Osteopathic Association, #77, December of 1977.
- Found variety of factors involved-recommendations - hold the breath to allow CO_2 to increase in the bloodstream.
- Breathing is stopped at end of forced expiration.
- Fix the diaphragm in this elevated relaxed position by also having patient lean forward compressing the chest.
- Exert a steady sustaining pull on the tongue while the patient holds his breath in this position.
- Resume breathing with smallest possible excursions of the chest.
- Capsuled modified treatment, lift the uvula while the patient's chest is compressed in an expiratory phase.
- The trigger point is located on the uvula.
- There must be a uvular connection with the diaphragm.
- Measure the vital capacity and/or breath-holding time before and after coxycygesl-xiphoid treatment. Look for lead square affect-lateral chest expansion- D-L fix - Reactivity of upper rectus abdominus to lower.
- Challenge for coaygeal-2G phoid involvement - challenge or T.L. one-side of the coxgy to the opposite side of the xiphoid for ligament interlink.
- After fixing all these structural things, challenge the uvula by lifting it up with a tongue depressor. Check a strong muscle if it's now weak, find a phase of respiration that abolishes it. Then lift the uvula with that phase of respiration to re-check the vital capacity.
- Cells heal at the moment of rest.
- Oxyhemoglobin reduction time is approximately 25 seconds. This is decreased with a disturbance in the gonads and is increased with a disturbance in the thyroid.
- This reduction time shows the rate of absorption of oxygen by the cells.

Reading referral - Osteopathic Medicine Journal for July, 1978. Article; Diagnoses and Treatment of Temporoparietal Suture head pain. Upledger and Retloff.

- Recent evidence indicates sutures are not ossified but contain nerve fibers, endings and vascular networks along with collagen elastic fiber complex within the human cranial suture.
- Restoration of sutural mobility is desirable.
- Hypertonus of the temporalis muscle may predispose the suture to decreased movement. This muscle is frequently contracted in emotional stress, dental malocclusion and T. M. J. dysfunction.
- Sutural compression will increase the severity of the symptoms.
- Challenge by pushing mandible headward slowly increasing pressure exacerbating the lesion until the patient starts to relax.
- It's a problem of hypertonicity of the muscles.
- Willie May technique put dental gauze approximately at 2nd molar, then put gentle superior pressure on anterior aspect of the mandible tractioning the T.M.J. and temporal parietal suture.
- In the same issue there is an article on cranial manipulative therapy.

Hearing Loss

- It's not too hard to restore low range hearing.
- High range hearing loss has a much more guarded prognosis. Since there usually is VIII (8th) nerve damage which is not myelinated so loss of function is not reversible.
- High range loss doesn't always follow any age, sex or laterality pattern. It changes independent of any of those factors.
- Check for T.M.J. involvement, occipito atlanto axial fixation, factors affecting vision also present, check T.M.J. with respiration and lateralization of the eyes with T. L. Check occipital, lock also right and left brain activity. Also check upper trap and emotional points which are usually negative with left and right brain activity. They may need long activity to their reflexes.
- There may be an emotional involvement of blocking out an unwanted sound, perhaps this explains the emotional N.V. involvement.

DR. GOODHEART'S RESEARCH TAPES

Tape 48

Reading Referral: Physiopathology and treatment of functional disorders by George Whatenmore and Daniel Kohli, published by Gruhman Stratton

- Functional disorders have their disorders not in structural pathology but in altered physiopathology which has altered nerve circuit activity within nervous and neuro-muscular systems-which results in tissue organ dysfunction.
- There are 2 systems-the nervous system and endocrine system which must communicate in sync via the neurons and action potentials and endocrines with their molecular hormonal substances released by glandular cells into the blood stream.
- Interconnections between those two systems, Hypothalamic, the anterior pituitary communicating with the posterior pituitary and the adrenal system allow the nervous system to influence the endocrine system.
- One significant source of signals within this system consists of action potentials from the pre and motor cortex called effort or ponesis - ponetic signaling.
- There are four kinds
 - Bracing efforts are where the cells are held in a partial on mode or "on guard" preparing the organism for quick or overt action.
 - Performing efforts are ones we are all familiar with.
 - Representation efforts are those giving sensory images-visual, auditory, and proprioceptive images.
 - Attention efforts give them a greater influence over the other signals-i.e., visual signs that say, get out of the way, there's a car coming.
 - There can be areas of errors in ponesis, these areas are called disponesis because they can act in a way detrimental to the organism.
 - These disponetic responses can occur in any of the four categories (Bracing, performing, representation and attention efforts).

Reading referral - Hospital practice magazine, March 1978.

Dr. Richard J. Wortman's article says, "feeding choline has been shown to increase Ach. release and enhance cholinergic function.

- Pteridise dysponesis has been helped by oral choline as well as with manganese and a few other things.
- Pteridise dysponesis is the unusual involuntary and repetitive motions of the face and mouth that come from taking large doses of MAO tranquilizers.
- this indicates oral substances can pass an effect through the blood brain barrier.
- In patients that lack Ach, activity for function of the digestive system

- will be helped by oral intake of choline and its precursor Lecithin.
- Also works well in people with limited perspiration and in people with diminished saliva output like Sojourns Syndrome.
- With enough choline the intestinal flora will work on it and create trimethylamine-which gives the skin and the urine the odor of rotten fish, Lecithin between 3 and 6 capsules per day is a better route to follow avoiding the rotten fish side-affect.

Reading referral - Scientific American, February 1974, offprint 1291. Nutrition and the Brain.

- They discuss the activity of Serotonin Levels. It's one of the six neurotransmitter compounds. Serotonin, Acetylcholine, gamma Amino butyric acid, epinephrine, norepinephrine, and dopamine. These six substances control neurotransmitter activity.
- We have been taught about the blood brain barrier and that nothing we ate would affect these substances. This is not necessarily so.
- Tryptophan is a precursor to Serotonin-tryptophan is not capable of being synthesized by us so the amount is dependent upon the ingestion of protein.
- Tyrosine is the precursor to dopamine and norepinephrine tyrosine can however, be synthesized in the liver.
- Tryptophan is the last abundant amino acid in dietary protein so the supply is quite small. By increasing the level of natural carbohydrate and not tryptophan levels one increases the level of tryptophan in the blood.

Serotonin

- It's levels affect our unconscious activities, it is to our environment what adrenalin, norepinephrine and dopamine are to our conscious adaptation. If it's cold, we shiver; if it's hot, we perspire.
- Its levels are affected by changes that we cannot detect with our five special senses.
- So with ion plus barometric changes, Serotonin levels do change which affects nerve impulses.
- That's why an increase in natural carbohydrate levels increase better nerve system function.
- Serotonin level affect SHIA levels which is serotonin antedote.
- look for a patient who swings with barometric pressure, weather, etc. Increase natural carbohydrate levels to increase Serotonin levels which then allows a balance in SHIA factors; also check for ionization and universal cranial fault.

Reading referral: The Wonderful World Within You by Roger J. Williams. He discovered pantothenic acid.

- Health of the intestinal tract is dependent upon pantothenic acid it helps with constipation.
- We supply standard process B & G, and Calcium Pantothenate they help in some cases of constipation.

Reading referral: New England Journal of Medicine, February 15, 1973. Article on Huntington's Chorea.

- Severe degenerative disease of the brain.
- Alanine, proline, valine, isoleucine, leucine and tyrosine are reduced

- in plasma of patients with Huntington chorea.
- They checked amino acid levels post mortum in patients' brains and found deficiencies in patients with Huntington chorea - and a dopamine deficiency in patients with Parkinsons.
- Work to increase the digestive efficiency to the levels of these amino acids.
- This is a good basis for nutritional therapy in these chronic degenerative diseases.

Parkinson's information - 147 E. 50th Street, N. Y., N. Y. 10022. L Dopa information - Dr. George Cotzias has done a lot of research on this.

- The amount of dopa is changed by the dopadecarboxylase inhibitors, Aldomet is one.
- Winter of 1977 - Center for American Parkinson's disease Assoc. talks about problems of treatment with L dopa to cinemet - the on-off phenomena, where at times the patients are unresponsive to the medications, they suggest medication changes and low protein diet.
- If you keep the patient balanced structurally and balanced left and right brain-wise, it decreases this on-off phenomena.

Nutritional testing.

- We've had a lot of problems with the unauthorized use of testing vitamins on the body and not lingually.
- In Alberta there was a movement to outlaw kinesiological methods because a non I.C.A.K. doctor used vitamins on the body to diagnose the need.
- No where have we recommended this procedure.
- We gathered a lot of material to back lingual testing I.A.P.M., Vol. 4 #1 July, 1977, Vol. 15, Nov and Dec of chiropractic economics, AI Scops work was sent. Feb. 1977, Journal of ortho-molecular psychology, Science Vol 163 Feb. 1964, 952-53, Journal of the International Academy of preventative medicine, Vol. 4, #1, July 1977.
- Please use Lingual testing - A chiropractic malpractice case went against a Dr. in Florida who was not using lingual nutritional testing.
- Nutrients on the body are relating to energies and not nutritional needs.

Left and Right brain update.

- Use to augment T. L. Also in horizontal and vertical position. The left brain is more active in the horizontal position.
- Tap following vertebral adjusting to improve bone memory, also temporal tap while patient performs left or right brain activities to bring out hidden faults. Tap left side math activity and right side with humming.

Gait problems.

- Look too for M.S. and other neurological diseases.
- Right and left brain activity will show in these patients, fix the hyoid balance it, use gait receptors, also.
- Look for G.S.F, Folic Acid and Thymus with right and left brain involvement nutritionally for now.
- Collected papers for 1973 and 1974 have been completed and are available.
- Bill Borman has a good article entitled Laboratory Assistants' factor - referral to Dr. Tiller.

-The first three (3) terminals are in our office.

-3/4 inch tapes of A.K. techniques from Canada and my involvement with Touch for Health are available.

Reading referral: Dr. George Eversaul book - Box 19476, Las Vegas 89119 - (702) 733-8476 10-5 Wednesdays.

Dental Applied Kinesiology techniques.

Reading referral: Head Neck and Trunk - 4th Ed., Warfel Publ. Lee & Feiberger.

-There is a definite relationship between cranial muscles and cranial faults.

-refer to last tape.

Reading referral: Vitamins and hormones advances in Research and Applications - Academic press. Many articles but one on folic acid especially. It discusses the Folate trap.

-We've found in Dyslexia and dyskinetic patients and also in patients with problems between left and right side, for example, where only one testicle descends, or a patient bruises more on one side, Folic Acid and Lt and Rt brain activity have a lot to do with this.

Reading referral: The Night Shades and Health, Childers & Russo, Horticultural publications - Somerset Press, Inc. P. O. Box 644, Summer-ville, N. J. 08876. Night Shade Plant Involvements with Especially Arthritis, white potatoes, peppers, paprika, eggplant and tomatoes. Norman F. Childers of Rutgers University.

DR. GOODHEART'S RESEARCH TAPES

Tape 49

Reading referral: Osteopathic Annals Nov. 1978.

The lymphatic System

- Reading from original issue of Neurolymphatic Reflex Book 1965 3rd edition.
- Talks about the lymphatic system and its anatomy.
 - Two times as many lymph vessels as blood vessels.
 - There is no normal heart to pump it.
 - its primarily a retrograde system - except for the head, neck, and abdomen it works against gravity.
 - The lymph is clear except after a fatty meal.
 - Without the lymphatic system the loss of blood protein would be disastrous - 1/2 of our blood protein leaks out of our circulatory system in any 24 hour period.
 - fluids pass to thoracic duct which passes to the subclavian vein.
 - nodes act as filters for the system - infections are usually noted upstream - i.e. painful inguinal nodes with toe infection.
 - The lymph system absorbs fat from the intestinal system since high fat levels in the blood destroys RBCs.
 - Antibodies and 1/4 of the WBCs are produced by the lymphatic system.
 - The most commonly found reflex is that of the PSOAS
 - The thoracic duct begins at the 2nd lumbar vertebra with the cysterna chyli
 - goes over specific anatomy of the system on the tape. Read text or British Grays Anatomy, the 1901 edition.

Retrograde lymphatics

- The N.L. for the adductors behind the nipple many times is involved with Brachial Neuritis, Carpal tunnel, tennis elbow and adductor problems.
- Reflexes for T.F.L. are many times involved with sciatic pain.
- Many times I couldn't get the muscle to show weak though all things indicated so.
- The article in Osteopathic Annals, mentioned above, talks of pectoral tug for a myriad of problems. It's a general treatment.
- By placing the patient in Retrograde position 20° head down I thought the lymph system would be facilitated. Instead weakness I couldn't find before would show.
- The pectoralis minor is the problem - when the patient is retrograded having someone do a pectoral tug or having the patient lift their left arm above their head abolishes the indicator.
- Pectoral muscles show fascial flushing requirement - do so and do N.L. and N.V. reflexes.
- The pect minor is usually stretched and the origin and insertion need to be brought together for it to bring a normal rib angle approximately 34° many times its dropped from 36 to 40°. - A rib technique may also be necessary.

- Sinus problems show a lot when patient is retrograde, showing many dormant problems we were unable to find, so do N.L. long and hard and do axill, tug or fascial flush to pectoral muscles.
- Read about anatomy of Pectoralis minor - its a rib lifter having same nerve supply as other pects except its innervation is from 8th cervical and 1st dorsal fibers where others are from about the sixth, so look to these areas to adjust.
- Look to retrograde in unilateral limb swelling, also look to diaphragm function. Left limb usually shows symptoms first since right diaphragm usually pumps more actively than the left.

Reading Referral: Lymphography of the Cervical Lymphatic System by U. Fisch, publ. by Saunders.

- Describes methods used to study the lymphatic system.
- If the lymphatic system can't drain itself completely it stores lymph in various areas until it can do so no longer. With poor lymphatic drainage there is poor absorption of fat. This causes a decrease in Vitamin A absorption.
- A helps abolish the retrograde weakness.

Reading Referral: Applied Nutrition, Harold Hawkins. Reprinted - International College of Applied Nutrition, La Habra, California and Mojave Books, 7040 Derby Ave., Reseda, CA 91335.

- Page 47 especially for Vitamin A deficiency.
- We recommend 1500 units of A 3 times a day.

DR. GOODHEART'S RESEARCH TAPES

Tape 50

Reading Referral: Dental Kinesiology, George Eversaul. Call 702-733-8476
Wednesdays 10-5:00 p.m., Box 19476, Las Vegas, NV 89119

Reading Referral: Physical Fitness in 30 Minutes a Week.

- Talks about sitbacks for strengthening the abdominal muscles and lifts the rib cage.
- Look to serratus posticus superior doing origin and insertion work since it is a rib cage elevator and will help lymph flow.
- Also challenge for rib correction.
- I do the rib correction and reflex work with the appropriate phase of respiration.

Retrograde lymphatic.

- A common cause of lymph blockages and a unique diagnostic procedure.
- Look for with unilateral problems.
- Patients can be taught how to fascial flush the pectoral muscles.
- Good technique for limb swelling and reduction of pain.

Nutrition

- Lingual testing is the way to do it. On the body testing has caused many problems.
- to find out what was happening we found the color of the substance was what made the difference, putting the same substance into different color capsules changed the response.
- Color therapy has many ambiguities.
- We have some charts to use for color therapy work for those who wish to work with this.

Color Therapy

- We're aware of the polarity of the body Right front (+), Left front (-); Right rear (-), Left rear (+).
- polarity also has color, positive is bluish and negative is reddish.
- So left front is red hue; right front is blue hue, Left back is blue, and right back being red. This is the basic beginning of color therapy.
- Chakras also have colors associated with them.
- Use acronym R.O.Y; G.; B.I.V.
- Red, Orange, Yellow, Green, Blue, Indigo, Violet.
- Beginning anterior at the head going down it's red. The throat area being Orange; upper-chest, Yellow; mid-chest, Green; upper abdomen, Blue; middle abdomen, Indigo, and lower abdomen, Violet.
- It is reversed with the Posterior aspect beginning with Red at the sacrum to violet at the head and neck.
- Also overlay the acupuncture circuits. The different meridians have their own colors. So the associated points have the color of their meridian. Bladder - 2nd sacral foramen, Blue; S.I. at first sacral foramen Red. L.I. white L4, 5 - etc.
- Each doctor has an energy and color pattern that is uniquely his. And each patient has a unique need. So if a doctor is deficient in a

certain color level he must think of giving that color to patients where it is needed.

- You can find out what color the doctor is deficient in by having a doctor test a patient's muscle while the doctor in question places his hands on different levels of the spine. Where a weakness occurs that is the color the doctor should realize he has to mentally image for patients that are in need of it.

Reading Referral: Healing and Rejuvenation Through Color 1972, 15th ed. Corine Heline. Also, Healing and Rejuvenation Through Music, J. F. Rouhy Press, California.

- Power of the Rays The Science of Color healing, S. G. J. Orsley, L. N. Fowler Co., 15th Newbridge Street, London, England, EC4U6VB.
- When you make a structural correction or work on a part of the patient concentrate on the color in question for that area and transmit them with your holding hand.
- If the patients left hand therapy localization causes a muscle weakness you would use your right to treat that reflex area.
- You can show the use of lights at the wrong area will cause an immediate weakness.
- It works best if the doctor projects it with his right hand.
- It has influenced B.F.T. monitoring.
- Antecdotal - A logan basic contact . use no B.F.T. change on a patient until the correct color was projected.

Reading Referral: The Rainbow in Your Hands, Davis and Rowls.

- You can put color in to Melzack wall points according to what meridian the point is on.

Reading Referral: Anatomy, A Regional Atlas of the Human Body by Carmine D. Clemente

- Section figures 150 & 151 for lymphatics.
- Goldthwait & Kendall & Kendall Posture of Pain, p. 150, books on posture are good to review.

DR. GOODHEART'S RESEARCH TAPES

TAPE 51

Alexander technique:

- We give the patient four basic directions.
 - place your hips over your heels by moving backwards at the heels so your toes are almost coming off the floor.
 - Make your chest wide.
 - Drop their shoulders like a couple wet rain coats.
 - Lastly, put your head ahead - have the patient put their neck back slightly and then have them nod to say yes and this will get the head ahead.
- With the work of Feldenkrais and also A. K. we realize posture is a learned cortical awareness and not how we sit or stand.
- Your body learned how to have the posture it has.
- In the book of reprints, it's mentioned how Alexander changed the position of a man's head on his neck and the arches rised.

Anecdotal: A patient with a Morton's Neuroma who had had podiatric care to no avail. I had noticed a change in her posture since the last time I saw her. So I showed her the technique and the pain of the neuroma immediately left her foot. The sensitivity to touch was also gone. While lying supine, the postural suggestions were made and once again the pain disappeared and I felt her metatarsals rise.

- The homeostasis that exists physiologically is so both metabolically and posturally.

Reading Referral: Universal Constant of Living by Alexander.

- He talked of the limited movement of the atlanto occipital joint in contrast to the wide range of movement of the cervical cranium.
- You can see where B. J. Palmer got the idea of the upper cervical if you read some of Alexander's techniques in retrospect.
- Posture is a cortical awareness that was man's natural heritage and could be relearned while supine or in any position, not by imagining but by doing it.
- We've found the Alexander technique to work well with pain control in those patients where the Melzack-Wall Approach wasn't a good one.
 - We would press vigorously over the pectoral muscles, posterior cervical muscles, lumbar area and against the gluteal muscles while the patients were standing.
 - We would sit down and say, "Well now, that's your problem," so we would show them how to stand rocking the ankle back, making chest wide, shoulders down and head slightly ahead.
 - Now the pain elicited where we rubbed before was gone along with subjective pains.
 - It only works when we did all the postural changes and not just any one.

Anecdotal: Dr. Schmidt found it to take away his late night heart burn after a "Staph" party.

Reading Referral: Centered Skiing by Dennise McLuggage.

- One of the exercises they do is to have the patient with closed fist place their arms in front of them. The patient raises one arm and lowers the other, then bring them back to level - most have no problems with the eyes open. With the eyes closed many have problems. This indicates a lack of proprioceptive awareness.
- 40% of the people I gave reading directions on Alexander's technique were unable to follow the printed recommendation.
- We found that an additional concept to the posture concept involved a straight posterior 3rd cervical and 3rd lumbar.
- These areas would not T.L. in the non-weight bearing position but in a weight bearing position they would.
- We adjust them anterior in a prone position.
- After this was corrected many time the patients could follow the printed instructions.
- We've found no matter what indicator you've found having the patient do the Alexander technique directions will abolish those findings.
- This indicates the patient has control of many of the factors which continue to perpetuate problems.
- Still fix what you've found.
- We tell them to do the technique for 2 - 3 minutes in the a.m. and 2 - 3 minutes at night while lying down.

Reading Referral: Holistic Dimensions in Healing: A Resource Guide. Leslie J. Keslof, Doubleday-Dolphin Books. There is an article on A.K. in the manual; there are several other good articles in it on chiropractic, osteopathy, naturapathy, homeopathy, etc.

- The attitude that Alexander has produced certainly has an anatomical basis.

Reading Referrals: A Reorientation of a Viewpoint from the Study of Anatomy, Douglas 1937 plus The Functioning of the Sub-occipital Muscles, The Key to Posture Use and Functioning, Murdock. Also Soh Hitons October 7, 1936 address at the institute of Labor Management in Burton England. The last touches on the effects of the shocks and vibrations we are subjected to.

- Our exercise classes are "physical jerks" - The strongest can survive, most cannot.
- Show them how to improve the quality of their life.

Reading Referral: Understanding the Scientific Bases of Human Movement. O'Connell & Gardener, chapter starting on page 212.

- They talk of labyrinth receptors and tonic labyrinth reflexes. TLR's and labyrinth righting reflexes.
- They talk of body on body reflexes, body on neck reflexes, visual righting reflexes, the later being dominated by equilibration reflexes.

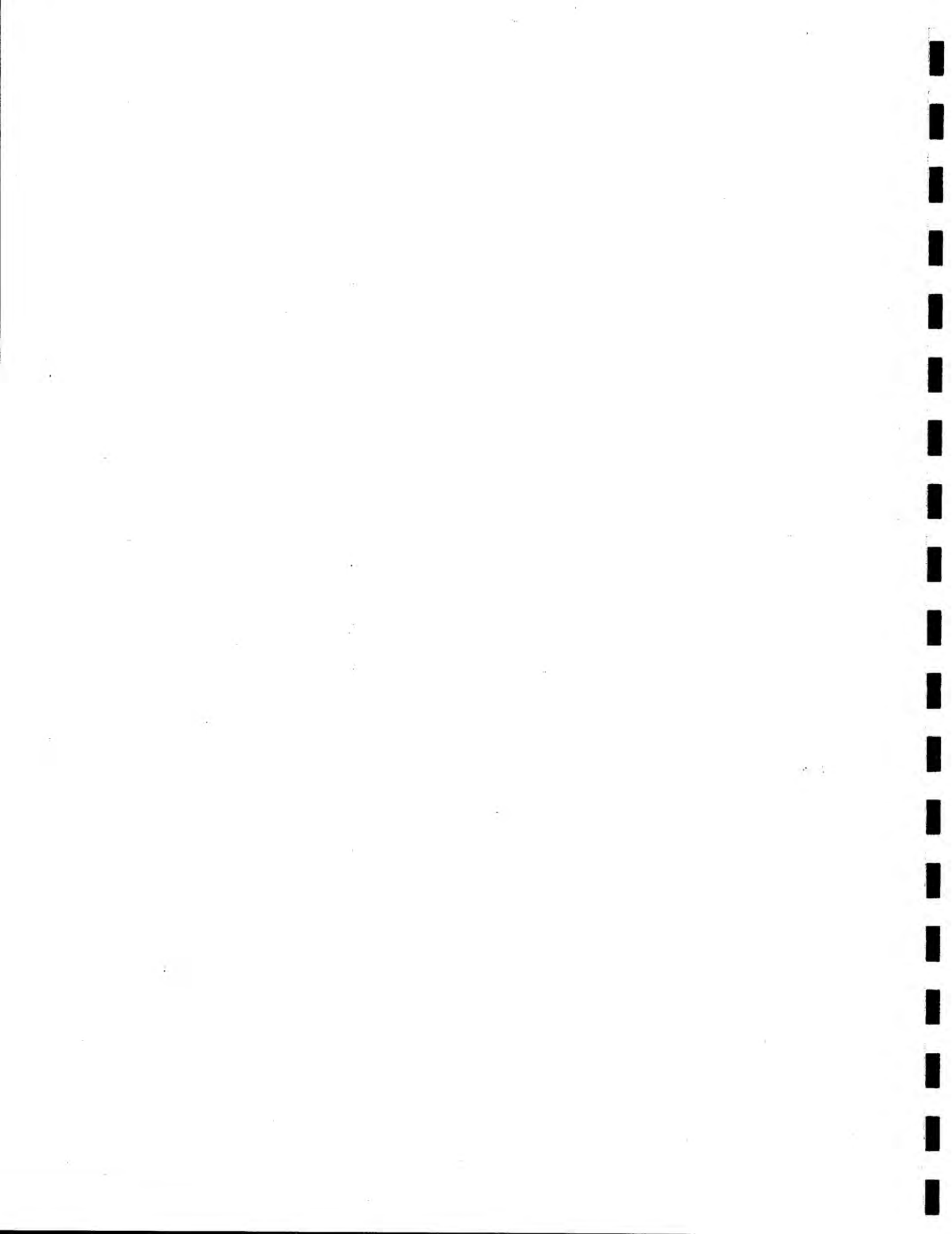
The Special Senses have dual functions.

- Mouth - eating and speaking.
- Nose - breath and smell.
- Ear - hear and balance.
- Eyes - see and level the head.

Head leveling (visual righting reflexes).

- Watch a blind person's head movements.
- You can show a difference in the cloacal reflexes when you T. L. to the occiput or supraorbital areas and opening or closing the eyes.
- The head and pelvis have automatic pilots.
- Check for ocular lock and fix by the usual measures.

- Have the patient flex a knee and bring it across the center of the body, keeping the foot on the table, putting a tension on the piriformis. Test a muscle if a weakness occurs, check for eye lateralization that abolishes it. Indicating the visual righting reflexes are affecting the pelvis.
- There is a lack of synchrony between the upper and lower righting reflexes.
- This can be done to either side.
- You can repeat the test with the patient in the prone position.
- This indicates the need for a basic contact to level subclinical faults in the sacrum.
- Challenge the sacrum and fix what you find.
- While doing the contact have the patient lateralize the eyes left or right checking for a weakness. If one occurs find a phase of respiration that abolishes it, usually inspiration. If this is the case, make a contact like you would if you were going to use a sacral contact for an inspiration assisted lesion of the sacrum. There doesn't seem to be an associated cranial fault at this time.
- fix and then rechallenge especially the piriformis stretch.
- Video tapes are now also available for use.



DR. GOODHEART'S RESEARCH TAPES

TAPE 52

Posture (continued)

- You want to demonstrate to the patient the visual effect on muscular motion. Have the patient put his right arm in front of him and sight along his index finger without moving his feet, turn as far as he can to his right and note how far he can go. Then do the same to the left but have him keep his eyes to the right while he turns left. When the patient rotates to the right as in the beginning, their rotational ability will have increased.
- This is quite a dramatic procedure for showing the patient the relationship of the eyes to the body.
- Small alterations between the functional relationship of the eyes and the head create enormous differences.

Reading Referral: Awareness Through Movement, Feldenkraise, Harper & Row, 1974, 148-149, he says, "The eyes are not only for seeing"

- Using the eye rotation to counteract the piriformis stretch is working with the automatic pilot and attention to the sacrum with the right phase of respiration will usually make the patient feel quite relaxed.
- The hold technique for sacral positioning takes no longer than 2 minutes.
- Works well with those who have ineptness in motion.

Lymphatics

- The Russians say that there is a lymphatic heart.
- They, with Radiography, studied the lymphatic duct and the cisterna chyli. Without the diaphragm and heart movement they observed a 12-10 pulse movement activity of the cisterna chyli.
- There are valves every 1/3 inch as with the venous system.
- I feel they have found the lymphatic system has a relationship to the spinal fluid system.
- We have found in Retrograde patients, once you get the sacrum moving well with the ocular circuit, this adds to the lymphatic systems capacity to function.
- Anatomists vary in what they say of the entrance of the thoracic duct to the circulatory system.
 - Some say the subclavian vein, some the brachial-cephalic.
- Regardless the entrance is quite medial and the pectoralis minor alters somehow the external-internal pressures so attention to the G.T.Os along with the N. L. do the job.
- Nutrition seems to be 1500 units of Vitamin A, 3x/day.
- The ocular basic circuits have also affected vital capacities on patients.
- The Russians found the "lymphatic heart" was not dependant on respiration or the pumping of the major blood vessels.
- The thoracic duct has 20 valves along its course.
- I feel Sacral movement along with postural factors influence lymph drainage.
- Read Anatomy of Thoracic Duct in Grays.

- The thoracic duct is the common trunk of the lymphatic system except for the right side of the head, neck, thorax, lung, heart and the convex surface of the liver.
- It varies in length from 15-18" from the 2nd lumbar vertebrae to the root of the neck.
- It commences in the abdomen by a triangular dilation, the reservoir of piquet which is anterior to the 2nd lumbar vertebrae going behind the right side of the aorta and the diaphragm.
- The thoracic duct consists of 3 coats or layers which differs from other lymph vessels.
- The right thoracic duct is only a half inch in length and enters into the right subclavian vein.
- The fascia is the main source of lymphatic drainage and if it gets tight lymphatic disturbances will follow.
- The pectoral stretch technique doesn't really fix things, it elevates the ribs and works some of the fascia along with balancing some of the other factors which are in the article.
- This retrograde lymphatic factor affects many things.
 - Rib position.
 - Sacral occulo relationships affecting spinal fluid.
 - The nutritional component of Vitamin A.
 - And the fact that the system drains the chyll and digested fats into the venous system.
- This combination of factors produce many problems in man allowing us another way to render a service to the sick and ailing.

Postural Hypoadrenia - Hypotension

- Some patients don't respond to our treatments yet they show postural hypotension, dilated pupil, altered sartorius gracilis testing.
- On reading clinical prevention of cardiac necrosis there is evidence that the kidney is the number one homeostatic organ.
- We found the kidney system to show on these patients with right brain and left brain activity.
- These patients also show a globulin of 2.2 or lower.
- On doing the N. L. for the kidney we would get a good response (sometimes up to 5 min.).
- Nutritionally, we use Albaplex, I'm sure there are other products.
- It is wise to maintain support to the adrenal and sartorius.
- There is also usually Hyoid involvement also.

Ten syllabus session is now available on VHS format. A.K. Tie clips and lapel pins are available through Lance West, 416 Superior Street, Toledo, Ohio.

DR. GOODHEART'S RESEARCH TAPES

TAPE 53

This is the ICAK Annual Convention report and monthly report.

- It was good to see the quality of the collected papers.
- This method will grow and add to an already polished image.
- There will be some discussion on office computers and the ICAK later in the tape.

Hair Analysis

- We're primarily using it to determine toxic levels buy Jerry Morantz has a good article on hair analysis.
 - One major one to look for is cadmium; it's been linked to hypertension.
 - Cadmium is found in tobacco, kitchen utensils, from television screens if you're too close, and also dried sludge fertilizers.
 - If you use zinc or some other nutrient to neutralize or chelate out the toxic hair analysis is a good way to monitor your progress.
 - We found muscle testing went along well with the chemical and clinical improvement.
 - Being the devil's advocate and checking all possibilities we found a finger lance of the finger and testing lingually the patient's blood would show allergen or toxic metals.
 - This lingual testing allows one a monitor of progress between hair analyses.
 - When you find a person reacting to their own blood you can test different substances to find which abolishes the weakness.
 - We have found in certain patients who have lesions only on one side. That blood from that side and not the other will show a weakness.
- Reading Referral: Scientific American, April 1974. Sue Binkley: A Time Keeping in Time with the Pineal Gland.

- Good article on the pineal.
- It's interesting; a lot of research on the pineal has been done by women. Virginia Fisk and others.
- Virginia found that the weight of pineals differed according to the length of light exposure.
 - those kept in continuous light had light pineals weight-wise.
 - Light and dark had middle weights.
 - Those kept in darkness had much heavier glands.
- She found that light and dark exposure is a major factor in pineal activity.
- We talked of melatonin production on the previous tape. This article talks of N-acetyltransferase in the pineal gland which produces a natural timing mechanism or biological clock regulating both physiological and behavioral processes.
- In the last tape we talked of patients who weakened on loss of exposure to light finding the photoreceptors of the skin and eyes were involved.

- We found the fifteenth cranial fault associated with that situation which is a sphenoid compression which requires a spreading of the condyles to fix it.
- At this point we have found no respiratory factor associated with it.
- We found in patients who we fixed the sphenoid spread, the pterygoid spread and condylar spread and other factors that in one to two weeks would fall down again.
- We found the pineal point on the lobe of the ear to be involved. It would show on cessation to light exposure. Indicating the booster activity of auricular therapy.
- the point on the ear is behind the pituitary and readily will T. L. using a vol finder or wooden orange stick.
- Stimulate the point by electrical means or mechanical it gives added reinforcement to the correction.

Renal Psoas fault and adrenal involvement.

- There is usually left and right brain activity needed to show this fault. The left Psoas will weaken with humming the right with addition.
- Prolonged N.L. activity to the Psoas reflex is needed for treatment.
- Also check the hyoid for involvement.
- Nutrient material for the kidney is usually also needed.

Reading Referral: Complementarity in Biology, James Isaacs.

- It was the information in this book and the observations of how right and left brain activity affect certain muscles that developed the electron posing concept.
- Isaacs calls the "Bion" the smallest subdivision in nature, not the cell.
- The Bion is capable of reproduction and is capable of determining what type of cell the cell will be.
- They are linked together by the trace minerals - together they make cells and then the cells are linked at the interface by Vitamin A. So what one cell does is transferred to the others.
- A is sensitive to the cellular needs that it is capable of transmitting this to all the cells.
- It's like the cells are posed on the tip of a pyramid. If the cell tries to slide down one side, Vitamin C prevents that and Vitamin E prevents them from falling down the other side.
- So you have a linkage between cells of Vitamin A and an oxidative reductive capacity by Vitamin C and E giving the capability of electron posing versus nutritional support.
- Patients that show a weakness on left brain activity show a need for small amounts of Vitamin C but E would neutralize this need.
- Patients that show a weakness on right brain activity show a need for E but Vitamin C would negate that.
- Combination of Acp-trace minerals and E will abolish the right brain, left brain activity - give 1 per day.
- Shows good responses in chronic and slow neuromuscular degeneration.
- Once Isaacs gets the patient poised he can use 1/100th of the normal chemotherapy in cancer therapy.
- The new 79 manual discussed these concepts.
- Sometimes not all three are needed.

Vol Method

- We found a high percentage of patients showed an overactive kidney meridian. This correlated with an inability to turn off the renal Psoas relationship through the sedation points.

- A way to check for an overactive meridian. Have the patient T.L. to the pulse points while you touch the first sedation points and look for a weakness.
- The meridian is over so that when you T. L. as above it causes a shift which allows the weakness to occur.
- This along with auricular therapy should be explored in difficult patients.
- You might have to tap the sedation for a long period of time to negate the indicators.

Computer System

- Best is with each doctor having a microcomputer in their office with access to the G.E. System. The I.C.A.K. will have space on the G.E. System.
- Each doctor would need a phone modem to access the data base for A.K. in the G.E. system.

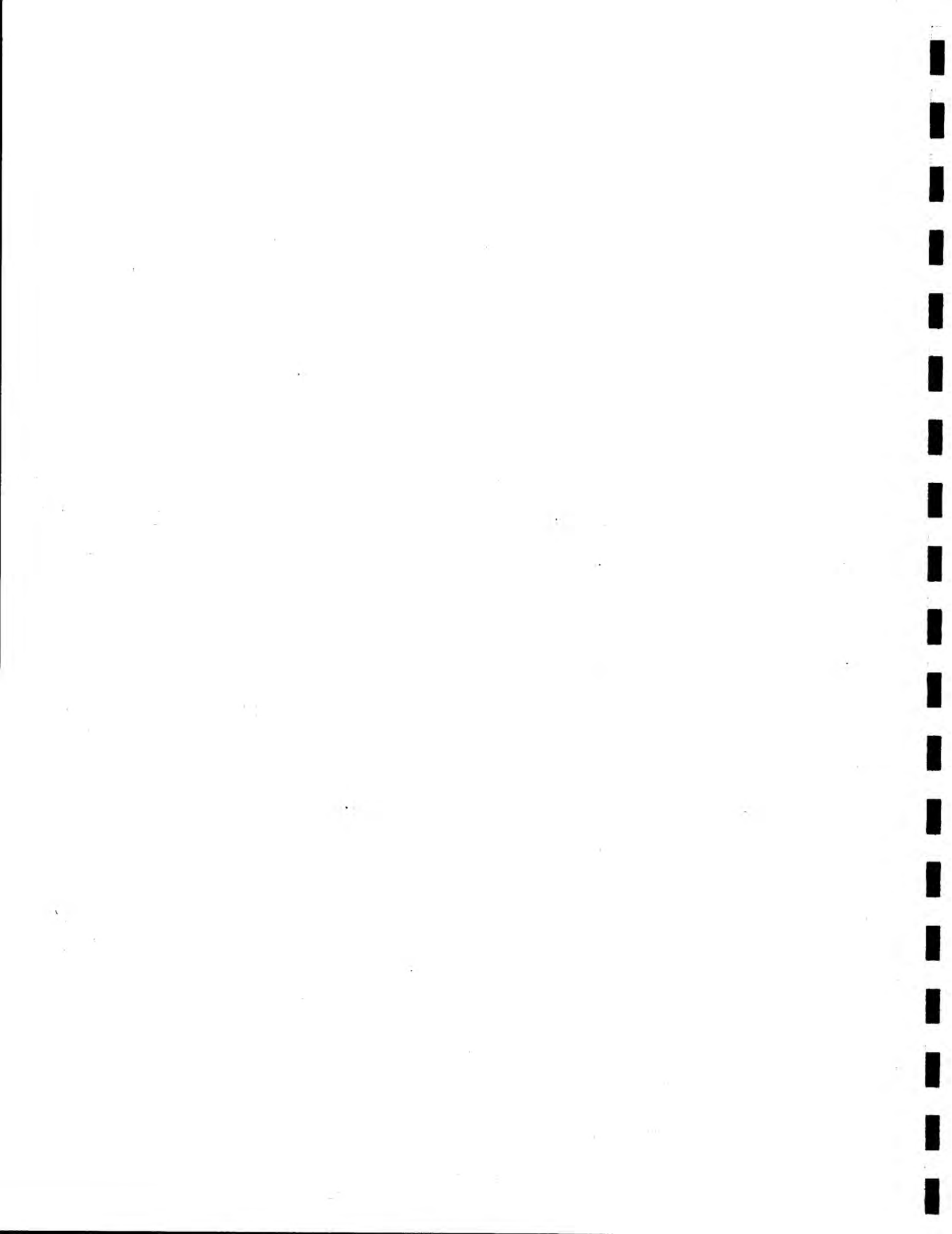
Inhalation Therapy

- Must be olfactory system that affects people.
- Ladies in dormitories, who randomly were having their periods before entering a college dorm, eventually fell in synchrony.

Reading Referral: Vitamins and hormones Advances in Research and applications by Academic Press, Vol. 34, 1976 edition, title Chemical Communication in Primates.

- We have shown patients in the past inhalation of toxic or noxious materials caused a weakness.
- In the collected papers, Dr. Brimhall's is of interest in regard to inhalation therapy for treating patients.

New Journal: Journal of Manipulative and Physiological Therapeutics, published by the National College of Chiropractic, 200 E. Roosevelt Road, Lombard, IL 60148.



DR. GOODHEART'S RESEARCH TAPES

TAPE 54

Pituitary Therapy

- I read endogenous endocraniotherapy - Samuels Therapy back in 1955.
- It was a treatment designed for treating diseases by treating the pituitary with short-wave therapy.
- One used the web of the thumb - pinching it off and using a small spectroscope, you watched for the spectroscopic change of the oxygen hemoglobin molecule observing the spectroscopic index shift. Normal 24-25 seconds.
- If it shifted down prior to pituitary treatments you also used short-wave to the gonads.
- If it shifted up you used short-wave radiation to the thyroid.
- This produced an addiction to the short-wave machine.
- We have found the glabella area to be the reflex area for the pituitary. When patients insufflated pituitary substance, the indicator at the glabella would disappear.
- We found that patients with diabetes insipidus, when post-pituitary substance was insufflated, it would diminish frequency of drinking and urination.
- We also observed patients with chronic problems having low specific gravity showed a failure of the liver circuits rather than the kidney. We now also look to the pituitary. When the specific gravity is higher look to the adrenals giving a false reading due to the electrolyte loss.
- Patients with low axillary temperature.
 - Look to fascial flush. T. minor.
 - Treat the N.L. reflex for the T. minor.
 - Pituitary and or thyroid substance nutritionally.
 - Ovarian reflex treatment at times needs to be treated, which has (-) feedback on the throid.
- With the exception of those patients that showed a Fralik's syndrome. We haven't had many patients to show a pituitary reflex.
- We would have a low temperature and specific gravity as evidence but the patients didn't respond to our treatment.
- If things didn't show we would try double T. L. to the thyroid and another organ. It is as if they have the same music but at different tempos.
- We tried this concept with the pituitary. We would have the patient T.L. to the glabella and another organ reflex. We found an inspiration assist to go with the above doing it quite vigorously and quickly.
- If doing the inspiration assist and we did not get a temperature increase within a minute we would then also take a contact on the hard palate at the cruciate suture pressing up toward the vertex with inspiration.
- If you aren't able to use a thermister to monitor axillary temperature, treat the patient who shows a double T.L. pituitary and some other organ for at least 5 minutes until all indicators are normalized.

Rebirthing

- Leonard Orr and Sandra Ray - Rebirthing in the new Age.
- Book is from Celestial Arts, Millbrae, CA., 231 Adrian Rd., 94030.
- You hyperventilate yourself back to your birthstate and it is also a cure for hyperventilation.
- Maybe this is somehow involved with the treating of the inspiration assist so quickly in this pituitary treatment.
- There are theta centers and seminars that discuss this process; 301 Lyon Street, San Francisco, CA 94117. (415) 924-1743.
- So, if you experience erratic movements of the patient while treating them, don't be alarmed.

Pituitary (continued)

- These patients when under usually show adiposity, whiteskin, sluggish mentality, low metabolic rate, increased urination, failure of hair growth.
- The patient who is hyperpituitary has thickened nose, lips, and tongue, excessive hairgrowth on legs and chest, impairment of their vision, an increased metabolic rate, headache and the temperature is usually increased. They may show a respiratory fault under pituitary thyroid simultaneous T.L.
- I only had one patient who was on L-Dopa for Parkinsons, whose temperature was in the sub-normal range that went down with the indicated cranial technique. I asked her to discontinue the medications.
- Quite often these patients will have strong hamstrings that blow out with expiration indicating the need for inspiration. Assist to the sacrum as well. This fault doesn't usually show in the clear until the respiratory technique is done cranially.
- In patients with complicated spinal problems we will use the contrapositional pattern on the coccyx as we treat the sacrum. In inspiration assist the sacrum would be pushed forward while the coccyx would be pulled backwards using a rectal contact.
- Under these conditions, we give pituitary substance 3 times per day.
- We then monitor the specific gravity and axillary temperature. The carbonic anhydrase cycle is dependant and affects glomerular filtration with H_2CO_3 being acted on to give H and HCO_3 (bicarbonate) which helps to maintain the normal acid alkaline balances. And the hydrogen goes off into the urine.
- The pituitary controls cell rate oxidation.
- All the substances the pituitary makes are essentially sulfur bearing, so make sure patients are getting enough in their diet.
- Need for pituitary drive.
 - Observe for a lower patient temperature.
 - Positive T.L. to the glabella.
 - A double T.L. of glabella and another N.L. reflex.
 - Check for a phase of respiration to abolish indicators usually inspiration assist.
 - Look for a sacral respiratory pattern checking for coccyx involvement also.

Front and back brain activity.

- We knew of the right brain, left brain activity so we looked for front and back brain activity.
- We found patients would weaken with a double flexion - i.e. flexing neck and knees simultaneously or double extension would show a weakness and a phase of respiration would abolish it.
- These show need for subclinical cranial faults we missed in the past.
- If the spinal cord gets too short - due to its cervical and second sacral attachments when we do inspiration assist, I hypothesize it frees up the filum terminale.
- Lowell Ward has shown the length of the spinal column actually will lengthen and shorten.

Reading Referral: Robert Mendelsohn; Confessions of a Medical Heretic, Contemporary Books, Inc., 180 N. Mich. Ave., Chicago, IL 60601.

Also: Fit or Fat by Covert Bailey, publ. Houghton Mifflin, 1978.

- Shows when a patient is on a 600 calorie diet the body thinks a famine is coming and begins to store fat.
- Basically he recommends exercising a minimum of 10 minutes per day aerobically $220 - (\text{your age}) 80\%$ of that number equals the heart rate to exercise at.

- Can use instapulse to monitor the rate made by Biosig Inc., P. O. Box 651, N.D.G. Montreal, Canada H4A3R1. It's a hand-held device.

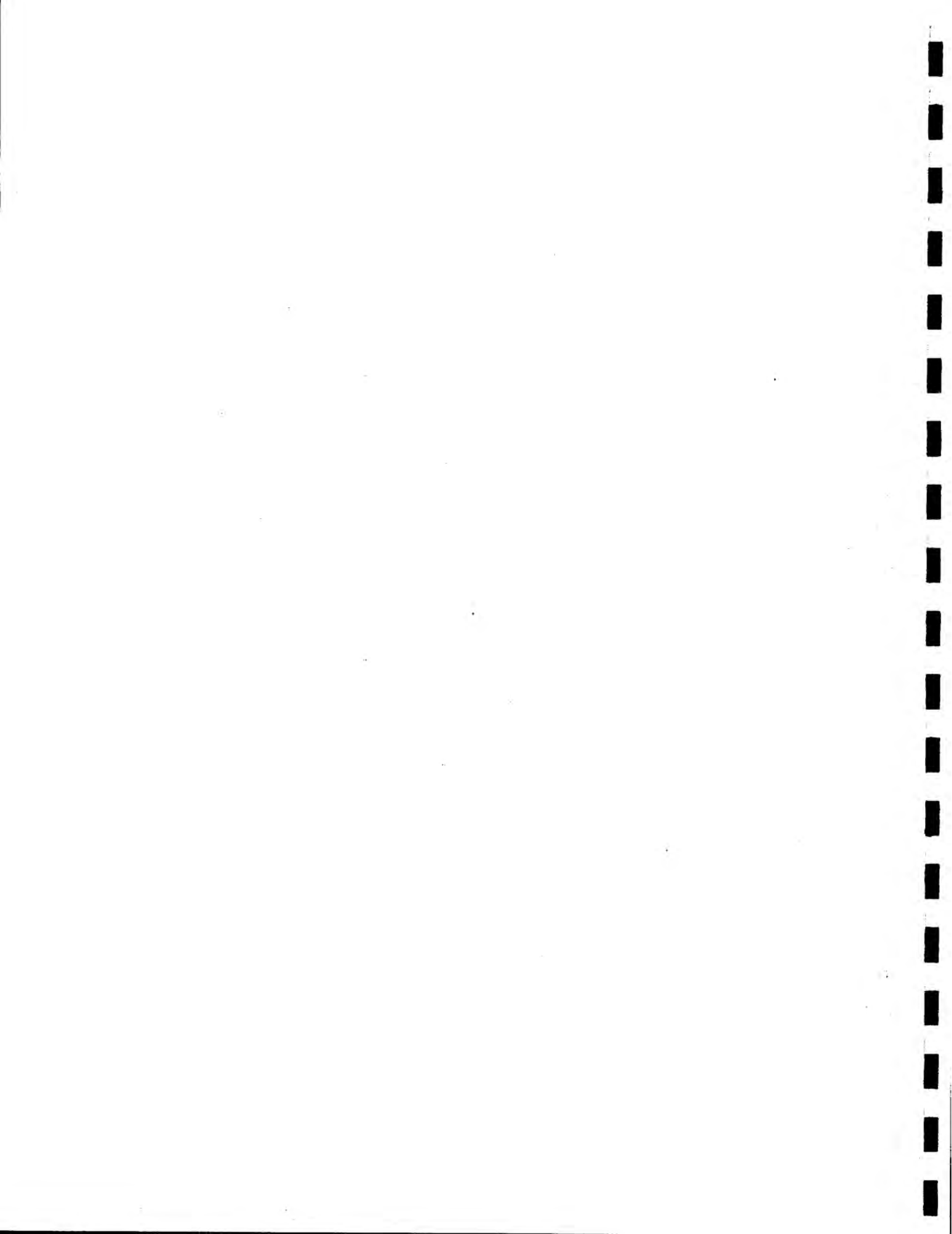
Also: Behold Man, Leonard Nielson by Littlebrown & Co., Boston.

- Marvelous pictures of the body.

Also: Gentleman Quarterly. There's an excellent article on A.K. by Paula Siegel, August 1979.

Also: In the Present Issue of Sports Illustrated there is another fine article by Herman Weiskopf on A.K.

- We now have copies of Dr. Isaac's and Dr. Lamb's work on electron poisoning.
- In the published material - On the Conference of Trace Substances and environmental health, Vol 8, pp 313-321 copies may be obtained from Dr. Poortinga, 403 Xenia Ave., Yellow Springs, OH 45387
- the article mentions the regime for electron poisonings. They noted many tissue changes most related to trace minerals.
- Copper helped visual perception of red and green color.
- Manganese has a sedative effect on the sight of some patients and a relaxing effect on skeletal muscle contracture and fasciculation associated with arthritis.
- Zn and Cu are helpful in skin disorders including staph pyoderma.
- Cobalt with 0.1 gms of tryptophan relieves coronary angina without the residual headache in those patients that get them with nitroglycerin.
- Copper with 0.1 gms of tyrosine diminishes aches in the flu.
- We found in patients demonstrating a subclinical cranial fault, that was demonstrated when in a double flexed position supine. When in sitting or standing positions, they would show the same response, but it would be abolished by left brain activity.
- In the supine position, the right brain is more activated.
- When in a gravity position, the left brain is more augmented.
- The left brain is water-soluble and right brain is fat-soluble (79 manual) along with the trace minerals.



DR. GOODHEART'S RESEARCH TAPES

TAPE 55

Reading Referral: Gentleman's Quarterly, August 79. Excellent article on A.K. by Paul Siegel.

- We got a phenomenal response from the article for A.K. referrals.
- Also the article in Sports Illustrated on Leroy Perry and his olympic involvement.
- Terry Franks is setting up his own practice near Minneapolis.

Pituitary Technique

- We continue to see good responses both in temperatures and specific gravities.
- On cranial pump technique it takes about 5 min. for th temperature to stabilize. Inspiration assist is the usual technique which needs to be done.
- The N. L. is at the glabella and is usually activated several times while doing the pumping action.
- We do give pituitary nutritional support.
- In patients that show the A plateau in temperature but it's still low, check for retrograde lymphatics.
- This all will help balance the pituitary, thyroid, adrenal axis.
- Check for right brain, left brain activity knowing right brain factors are fat-soluble and left brain factors are water-soluble.

Postural deviation.

- When patients heads are ahead or behind the lateral plumbline, or any lateral plumbline postural deviation.
- Femoral head fixation. We have found a new one which seems to be associated with a hidden occipital atlanto fixation.
- In this instance the symphysis pubis is related to the symphysis menti of the jaw.
- An analogy between the head and pelvis relationship is like that of the fighter aircraft and the tanker refueling it. They both have to fly straight and level.
- It's the same pattern of cloacal, visual and vestibular righting reflexes.
- We have found fixation of the femoral head induced by both muscular and ligamentous relationships that relate of atlanto occipital relationships that do not show up in the usual fashion.
- Just as we show a stretch weakness of the piriforms by bringing the knee up and medial that is neutralized by lateral motion of the eyes. You can get a weakness by a double flexion or extension pattern when the patient is in a supine position.
- Have the patients bring their knees up- test a muscle - then have the patient flex their head on their chest with the limbs straight. You'll get a negative response. Do both movements together and a weakness

- may occur, once in a while it occurs by doing extension of the above areas.
- You will also find a respiratory phase to abolish the above indicators.
 - Measure patients' ability of passive abduction.
 - To treat the above you contact the patient's head and while the patient attempts to flex or extend you resist that motion as you have in the past.
 - Recheck for a weakness of the double flexion. Now negative.
 - Note increase now in abduction.
 - Also note change in lateral posture.
 - If patient shows weak with double extension - treat it the same way.
 - Pelvic position must be at an optimum level for good C.S.F. Movement and special movement. As the sacral apex moves forward the pelvis moves backward and coccyx moves backward and vice versa. The pelvic ilia flare out with inspiration and in with expiration.
 - The above technique allows better motion of the pelvis.
 - Some patients who exhibit a sitting sciatica not present while standing or walking. We have found an open S. I. joint on the posterior which will only T.L. to the posterior neck extensors on that side. It responds to a challenge to the P.S.I.S. from a lateral to medial direction, frequently it is seen on the left side.
 - You adjust from lateral to medial with respiratory factor found to abolish it, usually inspiration.
 - Check for a subluxation also. Look to tape the area if needed.

Blood pressure.

- John Campbell's technique to T.L. to the carotid pulse with one hand and you can T.L. with the other hand to other areas. Once you correct the areas that are involved use the temporal tap to audit to make sure other areas aren't involved. (Collected papers 1977)

Reading Referral: George Meek, Healers and the Healing Process: Quest Book, Wheaton, IL, 306 Geneva Rd., 60187.

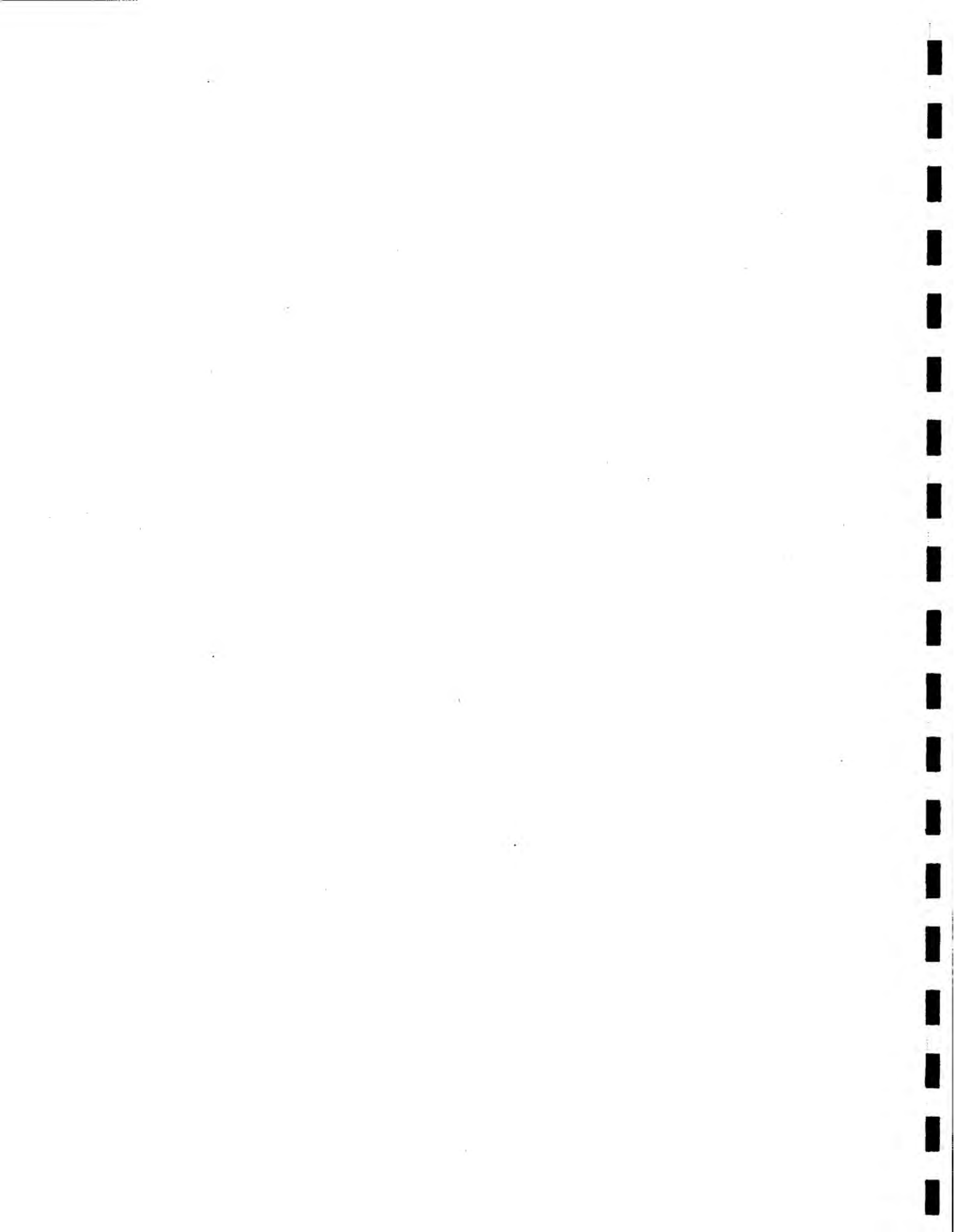
- Articles on healing.
- Also: The Therapeutic Touch: How to Use Your Hands to Help or Heal, Dr. Dolores Kriger.
- "Physician Heal Thyself" and "A Physician who Treats Himself has a Fool for a Doctor." I used to wonder about the paradoxical meanings here.
- Anecdotal: A patient with a tri-malleolar fracture that had not responded after normal orthopedic care. There was still lymph edema and several muscle weaknesses. I, without letting the patient know, grasped the patient's ankle with two hands and for 2 or 3 minutes I visualized her ankle as being better, like mine. Past indicators improved.
- I generally do not communicate what I'm doing to the patient along with visualizations of color because some people are not ready for this type of information.
- See man with eyes that really see, Feel man with hands that really feel and hear man with ears that truly hear.
- We can't rule out the metaphysical realm.

Reading Referral: Lowell Wards, Dynamics of Spinal Stress.

- His physiological short leg concept is excellent.
- If a patient is off from the plumbline, any adjustment you make should bring them back to midline.
- A patient of Dr. Dan Duffy has made an excellent posture meter. If enough people are interested, perhaps we could get a group discount.

Electron Poising

- Acp-E-trace minerals. Are the Nutrients of Choice in Low Dosages.
- Glutathione can accept or give electrons which is mediated by the sulphur system which is modified by trace mineral material.
- Occ. Vit. K as in fat-soluble chlorophyll is needed in association with quinones.
- We are welcoming Dr. Kevin Kopriva to the office to replace Dr. Franks.



DR. GOODHEART'S RESEARCH TAPES

TAPE 56

Thanks to Sheldon Deal for the timely release of the annual papers.

- One article to look at is the one on Lingual Ascorbic Acid and its correlation to bilateral pectoral clavicular weakness. 83% who showed bilateral weakness showed decreased ascorbic acid levels.
- All the collected papers showed great thought.
- On page 214 of The Scientific Bases of Human Movement. - O'Connell & Gardner.
- There are some discussions on righting reflexes.
- Stimulation of the labyrinthian righting reflexes evokes contraction of the neck muscles which orient the head in relation to gravity.
- Asymmetrical stimulation of skin receptors caused contraction of trunk and limb muscles.
- If you stimulate the opposite side skin receptors simultaneously no righting reflex occurs.
- Visual righting reflexes orient the head and body with the environment.
- Equilibrium reflexes are evoked by stimulation of the semicircular canals.
- The Semicircular Canals
 - They level the head in three dimensions primarily
 - Forward and backward
 - Side to side
 - Left and right
 - There is receptor involvement for a pitch pattern of the head (forward or back)
 - There is receptor involvement for a roll pattern when one side is lower than the other.
 - There is receptor involvement for a yaw pattern where one side is anterior and the other is posterior.
 - We relate this to a tanker aircraft fighter aircraft refueling. The head being the tanker, the pelvis being the fighter and the spine is the fuel line in between.
 - So you must level the sacrum to level the head and vice versa. You must detorque the pelvis to detorque the head and vice versa, etc.
 - The semicircular canals are sensitive to both pelvic and head positions.
 - We have a chin at our chin and one at our pelvis.
 - There is a symphysis menti and a symphysis pubis.
 - These two chins have to be level - if one is off the other usually follows.
 - You are all familiar with the occipito atlanto fixation tests. Flexing and extending the head both on and off the table.
 - Sometimes the body compensates and you get a femoral head fixation.
 - Some of the following technique is similar to the oculo basic technique where we stretched one piriformis and looked for an eye direction that abolished any found weakness. We then challenged the sacrum and we fixed it with the phase of respiration and eye movement that abolished the weakness. 79 Manual.
- This showed how the eyes affected the pelvis.

- The Pry Technique - Pitch Roll and Yaw
 - The oculo basic technique comes under the Roll pattern leveling the pelvis to level the head.
 - The Pitch pattern - the patient flexes the knees with the feet on the table and flexes the head forward, then test a muscle. Some patients show involvement with the legs extended off the table and the head extended back - we fix this similar to the occipito atlanto technique. You have the patient extend or flex the head while the Dr. resists said motion strongly. Then retest the patient.
 - You will note an increase in femoral head movement if you checked it previously. We see great increases in abduction of the leg up to 40% without any fascial flushing.
 - The Roll pattern - the patient flexes the knees with their feet on the table; they then let them both go to the left side and you test a muscle; then they both go to the right side and you test a muscle if a weakness is found you fix the sacral fault with a basic contact and eye position that abolished the challenge. As in oculo basic technique.
 - The Yaw pattern - the patient flexes the knees with their feet on the table and lets both knees go to one side and then rotates the head to the other side causing a counter rotation. If a weakness occurs you adjust the occiput. The fixation is usually on the side where the occiput was up. You find a point of tenderness on the occiput and adjust in a direction to the base of the nose with no rotation of the head. You can challenge the occiput on the atlas. The occiput is fixed in a state of rotation on the atlas.
 - Check for femoral head movement before and after treating. Look for increase in movement after treatment.

Reading Referral - The Food Connection, David Sheinkin and Michael Schacter and Richard Hutton.

- Applied kinesiology allergy testing is noted. There is a chapter on it and I'm mentioned in the text.
- The paper published by Trianno and Davis published by I.C.A.K. on reactive muscles has proven very beneficial.

ⓑ Reactive Muscles

- Some seem to be more reactive to certain muscles than others.
Anecdotal - A high ranking raquetball player who had elbow problems seizing up halfway through a match. No fascial flush showed or muscle weakness showed and there were no apparent vertebral or structural disrelationships. Checking for ligament I found that to be negative and ligament interlink is usually for joint involvement, not pain in a muscle. The triceps, through a gait relationship is related to the quadriceps. When I tested the right triceps after testing the left quad, there was weakness. So I did spindle cell therapy to the quad to reduce the tension retested, and the tricep was strong - look to muscles being reactive in gait patterns. This is myo interlink.
- We are all familiar with the decerebrate cat experiments, and how the cats were able to walk with different levels of spinal cord cuts.
- Anecdotal - I noted quadriceps temperature change while working the muscle spindle of the opposite triceps.
- It's very useful in athletic injuries.
- We look for an increase in temperature.

Reading Referral - The New American Medicine Show, Dr. Irving Oyle, Unity Press, Santa Cruz 1974.

- A book directed to bettering our philosophical concepts.
- It's a good book to understand how healing actually takes place.

Spinal Fluid Concepts

- "If the bones of the skull move with every breath we take, then the mandible is the handle of the pump." Dr. Willie May
 - We've shown how the mandible is involved with this.
 - We've shown inspiration to expiration assist.
 - It's hard to find faults if the pressure is too high.
 - I believe one of the functions of the T.M. J. is to monitor the C.S.F.
- Anecdotal - A patient didn't show anything when in the supine position but showed T.M.J. involvement and a need to have the sacrum stabilized only when they were in the standing position.
- This is frequently seen in patients with a convulsive episode.
 - We usually find the sacrum has to be held in a forward position. It moves forward with inspiration so in this example as the patient expires you hold the sacrum forward limiting its motion and reducing the C.S.F. flow rate.

Electron Poising Concepts

- The cell with its Bions (intra cellular bodies) they can be indeterminate when it comes to reproduction.
- The trace mineral potential availability determines what a cell can be.
- Cells in general are linked to one another by Vitamin A.
- The whole mechanism is then poised on top of a pyramid which is glutathione (a poly peptide of cystine, glycine, and glutamic acid). It has the unique capacity of giving and receiving electrons without changing itself.
- Now picture a shallow S on a piece of paper. On the top right put oxygen. On the lower left put hydrogen. At the mid point is the mid potential of the cell. Vitamin E prevents over-oxidation and Vitamin C prevents over-reduction.
- The cell is set up so that the more it oxidizes the more it will reduce itself (with hydrogen) glutathione is what keeps this remarkable balance.
- Oxygen is thyroid related, water soluble left brain.
- Hydrogen is adrenal or steroid related, fat soluble, right brain.
- The left brain is masculine and positive whereas the right brain is feminine and negative. This explains some of the acupuncture, biomagnetic, and positive and negative therapy localization relationships.
- Fundamentally we supply the patient with A.C.P., the P supplies the quinones which helps keep the body in mid potential.
- If the patient is exclusively left brain we try to supply those agents related to left brain (water soluble substances such as Vitamin C.)
- With the right brain we try to supply the fat soluble substances such as Vitamin A which will neutralize any weaknesses.
- Sometimes patients need both so we begin with trace mineral to begin nutritional therapy which abolishes both left and right type weaknesses.
- We basically start out with ACP, E and allorganic trace minerals or multitrophic chelate. A single tablet per day and then we add whatever nutrients appear indicated due to the patient type of pattern on testing. Also to increase their sulphur intake.
- Control of oxidation is under disulfide control which is basically the sulphur system which acts as a monitor for oxidation and reduction activities. That's why there is a nutritional need for things like mustard, horseradish, onions and garlic for the sulphur that is present in them.

(Tape 56)

-4-

- If you can imagine the S curve I've described as a propeller - the propeller hub would be copper, manganese would be on the oxygen side on the right, zinc would be on the hydrogen side on the left, etc. Trace minerals act as ergonizers. Substances which improve the potential of solving the complexity of the problem.



DR. GOODHEART'S RESEARCH TAPES

TAPE 57

Reading Referral - The Brain-The Last Frontier by Richard Restak.

- It's full or modern knowledge of the brain and nervous system.
- They state that speech seems to be lateralized to the left hemisphere. The speech area is larger on the left side than the right.
- Dr. Turkowitz noted a biasing of infant head turning to the right which would indicate the left hemisphere developing at an early age.
- Turkowitz noticed over 98% of newborns' heads were turned to the right. The other 2% even had their heads turned more to the right than the left when infant heads were positioned to midline while on their backs. 75% turned their heads to the right initially.
- Newborns responded to food stimulation more quickly to the right.
- Speech sounds were recorded to be perceived by the infants in the left hemisphere whereas non-speech sounds were recorded to be received in the right hemisphere.
- We know the left side of the brain controls the right side of the body 85% of the fibers decussate. The left side is mathematical, logical, reasoning, predictable and male.
- The right side of the brain controls the left side of the body is tonal, illogical, non-reasoning, non-predictable and female.
- Yet the left brain is like 3,000 years old and the right brain is like 5 million years old.
- Something has to bias the brain to the left. It's as if you have neurons 10^3 on the left and 10^{23} on the right.
- One notices how easily the left brain shuts down when someone has a few drinks, the speech and motor capability slows down.
- Something has to bias the brain to the left because the majority of us are right handed.
- In anthropological studies it is recognized a majority of wall writing occurs in the corner of a cave versus the edge of the cave indicating right handedness.
- In the animal, the limbic system (Rhencephalon). It is the seat of anxiety and tension and where most of the M.A.O. inhibitors work.
- An animal's head turning is hooked up with his olfactory sense. This is demonstrated in animal studies where animals exiting from a wooded area turn their head from side to side while sniffing.
- We usually turn our heads from side to side when we smell something.
- The head turning muscles, the S.C.M. and upper trap have a dual innervation from cranial nerve (spinal accessory) and cervical nerve innervation.
- I accidentally noted on a patient that when he therapy localized the bridge of his nose it was abolished by head turnings. I noted on patients who showed negative T.L. to either the nose or another area that sometimes a weakness would occur when both were therapy localized. I found no cranial faults involved with it, it was immediately abolished with head turning. This made me wonder whether the

biasing to the left brain was upset giving an improper balancing between left and right brain.

- The right brain is so dominant neurologically to the left
- Limbic technique
- Involves a fixation of the 7th cervical and first rib.
 - Lovett brother - At the 1st lumbar and twelfth rib or sometimes the 11th rib via the posterior serratus inferior.
 - If you T.L. the seventh cervical 1st rib bilaterally a weakness may occur on head turning. The same is true upon therapy localizing the 12th rib 2nd lumbar region.
 - The head turning is merely a screening technique to show the patient what is going on. The real technique is to T.L. the area of fixation and turn the head to one side or the other.
 - We challenge the vertebrae in question in one direction while pushing the rib in the other direction. We observe for a weakness. The side that produces the weakness is the side to adjust.
 - The 7th cervical is the vertebral prominens, it is like a tiller, it is the spinal backup to the limbic system.
 - The interesting thing to note here is the accompanying weakness of the peroneus tertius and/or longus and/or brevis and/or anterior and/or posterior tibial in about that order bilaterally.
 - With this movement there is a marked increase in the patient's energy and reoccurring problems hold better.
 - It is old fashioned chiropractic appealing to many people who like articular relationships. This is a true fixation.
 - This is the structural component to the left brain, right brain sequence - electron poisoning - holography, etc.
 - We're looking for the emotional side of the triangle for the right and left brain sequence.

ⓑ. Pitch, Roll and Yaw

- The two chins should be in balance with one another. The symphysis menti and symphysis pubis should be in synchrony with one another and have a full range of motion.
- Pitch
- The pitch pattern being involved with a femoral head fixation. You will usually note a full range of motion of a patient's hip while the patient is supine. However, in walking their gait seems greatly limited.
 - The semi-circular canals and the relative pitch are responsible for the limiting of the femoral heads.
 - We check for the pitch pattern by having the patient flex his head forward while flexing both knees and checking the pectoral claviculars for a weakness. Occasionally the patient will show an extension pattern. It gets fixed the same way.
 - This procedure is different from the atlanto occipito technique because here there is bilateral flexion of the head and also legs at the same time.
 - You fix this pattern by resisting patient head motion. As the patient attempts to flex the head forward you attempt to extend it and as the patient extends the head back you flex it forward. Your hands are holding the sides of the patient's head.
- Roll
- The roll pattern is basically the occlusal basic technique. The patient flexes both knees then lets them both fall to one side or the other and we test for weakness. If weakness occurs, we fix the sacrum.
 - The sacrum is challenged and it shows positive only with the patient's

eyes lateralized to one side or the other. You then find the phase of respiration which abolishes it.

- To fix the roll pattern you hold the contact that meets above criteria for about four to five respirations.
- The side we're fixing is usually the side of a short leg and temporarily may need to be lifted.

Yaw - The patient flexes the knees and lateralizes both of them to one side while the head is turned to the opposite side.

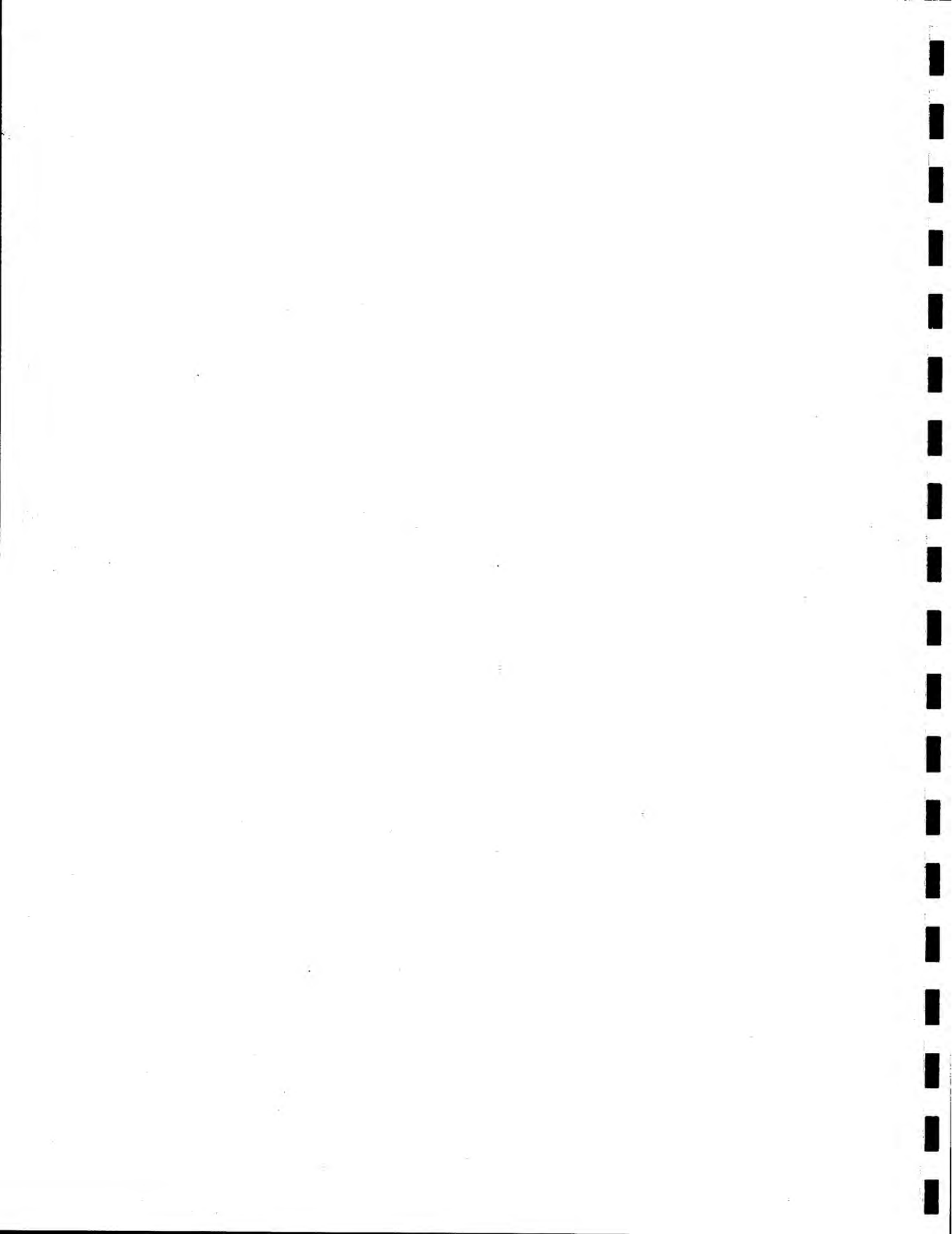
- When a weakness occurs, there is an occipital subluxation fixation usually on the side that was up on head turning.
- We challenge the occiput on the atlas. Hold the atlas and challenge the occiput.
- The occiput is then adjusted by a thrust to the base of the nose with the head in a straight up position.
- This will increase patient flexion considerably.

Unilateral Rib fixations.

- Exhibited by toe flexor weakness. All of them except for the big toe.
- This is challenged by challenging the levator costorum attachments. We challenge the spinous process with the rib just below it.
- We check for this with any P.R.Y. patients we find or limbic techniques.
- We adjust these rib fixations in the direction of the challenge.

Postureometer - We are taking orders for them so Dr. Duffy's patient will make them for us.

- Video cassettes of our sessions are now available on $\frac{1}{2}$ V.H.S.
- We've recently returned from Australia, it was a wonderful visit.
- We have copies of the New Zealand report on chiropractic.
- There will be chiropractic representation for the 1980 Olympic games for the U.S. athletes.
- There was a very fine article on chiropractic and A.K. in the Cincinnati enquirer.
- Terry Frank is now in Burnsville, Minnesota and Wally Schmidt is in Chapel Hill, N. C.
- Currently Drs. Kevin Kopriva, Phil Dunard, Gary Klepper and Rob Resnick are the current staff.



DR. GOODHEART'S RESEARCH TAPES

TAPE 58

Olympics

- This tape is being made at the Olympic Village in Lake Placid, N.Y.
- Chiropractic treatment is being given to the athletes who request it.
- We have a trailer here with a table and equipment for me.
- All the stories you have heard about the transportation is true.
- I have treated several skiers; Terry Lynch, Gary Crawford and Dave Erwin.
- Randy Gardner did not request chiropractic care so I was unable to treat him.
- Randomly athletes are chosen for drug screening, both winners and losers.
- I have seen some hockey games, been treated very well and you'll be hearing many stories as I lecture to various groups.
- The Olympic Village is a city in itself with a mayor and it is to become a minimum security complex after the games.
- The food is excellent and the athletes are well taken care of.

Reading Referral - Runner Magazine - March 1980. Talks of chiropractic and the U.S. Medical staff.

- The press has been good on this event.
- The athlete who injures himself is injuring the most precious thing he has and needs much support and reassurance that his body is responding well.
- Dr. Irving Dardik is to be lauded for all he has done in getting us involved with the Olympic games.

The Limbic System

- Is positioned between the two halves of the brain and as we've discussed previously is associated with smelling, and head turning.
- This technique was found accidentally in Houston when a patient T.L. to the valves of Houston and his nose and it was abolished by head turning.
- We've found the nose is apparently the T.L. input to the olfactory system which is part of the limbic system.
- We know the S.C.M. and upper trapezius have both a cranial and cervical spinal nerve supply.
- We found head rotation really takes place at the 7th cervical.
- We found that T.L. to the 7th cervical 1st rib would be negative but with head turning it would be positive.
- As Isaacs says, if you give biology what it needs it will solve its problems. This is true with the three sides of the triangle.

Research

- The Olympic committee is funding a project to look into the correlation of palpation between 2 members of a team investigating by palpation of the spine and joints of athletes. There will be seven teams of 2 members each. They will treat the athlete with manipulation but this will not be evaluated at this time.
- Another experiment will be set up to evaluate manipulation treatment.

- I encourage you to submit your name to Dr. Murray Goldstein, D.O. to volunteer your time for the 2-man team trials. Write to Dr. Goldstein, N.I.M., C.D.S.- N.I.H. Bldg. 31, Room 8A 52, Bethesda, MD 20205 (301) 496-9746. He is setting up the statistical part of the research.

Flu

- The most recent epidemic affecting primarily the sinuses, nasal, throat did not show the usual signs. They show a double therapy localization to spleen and sinuses together but not individually.
- It's similar to checking the pituitary against the thyroid.

Nails

- Those who bite them show a need for trace minerals.
- Nails themselves are high in trace minerals.
- We supplement low dose broad trace mineral support.
- Sometimes we start with very low dosages - a 16th of a tablet so the body can build up its trace mineral reserves without putting any minerals out of balance.

Pitch, Roll and Yaw

- We've found an additional factor - a yaw #2
- We're familiar with yaw #1 where both bent legs go to one side and the head goes to the other. This indicates an occiput subluxation fixation.
- In Yaw #2 we block a prone patient. One block under the anterior iliac crest and the opposite shoulder. If a weakness occurs it is neutralized by the patient's hands on the sacrum bilaterally not unilaterally. This indicates a posteriority of the sacrum usually on the left.
- We adjust it on a side lying position with the upper leg bent and parallel to the floor and no rotation in the spine. The Doctor's thigh is placed behind the patient's bent upper leg and the patient is instructed merely to push lightly against the doctor's thigh. Then with a pisiform contact adjust the sacrum in a forward direction neutralizing this torque pattern.

DR. GOODHEART'S RESEARCH TAPES

TAPE 59

Welcome to I.C.A.K.

Aerobic Anerobic Muscle Concept

- I found it when working on Dave Erwin on the Olympics
- He had hamstrings that were very strong and his problem of not being able to hold a tuck towards the end of a run prompted me to test his muscles repeatedly. The intact left side was fine but the right medial hamstring weakened after a few repeated tests. I had an answer for something I had no question for.
- We are aware there are two types of muscles.
- Slow twitch
 - Red
 - Aerobic
 - Burns fat and oxygen to provide energy - they are the postural muscles.
 - This is the equivalent of the dark meat on a turkey.
 - It owes its color to myoglobin. It acts as an oxygen reservoir within the muscle which tides the muscle over from one contraction to the next.
 - Site is small and redder.

Fast twitch

- White
- Anerobic
- Burns glycogen by an enzymatic action.
- This is the white meat on a turkey.
- Site of these fibers are large and pale.
- Its action is primarily glycolytic indicated by its high A.T.P.ase activity.

Reading Referral: O'Connel & Gardner. Understanding the Scientific Bases of Human Movement, p. 157. They compare fast and slow twitch muscles.

- Most muscles in man contain both type fibers in varying ratios.
 - Those with a higher content of aerobic slow twitch muscle will make better distance athletes.
 - Those with a higher content of anerobic fast twitch fibers will make better sprinters.
 - Evidence has shown you can bias these ratios by training.
- There are basically three types of fibers.

- A. Classic fast pale fibers.
 - found high % in gastochemicus small % of B or ^C fibers
- B. Slow red fiber
 - high % in soleus muscle, low A fibers
- C. Slow red fiber
 - high % in sloeus muscle, low % A fibers.

- With Dave Erwin I assumed that perhaps due to decreased lymphatic drainage the muscle was not getting enough fat to stay strong.
- With prolonged N.L. activation, the above weakness did not occur.
- When patients flex forward sometimes you will see one side higher. This high side should be the side of a weak psoas. Yet on testing the muscle I would not find it weak. But on repeated testing it would show.
- This works well especially with scoliosis patients when one cannot find a weakness.
- Capillaries have been shown to leak protein - 60% will be lost in a 24 hour period. All the fat is lost in the same period of time being retrieved by the lymphatic system.
- If there is a loss of retrieval especially of the fat it remains in the interstitial tissue of little benefit to us.
- So as the muscle keeps contracting, it does not get its proper supply of fat. So we try to improve the lymphatic drainage.
- If cramping occurs with repeated testing work both the N.L. and N.V. reflex. If the cramping persists we look to the nutritional requirement of that muscle.
- The 1980 manual has this in it.
- A person who doesn't eat meat is lower in iron and that may predispose them to this.

Anecdotal - A patient who has seen several dentists but was still having T.M.J. involvement. Her main problem was at 8:00 a.m. So I checked the then meridian alarm pt. to the now meridian alarm points. Individually there was no weakness but when both were T.L. Simultaneously there was immediate weakness. I then looked for a lou point of the above meridians to abolish the weakness. It abolished the pain in her jaw.

- It is best to stimulate a Yin meridian at a Yin time noon till midnight and a Yang meridian at a Y any time midnight to noon.
- This is the "Now and Then" technique.
- Check the now alarm point against the then alarm point or a major T.S. line indicator.
- Tap the lou point until the symptom is gone, the tap point is less painful or there is no longer a T.L.
- It is especially useful for those with jet lag or those who travel frequently.

B. Reading Referral. Killing Pain Without Prescription, Harold Gelb. It has a section on A.K. in Chapter 7.

- The charts we use are the ones printed in the 1973 manual.
- In the past we have described a sacral wobble and we have stated not every cranial fault has a sacral fault but every sacral fault has a cranial fault.
- A sacral wobble is a torque pattern within the pelvic girdle coming from its concentric movement.
- The patient when T.L. makes sure to T.L. only the sacrum.
- With regards to the spheno basilar junction there is evidence of a wobbling along with flexion and extension.
- There is a wobbling motion to the temporal bone.
- The frontal bones pivot at the mectopic suture.
- We're aware of the banana head.
- On examination there is an anterior divergence and convergence on the respiratory surface of the sacrum.
- On looking down at a skull checking the anterior frontal sphenoidal suture line there is a relative anterior convergence.

- At the pterygopalantine line there is a relative anterior convergence.
- The occipital condyles have a relative anterior convergence.
- At the occipital temporal suture the same is true.
- Some T.S. lines are painful to palpation and even though other things are improving the T.S. line will remain painful.
- I noted on some patients the upper T.S. line was painful on one side and the lower T.S. line was painful on the opposite side.
- I had noticed in some patients when I worked the glabellar area (reflex for the pituitary) I would get a response when manipulating the area in one direction and not the other.
- So I hypothesized that perhaps the sphenoid was rocking. I would have the patient T.L. to one side of the bridge of the nose looking for a weakness. It was usually negative.
- I instructed the patient to push the side of the bridge of the nose with about five pounds of pressure towards the top of the T.S. line on the opposite side. One direction may cause a weakness that is usually helped by inspiration assist.
- We fix this cranial fault the same way as it was challenged with the phase of respiration that abolished the challenge.
- The T.S. line will lose its soreness.
- This is how we fix a tilted sphenoid.
- The eye will be extruded on the high wing of the sphenoid. The high side will have a depressed high side T.S. line and protruding low side. The opposite would be true of the low side.
- Using the bridge of the nose to derotate the sphenoid is a lot more comfortable than using the pterygoid process. The nasal bone acts as a beautiful lever.
- This technique helps in long-standing T.M.J. problems.
- In the 1980 manual there will be drawings of the sacral and cranial anterior convergences.
- Because of the boycott of the Moscow olympics there has been some cutbacks.
- Those who wish to contribute funds can do so by sending them to the United States Olympic Committee Sports Medicine Foundation. Attention: Irving Dardik. Earmark it for chiropractic research if you wish. Call me for his address since he is moving.

The Brain

- 98% of right handed people who are asked a question requiring a verbal thought will respond with eye movement to the right. This is remnant of the biasing of the body from birth.

Reading Referral: Structure of Magic, Bandber & Grinder. Frogs and Princes. Real People Press, Boy F. Moad, Utah 84532.

- They talk of eye movement.
- When the eyes move up and to the right people are accessing constructive imagery doing visual manipulation.
- Eye movement up and to the left indicates access to remembered imagery. They like explanation with pictures.
- Eye movement down and to the right indicates access to feelings. It's good to work on this person at this time.
- Down and to the left movement is with accessing of internal dialogue and the person is talking to themselves.
- Eye movement level and to the right occurs when a person is thinking of something to say.

- With eye movement level and to the left they are accessing remembered literature.
- This lets you know whether a person is audio metric, kinesi metric or video metric.

Reading Referral: Scientific American offprint #158, June 1963. Availability:
660 Mark Street, San Francisco, CA

DR. GOODHEART'S RESEARCH TAPES

TAPE 60

In the workshop procedure manual, Vol. 2, 1979, and in previous manuals, the sections of "apply appropriate cranial technique" is well-known to you and self explanatory.

- The mastoid is moved forward with inspiration (tongue on roof of mouth), when a muscle is helped by inspiration.
- The mastoid is moved backwards (tongue held down), with expiration when a muscle is helped by expiration.
- These were called the relay reset method (Tape #35).

Reading Referral. Myofunctional Therapy in Dental Practice, Bartell Dental Book Co., 112 Crown St., Brooklyn, N. Y. 11025. Page 177 - He describes tongue movement on swallowing.

- We have found many patients who have problems swallowing with their mouth open. This is a simple screen for cranial faults. You should be able to swallow with your mouth open. If not, it's indicative of a cranial fault 50% of patients cannot do this.
 - The average individual swallows about two times a minute while awake and once per minute while asleep.
 - This comes to about 2000 swallows in a 24 hour period. The force varies from 1.5 to 6 lbs of pressure.
 - When the swallow is off it causes both dental and cranial faults.
 - Measuring the strength of the orbicularis oris is about 3-5 lbs of pressure. Readings above or below this is abnormal.
 - Thumb sucking has been hypothesized about with little proof. We don't believe it's due to insecurity. We believe it indicated a digestive problem where sucking helps to get increased predigestive juices as saliva. A properly breast-fed child rarely sucks its thumb.
 - Assuming there is a cruciate suture imbalance we have patient try to spread the maxilla apart, many patients get a positive response.
 - Dr. Schroed discussed this in the winter of 1979 collected papers - both the separation and closure.
 - We have found the suture to usually be jammed. We challenge by pulling apart and finding a phase of respiration that abolishes it.
 - DeClementes anatomy text figure 546 shows the origins of the pharyngeal constrictor muscles attaching directly to the basal portion of the occiput as well as to the temporal bone. This indicates why we can use an open mouth swallow as an indication of a hidden cranial fault.
 - Following the spread technique cervical muscles relax in a marvelous fashion.
- B. Very practical in relieving the tension type headache demanding relief.
- The muscles of the soft palate have a vagal innervation.
 - The forces add up to accumulated of 3,000 to 12,000 lbs of force over a 24 hour period in the oral cavity.

Dr. Steven D. Smith, M.D. of the Philadelphia College of Osteopathic Medicine who feels like I do that the tongue in the relay reset position is important. And that the tongue's anterior half comes in contact with meridian areas on

the hard palate which correlate to wrist pulse points. Starting with the conception vessel governing vessel on both the left and right sides and then the other respective points working their way back half way to the foveola palatina. They are on either side of the mid palatal raphe.

- There does appear to be evidence that these meridian points exist on the hard palate.
- B. In those patients with dentures or bridges perhaps therapeutic cutouts could be used in the difficult patient.
 - The points begin just behind the incisive papillae and are on either side of the mid palatal raphe.
 - Dr. Smith has written an article which will be coming out soon.
 - There are basically four ruggae folds that seem to correspond to the wrist diagnosis points for the meridians. You can find these points yourself on patients.
 - It really means that tongue position is important and that our original concepts of the relay reset mechanism has validity.
 - Dr. Smith is the dentist who did the splint work with the Philadelphia Eagles correlating jaw posture with muscular strength. Published in the N.Y. State Dental Journal, Vol. 44, August 1978.
 - So re-read the sections in the 1979-80 manuals on "Apply the Appropriate Cranial Technique.
 - We have found the cruciate suture not to T.L. in the clear but only with expansion.
 - I was recently speaking in Cape Cod and had a delightful time.

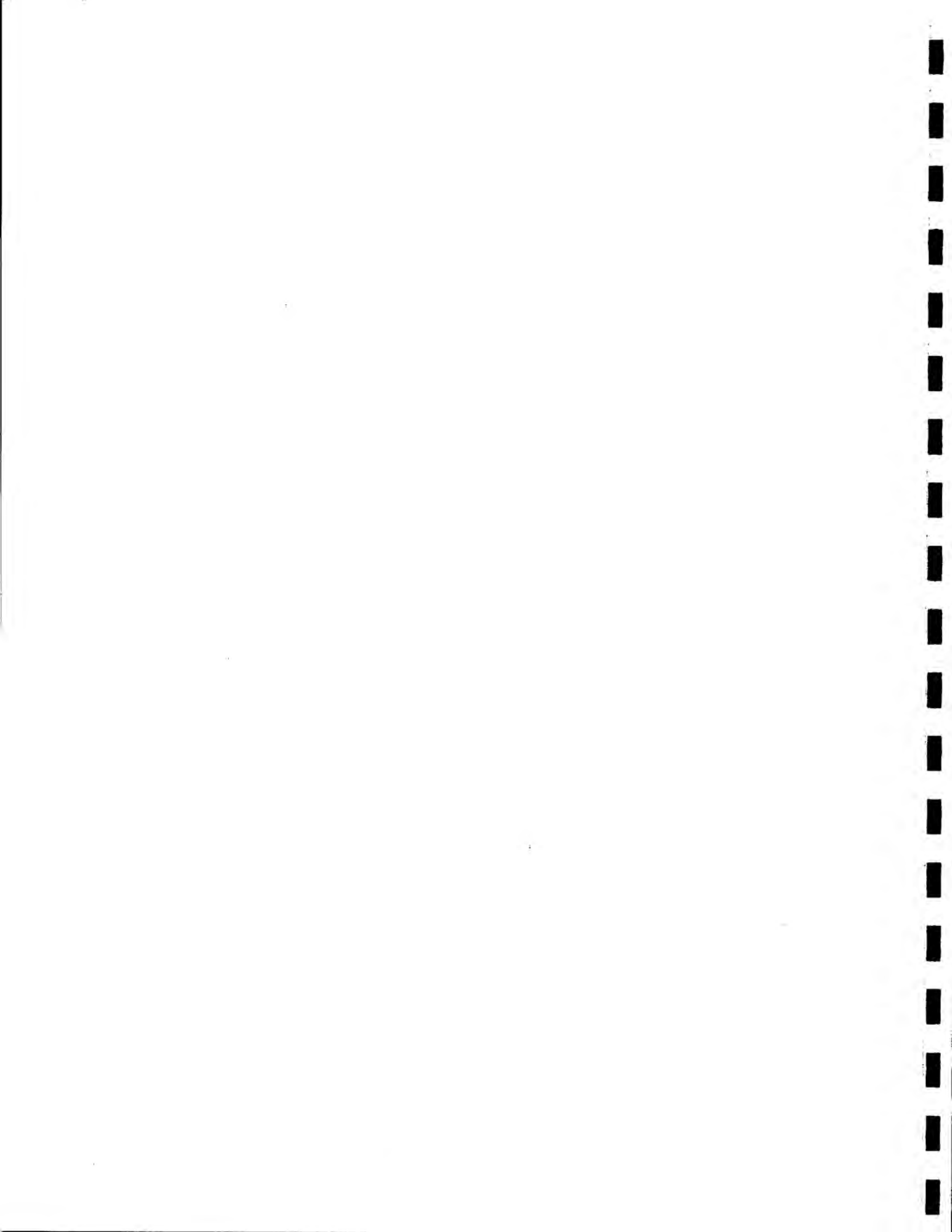
Reading Referral: The Body has its Reasons. Teres Bertherat & Carol Bernstein. Translated from french by Avon Books.

- There is a unique concept that some of the Yin and Yang meridians are associated with the anterior and posterior parts of the body.
- The conception vessel is the most Yin the governing vessel being the most Yang.
- They don't T.L. frequently due to the fact that they are the most Yin and Yang of the meridians.
- When a patient T.L. in a standing position you usually get a negative response. If they hyperlordose the lumbar and cervical spine and hyperkyphose the thoracic spine with their fingers therapy localizing the spots to the left wrist you'll get a positive pattern most frequently kidney bladder. You hardly ever get a response with the right wrist.
- If you can't turn a meridian off by the sedation points that's a pretty good indicator the meridian is over. With the bladder meridian tapping K6 bilaterally will turn it off and cause an increase in forward flexing of patients.
- In 30% of the patients we got a decreased amount of forward flexing. By going to the connecting points for the conception and governing vessels. CV15 or GV1 this would increase the flexing.
- Works well in patients with diminished forward flexing along with use of the limbic and P.R.Y. technique.
- Dr. Marks, a podiatrist, who gave me a copy of the book "The Right Brain," is listed under a footnote.

Reading Referral: Vol. 8, #3, May 1980. American Journal of Sports Medicine Published Williams and Wilkins.

- Fundamentally it is a test of reliability of muscle testing manually and by cybex machines.

- Two populations were studied, one athletic, one not.
- Cutaneous afferent stimulation was used for proprioceptive neuromuscular facilitation.
- It shows manual muscle testing shows a standard which can be validated that the cybex may now show.
- Cybex measure concentrically whereas manual test measure eccentrically.
- We have reduced to 100 mg the amount of pantothenic acid we use with anerobic muscle test weakness. 200 mgs seemed adequate but it was causing some irritability with some patients.
- Ten tests in 20 seconds for aerobic; 20 tests in 20 seconds for anerobic.
- Some muscles require the 18 mgs of the iron chelate for its aerobic activity as well as the pantothenic acid for the anerobic activity.
- In Tape #35 we identified an element of cranial technique that was involved with jaw opening and closing.
- We also found that putting the tongue against the roof of the mouth would negate the weakness that would occur when you would attempt to restrict mandibular movement with respiration, etc.
- So in difficult patients remember the tongue relay reset mechanism.
- Many times a lead square over G.V.1 will produce the same weakness as a lead square over the mouth which can be negated by tongue position.
- An I.C.A.K. member, Dr. Joan Sage, has written an excellent article on Gestalt therapy. Available through us or from Dr. Sagen, Georgia State University, 33 Gilmore St., S. E., Atlanta, GA 30303.



DR. GOODHEART'S RESEARCH TAPES

TAPE 61

The Cerebellum

Reading Referral: Involuntary Movement Disorders by Dr. Irving S. Cooper. Thanks to Dr. Baker for sending it to me.

- He will inflict a wound on the thalamus that will diminish involuntary movements as in Parkinson's and Chronic tonic torticollis.
- There is a dysarthria that occurs after the surgery.
- I truly enjoyed the section on the cerebellum because cerebellar cells are capable of reproducing.
- The cerebellum plays a major role in the processing of the information from the muscle receptors G.T.O.s and spindle cells.

Reading Referral: The Functional Organization of the Cerebellum in its Relationship in its Role to Motor Control by Eklels J.C. Nobel Symposium, 1-1936 edited by Granit 1966.

- He says a large part of the dorso spino cerebellar tract (D.S.C.T.) receives fiber from group 1A from the spindles.
- We are all aware of the spindle fiber makeup and the flower spray endings originating from the ends of fibers and the annulospinal component wrapped around the center of the interfusal fibers. The primary endings give rise to a large sensory fiber called group 1A ~ 12 microns in diameter.
- The secondary endings give rise to a smaller fiber, the group II fiber.
- So when the main muscle fibers are stretched, so are the interfusal fibers giving both the rate and intensity of the contraction.
- There is also a motor innervation to the spindle which will alter the spindles response to stretch, modifying the afferent information to the C.N.S. This is part of a loop cervo mechanism controlling muscle length. This is to be considered an involuntary movement disorder.
- We know the D.S.C.T. receives a large number of fibers from group 1A, 1B and Group II going to the ipsilateral side of the anterior lobe of the cerebellum.
- Some of the D.S.C.T. fibers have mixed transmissions which carry, 1A from the spindle, 1B from the G.T.O. and Group II from the secondary spindle. They are primarily 1A which is usually restricted to one group of synergistic muscles.
- Here is why I'm indebted to Tom Baker.
- One relay to the mossy fibers is 40-60 milli seconds. The total conduction time of the D.S.C.T. ranges from 2.5 to 6 milli seconds. The ventral spinal cerebellar tract V.S.C.T. relays information almost exclusively from the G.T.O.s. Their conduction time is somewhat faster, 2.5 to 4 milli seconds. The V.S.C.T. fibers cross both in the spinal cord and the cerebellum again. Most of the fibers terminates in the vermis of the intermediate lobe on the same side as the limb of origin. They terminate in the cerebellar cortex mossy fibers.
- Another major tract is the olivo cerebellar tract. These fibers terminate slowly as climbing fibers in the cerebellum. There is a precise

- projection of the inferior olive to the cerebellum. While the dorsal accessory olive and part of the medial accessory olive project to the contralateral vermis in the anterior lobe. The Spinalolivary tract to the inferior olive is a crossed tract and ascends in the contralateral vertical column. Thus, after relaying in the inferior olive, the ascending spinal olivary tract projects to virtually the same part of the cerebellum on the ipsilateral side as the D.S.C.T. and as the V.S.C.T.
- The latency for cerebellar response is longer for the olivary tract than the D.S.C.T. and V.S.C.T. It is 18 to 25 milli seconds.
 - Dr. Resnick has an interest in the cerebellum as I do. His comments have been useful.
 - There is only one output channel from the cerebellum with a connection to eye muscle cells.
 - It has been found the purkinje cells are inhibitory.
 - With all of this we see the cerebellum output is transmitted to the C.N.S. Solely by turning down the background discharges to these nuclei.
 - This means that the cerebellum functions as compurator or error detector with respect to the execution of motion.
 - So the cerebellum has to be involved with dyskinesias that we see.
 - He talks of the basal ganglia and its control of the five modulations of motor activity.

Reading Referral: Ruchte - "Handbook of Experimental Psychology," Published by S. Wiley, N. Y. 1951, 154-208. He talks of the cerebellum.

- He says, "The cerebellum by this sensing mechanism functions as a compurator or an error detector in respect to the execution of movement."
- So if the cerebellum is an error detector and the V.S.C.T. travels faster but longer.
- Suppose the cerebellum is trying to correct errors and bring things to center like a catcher will in baseball so the umpire thinks it is a strike.
- The key to this is to test muscles in rapid succession like we do in reactivity. This unlike reactive muscles is not affected by ostogen. And it is not affected by iron or pantothenic acid.
- Here we test a muscle, challenge, or interrupt therapy localizing rapidly to see if a weakness occurs. This brings out the weakness before the cerebellum can correct the error.
- This technique will bring out many subclinical faults in the pelvis and upper cervical regions that do not show under normal therapy localization.
- I see primarily patients who have been referred to me from other doctors. I see a lot of problem cases, sometimes the problems that come in exceed our solutions giving me answers sometimes for which I have no question.
- We just returned from Norway where we had a beautiful time.
- On our way back we stopped at Jackson Hole, Wyoming and spent some time with Otis Thomas and Peggy with a Holistic Healing Group. Many five people were there.
- For those of you who want tapes of that session you could contact Otis Thomas in Houston.

Eye Motions

- At the May I.C.A.K. meeting we discussed the eye motion that Restak

- talked about. Forming the basis of the book the structure of magic and neurolinguistic programming.
- When the eyes move down and to the right the patient is accessing feelings tactile and visceral kinesthetic feelings.
 - When the eyes are moved level and to the right they are auditory remembering.
 - When the eyes are moved up and to the right the person is constructing imagery and visual manipulation.
 - When they move up and to the left they are accessing idedic imagery or remembered.
 - When they are straight ahead but unfocused they may be accessing any class of information, generally the system they access most easily.
 - The eyes up and to the left as allowing accessing of remembered sound. Like nursery rhymes.
 - Movement down and to the left is like the person having internal dialogue with themselves.
 - They believe these eye movements come from the vistic pattern that comes from the fact all babies have their heads turned to the right from the left brain biasing as opposed to the right which is the source of instincts and reflexes. The left brain is more newly arrived information.
 - You're also familiar with ocular lock and the relationships that exist.
 - Knowing ocular lock exists and is a means of unswitching people. I've wondered why it exists?
 - So I ask patients if you had to learn something new would you like to hear it, read it, or do it. Then I observe their eye response. A person who goes down to the right is kinesthetic and likes to do it. Level and to the right they like to hear it first, and upward to the right like to read and see it first. Then taking their answers I tested a T.S. line muscle and when a person who answered they'd like to see it put their eyes up and to the right a weakness would appear. Activation of the N.L. reflex would abolish that. The same thing would happen to the other eye positions.
 - In these people the brain is taking 60% of the energy and the involved organ relationship only 40 and it should be 50-50. Our lifestyle can modify this.
 - This is one thing that allows us to identify the different patient types and how best to relate to them.
 - Some of this is shown in breathing patterns.
 - When the whole chest is breathing vs. shallow breathing but prolonged expiration indicates auditory accessing.
 - Breathing highly and shallow indicate visual accessing meaning up and to the right and the breathing will change.
 - Abdominal breathers are kinesthetic and that's down and to the right.
 - When the voice changes that means visual accessing which is up and to the right. You can hear it in my voice as I read or try to remember things.

Grand Teton Meditation Retreat

- Jackson Lake Lodge - Rev. Albert Hurd is president.
- Sig Paulsen was there, author of many articles and books.
- Dr. Norman Sheely was there also and a fine neurosurgeon.
- Reservation can be made for next year through Otis or Rev. Hurd.
- It was a marvelous thing.

Olympics

- There is good indication there will be an applied kinesiologist on the Canadian Olympic Committee.
- We supplied them with the A.K. packet material from I. C.A.K containing published material from different sources endorsing A.K. as an on-going approach.
- This is of great value for those seeking official recognition.

DR. GOODHEART'S RESEARCH TAPES

TAPE 62

Cerebellum continued

- Involuntary movement disorders - Irving Cooper.
- We discussed on the last tape the cerebellar function.
- The cerebellum plays a major role in the processing of information from muscle receptors. Both spindle cell organs to G.T.Os.
- It is part of the extra pyramidal system or the network that modulates motor activity.
- A large part of the D.S.C.T. receives group IA fibers from the spindles. Group IB from the G.T.O. and group II from the spindle cells traveling to the Ipsilateral anterior lobe of the cerebellum. The total conduction time varies from 2.5 to 6 milli seconds.
- The V.S.C.T. relays information from all most exclusively the G.T.O.s with a faster conduction time 2.5 to 4 milli seconds. It crosses two times terminating in the vermis and intermediate lobe on the same side as the limb of origin.
- There is an appreciable number of contralateral connections. The clinical importance is in the bilateral effects sometimes observed when the cerebellar thalamic tract is interrupted unilaterally in some cases of dystonia.
- I discussed the spino olivary tract and its relationship to the D.S.C.T. and V.S.C.T. projections.
- The olivo cerebellar tract contains primarily IA and II fibers from the contralateral limb primarily the lower limb. The latency time is much longer, 18-25 milli seconds.
- There is basically afferent processing by the cerebellum with but one output channel by the purkinje cells relating possibly to the eye muscles.
- Ruch has stated the cerebellum functions as an error detector in respect to the execution of movement. It acts as a servo mechanism for muscles and the cerebrum.
- The purkinje cells are primarily inhibitory in action.
- The whole output of the cerebellum is transmitted to the C.N.S. solely by turning down the background discharges to the nuclei.
- Therefore the cerebellum is an error comparer comparing the error of the incoming fibers acting as a correlator, comparator and compensator. Like when you walk on the side of a hill the legs are bent appropriately so the head and shoulders remain level.
- When there is a distortion in the body, the cerebellum compares the error of both sides compensating.
- This system has led us to the concept of multiple challenge. Therapy localization, etc., to check through these cerebellar compensations.
- For therapy localizing you just multiply make and break the contact while checking a muscle.

Reading Referral: The Structure of Magic, and Frogs into Princes

- We discussed the fact that people are audio, video and kinetic. That

- is demonstrated when in certain thought processes they move their eyes in a certain direction.
- I tried affecting the patient by asking what way they would like to learn something; by seeing, hearing or doing a new thing.
 - There were those patients who found this difficult to do using the binder and grindler concepts.
 - One patient with a chronic sciatica I thought might get better tapping the bladder meridian affecting cerebellar activity the results were equivocal.
 - She would drift to the left of plumb when her sciatica was aggravated. When she was feeling well she would be centered.
 - She would show the need for a basic contact to the left sacrum. She also needed a heel lift.
 - Patients who are ill or in pain seem to show a momentary nystagmus. Sometimes it looks like the patient is reading a teleprompter just past your head.
 - So standing at a plumb line and off approximately 2" to the left I asked her to close her eyes so she would be unaware of the plumb. She was still two inches to the left. When she put her eyes down and to the left she would come back to center and the pain would decrease. When her eyes were in any other position she would drift to the side and the pain would increase.

Eyes Into Distortion (E.I.D.)

- We observe a patient for any occipital, shoulder, pelvic, spinal rotation or unleveling and mark the distortion mentally noting these elements.
- You can use E.I.D. to bring problems out that are not showing but they should be there.
- You have the patient place the eyes into the distortion. If the occiput is low on the right with no rotation the eyes go down and to the right. If it's low on the right and anterior on the right you would put the eyes down and to the right with slight movement to the left. Go with the major distortion.
- If your head is down and to the right and slightly posterior the eyes, to compensate, have to move up and to the left to look straight ahead.
- There's good correlation with what we talked about with Pitch, Roll and Yaw. And utricular and saccular activity of the semi circular canals.
- This also correlates with how we use to treat extra-ocular muscles in scoliosis patients.

Reading Referral: November 1980 Scientific American. Article on Vestibular Apparatus by Donald Parker

- We are familiar with how a cat that is dropped always lands on its feet. Or if you tilt a newborn infant its eyes roll so the gaze remains fixed. These are controlled by the vestibule in the inner ear.
- These are compensations for a disturbance in balance or orientation and each is controlled in part by the vestibule of the inner ear and how that was done in the Pitch, Roll and Yaw pattern.
- The doll eyes reflex in infants is a vestibular compensation for a disturbance in orientation. Here an infant is held upright so the gaze is straight ahead. If its body is tilted its eyes will roll to keep the gaze straight. These reflexes are controlled by the otolith receptors and gradually decline as the visual receptors assume a greater role in the presentation of orientation and balance.

- treating low-range deafness. We can T.L. with left or right brain activity showing a need for long N.L. activity.
- We have also found the cerebellar technique shows a need for further N.L. activity. The interrupted T.L. and double challenge seems to be equivalent to each other.
- We do not know yet if the E.I.D. pattern is on this same level. It appears that way.
- This is a demonstration of how the cerebellum works with the extra-ocular muscles.
- These techniques have helped in a lot of problem patients.
- Having determined you are dealing with the comparator as part of the cerebellum, putting the eyes into distortion will allow you to evaluate the other circuits (N.L., N.V., Acupuncture, Nutrition, etc.)
- We found a large amount of muscles that would weaken with the E.I.D. pattern. We found the hyoid would abolish this. If the patient orients their hyoid into the distortion it will negate the E.I.D. weakness. The hyoid represents an override for this system reducing the number of N.L. reflexes that would need treatment.
- Balancing the hyoid helps in the E.I.D. pattern. Balance the hyoid by G.T.O. activity to the muscles around it.
- When making an adjustment, have the eyes into distortion and then do the bone memory tap to maintain good posture realignment.
- If a patient standing shows a distortion pattern merely place them into a correct posture putting their eyes into distortion and do the bone memory tap for good musculo skeletal changes.

The Tentorium Cerebelli

- Acts as a trampoline for the cerebellum attached at the straight sinus to the falx cerebri and the falx is part of the tentorium cerebelli which is attached at the ethmoid and occipital protuberance, and Petrous portions of the temporal bones so the brain is suspended in all positions so as not to be rattled with movement.
- The reciprocal tension membranes are responsible for many of the cranial adjustments we make.
- The dura attaches to the skull and foramen magnum atlas, axis and 3rd cervical being free of attachments going to the filum terminale situated at the posterior aspect of the cocyx.
- Despite the evidence of C.S.F. flow rate problems and low backs that are resistant to treatment. The evidence of an upper cervical fixation (U.C.F.) remain rather high with its weak double gluteus max.
- We have found a respiratory factor to the U.C.F. pattern. Test for it in the usual manner and look for a phase of respiration to abolish it. In some instances like a ligament stretch patient we may use multiple small thrust to break the fixation with little trauma to the area.
- I believe these upper cervical fixes are placing tension on the reciprocal tension membranes allowing U.C.S.F. movement.
- You want to remember the tentoriums are like three sickles. All of which have a common origin at the straight sinus. The Sutherland fulcrum with secondary insertions into the bones of the skull. Look to your anatomy text.
- They play an important role in cranial faults and U.C. fixes.
- So we see there is a lot more to this than just the structural pattern.
- I'd like to thank Sheldon Deal for another fine production of collected papers.

- One in particular by Jason Schwartz - "Some Dangers in the Development of New Techniques in Applied Kinesiology." It's a good paper on some of the newer techniques on reproducibility.
- What exists persists and what persists, exists.

The parathyroid

- We are currently investigating parathyroid involvement and at this point the parathyroid seems to be the critical factor in calcium mobilization to individual segments of muscle activity.
- I would appreciate information from you on the parathyroid.
- We're using Cal Ma Plus. Parathyroid extracts are expensive.
- Localized vasospasm of artery and vein, localized myospasm even in a weak muscle including ducts. All of these seem to fall under the parathyroid. I'll keep you involved.

The Olympics

We would appreciate funds to support the research projects. I'll keep you informed.

For those of you are interested we are using the article on hypothyroidism by Breslan & Pack from Metabolism, Vol. 28 #12, Dec. 1979. December 1979, American Journal of Medicine Article on Vitamin D., Vol. 67, and New England Journal of Medicine, November 3, 1977 article on Vitamin D metab.

DR. GOODHEART'S RESEARCH TAPES

TAPE 63

Thank you Dr. Poortinga for all the research work done in Literary Search.

The Parathyroid

- The levator scap is related to it.
- It seems related to microspasm of smooth and striated muscle.
- We see many of the problems of both Hypo and Hyper parathyroidism.
- In Hypoparathyroidism the calcium is usually low and the phosphorous high.
- In Hyperparathyroidism the calcium is usually high and the phosphorous low or normal.
- The levator scap goes from the first four cervical vertebrae to the upper one-third of the medial border of the scapula. Some authorities do not show it attaching to the atlas.
- It's action raises the scap to drop the glenoid cavity elevating and dropping the medial edge of the scapula.
- When the scapula is fixed it flexes and rotates the cervical spine.
- Test the levator scap with the patient seated and their elbow flexed like a rhomboid test. In this test the patient drops his shoulder and elbow without laterally flexing their body. You then stabilize the shoulder and attempt to pull the elbow away from the body.
- The patient will recruit by increasing their lateral flexion.
- The N.L. reflex is in the belly of the Teres Minor and in the first rib interspace near the sternum.
- It responds to parathyroid extracts and calma plus.
- The Parathyroid seems to have a monitoring affect on the thyroid. It helps to raise temperatures and it has a special effect on isolated muscle tension. We palpate muscle areas on the body looking for postural involvement and tenderness found on deep palpation.
- Having found a weak levator scap and elicited a response by lingual testing. Have the patient chew two or three calmaplus and there is a diminution of the muscle tension and pain.
- The sources for this were listed at the end of Tape 62.
- The article, Vol. 67 by Anthony Norman talks of Vitamin D along with the parathyroid hormone and calcitonon are the three principle effectors of calcium and phosphorous homeostasis.
- He says the steroid vitamin D₃ is subject to conversion to its biologically active form 1, 25, dihydroxy D₃. Its production is under the needs of calcium and the parathyroid hormone. It stimulates the intestinal absorption of calcium. There appears to be a specific protein receptor for it. It stimulates a calcium binding protein necessary for a biologic response.
- He reads from the article.
- The endocrine gland that produces the active form of 1,25 dihydroxy D₃ is the kidney. The liver mitochondrial enzymes connect it to 25 hydroxy D₃ showing the inter-relationship with the kidney and liver.
- There appears to be a feedback loop between the kidney and parathyroid.

- The parathyroid is controlled by a long loop feedback with ionized calcium in the blood.
 - Article by Breslow and Poole is on Hypothyroidism. The renal metabolism of Vitamin D cholecalciferol is important in diagnosis and observation of hypo-parathyroidism - He quotes article --
 - In bone, parathyroid hormone stimulates osteoclastic resorption and osteocytic calcium transfer. Causing destruction of the mineralized matrix making it possible for osteitis fibrosa condition.
 - Parathyroid increases serum calcium levels then eventually decreases it.
 - To make the parathyroid work one should have sufficient amounts of Vitamin D meaning strong quadriceps.
 - Hypocalcemia is responsible for most of the neuro-muscular irritability and hyperphosphatemia. It's responsible for carpal pedal spasm, paresthesias, Chvostek's sign, indicating low calcium levels causing a cramp in a blood vessel or smooth muscle of a duct, etc.
 - Sometimes you will note a prolonged Q-T interval on an E.K.G.
 - Parkinson's sometimes responds to this.
 - Lens calcification in cataracts is related to this.
 - Ectodermal changes of dry rough skin and mild trophic changes in the fingernails.
 - The Lung meridian is associated with the levator scap. The usual deltoid and lung related muscle weaknesses do not exist in this type of patient.
 - Cerebellum T.L. to the right pulse points bring out the lung meridian involvement.
 - The usual lung meridian muscles usually are not found involved.
 - The lung meridian alarm point is found involved and there is a positive therapeutic response to tapping of the first lung point L9.
 - The parathyroid seems to act as an auxiliary governor to the thyroid. When the thyroid seems to run slow, the levator scap parathyroid work seems to have a remedial effect. The same is true when the thyroid is running fast.
 - Many people with what looks to be laryngeal paralysis with hoarseness many times have a spasm of a vocal cord responding well to parathyroid material.
 - It appears to be a help in those patients who have chronic clonic tonic intermittent torticollis. If they show levator scap involvement when fixed, it seems to diminish the symptoms.
 - These patients are difficult and this is not the only answer to the system but when it is part of the problem it does help.
 - I'm doing this tape up on Gaylord during Christmas time and it's enjoyable and fun here.
 - I'd like to once again ask for contributions to the Olympic fund.
- Upper Cervical Fixation (U.C.F.)
- We're aware of the double gluteus max weakness associated with it.
 - There is also a respiratory system involved with it. If you test for an U.C.F. and it's negative, have the patient hold a breath in or out while testing, many times this will bring an U.C.F. out.
 - You challenge the fix out and fix it.
 - If the fixation is posterior you adjust the atlas on axis. If it is anterior, you adjust C₂ on C₃.
 - It appears the conception vessel and governing vessels are the meridians that control the meridian energy releasing old energy so the body can take on new energy.

- If you T.L. the B & E of one of the meridian above and test a muscle weakness may show on one or the other or both which then is affected by respiration indicating the potential for a respiratory cranial relationship.
- We stimulate the two ends of the involved meridian. When this is done after an U.C.F. adjustment it appears to help hold it in position and prevent future occurrences.
- We have the patient T.L. C.V. one and then tap their hand to prevent erotic involvement.
- If you challenge the sacrum especially for inferiority as for a basic contact you may or may not get a response either with single or multiple challenge. One factor that seems to be related to inferiority patterns which appears to be related to contractions of the Coxcygeal muscle. When this muscle is involved and you use origin insertion technique but it eliminates the basic challenge. It also appears to be involved with sacral or coxycygeal respiratory activity.
- With weakness the patient may have a bearing down sensation or Incontinence. This weakness causes stress on the utero sacral ligament causing lower back or cervical ache. That can be found both subjectively to objectively that with a uterine lift technique negates this.
- This sometimes is involved with urinary frequency and or irritability.
- I would highly recommend you check with E.I.D. especially with difficult problems in musculoskeletal cases and acupuncture circuits.
- Over half of the meridians either begin or end on the head. Tapping either the beginning or the end of said meridians has yielded good results.

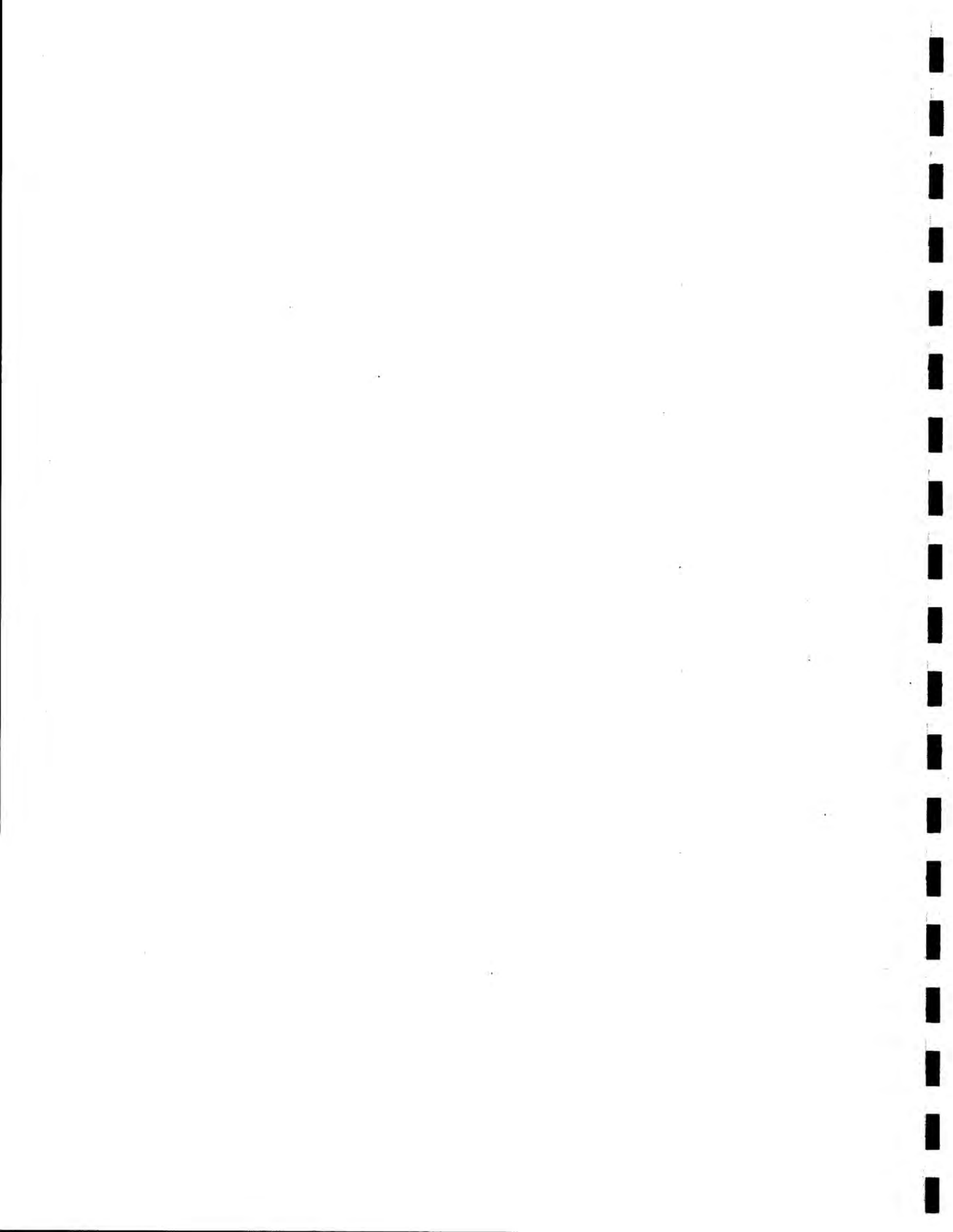
Reading Referral: Allan Beardall's Clinical Kinesiology, Vol. 1.
It's a very good publication. Clinical Kinesiology, P.O. Box 1752, Lakegrove, Oregon 97034.

Reading Referral: Super Learning, Sheila Ostrander and Lynn Schroeder.
Delta Confucion Press, 1 Dag Hammarskjold Plaza, N.Y., N.Y. 10017
Book on Learning and Using our Right Brain to Increase our Learning Capacity.

- Florida Regulation is questioning applied kinesiology and the case of nutritional testing holding vitamins.
- Please test nutrients orally.

End of Year Synopsis

- We've been doing work with a T.E.N.S. unit on Metzack wall acupuncture circuits.
- Olympic programs are still going.
- We're working with a dopler probe looking for changes with N.V. reflex work.
- We had a conference with Yoshita Imura, M.D. who is with a research foundation working with Bioengineering.
- I had a luncheon conference with Linus Pauling in regards to immunology.
- I also talked with Dr. Linden Smith. Thank you Jerry Morantz.
- The conferences have been many this last year creating many new connections.
- We're continuing P.M.G. investigation with thyroid involvement and oral pH changes with treatments.
- We have a reprint file of A.K material.
- It's been a good year.



DR. GOODHEART'S RESEARCH TAPES

TAPE 64

Upper Cervical Fixation (U.C.F.)

- Noted by double weak gluteus maximus
- Check for fix by palpating top three cervical vertebrae.
- Adjust with two hand thrust along facet planes
 - posterior fix adjust atlas on axis
 - anterior fix adjust axis on C₃
- The vertebrae move more readily into fixation.
- i.e., spinous process moves easily from right to left, the right side is posterior. Then push on the facets and check for restricted movement. Left side restricted in this instance means an anterior fix or restricted right side would indicate posterior fix.
- Some complaints are low back or neck problems that come with standing for a long period of time.
- I looked for respiratory association with U.C.F.
- I found the conception vessel or governing vessel to be involved when the patient T.L. the beginning and end of said meridian.
- When the patient showed a bilateral weakness only with respiration it would be neutralized by touching the beginning or end of the conception or governing vessel.
- We adjust the fix, correct the respiratory involvement and stimulate the beginning and the end of the involved meridian to hold the adjustment.
- We've had good results with an Italian nun who lost her sight and hearing - who said - acupuncture made her worse rather than better.
- Dr. Tesse had helped to regain her hearing but she was unable to affect her vision.
- We saw her in our office and on E.I.D. I found what he was sure he fixed, and indeed had.
- Pulse point T.L. showed response to E.I.D.
- There was peroneal involvement with E.I.D.
- On doing B & E to the bladder meridian after pulse point diagnosis with E.I.D. She commented on being able to detect light.
- We got both her hearing and sight back slowly.
- The point is it was tapping B & E with meridian respiratory involvement that turned things around.
- We've known lead, magnets and respiration have affected meridian energy.
- All the specified meridians either begin or end on the lead.
- We see changes in temperature, pH and Vitamin C levels with B & E technique.
- Breathing produces respiratory activity of the skull giving alternating pressure in the sinuses helping to maintain circulation to drainage.
- Vasque Lopez in 1942 said, "Visualizing the pituitary gland as a sense organ and an organ of smell. It acts as a chemoreceptor detecting changes in the blood sending impulses to the hypothalamus."

- Tucker & Wilson, in the theory of osteopathy, said, The anterior portion of the pituitary is a sensory organ testing the quality of the blood checking chemical balances and purity guiding physiological reactions.
- We believe the hypothalamic pituitary axis is a homeostatic one providing for internal adjustments and external as well.
- Temperature regulation is something it does. We feel through the paranasal sinuses. The pituitary like the testicle needs a cooling mechanism.
- We noted that as the temperature would go up in the axilla and posterior occipital protuberance it would go down over the area of the glabella.
- It would indicate to me that in the acupuncture system, especially those that begin or end on the head, are involved with this pituitary cooling system. The sinuses acting as cooling vessels to allow the pituitary to function at an optimum level.
- By doing the B & E technique to those meridians that begin or end on the head we have seen major changes in temperature, oral pH, and chemistry with good clinical response.
- We find an involved meridian via pulse point therapy localizing with or without E.I.D. And then we tap the beginning or the end of the meridian noting changes in what we are monitoring.
- We have also been using cranial technique along with the B & E technique. The involvement of meridians that do not begin or end on the head has been minimal.

The Procedure is:

- With the patient standing mark the major postural deviations. This will determine the eye position for Eyes into Distortion (E.I.D.) For example, a high right occiput - eyes would be down and to the left for E.I.D., other examples are given on the tape.
- Test muscles in the clear and T.S. line indicators.
- Go to the pulse points and check them in the clear and with E.I.D. looking for weakness.
- Then tap the Beginning and the End (B & E), of the involved meridian that begins or ends on the head, with respiration activity and note the changes of the factors you are monitoring.
- I see some people that bruise on one part of their body but not the other. I'm sure that the pituitary may be involved with this.
- If you monitor system levels of a chemical you may note differences. Sometimes the serum level of a substance is normal but the erythrocyte level is low. There has to be a control area for these differences.
- The pituitary seems to be able to do this when it is properly cooled.
- We've noted the temperature at the E.O.P. and axilla usually slowly rise but the glabellar temperature will rapidly drop.
- I think this indicates generally improved oxidation in the body both local and systemic judging from the three parameters we measure.

Reading Referral: Journal of Osteopathic Cranial Association for 1954. H. G. Grainger's remarks discussing cranial bulge.

- Wong, in his book on acupuncture, says twice there is no point in doing acupuncture meridian therapy to the head. So instead of doing things by rote, muscle testing lets you determine what to do where while monitoring something.

B. Eyes Into Distortion (E.I.D.)

- This represents what is left after you fix the major distortions.

Meridian Activity

- B & E. I'm strongly convinced that the conception vessel, governing vessel and those meridians that begin or end on the head play a major role in the maintenance of normal meridian activity.
- The utilization of the tapping to the beginning and end of the involved meridians has brought many good results.
- Dan Duffy has reprinted much material that would be of interest. You can contact him in Geneva, Ohio for what is available.

Reading Referral: New England Journal of Medicine. August 21, 1980. Article on Vitamin E and Free Radicals

- Free radicals are different because they carry an unpaired electron.
- Superoxide particles are produced in the cells by auto oxidation and by enzymatic processes.
- They have an ability to create even more potent oxidants being a constant threat to cellular integrity.
- The superoxide radical serves useful function. It participates in neutrophils and mediating inflammatory reactions. When they go unchecked they can create damage though.
- There are two types of White Blood Cells; T & B
 - T cells make a superoxide anion radical that works by contact distinguishing good from bad.
 - These free radicals are continuously generated and increase in hyperoxia - a danger in hyperbaric oxygen treatments.
 - The body has pathways to deal with these products. One being super oxide dysmutase S.O.D., glutathione synthetase, glutathione pyroxidase, glutathione reductase, g6pd and catalase.
 - Some nutrients help also. Sulphydrol amino acids, Selenium, Zinc, Copper, Riboflavin and Tocopherol (Vitamin E).
 - Vitamin E is the body's oldest recognized antioxidant. When the body produces an excess of these radicals they attack whatever is closest which is usually a joint.
 - It was by a chance observation on a paraplegic with a c₆ fracture that I noted that the muscle interlink work on his triceps would cause a temperature increase in the opposite quadriceps. The body thought the triceps was reactive to the opposite quadriceps. When I worked on the bicep I would get a rise in the hamstring, pushing together on the spindles and pulling apart on the G.T.O.
- A researcher at the N.Y. University Medical School has found that a critical factor in spinal cord injuries is a rancidity factor that causes a closing down of the capillary supply to the spinal cord tissue which then causes a rancidity reaction.
- In treating these patients we use things that help to reduce those things that help this rancidity reaction.
 - Vitamin E - 20-60 units of Selenium containing E. 20 x day. Also helps with convulsive states.
 - Superoxide dysmutase with catalase.
 - Trace minerals - for electron poisoning (also used with muscles and skeletal degeneration diseases)
 - Vitamin F in oil along with E has been useful with spinal cord disease involvement.
- One of the precursors that is involved in the prostaglandins important in auto-immunity as found in natural fat.

Reading Referral: Nutrition Review. W 130 March 1980

- Blood clotting abnormalities
- Arachidonic acid is required for the formation of prostaglandins and platelet formation.
- Vitamin E is an inhibitor of platelet aggregation perhaps by preventing the influx of calcium
- It is well known aspirin also reduces platelet aggregation.
- We use reactive muscle technique - fix what else we find and work with the nutrients above to neutralize the free radicals and decrease the rancidity by reaction.
- Quoting the journal again - Studies on Vitamin E can be classified into three categories. To correct deficiency states (Hemolytic anemia of low birth weight in infants, decreased red cell Life span, in cystic fibrosis, hyperaggrability of platelets in biliary attresia; Retinitis pigmentosa, etc). The second category is not in deficiency states but where large doses are necessary to counteract affects pro-oxidation, i.e., divers involved with long-term hyperbaric oxygen treatments. The third category is in helping the bodies' defense against free radicals. (G.6.P.D. Hemolytic Anemias)
- Selenium increases the Vitamin E potency by 50 times
- Vitamin E also helps with sickle cell anemia.
- The combination of the above nutrients makes the care of these degenerative diseases easier.

DR. GOODHEART'S RESEARCH TAPES

TAPE 65

Paraplegia

- One patient who had a C₆ fracture from a diving accident with muscle function in his triceps and biceps.
- He had no motor function in his lower limbs.
- I hypothesized that in this instance the muscles of the upper arm were reactive to the lower extremity muscles. The upper extremity muscles were set too high.
- I put thermistors on the quadriceps and hamstring muscles measuring the skin temperature of both.
- I did the same with the biceps and triceps and then noted what the stabilized skin temperature of each was.
- Assuming the triceps was reactive to the quadriceps I then did spindle cell activity to weaken the triceps and noted a temperature increase in the contralateral quadriceps of 2 degrees.
- We are familiar with the decerebrate cat studies discussed in the 1979 1980 manuals, and how they would respond with walking on a treadmill.
- You don't need your brain to walk with.
- I applied the same technique of spindle cell activity to the biceps and got an increase in the hamstring group and not the quadriceps.
- The majority of spinal cord injury patients (S.C.I.) hardly ever sever the spinal cord. They bruise it.
- There's good evidence through research at the New York University School of Medicine that nerve fibers are present and continue to be intact through the bruised area. If the eighth cranial nerve was stimulated you would get an evoked potential through the cord indicating continuity of nerve fibers through the bruised area.
- These fibers have the capability of functioning if the proper blood supply could get to them.
- There is free radical chemical pathology occurring in the membrane lipids which then causes platelet agglutination occluding the capillaries.
- Prostaglandin I₂ is inhibited by the action of lipid peroxidase.
- There is good evidence you only need seven percent activity of spinal cord fibers to walk.
- The key to remember is that these injuries are a bruising which causes a rancidity reaction.
- Nerve activity outside the brain gives electrical potential in the area of a microvolt which can be monitored nowadays. These potentials may be hidden by all the other activity being created by non-neural tissues, which are in the area of milli volts.
- As a result of signal averaging on the neuronal activity of the micro volt variety you can measure extra brain potential generated by a variety of sensory stimulation (periph nerve, auditory, etc).
- This monitoring can now be done without placing electrodes into the nervous system tissue.

- These so-called somatosensory evoked potential S.S.E.P.S. talked about by Restak serve to preserve integrity of the central nervous system.
- S.S.E.P.S. have been used to monitor damage in the spinal cord during surgery. They correlate to the recovery rate of these patients.
- S.S.E.P.S. appear to be more accurate in determining recovery than clinical examination representing a considerable improvement in managing S.C.I. patients.
- One of the limitations of S.S.E.P.S. is its inability to monitor the descending motor pathways. Some can be monitored.

The Rancidity Reaction in Spinal Cord injuries.

- The fibers don't function at the sight of the S.C.I. because their blood flow is impaired at that sight. The nerve fibers therefore are in a state of inactivity.
- The cause of the diminished blood flow is from the rancidity reaction as discussed previously.
- The prostaglandins are part of the autoimmune system. The Vitamin F factor are precursors to the prostaglandin. So the I_2 factor especially is diminished if these factors are present in low concentrations. Vitamin F will combat this rancidity reaction.
- We use Vitamin F at a dosage of 3 perles a day suppling the essential fatty acids.
- We supply 2 mgs. of Vitamin B_6 to insure the Vitamin F absorption and action.
- One of the main obstacles to any rancidity reaction are the antioxidants naturally Vitamin E being one of the best. Its action is potentiated 50 times by Selenium. We use a low dosage E Selenium source 20 times per day.
- There is a toxic level of Selenium of approximately 450 mgs per day so we give half of that per day.
- Low dosages of thymus and parotid is given to help counteract the autoimmune reaction. G.S.F. is one good product. We give it three times per day.
- The thymus modifies the R.N.A. patterns for eventual re-use. The thymus can determine what to keep or get rid of. The parotid receives this information and labels those things; food, etc for the substance to be used or not.
- When it breaks through the first antioxidant barrier which is Vitamin E and breaks through the second, Vitamin F, prostaglandin I_2 level. The third factor to consider is the superoxide radicals are inhibited by superoxide dysmutase. We give them from one to three times per day.
- We then use the reactive muscle technique monitoring the temperature response of the contralateral extremity sometimes ipsilateral. You should note at least a half a degree temperature increase in the muscle remote from the area you are treating.
- We treat the patient bi-laterally.
- This can be demonstrated on a normal patient also.
- One of our parameters for admitting a patient to treatments is that we get a temperature increase.
- The results are not immediate but you can show the increase temperature, indicating increase blood flow indicating increased spinal cord activity and gradual resolution of the platelet agglutination decreasing the rancidity reaction.

- It is the rancidity reaction along with the super anion radical liberation that makes the healthy patient his own worst enemy.
 - An ascending axon can be up to three feet long with the dendrites sending messages to the cell body.
 - The axon carries impulses away from the nerve cell body. The dendrites and the axons are called nerve cell fibers with the impulses being carried along the outer skin, known as the plasma membrane.
 - The membranes are made of Lipids and proteins. It's the membrane that get screwed up.
 - The average S.C.I. patient is male, under 30, and otherwise in excellent health. One S.C.I. develops about every 1/2 hour in the U.S. Right now there are over 500,000 and the federal government costs are over \$3 billion per year.
 - Approximately 90% of S.C.I.s are due to a sudden traumatic incident but in almost all the cases the cord was bruised and not severed.
 - In the spinal cord the hematoma actually leads to a physical softening of the cord. Most of the fibers degenerate only at this segment where the bruise is at.
 - The rest of the cord is normal.
 - The physical softening of the cord is due to a gradual diminution of blood flow. This softening is due to the fat molecules becoming rancid as a result of the bleeding at the bruise. There is also the lipid free radical reaction at the molecular level only a very small amount of blood is needed to promote that reaction. It will increase the rancidity reaction by a million times so a little blood can do a lot.
- B
- The liver is responsible for making the super oxide dysmutase.
 - Some of the rancid parts at the injury are caused by lipid peroxide causing medium size blood vessels to go into almost total spasm causing the blood in the small vessels to clot. The platelet mediated micro thrombi is what also occurs in M.S. patient spinal cords.
 - Pharmaceutical agents that are capable of preventing the blood flow in the spinal cord blocking rancidity reactions can prevent the development of paraplegia.
 - The rancid fat products that develop end up remaining there. Some collateral circulation attempts to develop but is stopped by this rancidity reaction.
 - For those who say you have to live with it, you may not have to.
 - It is felt the reason peripheral nerve fibers regrow is because of the good blood supply outside the C.N.S.
 - Manual stimulation activates normal pathways.
 - Spinal cord fibers can grow for very short distances. The stopping may be induced by some substance that inhibits the growth.

Three Stages of the Spinal Cord injury.

- Initial growth of nerve fibers through the injured sight.
- Elongation of the new growing fibers.
- Re-connection of the various fibers above and below the injury sight.
- Of these three phases research has found the first and the third are possible.
- The second step is the one inhibiting healing probably due to inadequate blood flow so it can't then occur, perhaps scar tissue, an inhibitory substance or perhaps all three.
- It has been shown that we only need 7 to 10% of the descending nerve fibers to walk in rats.

- It is reasonable to assume some S.C.I.s will be able to walk, perhaps awkwardly, even after a long period of loss.
- Restoration of the finer movements may not be possible.
- Injured neural tissue always contains abnormal blood flow so to get regeneration of nerve fibers the all or none law must be met.
- Elongation of nerve cell and new synapsis can occur.
- We feel our efforts are priming the pump.
- In some patients taking Valium or M.A.O. inhibitors for spasticity you get a better response if the patient stops the medications.
- Research at N.Y.U. Medical School is going to continue with S.S.E.P. Monitoring for ascending pathways of the posterior column and vestibular evoked potentials V.E.P.s for descending tracts in the anterior column.
- They are also monitoring the H. reflex of the gastrocnemius representing the lumbar area.
- The F reflex is from the abductor pollicis brevis and median nerve stimulation representing the cervical area.
- We have found the gastrocnemius and soleus to be weak when there is a pooling of blood in them in hypoadrenia. Some symptoms of achiness and pain with B deficiency also.
- It's as if the calf muscles think they are in a fight or flee situation.
- To bring this weakness on, have the patient extend the opposite elbow. There is a gait reflex relationship. Activate all the reflexes.

DR. GOODHEART'S RESEARCH TAPES

TAPE 66

Those who will be attending the I.C.A.K. meeting will be receiving a report sent to Dr. Dardik of the U.S. Olympic committee. The paper is on the high speed photographic techniques and the athlete.

- They take up to 10,000 frames per second, then they are put into a computer system with a sonographic pen.

Reading Referral: Body Movement - Barteniff-Lewis. Pub. by Gordon & Breech, N. Y.

- There is a good amount of information on labanotation.
- Laban has put movement events into movement notation.

Reading Referral: Gravity, Michael Nebedon, Pub. Center of the Form, 1453B 14th Street, Santa Monica, CA 90404.

- They feel the universe is expanding and gravity is what limits the expansion. The same is true of the body.
- We are denoted as trapezoids on one another.
- So movement is a series of muscular activities that maintain the trapezoids in a balanced position.
- We use E.I.D. we found a good number of fixations in the areas of maximum movement, C₇, T₁₂, femoral leads. The incidence of cervical dorsal fixation is very high.
- We're aware of the muscle testing for fixation involvement.
- When the body is in balance breathing and other movements are minimal for maximum effort.
- The key to remember is to use E.I.D. to check for fixations.

Pitch, Roll and Yaw

- We have another found phase, Yaw #3 - Patient is in flexed position for pitch testing and then turns the head to the left and to the right while the head is flexed. If a weakness occurs it means there is a lack of lateral motion of the head on the neck.
- To fix, the patient's head is in the flexed position and as the patient attempts to turn the head to the left or right, the Dr. resists this movement.
- It appears especially in patients who have digestive problems, especially in the lower bowel.
- We check for Yaw #2 in Dors lumbar fixation.
- Patients with fixation will show a high percentage of stress receptor involvement, especially for the psoas.
- When you fix a dorso lumbar fixation you'll note the psoas stress receptors reset, indicating the front limbs are out of balance with the hind limbs. Check the stress receptors for the sartorius and anterior tibial at the back of the wrists you'll find a high incidence of involvement, usually contralateral.
- When fixing these fixations and stress receptors the front and hind limbs are in balance with one another.

- God will forgive you but your nervous system will not.
- We're accustomed to observing patients in the static position.
- When checking for gait reflexes, imitate gravity with pressure on the head many more will appear. They respond to gait circuits and correction of the Dorso Lumbar fixation.
- When we balance all of these things we usually see increases in Dynavit scores, vital capacities, or breath holding time.
- Many fixation patterns are masked by cerebellar involvement.
- In some patients whose P.R.Y. has been fixed with no increase in flexibility. There may be an over-active bladder meridian so we turn it off by taping K_6 and CV_{15} . K_6 is the Luo point between the bladder and kidney.
- Also check the lung, large intestine system. Many times the hamstrings show too much tension. If you can't turn off the large intestine circuit go to L_7 and tap.

B. Reading Referral: Latest Ciba, Vol. 1; The Nervous System

- Section on hypothalamus. It has a very widespread involvement.
- Therapy localization E.I.D. to the pulse point usually indicates meridian involvement of a meridian that begins or ends on the head.
- So we measure glabellar and other head area temperatures. We find in patients with disturbances in the special senses, the pituitary is not cooling itself good enough. As a result, it doesn't balance the chemistry, hormonal, nutritional, somatic components. So it fails to act as it should.
- We continue to get good results with B & E technique tapping the beginning and/or end of the meridians that begin or end on the head.
- A stroke patient's conception vessel was found to be involved.

Gravity

- Because of Nebedons concepts we've been looking into the forces of gravity neutralizing the expansile forces of the body.
- We can change the effects of gravity by having minor alterations of weight. This is another element that proper balancing produces.

B & E Technique

- If you don't get a drop in glabellar temperature with tapping of the head point go to the other end of the meridian and tap it.
- A patient with trigeminal pain wasn't responding to this technique. I then tapped both the beginning and the end of the meridian simultaneously and we got a good temperature decrease.
- If you tap the opposite meridian even though it didn't show itself to be involved. Sometimes you get a better temperature response.

Reading Referral: Common Glandular Dysfunctions in General Practice and Applied Kinesiological Approach. Walter Schmitt. Available through Wally in Chapel Hill, N.C. Also his compiled notes on nutritional products.

- Dr. Dan Duffy has reprints of material printed a while ago.
- Dr. Ross Moody, D.D.S. has several very good tapes. Available through Sounds for Health. (714) 530-3613.

Reading Referral: Directing the Movies of Your Mind; Bry & Baer, Harper & Row publisher.

- This is similar to what Carl Simonton is doing to change patient's attitudes.
- I will be speaking with him at I.A.P.M.
- P.M. Magazine did a segment on us to be aired soon.

DR. GOODHEART'S RESEARCH TAPES

TAPE 67

- It was suggested in the past that for Melzack wall investigation one should use therapy localizing with breath holding if nothing was showing.

Eyes Into Distortion (E.I.D.)

- Last tape we talked of T.L. with an E.I.D. basis.
- In the cranial bowl, written by Sutherland, he cites the evidence that the spinal fluid is basically an electrolyte.
- The Falx Cerebri divides the brain into left and right halves.
- Through Davis & Rawles work we know the body is positive on the right and negative on the left in the front and the reverse being true on the back.
- Assume that breathing is the generator for the battery that is the brain.
- We believe the electrolyte factor of the C.S.F. is an element of maintenance and a better response to treatment.
- We remember when lead was placed over an ear that side of the body would weaken but lead over both ears would cause no weakness. Lead has an effect on acupuncture energy.
- We also know acupuncture energy is affected by magnetic energy.
- A 3000 gauss magnet is placed with the positive end to the right side of the head, nothing happens. The negative side to the left side of the head nothing happens. But the positive side to the left or the negative side to the right and the patient ceases breathing for a count of ten we observe a dramatic weakness.
- This indicates putting the wrong charge to a patient whose battery is low. Is like trying to start your car in the winter with everything turned on.
- This is what happens in many patients so they don't respond as well to treatment.
- We talked about the cranial muscles in the 1980 manual, Vol. B, that we would challenge by origin and insertion technique or by having the patient activating the muscle - i.e., frowning - to get a response.
- We now have the patient activate the muscles or the Dr. challenges them while the patient stops breathing. Weakness only occurs in this pattern in the cranial muscles and not skeletal muscles.
- This appears to be the key to the marked differences in cranial technique. Some recommend a light touch, others a thrust.
- We talked on the last tape of E.I.D. and glabellar temperature response. We found a good number of patients that responded to this and B & E technique giving good glandular and musculoskeletal changes.
- Some patients showed a temperature rise but would be brought down by simultaneous tapping of the beginning and the end.
- 90% of the venous blood leaves the cranium through the jugular foramen which is at the junction of two bones. Surrounded by dura.
- There appears to be two types of cranial faults. A subluxation that needs a manual technique we discussed in the past. The second con-

cept is one of a fixation. If you visualize the head as a capacitor or condenser this concept fits in.

Reading Referral: Osteopathic Medicine, July 1978 - Upledger & Retzlaff state that they have done histiologic work on specimens that show there are viable nerves and circulation within cranial sutures of the adult.

- The sutures have been shown to contain the structures necessary for nerve reflex activity. So abnormal sutural movement may cause abnormal neurogenic activity as well as intrasutural ischemia.
- It seems obvious that restoration of sutural mobility is desirable.
- Several mechanisms underly sutural dysfunction.
 - Hypertonus of the temporalis muscle.
 - Develop the concept that there are subluxation and fixation cranial faults and the fact that the cranial bones and their sutures have a resemblance to a condenser or capacitor.
- Condensers are classed according to the materials used to insulate them, air, glass, mica, etc.
- With this electrical concept, if the cranial bones are too close or too far apart, it will affect the electrical charges. The suture width can be affected by muscular activity.
- If the venous blood can't leave the Head then we won't get a temperature decrease.
- When we start to do golgi tendon or spindle cell activity monitoring the temperature. We will get a good temperature decrease when we release the jamming of a suture.
- This combined with B & E technique gives us a much better response. We now understand why such light contact cranial work is effective.
- With a good temperature decrease the lead square effect no longer occurs. Challenging with the magnet will give no response also.
- The patients usually note an increase in energy.
- Sutherland discusses how Dr. Kenny talked about the molecular magnetic potency of the blood corpuscles as the impelling power to the circulation of the blood rather than the muscular activity of the heart. He maintained that the C.S.F. was under the same law.
- He maintained the brain pulsed twelve pulses per second. Each of the brains molecules is an electric dynamo. Every red blood cell is carrying electrons containing electric power.
- The energy of this system is dependent on our vitality.
- So we have a skull that is like a capacitor, C.S.F. that is like battery fluid and breathing is the generator.
- When there is a good balance in this system as in children there is a quick response to treatment.
- The occipito frontalis appears to be the primary muscle involved with this technique.

Anatomy Review

- It may be a good thing to remember the relationship of the cranial membrane to venous flow and C.S.F. fluctuation. The main venous chambers in the brain are different than the rest of the body.
- The venous flow finds its way out of the cranium through an opening formed by two bones.
- The arterial walls and nerve supply are the same as outside the cranium. The arterial walls are protected on entering the cranium by passing through individual foramina in individual bones.
- You can reason membranous restriction disturbs the venous flow of spinal fluid. The cranial lesions may be primary the intracranial

membranes including the dura and arachnoid are the immediate disturbing factors that lead to trouble.

- If there is a lack of movement of the skull and membranous structures there will be an impediment to the normal flow of circulation. We have some thing to measure it by with the glabellar temperature.
- The jugular foramen is between temporal and occipital bones and there must be motion to encourage venous drainage.

Glenards Syndrome

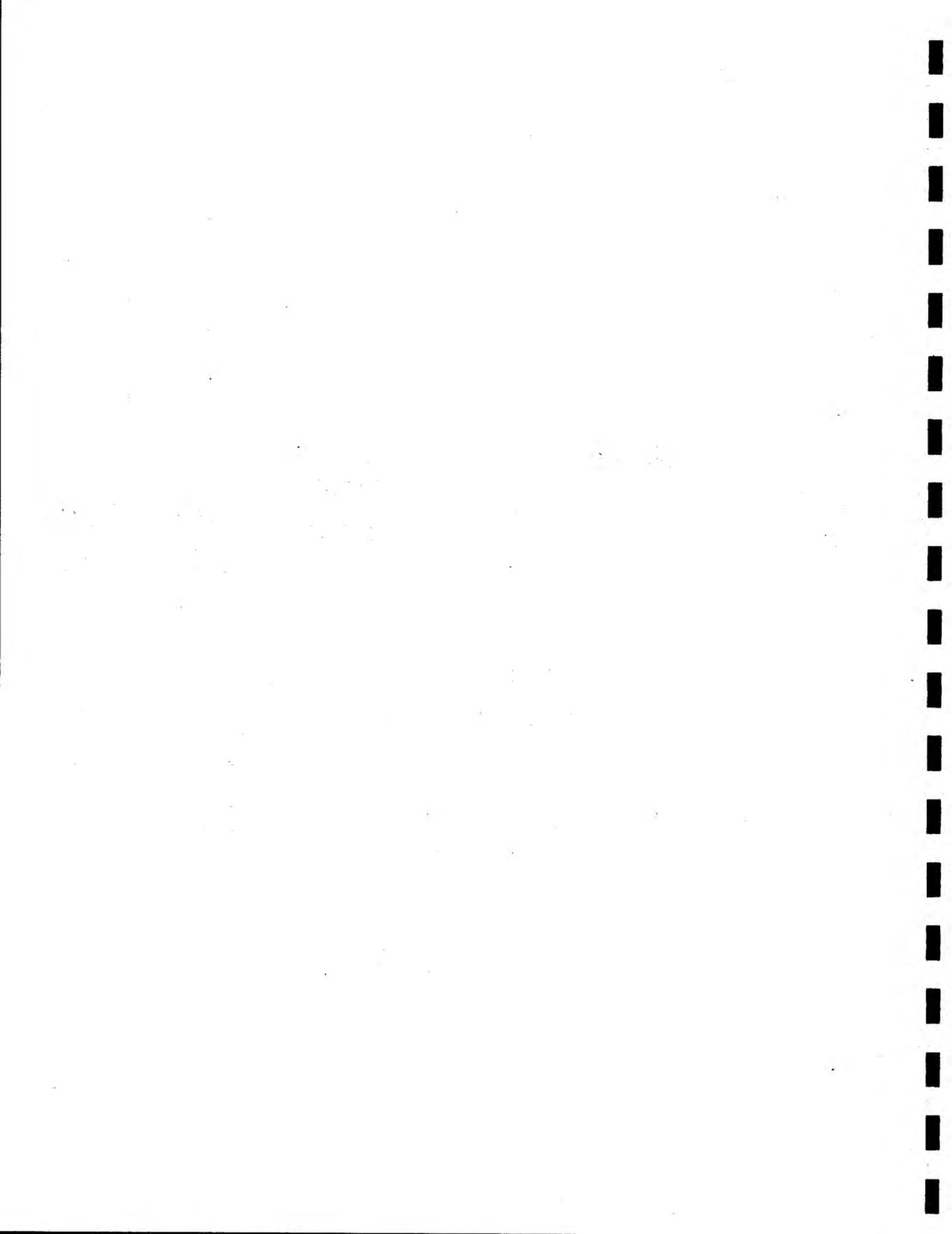
- An unusual pattern of autonomic dysfunction which involves the psoas shelf, abdominal wall support and viscera.
- There is a vagal tug when someone is in the vertical position which is absent in a horizontal position.
- There is visceral drag with mesenteric traction which produces a host of very vague symptoms. Abdominal distress which can't be pinpointed, palpitations, heart beat change with positional changes, dyspnea and sometimes a choking sensation in the throat.
- We do an endo or pulse rate check in the supine position and then we get the patient standing. The pulse rate changes 10-12 beats faster or slower. The same thing occurs if you bring the patient up on the table.
- Measure the beat before and after, when the patient holds their abdomen upon standing the noted change in rate will not occur.
- You'll generally find a bilateral psoas weakness in the clear or against reflex challenge.
- Abdominal muscle tone must be increased. Do inspiration or expiration assist, sagittal sutural spread, Vitamin E, N.L.
- Many times there will be cranial faults associated with it.
- With this problem there is a failure of the psoas shelf to act as a shelf.
- Occassionally there is a mid-scapular rhomboid weakness inducing a scaphoid position of the abdomen. So in addition to working the reflexes associated with the abdominals, you may have to work with O.I. on the rhomboids. You still have to exercise the abdominals and at times support them.
- The P.M. Magazine presentation done on our office turned out very well. Copies are available.

Reading Referral: The Brain Mind Bulletin. April 10, 1981, Vol. 6, #8. Interface Press, P.O. Box 42211 S. Avenue, 52 Los Angeles 90042 (2131258-7333)

- Find article on naloxone use in spinal cord injury patients. Used as preventive measure to block the body endorphins which cause a reduced blood flow to the injured area.
- Endorphins do this only after binding with their own specific opiate receptors.
- The results are best when given as soon as possible after the injury.
- Naloxone is a morphine antagonist.
- There is good evidence D.M.S.O. acts like dysmuzyne in neutralizing anion radicals of superoxide nature. Liberated by both T & B cells.

The 1981 Research manual has an extensive amount of information on spinal cord injuries. Whether to accept a patient and how to maintain a patient with an attitude of recovery.

- It also contains E.I.D. information.
- Some ideas on the hypothalamus and how it works.



DR. GOODHEART'S RESEARCH TAPES

TAPE 68

The Cervical Spine

- We all remember Ruth Jackson's 'The Cervical Syndrome' which came out in 1958.
- It seemed to validate the chiropractic position.
- She talks a lot on the cervical subluxation and disc extrusions.
- She believed it was possible for a posterior extrusion but a relatively large amount would have to be extruded to compress the nerve roots. The symptoms of which would be greatly aggravated by flexing of the neck.
- She feels the joint placement takes much stress off of the Inter Vertebral discs which therefore are much more vulnerable to injury and degenerative changes than the cervical discs.
- She discusses the capsular ligaments and spur formation which may give the appearance of extruded disc material.
- The surgeon who sees and feels an extrusion anterior to the nerve root may be misinterpreting this.
- When these joints are exposed they have the appearance of chondromalacia as seen in other synovial joints.
- Further dissection shows the nucleus pulposa being intact inside the annulus fibrosis despite the degenerative changes.
- I remember being impressed upon reading the book and some of the things you'd expect to see in a cervical disc patient.
- She talks of the positive hyperextension compression tests believing it to be diagnostically important. I must have done it to 2,000 patients and never found involvement with this.
- She talks of a shoulder depression test that if radicular pain occurs adhesions are present. I found this would occasionally work.
- Usually the blood pressure is 10-20 mm of hg higher on the side of involvement.
- She also noted dilation of the pupil on the side of involvement in 5% of the patients due to the reflex stimulation of the cervical sympathetics.

Reading Referral: Lowback and Leg Pain from Herniated Cervical Discs. Herman Kabat, Warren Green Books, St. Louis. I found out about the book in Australia!

- It discusses some difficult low-back and leg pains whose problems were not in the lumbo sacral area.
- Kabat believes cervical involvement is one of the major causes of low-back problems.
- Herniated Cervical Discs is another book he has written.
- He uses muscle testing as a system of identification using the flexor muscles of the wrist. Ruth Jackson talks of weakness of the extensor muscles of the wrist.
- I think both authors missed a simple thing. Cervical discs are possible of rupture and bulging. We found the annulus fibrosis to be capable

- of laxity and the annular ligament can bulge in the absence of manganese or in the presence of mechanical imbalance.
- If the annular ligament is weak the nucleus doesn't have to herniate for the disc to bulge.
 - I feel the discs get irritated especially at the disc between C₆ and C₇ when there is anterior movement of either C₅ or C₆.
 - When you challenge with the patient supine for anteriorities you don't get a response till about C₅, 6 or 7.
 - When the anteriority is found there will be dramatic weakening of any muscle.
 - Then when you palpate the most inferior aspect of the spinous process you'll find a great deal of pain. Having established that we have found the wrist extensors as a good indicator.
 - Test the wrist extensors in the clear then exert a downward pressure on the vertex of the head retesting the wrist extensors many patients will show an immediate weakness.
 - We call this a H.C.D. Hidden Cervical Disc.
 - Sometimes you need to challenge just one side with a diagonal challenge. A great many patients will show reaction to the extensors with cervical compression.
 - A great many will show anteriorities at the level of the sixth cervical primarily.
 - All the above can be neutralized by either rest or cervical traction.
 - It requires not traction but a traction adjustment. The patient is lying on their back with the palmar surface of the knuckle of your index finger against the lowest segment whose spinous process is not tender. It's like your trying to adjust an anterior thoracic. The other hand grasps the patient's chin supporting the patients head with your forearm. You give a quick jerking tug toward the vertex. You may have to do this more than once and the patient may experience it at the waist level.
 - I have the patient hold their breath while adjusting this with the tug allowing the involved vertebrae to slide down the articular process.
 - If pain remains at the tip of the involved spinous process we give dysmuzyme (S.O.D.) as the chemical factor rather than manganese.
 - The above challenges are neutralized by S.O.D. when on the patient's tongue.
 - This anterior cervical disc syndrome will not therapy localize unless under cervical compression.
 - Many times you'll find evidence of a carpal tunnel.
 - For low back involvement you may wish to test a muscle such as the psoas against cervical compression.
 - They may also need manganese nutritionally.

Procedure for H.C.D.

- Test wrist extensors.
- Give heavy compression of vertex of the skull and retest for either bilateral or unilateral weakness of the wrist extensors.
- Challenge the cervical segments for anteriorities, usually it is the sixth.
- Palpate the spinous process the most inferior tip of the involved segment will be tender to pressure. This anterior segment is the one which is compromising the involved disc allowing it to bulge putting pressure on the nerve root or spinal cord.
- The therapy is a traction adjustment. Allowing the involved cervical

- to come down the facet plane to a normal position.
- We were on T.V. in Australia and copies of this are available on 1/2" VHS tape.
 - My father used to say the more voluminous the history, the more localized is the cause. Many times it's a H.C.D.
- B.
- In the past we assumed with a cervical disc we would get brachial radiation yet we failed to realize the sensory tracts involved.
 - Kabat's work is worth reading. His motion restrictions are almost impossible. This is his main therapy movement restriction.
 - He classifies the problem into 8 faults.
- I'm going to be on a program in the Fall in Chicago with Carl Pribram. He is well-known for his studies and Holographic brain function concepts.

The Brain and Holographic Concepts

Reading Referral: Pietsche, Author of Shufflebrain - The Quest for the Holographic Mind, 1981, Houghton Press, Boston, MA.

- Pribram finds it a most noteworthy book.
- Pietsche is chairman of the department of basic health sciences at the School of Optometry of Indiana University.
- His research has been with salamanders primarily who have regenerative powers.
- He's been on "60 Minutes."
- His primary interest has been the regeneration of body tissues.
- Holographic predictions were dimetric to my theory and its implications were at odds with everything I believe, Pietsche said.
- Holographic theory said memory can't be predicted by the structure of the brain.
- Pennfield & Rasmussen are responsible for the homuncular concepts concepts of which part of the brain is responsible for which part of the body. Pennfield would do his work on neurosurgery patients who were under local anesthetic. He would use electrical stimulation of areas of the brain and observe the response.
- They believed memory as well as motor function occupied a certain place.
- The memory aspect was to be repudiated.
- They did work with mice running mazes. It was found by incising the brain that they could not alter the rats memory of running the maze. If they removed any 20% of the brain the memory would be lost.
- In a decerebrate cat experiment they stimulated the hind legs with hot water. The animal learned to jerk the leg out, if the lgs were anywhere near the hot water. Similar to the brain experiment if they sliced the cord anywhere the response was still there but if they removed more than 20% of the cord the memory was lost.
- Pribram was impressed by Ashley's experiments and was related to that part of optics known as holography.
- It was invented by Gabor in London in 1947, he made the first hologram. Holography really did not take on till 1971. this is when Gabor also won the Nobel prize for holography.
- They take pictures with a reference beam and coherent light. They use lasers which is coherent.
- The laser beam is passed through a prism which splits it into two beams which strike separate mirrors. The first reference beam goes through a diffuser to the photographic plate. The second beam goes past the object being photographed to the same photographic plate.

- The film when developed has a series of concentric circles intersecting one another. When coherent light is passed through it you get a three-dimensional image.
- If you cut the film in pieces you still get a whole image just losing its clarity.
- This is unlike a photograph that if you cut in half, you get half a picture.
- So with holography the picture is not in any one place but all over the plate.
- The original left brain right brain activity of John Diamond has tremendous potential.
- Let us suppose the concepts of the beams with the mirrors is a crude method of demonstrating how holography works.
- Suppose that the mirrors are out of focus - we don't get a picture without both beams hitting the plate.
- The interference is what gives us the image in three dimensions.
- Suppose the skull and spine are the mirrors if they are off focus things will be off.
- We are aware of the left brain right brain and the opposite body side innervation. That 15% of the fibers don't decussate at the pyramidal decussation but 8% do lower down. Leaving 7% of the fibers going down the same side.
- Suppose the electrons of the skull are like magnets and have become jumbled. So when you test a T.S. line indicator against either left or right brain activity and find it to be strong, that side is focused on the photographic plate.
- The side of brain activity where weakness occurs is not focused on the photographic plate.
- The one mirror can reset the other. If you can't find a weakness in the clear, put the eyes into E.I.D.
- The spinal column has the same resonance factor.
- If you have the patient therapy localize to the area of nerve supply for the muscle you are testing unless there is a subluxation there it will test (-). If the patient does that activity which caused weakness, while therapy localizing that spinal segment, weakness will occur with the hand that is primarily innervated by the side of the brain you are using, i.e., left brain - right hand.
- Tap the bony segments on the right while you activate the left brain. This will neutralize the weakness. It's as if the bone has to remember what the angle is.
- We've had good results with chronic musculo skeletal diseases.
- Holographic technique fits in well with electron poisoning.

DR. GOODHEART'S RESEARCH TAPES

TAPE 69

Reading Referral: Ligament and Tendon Relaxation Treated by Prolo Therapy.
George Hacket, Publ. by Charles Thomas Co., Springfield, IL

- Trigger point therapy has been around for a while. Such people as Janet Travel and Ray Nimmo have popularized it.
- Nimmo works with referred pain coming from ligaments and uses the Nimmo T to work on them.
- With trigger point therapy a distant point will hurt. Sometimes I couldn't find a trigger point but the patient would feel better.
- Patients' pain thresholds vary.
- In some painful tarsal tunnel syndromes I had fixed there was still pain in the heel. Melzack wall technique was a short-term relief.
- I had learned femoral ligaments would occasionally reproduce pain in the heel area. So I put a thermister on the area where the patient said the pain was on the heel.
- I attempted to use the T with hard, heavy intermittent pressure on the posterior superior portion of the femoral ligament. A spectacular rise occurred in the heel and the patient remarked it was a good hurt.
- Hacket uses prolo therapy where a sclerosing agent is injected into the ligament, this is needed sometimes. Most of the time pressure is enough.
- We sometimes do ligament interlink to augment it.
- We use this heavy intermittent pressure until the referral pain, or the temperature, stops rising.
- Put the thermister over the area the patient is complaining of, wait for it to come to a constant level, then use heavy pressure to a reflex area and observe the response.
- Trigger points will therapy localize.
- There can be more than one cause for the same problem.

Hidden Cervical Disc.

- I observed people have problems giving the high velocity supine adjustment as described on the last tape.
- Another simple way to make this adjustment is in the prone position. And you adjust by contacting the anterior of the vertebrae in question with the head rotated, and adjust downward along the facet line on both sides. Use origin and insertion technique on the area in question also.
- You have a knife edge contact of the index finger on the vertebrae in question and do like a bench movement being sure to adjust downward, not, I repeat, not across, with the head turned toward the side you're adjusting. Facet range with the head in this position is inferior. Do this bilaterally.
- You may have to use a little more force on the second side since the vertebrae has pivoted slightly.
- If this adjustment doesn't take the spinous tenderness away, attempt

the supine adjustment as discussed in the last tape. If pain remains give S.O.D. orally, 3 X/day.

- I can't recommend the Kabat book more highly.

Electron Poising

- The new collected papers have some good articles on it. Especially Wallys, on Iron.
 - If you think of a sine curve. The upper right is thyroid and oxygen. Adrenal and gonads and hydrogen are on the lower left. If all we did was take in hydrogen from hydrocarbon we'd be in excess reduction.
 - We are in a state between oxidation and reduction. That's one reason for products containing sulphur: onions, mustard, horseradish and curry powder.
 - the sulphur along with the quinone in green leafy vegetables sort of work in this oxidation reduction system.
 - In the '80 manual we talked of the left side being hooked with adrenal gonads and hydrogen and the right side being associated with the thyroid and hydrogen. This is how Isaacs drew it.
 - If we reversed it it would fit left and right brain activity perfectly. The left would then be left brain, thyroid and oxygen and the right would then be right brain, hydrogen and adrenal.
 - The water soluble elements are left brain and the fat soluble are right brain.
 - The center of the sine curve is like a shaft of an engine. The curve is like a propeller. the propeller is attached to the shaft by copper. The electrons enter the system by the use of zinc in relation to the sex gland adrenal basis. They get out by the way of manganese which is hooked up with the hydrogen oxygen basis left brain.
 - The body simply splits water apart. It does so enzymatically so that there is no high heat given off. In the process electrons are moved.
 - Trace minerals allows the cells to communicate with each other. Vitamin A allows the cells to connect with each other. Vitamin C & E are around to prevent over reduction and oxidation.
 - The poisoning products act as a base and after the patient has been on it for a while we then test to see if there is a specific need for a particular nutrient.
 - The trace minerals are augmented by the electron poisoning product.
 - The poisoning products are useful with the P.R.Y. technique, left and right brain technique, and holographic technique.
- B.
- The conference in Chicago with Carl Pribram, D. Cheraskin and Dr. Upledger went well.
 - I was able to show them the holographic, right and left brain tapping technique.
 - We've also learned to challenge segments making the proper adjustment, then rechallenge the segment against also left or right brain activity and see whether a weakness occurs. If it does, then after making the correction tap that segment on the phase of brain activity that doesn't cause a weakness.
 - For the trigger point therapy we ask the patient where they are having the discomfort and this is where we place the thermister. We then search for a trigger point that will refer pain to that area or increase the temperature there.
 - I will have the patient therapy localize the point and find a phase of respiration that abolishes it.

- I use the opposite Dr. hand to patient side to treat the point with respiration. Then Drs. right hand to the patient's left, for example.
- the point doesn't have to be on the same side as the pain.

Reading Referral: Language of the Brain, Carl Pribram. It's out of print so if anybody can get me a copy, let me know.

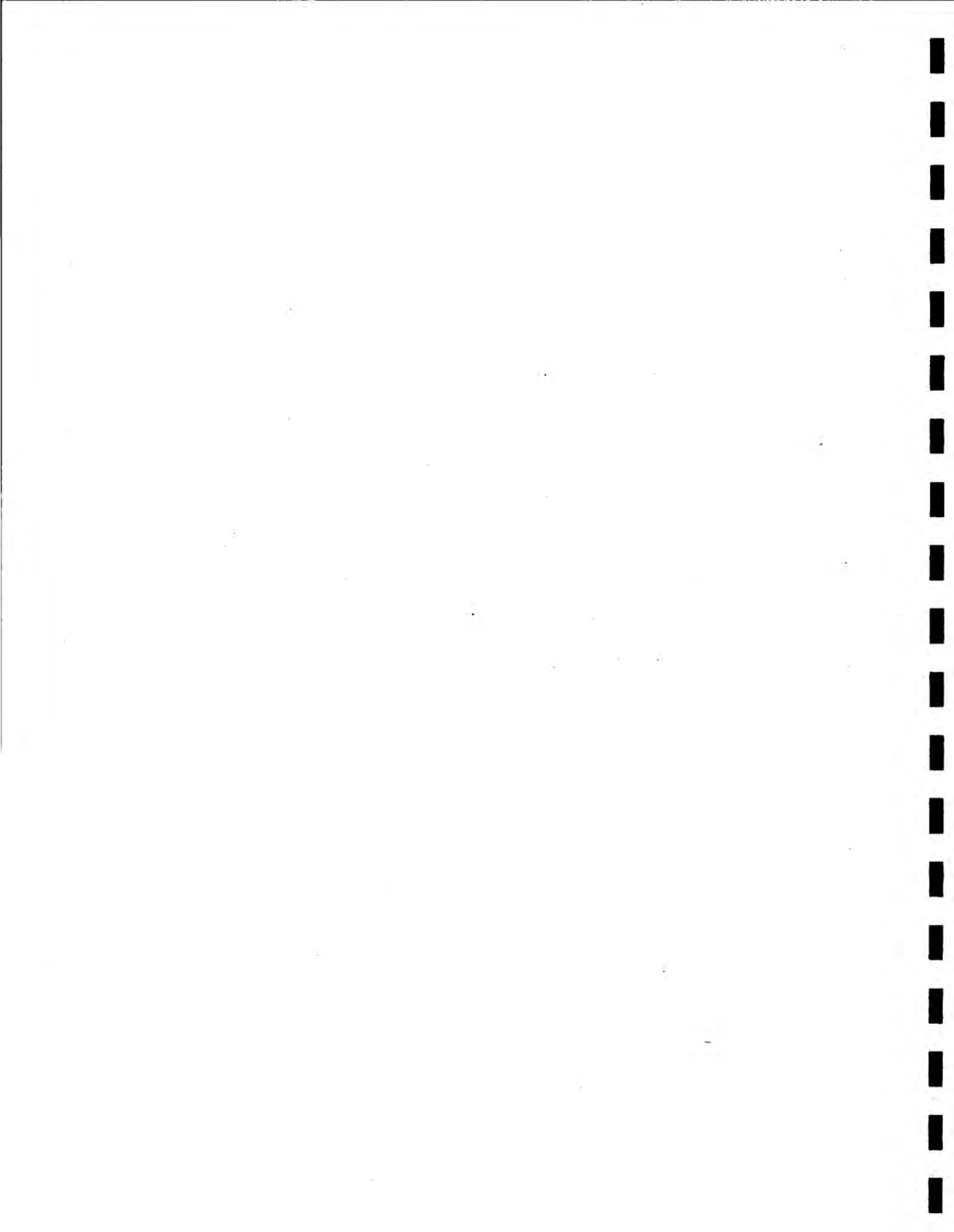
- Dr. Cheraskin noted as Vitamin C levels were decreased in guinea pigs their blood sugar levels increased. He believes this has something to do with the diabetic syndrome.
- Some people taking large doses of Vitamin C show abnormal lingual ascorbic acid tests because their level of ascorbase is so high.
- There is both cortical memory and spinal segment memory.

Reading Referral: New Guinea tapeworms and Jewish Grandmothers, Robert Desowitz, W. W. Norton Co., New York 1981.

- It deals with parasites and the troubles they cause.
- The chapter on giardia is especially interesting. A lot of patients that never really get well from a foreign trip are good candidates for it.
- With all the traveling people are apt to do today, this is a good book for your library.
- We're including a copy of the trigger areas with this tape. Invitations to join I.A.P.M. is also enclosed. Up until now, a D.C. could only be an associate member.
- Those who would like tapes of the conference in Chicago can obtain them from the Oasis Center for Human Potential, 7463 N. Sheridan road, Chicago, IL 60626.

Reading Referral: Understanding Holography, Michael Winion, Arco Publ. Co., New York 1978.

- We now have the concept the cortex is like the parabolic dishes they have for radio transmission. It constitutes the mirror or the hologram.
- We're experimenting with holographic technique and vision problems.
- See you in Acapulco.



DR. GOODHEART'S RESEARCH TAPES

TAPE 70

Holography.

- At Acapulco, John Brimhall demonstrated a weak left psoas with vertex compression. We fixed the H.C.D. that with right brain activity it all came back.
- You take the side of the skull of the activity that caused weakness and tap that side with the patient saying the opposite sides activity that didn't cause weakness.
- You then challenge the area of neural innervation for the muscle in question with right and left brain activity.
- Usually only one side of the involved segment will T.L. with one hand with one phase of brain activity.
- You tap the side that T.L. with the phase of brain activity that did not cause weakness.
- Lashley found that a trained rat would be capable of running a maze with up to over 50% of his brain removed with only insignificant errors. The more complex the maze, the smaller the amount of brain that could be removed before errors occurred.
- The point is memory is not at any one place.

Reading Referral: The Brain, the Last Frontier, Restak, page 223 in particular. He talks of Pribram's holographic brain concepts.

- The hologram stores visual information across the entire surface.
- To move a finger both sides fire the a thousandth of a second later the same two areas fire again, then just before the movement occurs the side involved fires only. There are actually five firings instead of the one we used to be taught.
- A simple tapping is all that is needed to reset this system.
- Adjustments hold longer when left and right brain holograph technique is done.
- You tap with the phase of brain activity that didn't cause the weakness.

Clonic Chronic tonic torticollis

- I have a pediatrician with this who counsels a group with this.
- We're trying to find out why more people are getting this. It does not appear to be nutritional other than niacinamide B₆ or specific needs you find.
- If you analyze gait - as your right arm goes forward and left foot. The body torques appropriately. The right clavicle comes forward and you'd expect the head to follow suit and go to the left, but it doesn't.
- When you take a step the opposite lat weakens to allow the opposite arm to go forward.
- Certain muscles are activated on or off with gait.
- All the muscles of the right leg to bring it forward are activated along with the muscles of the left arm. Their antagonist are inhibited by

- allow them to go forward.
- While this is happening the opposite is happening with the other contralateral limbs.
- The homolateral trapezius should weaken with a step because the head had to turn slightly to remain centered straight ahead.
- I.E., A left step with the right arm coming forward, the head is being pushed to the left by the right shoulder clavicle coming forward.
- To keep the head focused straight ahead, the left SCM. Scalene must contract to turn the head to right to keep it centered. For this to occur the left trap right SCM must release.
- This usually does not happen in these torticollis patients.
- Look to in neck problems.
- We check this by having the patient take a step forward with their opposite arm forward and staying in this position. The trap on the side of the leg being forward should be weak and the opposite SCM scalene groups.
- The stress receptors for the upper trap on the forehead and the mastoid processes for the S.C.M. are involved and they are challenged with the patient in a normal position. Challenged for a direction causing weakness and the phase of respiration that abolishes it. We then fix them appropriately and recheck the gait as we found it.
- This is why there is a dual nerve supply to these muscles because with it the muscle would have to be on and off at the same time. This is because the trap has to let go on the same side the S.C.M. is contracting and they share a common nerve supply.
- As a home exercise, see which phase of gait has a tendency to keep the head centered better. Then have the patient accenuate this part of gait at home for the zigs and zags to match. It's like you've got 2000 zigs and 4000 zags, they have to balance.
- We see this in reoccurring U.C.F., head tilts, and normal patients.

B

Tilt

- Pitch Roll and Yaw
- The newest component of the P.R.Y. technique.
- The head has a pitch pattern it shares with the pelvis.
- The head also shares a roll pattern with the pelvis.
- The head also shares a yaw pattern with the pelvis.
- The head moves and the body follows.

Tilt

- You check for this with the patient supine and only one knee bent up. Have the patient bring his ear to his shoulder on that side. Test a muscle for weakness. The tilting or lateral flexion should occur with no rotation.
- When you get a positive reaction we find an indicator to observe flexion - Leg abduction, etc.
- You fix this like the pitch component except from side to side. As the patient laterally flexes to the left you resist and as the patient laterally flexes to the right you resist that motion doing it four to five times. No rotation should occur.
- We observe the increase in our indicator.
- This tilt pattern seems to relate to the gait pattern we just discussed.
- We're not sure of the nutritional component for it yet. It appears to be trace minerals.

Acupulco

- At the winter meeting I was able to get hold of Kabat's exercises and

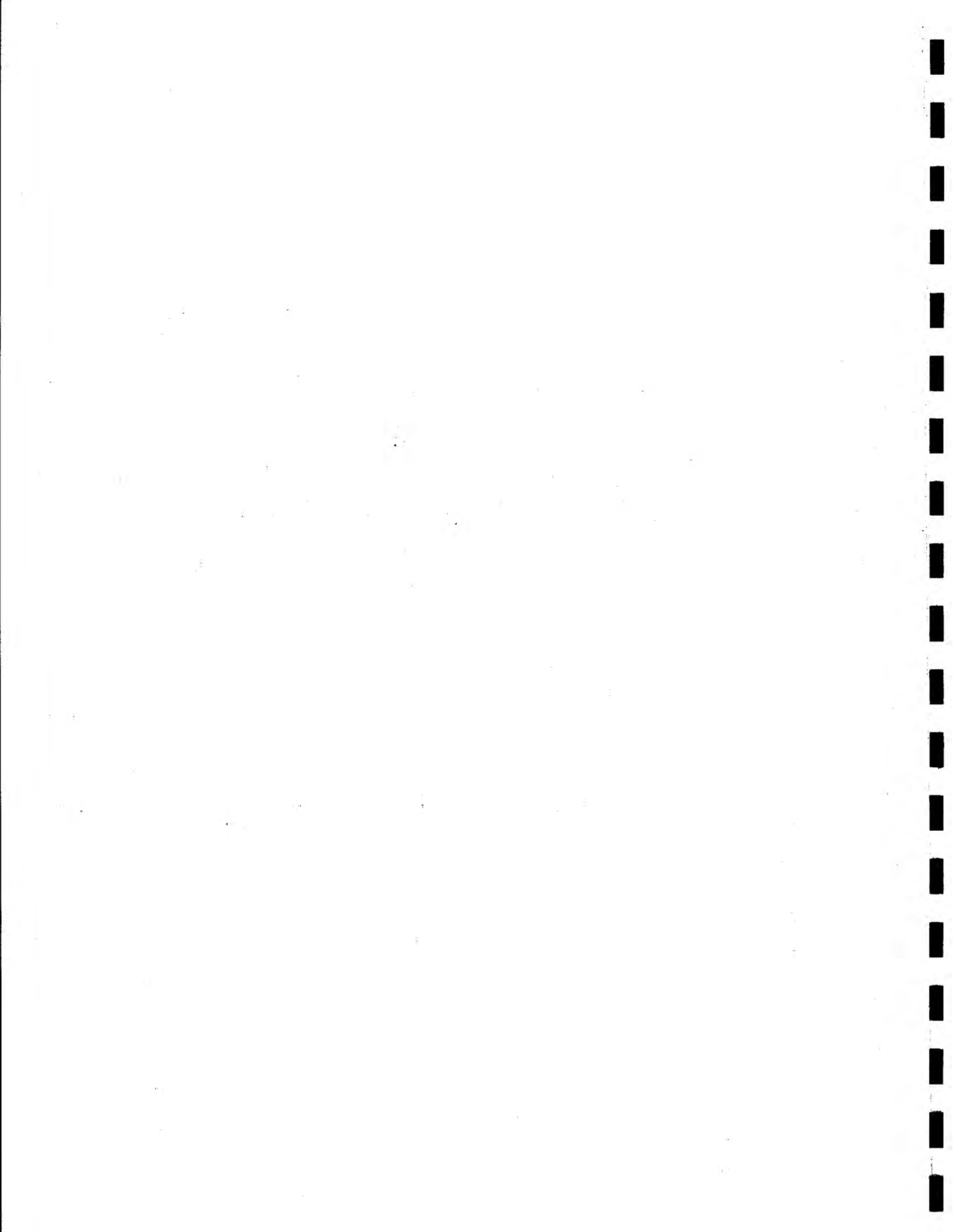
- some of them are impossible.
- It really means balance the structure even if it appears unrelated to the problem. Musculo skeletal stress adds fuel to the fire.
- The prone adjustment in a downward direction is very effective and doesn't require as high a velocity as the supine adjustment.
- If you find a cervical disc after you fix it and rechallenge it, challenge it against left and right brain activity.
- Also, check the trap gait circuits against left and right brain activity and do the appropriate tapping.
- You get better responses and the treatment lasts longer when the holographic technique is done.

Reading Referral: Dr. Scmitt's paper about the Abolition of Murphy's sign after Ligament interlink.

- We move quadripedally even though our stance is bipedal.
- We talk of ligament interlink and revenue sharing of the spinal cord.
- It is fundamentally contralateral.
- Sometimes this interlink can phase in a muscle response which then causes a visceral response.
- His paper describes a ligament interlink involving the elbow and the knee and the abolishing of murphy's sign.
- It's one to look for with recurrent gallbladder problems.
- We appreciated the attendance of Dr. Dardik in Acapulco and he was intrigued by Dr. Caskey's presentation on running.
- If you would contact Mr. Nathan Keats of Keats Publishing, New Canaan, CT. and asks about the book, "You'll be better." The bigger the response from doctors, patients and friends, the better. It might get it published. He's had the manuscript. Keats publishing Co., 26 Grove St., New Canaan, Ct. 06840.

Electron Poising System

- It is the chemical equivalent of the Hologram and works well to negate left and right brain activity.
- Do use the basic product and modify the nutritional need as needed.
- There are neuropeptides - American Heart Journal, 1980, Vol. 99 #1. They talk about them having similar actions and there are no apparent reason why enkephalins and endorphins have separate existence.
- It appears that enkephalins act as neuro transmitters and endorphins may act as neuro modulators.
- I think when the area of representation in the brain doesn't match that of the body then there is something wrong.
- Thank you Dr. sheldon Deal for another well compiled paper. The papers are getting better and better.



DR. GOODHEART'S RESEARCH TAPES

TAPE 71

Clonic Chronic Tonic Intermittent torticollis

- The head turning without the patient's wish.
- When severe the person can't eat.
- We generally find a fixation of L₅ on S.
- Occipital atlanto torque patterns are frequently seen.
- There is a need for Niacin - B₆.
- We look for levator scap parathyroid involvement.
- Each case has its own pattern.

Trapezius

- For the neurological level of innervation I have found no less than six different interpretations of the innervation of the upper trap.
- The trapezius and S.C.M. have spinal segment innervation and a spinal accessory innervation.
- It basically comes down to the fact that there is a dual nerve supply to both the S.C.M. and upper trapezius.
- Why do these two have two innervations?

Gait

- When you analyze gait under high-speed photography, 10,000 frames per second. That's right, second not minute, per second. This shows motions not visual to the naked eye.
- I was struck by the motion of the head and neck.
- The head has a tendency to go toward the side of the foot going forward. It must, however, turn towards the side of the arm in moving forward to keep looking straight ahead.
- Since the neck has mobility it doesn't move with the shoulder girdle. It turns to the side that the shoulder is going forward thereby keeping the head in the center.
- For this to take place the S.C.M. must be turned on while the trapezius turns off on the same side.
- So with a left step, right arm forward, the left S.C.M. must turn on while the left trapezius is off and the right S.C.M. must turn off to allow the left S.C.M. to pull. The right trap also must contract.
- This explains why there is a dual nerve supply.
- The upper trap should shut off on the side of the foot forward. And the S.C.M. on the side of the forward shoulder shall shut off.
- The opposite S.C.M. and trap should be strong.
- When these aren't working properly the stress receptor for that muscle is treated. Find a direction that causes weakness with a phase of respiration that abolishes it. Then treat it in that direction with the phase of respiration that abolished it.
- This allows more zigs and zags when things are off causing symptoms structurally posturally, etc.
- We have the patient accentuate the weak movement to balance the zigs and zags.

- Sometimes you'll see a weak upper trap that will strengthen when you take a step forward on that side. It will be negated by the N.L. for that trap, fix it. This will usually not show on a postural exam.
 - This is useful in preventing reoccurring U.C.F., helps prevent middle and lower cervical fixations, and in improving gait involved problems. We apply with every treatment given to ensure good balance in this area.
 - A Brodal - he talks of the spinal accessory as being both sensory and motor. He indicates there is motor innervation to the muscles from both the spinal accessory and cervical nerves.
 - This dual nerve supply allows one muscle to be on while the other is off on the same side.
 - It's hard for the same nerve to be on and off at the same time.
 - This I believe is why things return even though we fix them because walking is screwing them up.
 - You treat the stress receptor on the side that the muscle is not turning off on.
 - In the chart in the 1974 Research Manual for Neck Flexor the #16, The number is 17. It's the same areas as on pp 12 and 13 of the Blue Walther manual.
 - A retrocollis pattern is seen sometime. Turn on or off the proper stress receptors as needed that involve both neck flexors and extensors as well as the S.C.M. and upper trap.
 - The pediatrician was in the office last night and I had Dr. Swenson from North Dakota and our newest associate, Mark Diener, in observing.
- B. - I hope this gait pattern is clear because it's a very useful thing.
- Holographic Technique
- I had a patient who had a pain in her leg at night. Thinking it may be pineal involvement I checked her in a bright and dark room with her eyes open and closed - no response occurred.
 - When she thought about her leg problem with her eyes open and closed, when she did it with her eyes closed weakness occurred.
 - It seemed reasonable if there is a left and right brain there should be a front and back brain. Pribram believes this to be true also.
 - When you look at something you do so with the occipital cortex in the back of the brain.
 - When you look at something with your eyes closed there's no retinal stimulation, there is frontal lobe activation.
 - To fix this problem, if the patient weakens with their eyes open thinking about the problem, you have the patient close their eyes and tap the back. If weakness occurs with the eyes closed and thinking about the problem, you have the patient open their eyes and tap the front.
 - You get a good increase range of motion in patients this shows in.
 - I've shown this to Drs. Swenson and Diener in the office today.
 - You must also do what is necessary mechanically.
- Reading Referral: What's So Bad About Feeling Good, Dr. robert Freyman 1982. He's a seventh generation physician.
- Glenards Syndrome
- On page 106 of the new 1980 workshop procedure manual we talk of Glenards Syndrome.
 - There's a disturbance of the psoas shelf which is a source of visceral support.

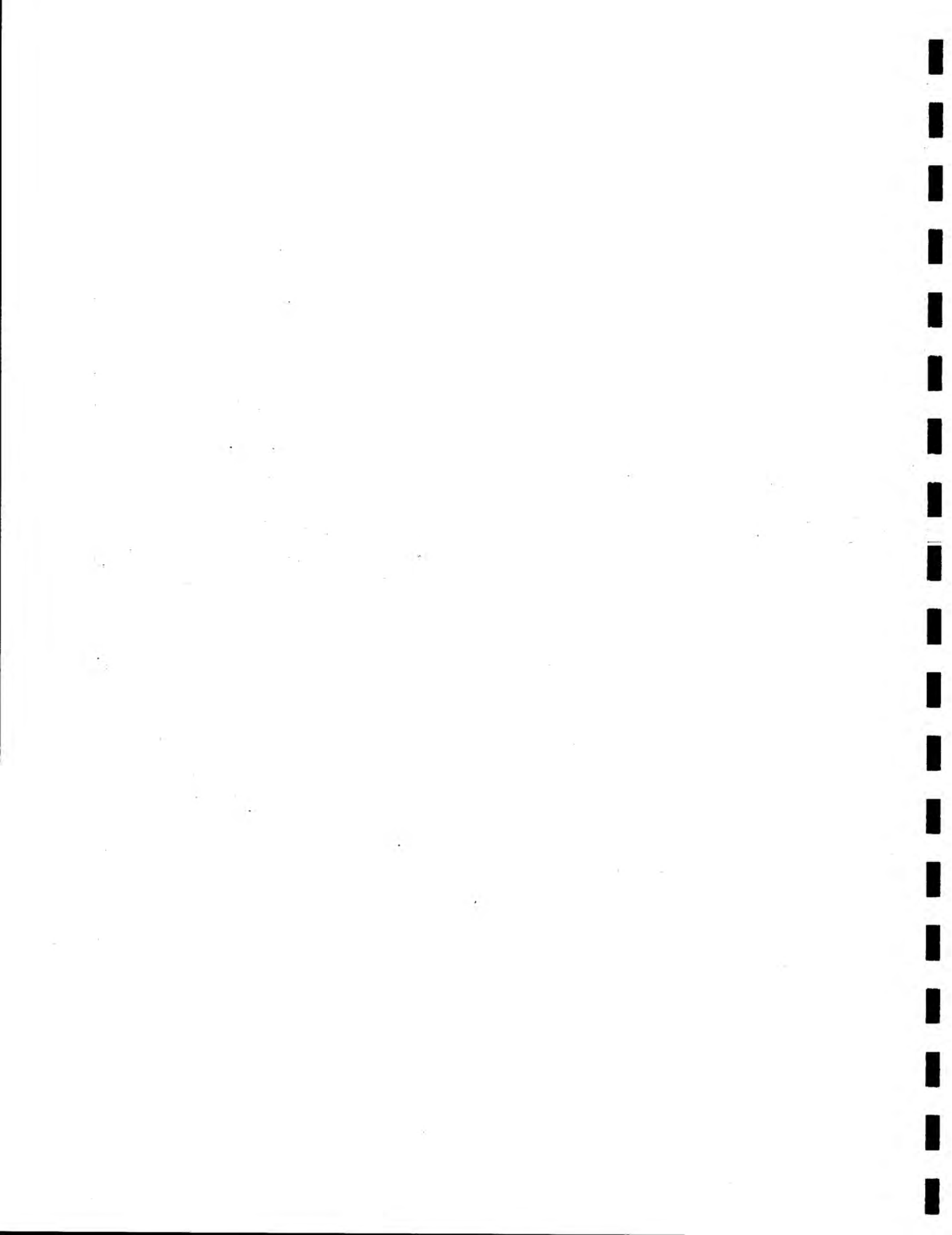
- Dr. Schmitt observed patients showing weakness on anterograde or with a table angled up at 30 degrees.
- We find things show in different positions. This anterograde is a failure of the N.V. for the restintaculum chyli, the lymphatic heart, the reservoir of piquet. There are a number of names for the dilation of the lumphatic duct.
- A patient with an anterograde problem may not show it in a fully vertical position.
- Muscle weakness will show usually from 30-45 degree inclination forward. Check this when there's a problem you can't get to show or just to check in the clear.
- This is a failure of the N.V. component. The glomus coxycygius is the N.V. for the restintaculum chyli. You stimulate the tip of the coxycy intra rectally with expiration. The glomus is stimulated with respiration.
- The coxycy moves forward on expiration, it's as if the coxycy isn't moving forward enough.
- The N.L. is k₂₇ bilaterally.

Reading Referral: The Vital Probe by Irving Cooper.

- On Kirlian photography
- It describes her journey into body energies.
- One of the interesting things she found was the evidence from another source that the acupuncture points produced more carbon dioxide than oxygen.
- This must mean the points take in more oxygen.
- I test points against oxygen infusion by using a small vital air on the area, on testing muscles hardly ever do they strengthen. When I do this to a N.L. or N.V. reflex, they will show a response.
- With a subluxation there is over-activity. When there is under-activity it indicates the body has turned something off that was over active. This is why it's so essential to do lymphatic activity.
- Do the N.L. and spray the area with carbon dioxide the muscle weakness reappears. Spraying it with oxygen causes strength.
- On page 140 she cites papers particularly one dealing with electrodermal points rather than acupuncture points. The Hungarian research showed the electrodermal points differences to gas.
- This is probably why Hyperbaric treatments work forcing the oxygen through these points.
- Some patients respond to carbon dioxide.

Auricular Therapy

- Dr. Worley in Detroit does a lot of work with this.
- Dr. Radtke attended a workshop on it.



DR. GOODHEART'S RESEARCH TAPES

TAPE 72

Gait Pattern

- While in Texas I tried to demonstrate the pattern to the doctors there.
- The S.C.M. releases on the side of the forward arm, the splenius capitus and trapezius release on the side of the forward leg.
- There are other walking gait patterns.
- The Psoas is turned on on the forward leg side. We put the patient in an upright position on our Hi-Lo with one leg forward on the bottom plate while the other leg is back to the side of the table. The leg that is behind should be off and we test it in this position.
- We work the stress receptors here also if the muscle isn't off as it should be.
- The quadriceps should be on on the forward leg side and the hamstrings should be off on the same side.
- This pattern is frequently disturbed when you see this, it's a stress receptor or a reactive muscle.
- In the chronic clonic tonic torticollis patient it's usually a mixture of stress receptors and reactive muscles.
- One of the hardest torticollis patients I had showed spindle cell involvement of the left quad. When it was done it negated head turning.
- The concept that muscles turn off and on with walking is an easy one.
- These walking gait patterns should be looked into with persistent problems. We also test them against E.I.D., inspiration expiration and left and right fore and back brain.

Glenard's Syndrome

- I discussed Glenard's syndrome in the 1981 manual.
- This is where there is a mesenteric tug on the vagus when the patient goes to a standing position.
- We're familiar with retrograde. It made sense that there is anterograde lymphatic drainage.
- Terry was observing muscle weakness on different positions about 45 degrees. The weaknesses were not always present.
- Wally felt it was anterograde.
- The cisterna chyli at the 2nd lumbar has three muscle layers.
- There is a pulsatile flow in the lymphatic system as in the C.S.F. It flows in a retrograde direction emptying into the subclavian vein.

Anterograde Lymphatics

- The patient will demonstrate a weakness when at a 35-55 degree upward inclination.
- Usually when the patient is in a standing position it may show some.
- The N.L. reflex for this is at K₂₇ bilaterally.
- Vigorous manipulation of K₂₇ is the treatment.

- The glomus coxycygeum is the area Coombs discovered giving colonics. He found some patients got better by the tip before the water even began flowing.
- It is a baro-receptor in front of the tail bone. That's the N.V. receptor, treatment is on expiration.
- The acupuncture meridian is the governing vessel.
- The patient's symptoms are: not liking to stand in line, back pain which develops as the day goes on, getting better with a rest, then the pain comes back once they are up again for a while.
- In some cases K₂₇ may have to be stimulated 4 to 5 minutes.
- Look to see if the patient can't get out of a chair.
- The patient may also complain of fatigue after being up 2 to 3 hours which doesn't seem to be hypothyroid or hypoadrenia.
- We will also T.L. to the spine in retro and anterograde position.

Lovett Brother relation

- We're aware of the Lovett brother relationship, L₅-C₁, L₄-C₂, etc. And that if L₅ is posterior on the right look to C₁ to be posterior on the left.
- If you T.L. the segments in this condition you may get a response. If you get a response adjust it appropriately.
- Some patients will palpate like something is present but don't T.L. or challenge. T.L. the opposite side in the cervical and lumbar area for the Lovett brother involved and challenge and it will show.
- This means a Lovett Brother or, as Dr. Jarnette referred to it as a resistance and contractive factor.
- Palpate the cervical and lumbar area for tenderness. Manipulate heavily the area that doesn't hurt as much till the tenderness at the opposite area diminishes.
- This is a representation of a slow down of lymph drainage.
- Then work your way down the spine with this opposite side T.L. and manipulate the upper areas.
- The reverse is true in the neck since the drainage of the lymph is in a downward direction. You T.L. the atlas axis and opposite L_{4, 5} if its positive manipulate the L_{4, 5} area.
- Look for an U.C.F., E.I.D., and the rest also.

Holographic technique

- You recall the left and right brain technique where we tap the side of the head that caused weakness with the phase of brain activity that didn't cause weakness.
- We do the same thing therapy localizing to the spine.
- We now do front and hind brain that we challenge with eyes open or closed thinking of the problem. Eyes open activates the back, eyes closed activates the front.
- We tap the area that caused weakness with the eyelid position that was strong.
- I.E., patient weakened with eyes closed. We tap the front of the head with the eyes open.
- With the eyes open the occipital cortex is being activated. The frontal area is activated with the eyes closed.
- It seems to work only when the patient is thinking about the problems at hand.
- We get good symptom diminishing effects and increase ranges of motion.
- There is not only bone memory but also soft tissue memory.

Reading Referral: Psychology Today, February 1979 - fine interviews with Carl Pribram.

- Pribram talked off Bernstein's work in the thirties. The coordination and regulation of movements.
 - He dressed people in black and had them dance against a black background. White dots were on the joints of the body. He filmed these people and had wave forms for different motions. He did frequency analysis of the waveforms by Fourier transforms as with hologram.
 - With this analysis he was able to predict where the next movement would occur.
 - Pribram read this realizing this is what the brain was probably doing.
 - We're finding our senses do holographic representation and the brain does a Fourier transform measuring the crest and the waves components and acts on them.
 - The bone memory techniques are really holographic principles.
 - Contact us if you wish a copy of Pribram's interview.
- B.
- Sir John Eckels, who probably knows the most on the cerebellum than many contemporary people mentioned there were synaptic potentials between many cells giving a ripple effect like a stone hitting water.
 - Intersecting wave fronts when they come in contact set up an interference pattern.
 - Pribram thought if there were intersecting wave fronts in the brain these fronts might have the same properties as in a hologram. Holograms are resistant to damage as memory is in the brain.
 - The brain has to behave in part as a hologram.
 - This concept allows for perpetual constancy and transfer of learning.
 - Pribram said they had to find if individual brain cells acted as frequency analyzers allowing certain cells to resonate with that sensory inputs frequency. Pribram found this to be true.
 - It's as if the micro dot three dimensional actual you and the three dimensional micro dot image of that part of you must be in parallax to be healthy.
 - When you take the memory and tap it into resonance as we do you see remarkable changes and increases in motion.

Reading Referral: Scientific American, Vol. 220, #1, 1969. Pribram's article on remembering.

- There is a useful biofeedback type thermometer available through Heathkit M-99 electrotherm retailing for \$49.
- Works well for glabellar - B & E technique. Any temperature analysis technique.
- Contact Raleigh Jones in Florida of V.M. Nutri, he bought a large quantity.
- Thermometry is essential with spinal cord injury patients and indicates how long to tap in hypothalamic technique.
- David Leaf has a computer printout of A.K. classes and are available from I.C.A.K.
- In Thelma Mosses' book the body electric discussing Kirlian photography. On page 190 she discussed electrodermal point carbon dioxide production. They now use electrodermal instead of acupuncture points. It was shown these points were a source of energy flow.
- On some patients we will treat these points or reflexes with oxygen or carbon dioxide which even causes strength. We use a small vital air applicator.

- You can use tank carbon dioxide or your own breath, to treat the points. Use whatever doesn't cause a weakness at the point of involvement.
- It makes the treatment more long-lasting.
- Dr. Carl Messman showed us the remarkable results available to us with tempo mandibular splint work at the last I.C.A.K. meeting.
- He showed us films of cervical and cranial movement and copies are available.
- There is a fine article on A.K. and dental work in the sports medicine field from the American Dental Association.
- I'll be lecturing to dentists at Ohio State this weekend on a post-graduate level.

Holographic Interosseous Subluxation

- Chiropractic is associated with nerve interference, and that structure determines function.
- Trescott developed concepts of angular analysis, light contacts, and leg length. He observed that his own x-rays showed no change between views taken 20 years apart, yet his health deteriorated.
- X-ray is good for pathology, and gives a clue to structure, but it's not all encompassing.
- Fixations are vertebrae "stuck" in place.
- TL and muscle testing helped to make structural corrections.
- Right and left brain, front and back brain relationships, and even inside and outside (brainstem and cortex).
- The skull acts as a large parabolic reflector, augmenting, amplifying, acting as a booster to the signal. Left skull boosts left brain activity, and the right skull boosts right brain. Front skull boosts with eyes closed, the back skull boosts with the eyes open.
- TL a vertebra against right or left brain activity. After adjusting the vertebra, tapping the vertebra on the phase of right or left brain that produced strength gives good clinical results.
- Images of the entire body are all over the brain and there is a perfect "microdot", a three dimensional image in the brain, and as long as the image in the brain fits the physical structure, you are not aware of it. If you wake up with attention to an area, it's because the image in the brain doesn't fit the structure. Correction of the structure does not always give good results, so tapping the skull gives better results.
- TL was developed as a high gain pattern using the thumb and finger. EID makes TL more a cerebellar function.
- Another factor to the subluxation/fixation concept is the interosseous vertebral fault.
- If an ordinary photo is cut up in $\frac{1}{2}$, there is only $\frac{1}{2}$ left. If a holographic picture is cut in $\frac{1}{2}$ you still get the whole picture. A stroke patient that loses $\frac{1}{2}$ the brain does not lose $\frac{1}{2}$ their memory.
- The right and left sides of the spine are two wave fronts which form an interferometer holographic pattern, forming a single wave front. Comparing this single wavefront to the 3-D microdot image in the brain of for instance, L5, and if there is synchrony, the two blend in harmony. Subluxation, cranial faults, etc., cause a paralax and there is not a blending of the two units into one and therefore there is disharmony and correction is needed.
- GJG discovered in an area of the spine that was negative to TL, it would TL positively if the spinous process (SP) and the transverse process (TP) were TLed simultaneously. (Right hand on the SP and left hand on the left TP, or left hand on the SP and right hand on the right TP). This TL would show on one side or the other of the involved vertebra. Challenge to the vertebra occasionally found a subclinical fault, but hardly ever. At the time, GJG was finding this pattern on very acute patients.
- Interosseous fault would cause a compaction or piezoelectric effect that was altering the interferometer holographic response between the right and left side.
- On some patients he would identify a right or left brain problem after a structural correction and tapping on the phase of right or left brain activity that strengthened would help, but in some cases it would return. Tried to check for structural faults or fixation, but they were not present.
- The SP and TP may be interosseously compacted or separated. GJG tried to challenge the SAME vertebra TP and SP, press the TP down and the SP laterally and got a positive response. This often would reproduce the patient's pain.
- The Governing Vessel (GV) runs up the spinous processes, and there is a twin split in the Bladder (BL) meridians as if to balance electromagnetic properties.
- Perhaps there is a bone memory fault that has been produced by the compaction on side due to injury or chronic muscle pull and it requires the interosseous adjustment. Obviously there is no adjustive click. The adjust-

ment is the same as the challenge, to separate or approximate the TP and SP of the same vertebra.

-This gives good clinical results, especially in the acute patient.

-Morphological composition of bone, there is hard, inorganic material, and resilient, organic material. Bone is equally resistet to compression and tension. "In tensile strength, bone is almost like cast iron with only a third of the weight, the breaking stress being 15:5 at 18 metric tons per square inch. Its superior flexibility has bone resembling steel more closely than iron having about half the strength of the former. Compression tests show that bone has a very large margin of safety to weightbearing and to impact forces like jumping. It should be remembered that contracting muscles are responsible for much more components of pressure, even at weightbearing joints, especially on active movement. In the hip joint, only a fraction of the pressure loading is due to body weight." "Morphology of the Human Skeletal System" in the British Edition of GRAY'S ANATOMY, Williams and Wilkins. In standing, the hip joint takes half of the body weight and pull of the muscles multiplies this by a factor of 6. Walking or running means a total load of 600 pounds in the average man, and could be easily doubled with exertion.

-Each vertebra is ossified from three primary centers, one in each half of the vertebra, and one in the body (centrum).

-The adjustment of the interosseous subluxation is done with your thumbs. In approximation challenge, push the SP and TP together. In a separation challenge, push the SP and TP apart.

-The primary center starts in the TP and spreads backwards into the lamina and SP. The centrum is connected to each half of the vertebra by a synchondrosis called the neural central joint. In the thoracics, the costal facets lie behind the neural central joints. In the first year, the halves of the arch unite behind first in the lumbar region, and then up into the thoracics and cervical regions. In the upper cervical vertebrae, the center unites with the arches about the third year. In the lower lumbar, union is not until the sixth year. Until puberty, the upper and lower surfaces of the bodies and the ends of the TP and SP are cartilaginous. This may be why there are bent SP's due to injury of compression and interosseous subluxation occurs. The secondary centers fuse at about 25 years. The bifid SP's of the cervicals have two secondary centers. Mode of ossification differs in C1, C2, C7, and lumbar vertebrae. C1 has three centers, one in each lateral mass about the seventh week of intrauterine life. At birth the anterior arch consists of fibrocartilage. A separate center unites with the lateral masses at 6 years. The lines of union extend along the superior articular facet. C2 is ossified from five primary and two secondary centers. The vertebral arch is ossified from two primary centers, the centrum from one; the centers for the arch appear at 7-8 intrauterine weeks, and the centrum of it at 4-5 months. The dens represents the centrum of the atlas and is ossified almost entirely from two laterally placed centers appearing about 6 months intrauterine, and join at birth to form a conical bony mass deeply cleft by cartilage above.

-"TRESMOTT SYSTEM OF ANGULAR ANALYSIS AND CONTROLLED ADJUSTING", by Trescott, 1952. "I've always clung to the adjustment in its purity because I felt it offered a correct approach to solving the cause of sickness. Time has justified my contentions. 14 years ago my attention was drawn to an effort on my behalf in solution of the problem. Too many cases under adjustment were not getting well. There must be an answer somewhere, so I started to experiment in individual research. I owe much of my personal knowlege to Dr. James Hall of Palo Alto, CA., who sent a note saying 'It is my opinion that structural bone irregularities and anomalies make it impossible to do accurate work either by palpation or through x-ray interpretation. Given time I will develop a means by which our work will be virtually foolproof on the spinal column.' Years of research following during which original efforts were made to get away from the old ideas of palpation and use of x-ray. The end seemed to come to limited use but it was still left up to x-ray to determine where to adjust. Its very existence did point to the upper cervical vertebrae. This fact must be reckoned with and encouraged him to do greater effort to solve the problem. One could not deny the far reaching effects following adjustment of the cervical region in some cases, whereas the same adjustment in other cases would prove almost tragic. This was something that must be worked out, somebody must do it. As time passed on, I worked out a procedure where I thought I could adjust myself. This action on my part finally wrecked my health. My body wasn't strong enough to keep the office going and many times I would be lying on the couch at the office hoping that noone would come in because I was just too sick to care for anyone. X-rays were taken and carefully compared with those taken 20 years ago, but no change could be noted. Still, I was well 20 years ago, and today I am sick. Why this state of health when no change could be seen on x-ray? It seemed to contradict the very

basis of the system of adjusting I had been taught. Still I could not go back on chiropractic, I had too much faith in to throw it overboard."

-Cunningham's "HUMAN ANATOMY", 1945, page 1015, "Just before its division, each nerve gives off a meningeal branch which reenters the vertebral canal after affecting a junction with the branch from the sympathetic trunk and is distributed to the membranes and vessels of the spinal cord." Burke, very critical of chiropractic, says regarding the recurrent spinal or meningeal nerve (or nervous sinu vertebralis), "recognition of this extremely important nerve has apparently escaped recognition by the profession at large. It is not specifically described by any textbook, even those on anatomy", this was in 1964. Yet in 1910, D.D. Palmer said on page 326, "Just before their spinal nerve division, each nerve gives off a slender, recurrent branch which reenters the vertebral canal after affecting a junction with a branch of the sympathetic cord, and is distributed to the spinal cord and its membranes. On page 515, it also sends branches to the vertebrae and the vertebral ligaments." This nerve may transmit the holographic subluxation. D.D. Palmer also said that "the first and second pair of cervical nerves cannot be pressed or squeezed between the occiput or atlas, or the cleft between the atlas and axis, yet there are many diseases resulting from their displacement. In addition to the first and second cervical nerves, all five sacral nerves and the coccygeal nerves are without true moveable IVF through which to escape from the canal, leaving 23 of 31 pairs of spinal nerves subject to subluxation as the cause of pressure on spinal nerves. What about the other 8 pairs and what about the 12 pairs of cranial nerves? Certainly no chiropractor with the experience in care of human disease would accept the contention that chiropractic technique is limited to the influence of 23 pairs of spinal nerves. Besides this, the pinched nerve theory does not and never has given a reasonable explanation for the influence exerted upon all nerves." From Huxford's "NEURODYNAMICS OF VERTEBRAL SUBLUXATION".

- "HOLOGRAPHY IN MEDICINE", "This analysis does not mean to imply that all brain and neural functioning can be reduced to holographic process, but that certain processes are most accurately describable by an analogy to specific, well understood holographic related processes."

-A researcher in the University of California has severed up to 98% of a cat's optic tract without seriously impairing their ability to skillfully perform tests that require differentiation of highly similar figures.

-Carl Lashley's experiments on cats and rats show that even large destruction of brain tissue fails to impair recognition.

-Experiments on brain damaged people, all show certain defects in common, like slow dark adaptation and slow ability to find camouflaged figures regardless of location of lesion.

-1950, Carl Lashley, "I sometimes feel in reviewing the evidence of the localization of the memory trace, that the necessary conclusion is that learning is not possible at all. Nevertheless, in spite of such evidence against it, learning does sometimes and somehow occur. Subsequently, lastly produced, an interference pattern model that would account for nerve impulses transmitted over discreet paths being converted into a general field of activity, thus functioning independently of particular nerve cells."

-Prebrum studied electrical activity of various points in the striate, the visual cortex of monkeys responding to specific stimuli. He found that waveforms present there indicating that the monkey saw one input or the other, whether he responded with the correct or incorrect response, he was behaviorally conditioned. Most surprisingly, whether he intended to respond one way or the another before he initiated an overt response. Since these electrical impulses all arose in the visual cortex normally only thought to receive visual input, it seems that inputs are interacted with and modified by existing patterns throughout the various areas of the brain.

-At first GJG thought the interosseous subluxation TL may be ligamentous in nature, however, flexion, extension, lateral flexion, and rotation of the spine did not change the TL. He feels it is intrinsic in the bone rather than ligamentous.

-This can be done to the ilium by challenging with separation or compression.

-The ACA JOURNAL article by GJG on reactive muscles failed to italicize the quote on the work of Triano and Davis. The article was also submitted to the JOURNAL OF PHYSIOLOGIC THERAPEUTICS and the AMERICAN JOURNAL OF SPORTS MEDICINE.

-Emil Zmenak has been teaching dentists in his area, one in particular is using TL to find devitalized teeth. He found that anaesthetizing the tooth negates the previous positive TL, or if he anaesthetized the patient's finger on the unanaesthetized tooth, it was also negative to the TL.

-MANICHI DAILY NEWS, May 3, 1982, Japan, article by Professor Ioggi, "Scientific Analysis of the Mechanism of the Disease of Cataracts". He has found that acquired cataracts are directly caused by a lipid peroxide. Clouding of the lens occurs with accumulation of lipid peroxide in the blood which damages the lens and makes it turbid. Decreasing lipid peroxide in the blood could prevent cataracts. Lack of vitamin B4 leads to cataracts in rats, and these B4 deficient rats then accumulated lipid peroxide in their blood. Rabbit lenses soaked in lipid peroxide showed similar changes as those in rats. In Japan there has been a dramatic increase in cataracts and this is due to the processed rice. Natural thiamine is usually associated with vitamin B4. People with cataracts should add superoxide dismutase and a natural source of vitamin B.

Scar Treatment

-One of GJG's patients had a Colle's fracture and she was in more pain than normal. She required treatment 2-3 times a week on a Melzack-Wall basis and physiotherapy to control the pain. After healing and removal of the cast, she still had a lot of pain, and developed bone marrow suppression. No history of drugs that may cause that, or no large bowel carcinoma, etc. She was very artemic, but with the help of a hematologist and careful nutrition she responded; but then had digestive problems. He noticed a small scar over the Colle's fracture from a knife wound 15 years ago.

-Hershall Allen's report on his experience in South America noted that the German physicians paid a lot of attention to scars, recent or old. They used procaine to infiltrate the scar. The scar tissue "forgets" what to do, the memory of the tissue is impaired by the fibroblastic activity in the scar; the procaine makes the body remember. Outside of the brain, outside of the skin, and the nervous system are all ectodermal in nature and therefore a close relationship exists.

-The Colle's fracture patient TLed the scar, and there was reappearance of the factors GJG had just corrected, i.e., pectoralis major sternal, posterior ilium, etc. GJG sprayed the scar with ethyl chloride to frost and the TL of the scar became negative, as well as the other factors; however, once the frost wore off in 30 seconds, the scar TL was positive along with the other factors.

-The body has a holographic principle. GJG thought to spray the scar with fluori-methane and put the wrist through range of motion to stretch the skin. The patient said she suddenly felt better, and subsequently the TL has remained negative.

-TL positive to a scar may occur with specific muscles only, for instance, a gall bladder surgery scar and the patient is having small intestine or large intestine symptoms. TL to the scar may produce weakness in the quadriceps, abdominals, or fascia lata.

-Very important are scars from disc surgery.

-Treatment for a positive TL scar is to spray the scar with ethyl chloride (be careful due to explosive nature) or fluori-methane while the patient goes through range of motion of that area. If abdominal scar, have the patient flex, extend, laterally flex, and rotate the trunk. Recheck to be sure the TL is negative.

-No nutritional correlation yet. Have only had to repeat the procedure two times to hold.

Brain Neurolymphatic

-1982 Research Manual, in the addendum, the word compulsive is used instead of convulsive. GJG found that convulsive epileptic patients would show a temperature decrease over the glabella, temperature steady at the vertex, and temperature increase over the EOP slowly following Beginning and End Technique.

-Cooper's work of pacemaker activity in the cerebellum attempting to limit convulsive seizures. Found that alterations in surface of brain or cerebellum can produce seizures. Aluminum compound or penicillin is placed on the brain which causes a seizure and is a standard by which to measure anti-convulsant treatment. Decreasing the temperature of the cerebellum causes an increase in convulsive episodes, and decreases effect of anti-convulsant. Increasing the temperature of the cerebellum increases the effect of anti-convulsants.

-There is a NL reflex for the brain. This contradicts traditional views that the central nervous system lacks lymphatic vessels; references: "A HISTOLOGICAL TEXT AND ATLAS", Rhodin, Oxford Press. "LYMPHATICS, LYMPH, AND THE LYMPHOMYELOID COMPLEX", Yoffey and Courtice, Academic Press, New York, 1970.

-SCIENCE, Vol. 203, March 16, 1979, "Multiple Sclerosis: The Presence of Lymphatic Capillaries and Lymphoid Tissue in the Brain and Spinal Cord", by John Princeas. "There are thin walled channels that are observed

in the perivascular spaces in central nervous system tissues in a number of patients studied that were indistinguishable from lymphatic capillaries in other tissues in terms of both structure and content. The presence of such channels is not easily reconciled with the traditional view that the perivascular spaces represent cul-de-sacs or backwaters of the subarachnoid space whose chief function is to act as a protective cushion between the expansile blood vessels and the parenchyma. The present findings are more in keeping with the views of Harreman and other neurophysiologists, that these spaces serve the same function in the central nervous system as lymphatic vessels serve in other tissues. While this is not to say that the central nervous system has lymphatic drainage which is equivalent to that of other tissues, it is not unreasonable to view the presence of lymphocyte-containing channels in the perivascular spaces of the central nervous system as evidence that lymphocytes normally there circulate through these channels, possibly in the same area and numbers that lymphocytes circulate in other tissues, and this may constitute the basis of immunological surveillance in the central nervous system." Abstract: "Thin walled channels resembling lymphatic capillaries and containing lymphocytes were observed in perivascular spaces throughout the central nervous system of patients with various neurological disorders. This suggests that the immunological surveillance in the central nervous system may normally involve lymphocyte circulation through the perivascular compartment. In some old MS blacks, perivascular lymph tissue was found which was organized in a manner similar to the antibody-producing medullary region of the lymph nodes. This may indicate continued processing of the putative MS antigen in such lesions."

-It makes sense to check the supraspinatus muscle against the NL at the coracoid process, and atlas and axis transverse processes.

-AMERICAN HEART JOURNAL, Jan., 1977, Vol. 93, No. 1, by Foldi, Schuper, and Brummerkj, Salz Gitter-61, Ringelheim, Federal Republic of Germany. "Only by studying the consequences of regional lymphatic blockages can conclusions be drawn concerning the functional significance of the lymphatic drainage. The consequences of cervical lymph blockage clearly demonstrated that although proteins leave the intracranial site mostly through blood vessels are partially disposed of by cellular uptake and degradation, lymphatic drainage is vital."

-Need for retrograde lymphatic treatment is weakening of muscles when placed with the feet 15 degrees up. Due to the trapping of the subclavian vein by a stretch response of the pectoralis minor.

-Anterograde lymphatic drainage, NL at K27 bilaterally, GV acupuncture, NV at the glomus coccygeum intrarectally against the coccyx, and responds to cyruta.

-Need for lymphatic drainage such as when there is cervical lymphadenopathy, throat infections, ear or nose infections, etc. can be identified by putting the patient into a sitting position or in anterograde position and check the neck flexors for strength and rule out NL, NV, Acupuncture. Have the patient contract both pectoralis muscles and the neck flexors will go weak. There is a blockage of normal vertical drainage. Release of the pectoralis minor, increase vitamin A, and general lymphatic drainage is necessary.

-"This is the functional importance of any regional lymphatic system can by no means be assessed by measuring only lymph flow and lymphatic protein output. In comparing these data to blood flow and amount of protein transported from the tissue via the blood vessels. The only reasonable approach to this problem is the study of the morphological and functional consequences of experimental lymphatic blockage. As cervical lymphatic blockage leads to the syndrome of lymphostatic encephalopathy, exactly as hepatic lymph blockage or cardiac lymph blockage leads to lymphostatic hepatopathy or cardiomyopathy. Prospectively, it is justified to ascribe a role of fundamental importance to prelymphatic, lymphatic drainage of both the brain in health and disease. Pure lymphatic lymphostatic diseases are not as common as various pathological processes in which lymphatic load is increased. At the same time, lymphatic drainage is partially or totally failing. I have called this state "safety valve insufficiency of lymphatic drainage". It is characterized by massive cell death, and it has been demonstrated to play an important role in diseases of various organs, liver, and kidney. Experiments and evidence has been presented that also in the brain various experimental lesions are made much more severe if combined with cervical lymphatic blockage. Our papers on prelymphatic lymphatic drainage of the brain and the lymphatic encephalopathy have found only a minimal resonance until now." Continued from AMERICAN HEART JOURNAL.

-"CHIROPRACTIC MANAGEMENT OF SPORTS AND RECREATIONAL INJURIES", edited by Dr. R.C. Schafer, D.C. GJG is one of the review editors, Williams and Wilkins, developed in cooperation with the Council on

Sports Injuries of the American Chiropractic Association.

Muscle Memory

-“NEUROLINGUISTIC PROGRAMMING: FROGS INTO PRINCES”, Bantler and Grinder. Page 25 has a picture of a face with arrows pointing up right, down right, and right, up left, down, left, and left. Arrows represent visual accessing cues for a right handed person. Ask a person if they are audio, video, or kinetic (hear it, see it, or do it) in order to learn something. Test a TS Line indicator muscle. If they are kinetic, put the eyes down right, if video, put the eyes up right, and if they are audio, put the eyes right. If the muscle weakens, TL the NL to see if strengthening occurs. Explain to the patient that the brain and muscles are 50-50%, but the brain took 60% and the muscle gets 40% and goes weak. Visual Accessing.

-EID helps uncover problems by placing the eyes into the patient's distortion pattern.

-Dr. Schmitt came up with a way to help find the distortion. Take a weak muscle and put the eyes into different positions until it goes strong and that is the distortion.

-Ocular lock, treat K27/umbilicus or sometimes a glabellar fault.

-“SYBERVISION, MUSCLE MEMORY PROGRAMMING FOR EVERY SPORT”, by DeVore and DeVore, Chicago Review Press, 820 N. Franklin, Chicago, IL 60610, 1981. Deals with a method of physical education and training in muscles using sybertricks and syberaids.

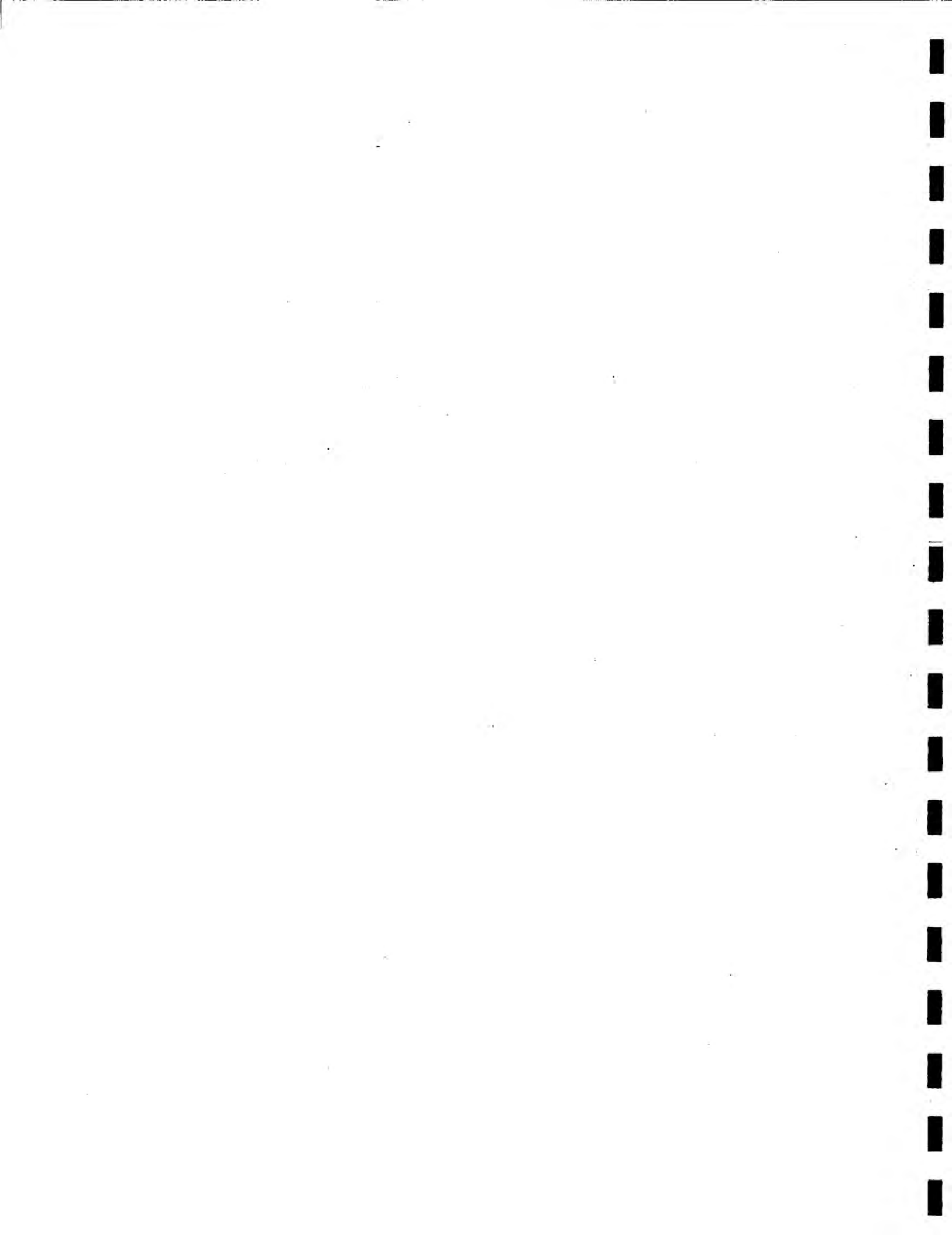
-Find a weak muscle, and determine what reflexes will help, but don't treat them. Next, have the patient imagine the muscle is strong, and in most cases there is little to no change. Then have the patient look up and left (visual remembering), a small percent will improve. Have the patient put eyes up left and imagine that the muscle is strong, and almost 100% will get strength. Tap the patient's head with the eyes up and left and most patient's muscles will be strong. Go ahead and treat the reflexes previously found. Way to access the muscle memory.

-This is useful in paralyzed patients. Have the patient look up and left and then tap the skull, spine, and area of paralysis (i.e. lower extremity). Do this in addition to other procedures.

-Also useful in better body balance. Put the patient on the plumbline facing the doctor, then have them close their eyes and they may deviate to the right or left. Tap the skull, TMJ, and nose with the eyes up and left and eyes closed. Recheck on the plumbline; if they deviate back and forth right and left, check for a sacral fault, especially sacral wobble. Produces better head on neck righting reflexes. If the patient is a true left handed person, put the eyes up and right.

-Better results if you tap the skull and part in question while the patient is supine or prone and then again while they are standing.

-Patients that have difficulty taking a deep breath, yawn a lot, short of air, can't run any distance, but the vital capacity is normal, heart, lungs, and kidney are ok, and no anemia may lack vitamin G fractions. G keeps a high positive polarity of the red blood cells and blood vessel walls so they repel each other and the red blood cell gets maximum oxygen uptake in the capillaries. Be sure to rule out diaphragm, etc. Take the vital capacity, give 2-3 vitamin G, and then retake the vital capacity to check for an increase.



Oxygen/Carbon Dioxide Capacity

-In the last tape, vitamin G was mentioned (riboflavin and niacin) which helps increase polarity of red blood cells and capillary membranes. Helps with patients that have a decreased vital capacity.

-With inspiration: Hering-Breuer reflex is activated, abdominal muscles relax, diaphragm descends, ASIS of each ilium moves lateral and down, sacrum goes from posterior to anterior, whole pelvis rotates on the femoral heads from anterior to posterior, rib cage ascends, lower ribs widen, clavicles ascend, mandible moves slightly downward and widens, and the maxilla moves slightly upwards and widens posteriorly.

-Test bilateral pectoralis major clavicular (PMC) for strength. Challenge the pubic bone caudal, and if the PMC goes weak, inspiration will negate it. This is a screen. Press up on the lower rib margins on either side of the xiphoid, push the clavicles up, spread the maxilla and mandible and if it causes PMC weakness, inspiration will negate. It's not necessary to do all of them.

-Check the patient's oxygen/carbon dioxide capacity by having the patient breathe into a plastic bag (Cover the mouth and nose), have the patient take 5 breaths. They are only rebreathing the air in the bag. This weakens the patient. Contact the pubic bone and adjust it inferior on inspiration, contact both lower rib margins and thrust up on inspiration, thrust up on the clavicles on inspiration, spread the mandible and slightly down on inspiration, and spread the maxilla and slightly up on inspiration. Then have the patient take 10 breaths and the patient can take this without weakness. The vital capacity goes up after about 10%. Be sure to check the vital capacity before and after. Do this procedure after muscular faults of the diaphragm and abdominals, etc. has already been done. Patients will often say that they feel better.

-Helps with shortness of breath, inability to climb stairs, trouble with running.

-In diaphragm or hiatal hernia problems, check C3 by TLing (phrenic nerve). If negative, challenge the TL with inspiration and expiration. More commonly shows up with expiration. Rib cage that does not expand with deep inspiration is the side of the tight psoas; can use factors to strengthen the opposite psoas or spindle cell the tight psoas. Check thoracolumbar fixation.

-This oxygen/carbon dioxide capacity challenges in about 70% of regular patients, higher in difficult ones.

-Subluxated vertebrae often are also holographically subluxated.

Internal and External PSS

-If the pelvis TL's negative for Category I or II, or you've already fixed a Category I or II, have the patient TL the sacroiliac (SI) joints while supine and place one leg in the Patrick Fabere position and check for weakening of the pectoralis major sternal (PMS), check the other side also.

-Measure the height of the knee in the Patrick position by using the doctor's hand over the patient's knee and measure against the doctor's leg. Compare with the opposite leg in the Patrick position.

-The positive SI TL with the leg in the Patrick position that also has the higher knee corresponds to an external PSS; the positive SI TL with the leg in the Patrick position that has the lower knee corresponds to an internal PSS. One or both may TL positively.

-The TL will be negated by respiration; external PSS by inspiration, internal PSS by expiration.

-Put the patient prone and challenge the PSS in an internal or external direction. An external PSS is adjusted into the SI joint on inspiration, an internal PSS is adjusted away from the SI joint on expiration. Recheck the Patrick position for height.

-If one side or the other is still high, it means the adductors on the high side are in contraction and the opp-

osite adductors are weak (low knee), check against factors and correct. If still different, go after the psoas.

Femoral Head

-The femoral head is next checked. Have the patient take a step with their right foot and measure the distance between the two feet and do the same for the left foot forward. A difference in stride length may be noted. Check gait, especially opposite abdominals and gluteus medius. Check gluteus maximus and medius. Do the leg cross-over test. Cross one leg over the other and mark on the thigh and do the other side. The side that does not go over as far is the tight gluteus medius and origin-insertion technique is indicated.

-During gait, the axis of rotation is T7. The lumbar move with the forward hip up to T7; then above T7 moves the opposite way.

-Right tight toe turn in, left toe in is ok, indicates a left psoas/piriformis is functioning normally but the right psoas/piriformis is hypercontracted. Long right leg. Combine a cross crawl maneuver, have the patient turn their head to the left and raise the left arm, and bring the right knee (long leg) across the center of the body. The left knee (short leg) is brought towards the chest and then away from the center of the body, and the right arm up with a right head turn. Repeat 4-5 times. If everything is balanced, this technique helps to reset the femoral head, and turn in of the toes is more equal.

DMSO

-“LIFE EXTENSION: A PRACTICAL SCIENTIFIC APPROACH ADDING YEARS TO YOUR LIFE AND LIFE TO YOUR YEARS”, by Durk Person and Sandy Shaw, Warner Books, 75 Rockefeller Plaza. Has a forward by Harry Demopolous. Thank you, Dan Duffy. Good chapter on subversive free radicals, SOD, catalase, glutathione peroxidase. Discusses the fact that white blood cells make free radicals of the hydroxyl type and hydrogen peroxide. We have free radical quenchers that are part of our normal nutrition (A,C,E,B1,B5,B6, cystine, zinc, selenium, cholesterol). Hydroxyl free radical splits apart hyaluronic acid which is the agent associated with synovial fluid and membrane.

-“THE BIOLOGICAL ACTIONS OF DIMETHYL SULFOXIDE”, Jacob and Hershler, Annals of N.Y. Academy of Sciences, 1975. Dimethyl sulfoxide (DMSO) is a powerful hydroxyl free radical scavenger in external use.

-In “LIFE EXTENSION” they talk about a 50% DMSO solution in water called Rinso-15, Tera Pharmaceutical, Inc., Buena Park, CA, distributed by Research Industries Corp., Pharmaceutical Division, Salt Lake City.

-The FDA allows use of DMSO under certain conditions only.

-50% DMSO and 50% liquid SOD with catalase, ½ ounce in a test tube will warm the tube, and when painted on a stiff sore joint, it helps with the stiffness and pain.

-“It’s a fast and effective treatment for bruises, crushing injuries, pulled or wrenched muscles, and similar injuries since it is a combination of two things that are very good scavengers or quenchers of free hydroxyl radicals which are responsible for much of the damage of a crushing injury and has been implicated in arthritis. When the damaged blood vessel in the injured area leaked blood into the surrounding tissues, the copper and iron contained in the blood stimulated the production of free radicals.”

-GJG has patients from other doctors on multiple supplements for various problems, but the underlying problem is malabsorption; you’ll find quadriceps/small intestine.

-GJG had a patient with 20/80 vision and he found the need for vitamin D and calcium from Standard Process and this brought the vision to 20/20. The sclera may be deformed by the action of the muscles. The vitamin D and factors for the small intestine seems to help the eye.

-Relisten for neurotransmitter information on previous tapes. Pat Casey’s Index, Tape 47, Side 1, Index 50, and Tape 48, Side 1, Index 230-240.

DR. GOODHEART'S RESEARCH TAPES

TAPE 76

-1-

Sacral Base Research

- Fred Barge, D.C., author of three books, "TORTICOLLIS", "TORTIPELVIS", and "SCOLIOSIS".
- Dr. Barge at the Barge Chiropractic Clinic, LaCrosse, Wisconsin, has done a research project on sacral bases. He took 125 sacral base X-rays to determine the level of the sacral base and its relationship to lumbar spinal balance.
- When studying the superior aspect of the sacrum, anomaly was the rule rather than the exception.
- Sacral base X-ray was compared to a 14x17 AP view of the same case. The level of the sacral base was not consistent with a line drawn across the superior aspect of the sacrum, the transverse processes, and the sacral notches on the AP, when are accurate to determine the level of the sacrum and are more often in line with the sacral surface than the transverse processes.

-The sacral base X-rays were analyzed for side of inferiority and the development of a plateau. Findings are as follows of 125 sacral base X-rays:

- low right sacrum 40 or 32%
- low left sacrum 49 or 39.2%
- level sacrum 36 or 28.8%
- therefore unlevel sacrums were 89 or 71.2%
- level of sacrum that correlated to transverse processes or sacral notches 46 or 36.8%
- inadequate correlation 79 or 63.2%
- plateaued sacral base 82 or 65.5%
- unlevel plateaued sacral base 36 or 43.9%

There were 76 males:

- no plateau 39 or 51.3%
- low sacral base plateau 32 or 42.1%
- high sacral base plateau 5 or 6.6%
- total plateau 37 or 48.7%
- 2 had scoliosis

There were 49 females:

- no sacral base plateau 4 or 8.2%
- low sacral base plateau 23 or 46.9%
- high sacral base plateau 22 or 44.9%
- total plateau 45 or 91.8%

-females are more prone to scoliosis, anywhere from 6:1 to 9:1. Onset of the menstrual period contributes to this. Also find cloacal activity.

-Ferguson's Sacral Base Angle should be determined in a standing film. Normal is 43-51 degrees.

-When marking the film, there is a line drawn across the sacral base called the TSB (True Sacral Base). Another line is drawn across the inferior endplate of L5 called the TDL (True Disc Line). Then the L5-sacrum wedge can be determined. Convert the sacral base line and the L5-sacrum wedge to the AP film by placing the sacral base film behind the AP film and trace the lines onto the AP. This tells disc wedging and helps you determine direction of adjusting via the spinous processes.

Sacro-iliac Bypass

-old DeJarnette technic.

-Nuchal ligament tension/neck complaint. The patient may show a head tilt that is not evident in the muscles, and there is a negative challenge to the sacrum.

-Procedure:

1. Identify nuchal tension by palpating the occiput down to C6 or C7 for tenderness, and a head tilt.
2. With the patient prone, hold the ilium down with one thumb and pull up on the sacrum. This gives a positive TL, and shows sacral inferiority on the side of nuchal tension.
3. Treat by holding the ilium down with pressure as close to the sacrum as possible but not on the sacrum. Flex the patient's knee telling them that they will feel a sharp pull in their quadriceps, then give a sharp thrust into knee flexion. This pulls down on the ASIS, but holding down on the ilium keeps it from going upward, and the resultant motion allows the sacrum to go up on its own.
4. Repalpate nuchal ligament for decreased tenderness and a better head level.

-Useful in neck pain, headache, shoulder/arm pain.

-May complicate sacral base problems as previously discussed.

Brain

-Reading referral- "SPACE, TIME, AND MEDICINE", Larry Dossey, M.D., Shambhala Publications, 1920 13th St., Boulder, Colorado 80302. 1982, Random House. Brain is a hologram (part contains the whole). Consciousness and relation to health and illness. Concepts of time. Thank you Bob Blaich.

-Wiggin 1857- postmortem study of his friend's brain revealed he had no left hemisphere, yet he was normal.

-Article- "Is your brain really necessary", John Lorbor, SCIENCE Vol. 210, Dec. 18, 1980.

-He questions whether an intact cerebral cortex is necessary for mentation.

-CAT scan can assess the thickness of the cerebral cortex.

-Studied hydrocephalus with CAT scans. Increased cerebrospinal fluid has replaced the normal cortical brain tissue. Many of these patients have normal intellect.

-Normal cortex is 45 mm with 15-20 billion neurons.

-Case history of a cerebral cortex that was 1 mm thick in a gifted man intellectually and socially.

-Redundant information is laid down into the tissue so normal function remains possible even after destruction of tissue.

-21 year old female had her left hemisphere removed due to intractable seizures. There was a return of right side motor function a few weeks later.

-Left brain is for speech, math, logic. Right brain is for intuitive, non-verbal, non-rational. Narrow brain function seems specious. Holographic function of the brain seems to explain.

-Synaptic clefts are always active. Complex wave forms act on synaptic clefts and allows diffuse storage of information.

-Hertz frequency is in the Myomatic.

-The frequency of a muscle is proportional to its length. If the frequency is greater than the length of the muscle, the muscle won't respond.

-There was surgical switching of a biceps and a gastrocnemius. Cervical output caused biceps activity in the leg, and lumbar output caused gastrocnemius activity in the arm. This means that muscles have wavelengths. More reports on this later.

-Integrate this in spinal cord patients. Use the correct frequency to help temperature in spinal cord injuries.

-Right and left brain activity- Find the side that faults the patient and find the phase that doesn't, for example, if humming blows it and multiplication tables doesn't, then tap the patient's right skull while the patient does multiplication tables. Another example, if C6 TL's with the left hand plus multiplication tables blows and humming does not, then adjust according to vertebral challenge during humming.

Mercury

-Dr. Olympio Pinto says that 22% of people are sensitive to amalgam silver mercury fillings in their teeth.

-Merc Test Kit- Test with mercuric chloride on a bandaid over the skin. Be cautious, read directions on the test kit. GJG then muscle tests and sees if the patient is sensitive, if so, all muscles weaken. If you get a positive response, remove the bandaid and wash the skin.

-Toxic Element Research Foundation, PO Box 2589, Colorado Springs, Colorado 80901. TERF puts out a bulletin quarterly. To be a member costs \$100 which is tax deductible.

-Mercury intoxication can mimic a lot of problems- neurological, emotional, cardiological, immunological.

-The American Dental Association claims that mercury is not harmful in the mouth, but they warn that out of the mouth it is toxic.

-Get the Mercury and Nickel Test Kits from Tox Supply, 2763 Delta Dr., Colorado Springs, Colorado 80910, phone number 475-7447. They cost about \$25 each.

-Case history from Dr. Huggins- A young girl who was a good student, outgoing, etc., had dental work done and completely changed. She developed acne, wouldn't sleep alone, dropped out of school. She had a similar experience at the age of 4 after teeth fillings, but when the deciduous teeth fell out, the problem resolved. Quadrant removal of amalgams also resolved the problem.

-ALS, MS and Hodgkin's also noted to improve.

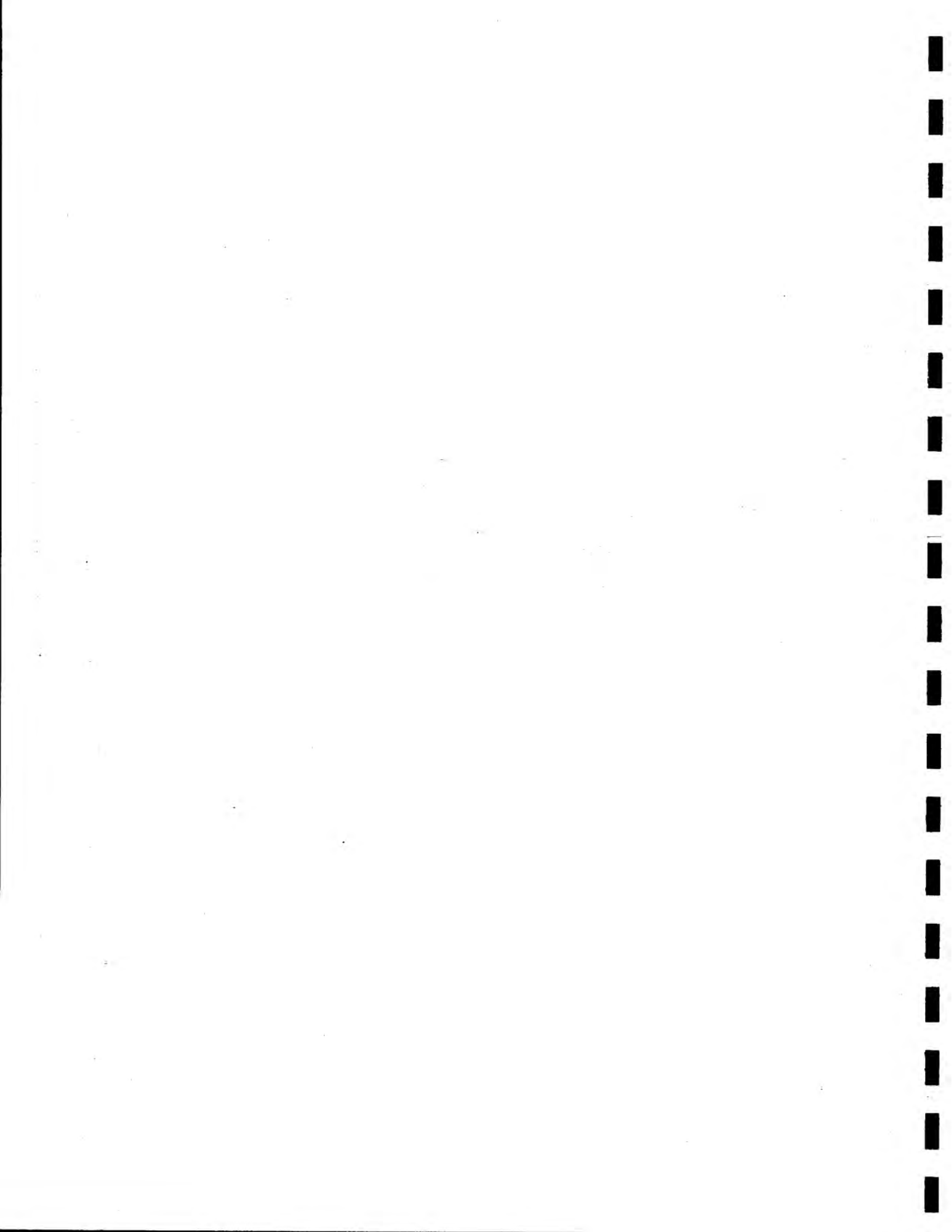
-In difficult patients, consider amalgam sensitivity.

-Mercury vapor in the mouth once amalgams are removed sometimes starts to show up in the urine and hair. This indicates the need for intravenous vitamin C, digestive aids and other chelating agents to break mercury out of the tissue.

Superoxide Dismutase

-Lingual SOD combined 50-50 with DMSO is a good diagnostic parameter for the use of superoxide dismutase. When applied as previously discussed, the effect lasts for 15 minutes to 3-4 hours. This is an indication for the patient to increase intake of SOD and trace minerals (especially copper and manganese). GJG has had a good response applying it to psoriasis. Don't use all over the body, only as an investigation of a localized patch to see response.

-Going back to Lorbor- The brainstem is a source of information, the cortex is the redundant area. The bony cortex is the resonating area. The cerebrospinal fluid is like an electrolyte, and it is in layers. Steer at the University of Western Ontario put methylene blue in pigs CSF and showed that CSF got out to the toes of the pigs, this is axonal flow. There is a memory circuit in CSF.



Acupuncture and Muscle Channels

-Reading referral- "ACUPUNCTURE- A COMPREHENSIVE TEXT", edited by John O'Conner and Don Blansky, 1974, Shang Hai College of Traditional Medicine, Eastland Press, P.O.Box 4910, Chicago, IL 60680. Photo-printed by Cushing Malloy, Inc., Ann Arbor, Michigan. Thank You Inian Moon. GJG quotes from the book:

"Discuss distribution and pathology of the 12 muscle channels on the periphery of the body. They enter the body cavity on the trunk, but they don't reach the organs. They take names from the 12 meridians, and generally run the same course. There are 3 yin and yang of the arm, 3 yin and yang of the leg. Yang muscle channels are distributed along the back, head, and posterior aspect of the limbs. Yin muscle channels are distributed along the anterior portion of the limbs and the anterior thoracic and abdominal cavities. By way of general description, muscle channels originate in the extremities and ascend to the head and trunk. The greater yang and lesser yin muscle channels are along the posterior body. The lesser yang and absolute yin are along the sides of the body, and yin brightness and greater yin along the anterior aspect. Muscle channels have points of connection and points of convergence. Each muscle channel connects with one other muscle channel, i.e. leg greater yang bladder connects with LI 15 shoulder and GB12 on the head, and converges with yang brightness and lesser yang channels. 3 leg muscle yin channels and leg yang brightness channels all converge in the genital region. The leg greater yin channel ascends to the abdomen and then proceeds to the spine. The leg lesser yin muscle channel also follows as far as the nape of the neck where it joins the leg greater yin muscle channel. The arm yang muscle channel ascends to the neck and converges at the hairline above the temple. The arm yin muscle channels all extend into the thoracic cavity. One of them, the arm greater yin travels to the ribs, another, the arm lesser yin extends to the umbilical region. The distribution and pathological symptoms of each of the 12 muscle channels is discussed below" and proceeds to discuss the distribution which is fundamentally in the general area of the meridian. This is nothing new.

-As GJG watched high speed motion picture photography at 10,000 frames per second and saw the gait pattern of the upper trap and SCM, and observed their reaction, he wondered if there was an acupuncture-gait relationship. He started testing muscles with the patient in gait (weight and non-weight bearing). When the patient raised arm and leg in traditional gait fashion, there was no muscle weakness. If the pulse points Tled on the right or the left with the patient in a gait pattern of the right leg forward and testing the left TFL for example, there was a high percentage of weakness on many difficult patients. If a TS Line indicator could not be identified, one of the ways was to check the 5 IVF factors along with acupuncture against breath holding and in a gait position; this gave a high percentage of discovery. Identifying the meridian and then running the meridian did not seem to have any effect, running beginning to end or end to beginning, nor did the usual gait reflexes on the feet. But, if they palpated the meridian, there would be an area of extreme soreness, and it would feel to the palpator like an area of congestion or an accumulation of material. WE GOT EXTRAORDINARY RESULTS IN RANGE OF MOTION, FLEXIBILITY, AND REDUCTION OF PAIN.

-In a case of clonic chronic tonic intermittent torticollis, a 21 year old female had a major medical workup, etc. She showed emotional factors, TMJ, holographic TMJ, but this had no effect. On the left pulse points there was a positive TL only when she advanced the the right leg. The right pectoralis major sternal was weak in the clear only with the right leg forward. Tracing the meridian revealed a sensitive area in the thigh. Her head was pulled sharply to left. GJG manipulated the area briefly and asked her to touch the area which then caused neutralization of the pectoralis major sternal even with the right leg forward. She then stood and continued to hold the area. After approximately one minute her head came to the center and she was able to move her head from side to side. When she removed her hand the head again went left. She reheld the point and the head centered. She then went into a syncope crisis- blue lips, pale due to the change in circulation which lasted 2-3 minutes. She gradually came out of it and her head remained centered. GJG manipulated the area which was very painful and she had the same reaction, and her

head still remained centered. Now, if her head pulls, she touches the area; she's also doing gait reflexes and the walking gait pattern to rebalance.

-Muscle meridians follow the usual meridians except for two- more later.

-50% of clonic chronic intermittent torticollis get better when they yawn, but GJG had never found anything wrong with the TMJ, until holographic came along.

-A chiropractor told GJG that if he touched an area on the lateral aspect of the leg below the knee the head would temporarily remain strong. GJG investigated and found that if the acupuncture circuits are negative, have the patient go into a gait pattern (not necessary to be weight bearing) and then TL the pulse points to find it positive. Trace the meridian, find the sore spot and manipulate 30-40 seconds or longer.

-Further quotes from "Acupuncture- A Comprehensive Text":

"To understand the function of the muscle channels it is first necessary to understand their nature. The muscle channels are a constituent of the channel system and are dependent upon nourishment of blood and qui circulating through other channels for their functional activity. Thus orientation of muscle channels by and large coincides with pathways of the 12 primary channels. Muscle channels illustrate correspondence between anatomical features of the body, muscles, tendons, ligaments, and other connective tissue and traditional features of the channel system. Muscle channels are not viewed as distinct anatomical entities, but represent an earlier description of the of the structure and function of the body's musculature within the body's larger framework of the traditional channel system. Pathology of the muscle channels likewise reflect those symptoms which affect corresponding groups of muscles and other connective tissue as they presently understand. The function of the muscle channels parallel function of other muscles and sinews generally. The muscles restrain the bones and are useful in moving the joints. The connective tissues are divided into three groups, Large, Small, and Membranous connective tissues. Although the origins and insertions of individual muscles and their particular functions are not clearly defined in earlier texts, the gross description of distribution and function are quite accurate. The clinical significance of muscle channels is to be found in their function and pathology. It is the muscle channels that extend and reflex the the muscles and joints and move the limbs. Their pathology is therefore reflected in symptoms of impaired movement, pulled, twisted, strained, atrophied muscles, muscle spasms, cramps, etc. Viewing distribution of muscles of the body, it can be seen that every joint has basically two groups of counterfunctioning yet complimentary muscles, i.e. abduction-adduction, flexion-extension, internal rotation-external rotation, whose balance interaction maintain normal movement. In traditional medicine these contrasting yet mutually interdependent muscles and muscle groups and actions are describing the characteristics of yin and yang, male and female. When yin and yang fail to balance and regulate one another, muscle channel dysfunction results. It has been described that when yang is distressed the muscle overextends, when yin is distressed the muscle overcontracts. Cold causes muscle tense, heat causes muscle laxity. Therapeutically a local muscle channel symptom can be generally treated by stimulating an area contiguous to the pain (GJG has not found this to be true). In addition, because of the intimate relationship between the primary channel and the muscle channel, an acupuncture point on the related primary channel may be selected, i.e. see treatment for sequellae of infantile paralysis in Section 4. The principle that when the yang is overactive, the yin will be underactive and vice-versa refers to the imbalance of muscle groups on the medial yin and the lateral yang aspects of the limbs. Treatment of these such conditions is directed towards restoring the prior balance between counteracting balance and yin and yang muscles."

-Heavy, deep, hard, painful manipulation of the proper point has extraordinary results.

-Remember- diagnose the need, supply the need, and observe the results.

-Thanks to Dr. Fred Stoner for working with the Arab oil people and introducing AK to them.

-Dr. Monty Greenawalt, head of Foot Levelers, has agreed to fund a chair of AK in one of the chiropractic colleges for the purpose of teaching AK.

-Thanks to VM Nutri, Paul White, and Rally Jones for establishing a \$1,000 scholarship at National College in GJG's name.

Overoxidizer, Underoxidizer, Mixed Oxidizer

-Thelma Moss's "THE BODY ELECTRIC" on page 190 describes a physicist who studied her research about the amount of carbon dioxide emitted at electrodermal points. It is shown that these points are electrodermal or acupuncture points, and are a source of energy flow even if energy is labelled as an exchange of respiratory gas.

-Ancient yogi texts state that we breathe through pores in the skin by taking in oxygen and emitting carbon dioxide.

-Placing carbon dioxide gas on the skin would cause weakness of certain circuits which is neutralized by oxygen.

-Placing oxygen on the skin would neutralize certain circuits which would be enhanced by carbon dioxide. GJG was surprised to find this point, one would think that oxygen be of value.

-World class tennis players, whether right or left handed, often blow onto their hand prior to serving.

-Review electron poisoning curve in 1981 manual.

-Blowing on the hand relaxes them, but if they get into a fifth set, there is more stress and they stop blowing on their hand as they get fatigued.

-Lower curve (adrenal side)- if you apply carbon dioxide to a TS Line level or if the patient blows on their hand, it may weaken them, yet there are no signs of oxygen deficit.

-Upper curve (thyroid side)- these patients will weaken from oxygen.

-If carbon dioxide weakens, they need alkaline ash minerals like Organic Minerals from Standard Process or its equivalent.

-If oxygen weakens, they need acid ash minerals like phosphorous.

-Those patient's that weaken by carbon dioxide do not have an oxygen deficit; but those that have an oxygen deficit will weaken by breathing their own carbon dioxide, and will weaken with oxygen- this is a paradox. Give a multinutrient to patient's that are above and below curve- EBA, Poiseplex, Cataplex.

-Winter meeting 1982, Walter Schmitt presented "Link Between the Nervous System and Body Chemistry". Describes the use of amino acids as precursors to neurotransmitters, hormones, etc., and the use of SP 21 and K 27 to balance body function. GJG doesn't always find the relationship of tyrosine being needed when muscles on the right side of the body are affected by right brain activity and left muscles affected by left brain activity; and when it crosses, right muscles affected by left brain and vice-versa need tryptophane.

-Refer to pages 4-5 of electron poisoning curve.

Steroid-dependent	Catalin	Thyroid-dependent
Left side	Poiseplex	Right side
Carbon dioxide	EBA	Oxygen
Alkaline ash		Acid Ash

-Left brain is water-soluble and right brain is fat-soluble. Test against tyrosine and tryptophane.

-If you have a difficult arm, hand, Carpal Tunnel Syndrome patient, have them blow on their hand and a large amount will weaken from the carbon dioxide. Organic Minerals negates weakness. Vice-versa for oxygen weakening and phosphorous negating.

-You can purchase a portable oxygen from Vital Air Co., or your local pharmacy. Use the patient's or doctor's breath for carbon dioxide.

-You can classify patient's as Underoxidizer, Overoxidizer, or Mixed Oxidizer.

-Mixed responds to oxygen and carbon dioxide at different times; they may need both alkaline and acid ash minerals.

-Refer to page 6 of Schmitt's article, and also reread and understand the electron poisoning concept.

-Patient breathes own carbon dioxide for 4-5 breaths and test for weakness. Run the pelvis through the normal Hering-Breuer reflex- a deep breath causes the pelvis to go down, rib cage up. Challenge the pelvis by pushing down, challenge the clavicles up, challenge the skull by spreading upper and lower teeth apart. these patient's are at the upper end of the curve (thyroid side) and what they need weakens them.

-Long-term set-point support by EBA, Catalyn, or Poiseplex is indicated, and use either alkaline or acid

ash as found.

-Continue gait reflexes for the upper trap, SCM, and TMJ.

TMJ

-The need for B12-Folic Acid can be found by TLing with the left hand on the left body covered by the right hand, and the right hand on the right body covered with the left hand. For example- TL to the TMJ in this manner will produce weakness on opening or closing, and sometimes open on one side and closed on the other. This positive TL shows evidence for B12-Folic Acid, is an indication of being switched, and is an indication for holographic adjustment. If it shows open, you want to close down the jaw, decrease the mandibular angle. If it shows closed, you want to open up the jaw, increase the mandibular angle. Use a thrust just like on a vertebra. More later.

-If you find a TMJ problem that doesn't show up in the usual fashion, check it left on left, right on left, check it right on right, left on right. This shows the need for B12-Folic Acid. Give 1 mcg. of B12 and 1 mcg. of Folic Acid with stomach and liver principles, and give a holographic adjustment as per above. It still needs nutritional and proper muscle balancing.

-GJG is now investigating functional nutritional testing of blood and urine. A nutrient may be measured in the blood (which is a transport system) and the level is normal. But if you measure something that reflects its utilization you find it is abnormal. Lingual vitamin C and urine vitamin C are measured, if they parallel each other, this is fine; but you may see an increased lingual and decreased urine, or decreased lingual and increased urine, and this shows that the body has trouble utilizing it and this is at the cellular level. Other blood chemistry values represent the transport system and not the use system and therefore functional testing is important. More reports later, for example, red blood cell transketolase for functional use of vitamin B.

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-A chiropractic newsletter called WORLDWIDE REPORT, put out by Dr. Snalc, 2027 Grand Canal Blvd., Stockton, CA 95207, contains an article by Dr. Fred Stoner, former president of the National Board of Chiropractic Examiners, reports that Edmond N. Khashoggi has donated \$50,000 to chiropractic education and research. He states that "chiropractic and AK exceeds any other methodology in today's vast medical field." \$5,000 has also been given each to Parker, Palmer, National, ICAK, Life, Logan, Western States, Texas, Northwestern, and New York Institute directed towards research in AK.

-A mailgram dated 2-3-83 from Monty Greenawalt of Foot Levelers, Inc., states that he has donated funding for a chair position for AK teaching at a chiropractic college.

Muscle Meridians

-Related to gait.

-Always check TL to associated point and challenge.

-Put the patient's leg into gait position that allowed the TL to show. Find the relationship of the vertebral level/associated point on the spine that correlates with the pulse point for that meridian.

-Adjust the patient. For better challenge, put the patient into a gait position while lying on the table. Re-challenge.

-GJG father noted that old ladies climbing stairs backwards with swollen ankles don't get out of breath if they climbed backwards.

-Article: "Ancient Art of Japanese Bonesetting in a New Light- Isogaidynamic Therapy", by Dr. Neil Newman, DIGEST OF CHIROPRACTIC ECONOMICS, July-August 1982. Dr. Isogai's book is available by writing Kimiyoshi Isogai, 2112 Nakano Ku, Tokyo, 164, Japan. \$34 by sea mail, \$50 by air mail. It is based on the gravitational pull and how people react to it with balance. Isogai is a former pharmacist in the Kyoto Hospital for 5 years, he is interested in the femoral head.

-The upper trap and SCM should turn off with the foot forward. They both have the same nerve supply so one muscle cannot be "on" with the other one "off" at the same time. See Research Manual 1982.

-Toe turn in will be weak psoas or piriformis on that side. If not weak in the clear, TL the NL, NV, Acupuncture or check for fascial flush, inspiration/expiration, stretch weakness, aerobic/anaerobic, reactivity.

-Femoral head angle should be approximately 130 degrees. The femoral head moves forward in the acetabulum and the greater trochanter moves backwards and vice-versa.

-A femoral head subluxation occurs as the femoral head moves forward and the pelvis compensates with rotation, which makes the subluxation non-observable. Challenge with the patient supine, press up on one femur head and down towards the floor on the other, Challenge posterior as discussed on last tape.

-1. Patient into a Patrick-Fabere position.

2. TL the sacroiliac joints, gives a positive TL.

3. Check respiration to neutralize. If inspiration neutralizes = External PSS. If expiration neutralizes = Internal PSS.

4. For an External PSS adjust ilium into the sacrum. For an Internal PSS adjust ilium away from the sacrum.

-To identify femoral head motion: take the extended knee and cross over the other knee and compare left to right. One knee will cross over more to one side. There is restriction of the femur on the side that does not cross. You must rule out a Category I or II by checking and fixing.

-May see weakness of neck extensors in iliac fixation.

-Easy toe turn-in not attributed to 5 factors of piriformis or psoas, or reactivity, etc., check Patrick-Fabere. If the patient readily turned in to the left, when the femur head is checked at the trochanter level it appears to be going in the opposite direction. Adjust opposite challenge weakness.

-Assume this patient has easy left toe in, they are taking a bigger right step while walking. If they take a longer left step, all previous problems found in the distortional pattern will disappear. Patient "walks into their distortion".

-Isogai uses exercises, but these are not practical in the United States.

-Have the patient take a longer step with the easy toe in side and swing the opposite arm further forward.

-The body is in a torque.

-Sometimes both femurs need correction.

-Fix the Category I or II first. Then fix whatever else you find.

-By walking backwards the distortion is reversed. This is why the ladies with swollen ankles go up the stairs backwards. Walking backwards is not the therapy! It is just a diagnosis.

-Patients with this problem will always have to turn in one direction (i.e. when getting up) due to the torque.

-Isogai's research shows therapy based on observation that the angles of the femur in the acetabulum determines leg length. When the femur abducts or rotates externally, the leg is longer on that side.

-Quotes from Dr. Neil Newman: "If all chiropractors would incorporate this simple analysis into their procedures, they would find it is the most consistent and accurate in finding leg length variations. The significance of Isogaidynamics has spread throughout Japan and other regions. Before his publication his work had been virtually unknown to the western healing arts. Since chiropractic is the second largest healing art, if we do not look further into this great work, I'm sure the medical profession will, and easily recognize the efficiency and efficacy of structural distortions and their role as a major cause of disease. The medical profession will then claim to themselves the authority of specific and scientific structural engineering and relegate chiropractic as mere haphazard spinal manipulation. Isogai has discovered what we as chiropractors have known since our humble beginnings, that structural distortions especially within a spinal column disturb neurological integrity and thus lowers resistance to stress. Lowering of resistance Isogai has found to be the primary cause of most disease processes....structural imbalance create spinal stress points resulting in spinal curvatures predisposing the area to disorders by mechanical effect or neurophysiological aberration...Isogai has clinically proven that by changing hip joint angle, leg lengths up to two inches can be corrected."

-People are literally "screwed up" due to their walking patterns.

-GJG feels there will be evidence of electron poisoning and chemical relationships to gait pattern. Wally Schmitt is in the process of writing a paper discussing manganese, zinc, and copper.

-GJG treated three separate patients in severe pain from respective TMJ, Trigeminal Neuralgia, and Tic Doloieux problems. Each responded to TL of the pulse points using gait position. TMJ showed lung, Trigeminal Neuralgia showed liver, and Tic Doloieux showed stomach.

-The meridians are analogous to a six man relay team on each side of the body with one man dropping the "baton" at the crucial moment. Further, the foot is like a generator, the brain a battery, both connected by the spinal cord. The body is the fan belt and is usually loose on one side. Meridian treatment helps the relay man pick up the baton and run.

-Observe how the patient is turning, does the body turn better to the right or the left? Rule of thumb-walk them in the direction they are turning. If the left foot turns in easily, take a larger step with exaggerated right arm swing forward to countertorque and get T7 moving properly.

-Thank you Drs. Isogai and Newman for the above information.

-To recap:

-TL pulse points in the gait position, or TL the NL or NV in difficult patients (and acupuncture).

-This procedure especially helpful in resistant thoraco-lumbar or cervical problems.

-Rule out Category I or II and use Patrick-Fabere positions for Internal or External PSS rotation, then analyze toe

turn in and use increased step on easy toe turn in side.

-Can check correct long leg stride by having the patient take a long step with the "wrong" side (i.e. right long step with easy left toe turn in) and watch symptoms return.

-If the patient begins to feel well after increasing stride length, they can discontinue longer stride to walk normally, guarding against reversing back to aberrant gait pattern (i.e. right long stride).

-If the patient has to turn a lot, have them turn opposite long leg stride. If long left stride, they should turn to the right. Use this in acute cases where the torque is severe.

-Don't use this gait pattern correction in place of structural corrections. Perform structural corrections.

-TL the associated points on the meridian found against gait. If the patient is prone on the table, slide the leg off to obtain gait position. Use this position to give positive structural challenge. Also check holographic, especially in areas which are adjusted.

-Isogai has clinically tested 90,000 patients over 40 years finding femoral angle discrepancies causing leg length differences.

-Femoral abduction and external rotation causing leg lengthening, adduction and internal rotation shortening. (Partial excerpt of a letter from Isogai to GJG).

Postural Evaluation

-Lateral plumbline should strike slightly anterior of the lateral malleolus, through the femoral head, glenoid, and external acoustic meatus.

-More patients are ahead of line than behind.

-Body is literally behind the head rather than the head afront of the body.

-Most frequent finding in these patients is failure of abdominals to respond to stretch. Weakness will often not show in the clear. With the patient supine, the doctor places their chest on the table while the patient arches back over the doctor's back to stretch the abdominals. Fascial flush required. Recheck abdominal strength, rectus and obliques. 5 mcgs. of vitamin B12 three times daily is beneficial. Treat the NL.

-AMERICAN JOURNAL OF SPORTS MEDICINE has declined manuscript "Reactive Muscle Complete with Myographic Studies", that was submitted by GJG. He is attempting to revise manuscript and resubmit.

-Olympic cycling paper by Drs. Schmitt, McQueeny, and Goodheart submitted. Continue to have Commission on Sports Medicine Modulites. Other papers include "Fencing" by Handleman and Goodheart.

-Paper on weightlifting and wrestling per request of Dr. Dardick Bertram Zairs, orthopedic physician to the Boston Bruins and physician in charge at the winter games in Yugoslavia. Dr. Robert Leech is physician in charge at the Los Angeles summer games.

Tympanometer

-For the TMJ. Measures the flaccidity or tonicity of the tympanic membrane which is related to the middle ear and the TMJ.

-Coston hypothesized that TMJ and occlusion problems are related to ear and sinus problems.

-Arland says the tensor tympani shares common innervation with the external pterygoid. Tensor palati (Cranial nerve V) regulates the opening of the Eustachian tube.

-Olympio Pinto found a ligament connecting neck and anterior process of the malleolus to the mid-posterior-superior part of the capsule, interarticular disc, and sphenomandibular ligament. This ligament is called the Mandibular-malleolar.

-Tympanometer gives graphed information of sound hitting the eardrum. Obscure TMJ problems have been uncovered.

-George Mernoff technique (of Monroe Labs) utilizing functional nutrient testing is currently in the works.

Parkinson's

-When muscles are contracted, you paradoxically want to shorten them, GTO to turn "on" further will actually turn muscle "off".

- Dosage of up to 10 gms tryptophane daily.

-Reading referral- "BALANCING BODY CHEMISTRY THROUGH NUTRITION", Student Manual, by Robert J. Peschak, D.D.S., 1977. Address- Color Coded Systems, 7759 California Ave., Riverside, CA 92524. Phone number 714-688-0800. Other manuals- "NUTRITION FOR A HEALTHY HEART" and "SEARCHING FOR HELP".

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Gait

-SOTAK seminar- a combined SOT/AK seminar sponsored by VM Nutri. Theme of the seminar was D.S.O. (Diagnose the need, Supply the need, Observe the results).

-Three classes of gait patients:

1. Those taking a longer left step- 45%
2. Those taking a longer right step- 45%
3. Those with even length on both steps, these are in the minority- 10%

-Dr. Isogai of Tokyo feels more Japanese have step length differences than GJG has discovered in the US. Isogai feels the left leg is longer 70% of the time and the right 30%. Could be that Japanese have increased right brain activity.

-The average patient is 10 pounds heavier on the right on a scale weightbearing. When greater than 10 pounds on the right or greater than 5 pounds on the left, there is weight variation.

-Use toe in, have the patient increase stride length of that leg (Tape 78) that turns in easier.

Book referral: "ISOGAI'S DYNAMIC THERAPY", by Kimiyoshi Isogai and Yoshihito Isogai. Order from K. Isogai, 2112 Nakano Ku, Tokyo, 164, Japan. \$34 by sea mail, \$50 by air mail.

-Isogai is unaware of the pelvic category system.

-It is necessary to fix the pelvis correcting any SI subluxation before using stride length. If dural torque is not corrected by changing gait, skeletal structure faults will return.

-Dural torquing analogous to stethoscope tubing that is stretched, then twisted, the U-shape at the ear piece corresponding to the occiput and the chest bell as the sacrum, and the kinking of the tube representing a mechanical compression of a dural port in the spine on one side, and a separation of the opposite port. In addition, the torque moves one point anterior and the other posterior in the direction of the torque. This effects spinal nerves and cerebrospinal fluid flow as well as corresponding vertebral level patterns.

-Treatment is determined by toe turn-in (easy toe in on the left for example):

1. Longer left step.
2. Turn only to the right.
3. 25 deep knee bends with the left leg advanced, three times a day.
4. Sit in a chair with the left leg advanced.

-Easy toe in is also indicative of a weak psoas or piriformis. Check IVF Factors. Have the patient advance leg that does not turn in, while standing, and the psoas or piriformis will show.

-If category does not show with usual SI TL, advance leg over the table to the floor. This is leg with tight toe in. This simulates gait and should make the category show. Category I will show up more readily than Category II. With one leg off the table, raise the other leg into a gluteus maximus test. Will weaken if category is present. Challenge direction of category in the usual fashion. Usually posterior ischium on one side. Use SOT blocks and treat the NL.

-When the patient is supine, a left piriformis/psoas will appear weak and will with the right leg forward. This reverses with the patient prone due to compensation. While supine, if femoral heads are further back, they have a tendency to go further back and likewise go forward while prone.

-After Category I correction, toe in will often times remain unequal.

Nutritional

-Red blood cells, white blood cells, platelets, and venous walls all have positive polarity. Repel each other.

-Riboflavin and niacin (G factors) will prevent sludging and coalescence of formed elements in the blood.

-George Mernoff technique utilized doing functional assays on blood measuring red blood cell transketolases, kylluronic and xanthurinic acid for vitamin B6, methylmelonic acid for vitamin B12, etc.

-Mernoff studied schizophrenic patients at Monroe Medical Labs, Monroe, NY, finding only 3% had any blood measured nutrient deficiencies. When using orthomolecular vitamin therapy however, 70% of the patients showed improvement.

-Functional studies measure nutrients "used" by the body, not the amount contained in the transport system- the blood. It's as if the check is in the mail, but it is not yet in your bank account.

-30% of the schizophrenics did not improve despite relatively high doses of nutrients. Another 3% improved with intravenous and intramuscular injection.

-GJG hypothesized there was some other factor since all elements in the circulation are positively charged then it was reasonable to suggest that in order to absorb nutrients they must be less positive than the materials in the blood.

-Nutrient position on the tongue makes a difference.

-Either right or left tongue placement makes a difference in muscle testing.

-If the brain is the battery, feet the generator, and the spinal cord the connection, the hip joints are like old fashioned cranks that generate current with one side positive and the other side negative. The polarity difference could be altered, i.e. the right front of the body is positive and the right back is negative. ("MAGNETISM AND IT'S EFFECT ON THE LIVING SYSTEM", Davis and Rawls, Exposition Press, Hickville, NY, previous tape).

-If polarity of the digestive tract is disturbed, gradient of absorption is also effected. Tongue is the exposed site to test polarity of the tract.

-Unilateral mouth problems, i.e. excess saliva flow, dental caries on only on side, tongue lesions, etc. seemed to parallel gait pattern. Correction of Category I or II would negate effect of varying nutrient placement on the tongue (right or left side). After correction, indicator muscle was unaffected by changing nutrition from right to left.

-The tongue therefore mirrors polarity in the rest of the tract. Polarity change in tongue (positive for example) means one side of the intestine is not absorbing. Disturbance of one side disturbs the other and acupuncture, NL, and spinal nerve problems can potentiate this effect.

-This premise explains why treatment of a liver NL can effect night blindness without the addition of vitamin A to the patient's regimen.

-Tongue reflex point had to be ruled out in effects of nutrient placement on the tongue. This point did not appear to be a factor. Nutrient location became a factor most frequently when patient had to take a longer left step.

-Currently looking into trace mineral and electron poisoning effects, especially manganese and zinc.

-Oxidation-reduction seems to be involved. Some people need both alkaline and acid ash minerals being effected by oxygen and carbon dioxide. Sometimes body will be overoxidized or overreduced on one side or the other and polarity will be correspondingly affected.

-Generally, if you ask a patient to step forward and he uses his left foot, he will use his right foot if asked to step back.

-Only about 10% of corrected Category I seem to not require the nutritional approach. For example, a previously weak pectoralis major sternal responds to whole liver on only one side of the tongue. After correction of the Category I or II the pectoralis major sternal is rarely strong on retest. If it is strong, check against the 5 factors, etc. After this factor is corrected, the nutrient should negate the pectoralis major sternal weakness regardless of location on the tongue.

-Polarity of food should not matter. The notion of limiting food types (i.e. macrobiotics) is replaced by maintaining proper polarity of the digestive tract. The exception is processed foods. Nature provides a multitude of foods. If a person becomes ill from eating different natural foods, there is something wrong with the person rather than vice-versa.

-Dural torques can appear at birth process. Usual delivery is occiput left anterior, second most common is occiput right anterior. Permanent torque set up which will effect femoral heads. Cranial faults must be addressed in very young children who don't walk.

-Dr. Deuton (SOT) admitted to not giving much attention to the concept of mind language.

-Reading referral: "DENTAL KINESIOLOGY", Dr. George Eversaul. Order from Dr. Eversaul, Box 19476, Las Vegas, Nevada 89119, phone number 702-733-8476, \$50-\$75.

-Talks of temporal tap for psychology use in dentistry for stopping bleeding.

-Chapter 8 discusses "imagery".

-It is important to keep your testing objective. By focusing your attention on the outcome of a procedure, you may bias the result.

-Femoral head adjustment challenge (Tape 78) is done supine by pushing up on femoral head and towards the floor on the other femoral head. Adjustment follows rules for extremity challenge, opposite direction of weakness.

-Patient prone with blocks under ilium and shoulder (Yaw pattern), you obtain information of a sacral fixation.

-If blocked under the right femur head and left shoulder while supine, there will be a weakness if the patient should take a longer left stride.

-Dural torque will increase arthritic pain.

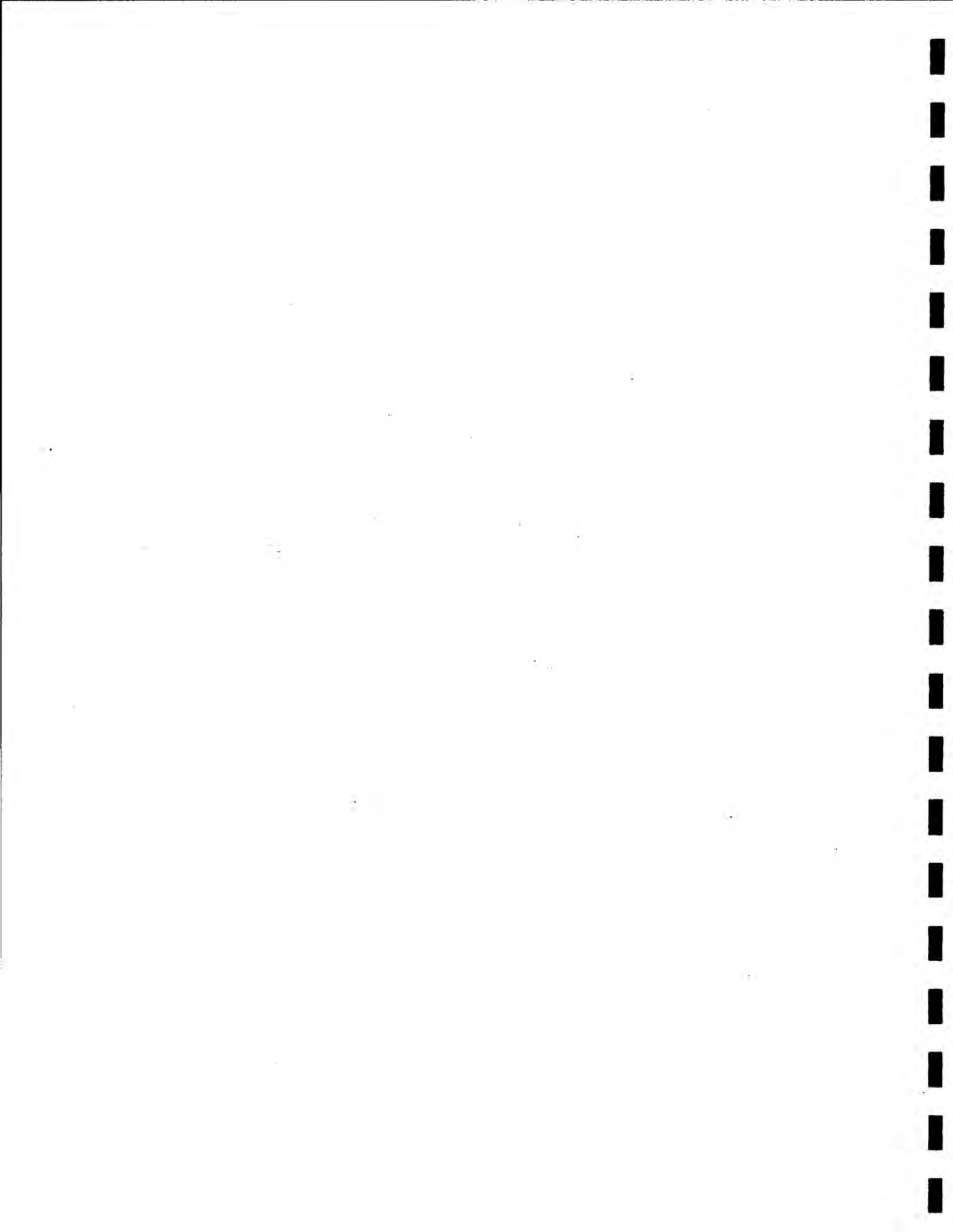
-Torquing will respond based on how long the process of torquing was occurring. The longer the development period, the longer the recovery.

-Patient's on large amounts of different vitamins will be found to have poor absorption, small intestine NL involvement.

-Stride length should be altered only about 2-3 inches.

-Isogai's book is highly recommended.

-D.D. Palmer said, "Everything comes around when you think of it."



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-Letter received by Bob Blaich from the US Olympic Committee and principally Kenneth "Casey" Clark, PhD concerning proposal to develop a protocol for clinical study of AK. This project will consist of a group of experts convening to study protocol of treating US athletes. This proposal delineated three factions of chiropractic as 1. straights, 2. mixers, and 3. AK practitioners. This study would interest itself in the AK procedures and the benefits to athletes with orthopedic complaints or underlying muscular imbalance found during AK examination. Dr. Bob Blaich and Dr. Wally Schmitt were appointed to oversee the project.

-Dr. Dardick has notified GJG of his reappointment to the Commission on Sports Medicine Modalities.

Dural Torque

-The dura is firmly attached to the inside of the skull, temporal bone, occiput, glenoid, foramen magnum, atlas, axis, and C3. The dura continues down the spinal canal unattached until the second sacral segment with the filum terminale attaching to the posterior coccyx.

-Difference in stride length produces dural torque.

-Indicators of torque are the toe in and primarily challenge in the supine position with blocks at the ischium and opposite glenoid. This is then reversed. Torque follows the vertebral pattern. If patient has to be "un-torqued" to the right; when block placed under the right acetabulum and left glenoid, a muscle will weaken. A block under the left acetabulum and right glenoid, and the muscle remains strong.

-Easy left toe in will usually show weakening of indicator muscle with right acetabulum and left glenoid blocking. This is not a hard and fast rule, merely a frequency. This patient will take a longer left step, do knee bends with the left leg extended, and sit with the left leg slightly forward.

-Reading referral: "CRANIAL-SACRAL THERAPY", by John Upledger, D.O. and Jon Vredevoogd, Eastland Press, Chicago.

-Page 11 has the concept of pressure stat of CSF.

-Upledger thinks brain tissue doesn't have tensile strength to act as a hydraulic pump to raise fluid pressure within a semi-closed hydraulic system. Although glial cells are seen to move in rhythmically in vitro, this motion is only one-tenth the rate we observe in the cranio-sacral system. An alternative to the rhythmic brain concept would be a pressure stat model. In this model one would need only to assume that CSF production by the choroid plexuses within the ventricular system of the brain is significantly more rapid than its absorption into the venous system by the arachnoid bodies. When CSF production is turned on for a period of time it will reach an upper threshold of pressure. When this threshold is reached, CSF production is turned off by some homeostatic mechanism. In this manner a rhythmic rise and fall of pressure in turn, causes the rhythmic changes in the boundaries of this semi-closed system.

-Two mechanisms are involved:

1. Since sutures do move and contain collagen and elastic tissues as well as vascular and nerve fibers, it seems possible that the suture contains a stretch reflex. When suture is gapped by increased intracranial CSF pressure, reflex of stretch telegraphs to the ventricular area to stop CSF production.

2. As CSF pressure is reduced and suture gaps approximate, another message is sent to resume CSF production.

-Single nerve axons in monkeys have been traced from the suture centrally through the meninges to the third ventricle of the brain. These histological structures lend support to the model.

-British Gray's (19th) mentions an arachnoid granulation projecting into the floor of the straight sinus. This contains a sinusoidal plexus which becomes engorged and acts as a ball and valve mechanism to control out-flow of the great cerebral vein, thereby increasing back pressure which affects CSF secretion by the choroid plexus in the lateral ventricle.

-It's suggested that this homeostatic mechanism causes the ventricular system to rhythmically dilate rather than the presence of an intrinsic contractile property of the brain.

-Page 2 of Upledger et al, tells of Dr. Upledger's first experience with cranial-sacral motion while removing a dural calcification during a 1971 surgery. "I was assisting a neurosurgeon in the removal of an extradural calcification....my task was to hold the dural tube still with two sets of forceps while the surgeon removed the plaque without damaging or cutting the underlying dural membrane. The membrane would not hold still....it became apparent that the movement of the dura was rythmical, about eight cycles per minute. This rythm was independent of the patient's breathing and cardiac rythms. It was another physiological rythm..."

-In 1975, Upledger joined the Biomechanics Department at Michigan State Osteopathic College.

-Upledger has a CV4 technique, formerly the "bulb" technique, which is compression of the fourth ventricle by gentle compression of the occiput. Originally developed by Sutherland, who believed that compression of the fourth ventricle affected all the vital nerve centers located in the fourth ventricle. The occipital squama provides an accommodation to the changing intracranial pressures. CV4 technique reduces ability of squama to accommodate thus increasing CSF hydraulic pressure. CSF fluid movement and exchange are enhanced.

-Upledger - Appendix C.

-Reading referral: Article in Journal of the American Osteopathic Association, Vol. 78, July 1979, by John Upledger, D.O. and Z. Carney, PhD. "Cranial osteopathic manipulative diagnosis and treatment is associated with palpatory sensations perceived by the cranially-oriented osteopathic physician at various locations on the patient's body. The nature of these palpatory sensations range from smooth and regular to jerky and irregular motion. Distinct electromyographic patterns correspond with each of the palpatory sensations. This far exceeds random possibility."

-Upledger - Appendix F. Tandem Tennis Balls.

-James Nelson Reilly, PhD talks of inducing "still point" (point where CSF ebb and flow is halted) using tandem tennis balls taped together and placed under the occiput. We have found the addition of a third ball works better in the bifurcation of the chiropractic table.

-Tennis balls should be placed at the top of the occiput but below the lambdoidal suture (approximately above the ear openings).

-By simply holding the patient's occiput with crossed hands you can get the same effect by watching change in patient's expression, relaxation, etc.

-When occiput motion is limited, the sutures open due to increase in hydraulic pressure.

-Dural torque is analogous to a stethoscope tube with the U-shape of the ear pieces as the occiput and the chest bell as the sacral attachment. If the tubing is tractioned and twisted, the tube will kink and then rotate when the chest bell is released. The torque creates a pull which restricts sutural motion at the skull attachments.

-Tennis Ball Therapy:

1. Test the patient supine with toe turn-in. Usually easier toe in on the left.
2. Check adductor tension by externally rotating and abducting leg up towards the head with the knee extended. Usually at 90 degrees there is limitation. Compare right and left.
3. Place tennis balls under the occiput for 8-12 respiration cycles. Immediately there should be an equalized toe turn-in and adductor range of motion should increase to 130-140 degrees.

-Reading referral: "MYOFASCIAL PAIN AND DYSFUNCTION" Vol. 1, by Janet Travell and David Simons, Williams and Wilkins. An excellent source for muscle correction, good illustrations, and each chapter deals with a separate muscle. Chapter headings contain unique, everyday expressions that patient's use to describe symptoms. Chapter 15 for splenius capitis and cervicis is entitled "Ache inside the skull". Pectoralis major is called "Poor posture and heart attack muscle".

Gait Breathing

-With the left foot forward in gait, the patient should be taking a breath through the left nostril.

-If a supine patient has an easy left toe in, have the patient take about 5 breaths through the left nostril, exhaling through the mouth. There should be immediate equalizing of toe in that may last permanently. Usually this is only temporary.

-Salk Institute has given evidence that right and left brain polarity is affected by nasal respiration. Nostril breathing dominance is alternated every 20 minutes to adapt to polarity patterns which change with atmospheric pressure fluctuations. Barometric pressure changes, in turn, change ionization which increases serotonin. This serotonin level affects patient's view of weather environment. Excess serotonin is neutralized by 5-hydroxy-endolactic acid. Some patients lack this acid and are increasingly sensitive to weather changes, i.e. ankles swell when a storm is approaching.

-Since each nostril changes polarity every 20 minutes (positive to negative), instruct the patient to consciously take deeper nostril breath with long leg stride.

-Cranial fault is usually found on opposite side of ischial area requiring adjustment.

-Also check Category I, especially TL the SI joints in a gait position while the patient is prone.

-By TL to the SI with one palm up and one palm down, this will uncover Category I that is not found with usual TL. TL the first ribhead with one palm up and one palm down. Dr. Dan Duffy has found that the tender ribheads will correlate to the Category I that is found by TL in this fashion. This is related to polarity.

-1. Challenge with blocks (glenoid/acetabulum). If nothing shows; 2. Simulate gait with one leg off the table during SI TL.

-With easy left toe in (left is more common) there is usually required an ischial adjustment of the same side which immediately abolishes first ribhead pain.

-By TL to the sacrum (after ischial adjustment) with palms together as if praying, or palm to knuckle, there is usually a need for a posterior base sacral adjustment on the side of the ischial adjustment and easy toe in.

-Patient seems to be doing better symptom-wise; retest with glenoid/acetabular blocking and often weakness will now not show until the patient uses EID (Eyes Into Distortion).

-Taking the longer step is not in itself therapeutic. The problem is usually a pelvic disturbance, classically a Category I.

-If one blocking position causes weakness, i.e. right glenoid/left acetabulum, reverse the blocking and place the tennis balls behind the occiput to "untorque" the patient from the top and the bottom.

-Difficult headache case had initial exacerbation then gradual resolve of symptoms.

-Upper cervical fixation, holographic involvement, and cervical subluxation often found with torquing.

-A patient with convulsions: Simply by tennis ball placement, a 2 degree rise in temperature was produced at the external occipital protuberance. By using B and E Technique, along with tennis balls, you can furthermore drop the glabellar temperature which helps convulsive and fugue states.

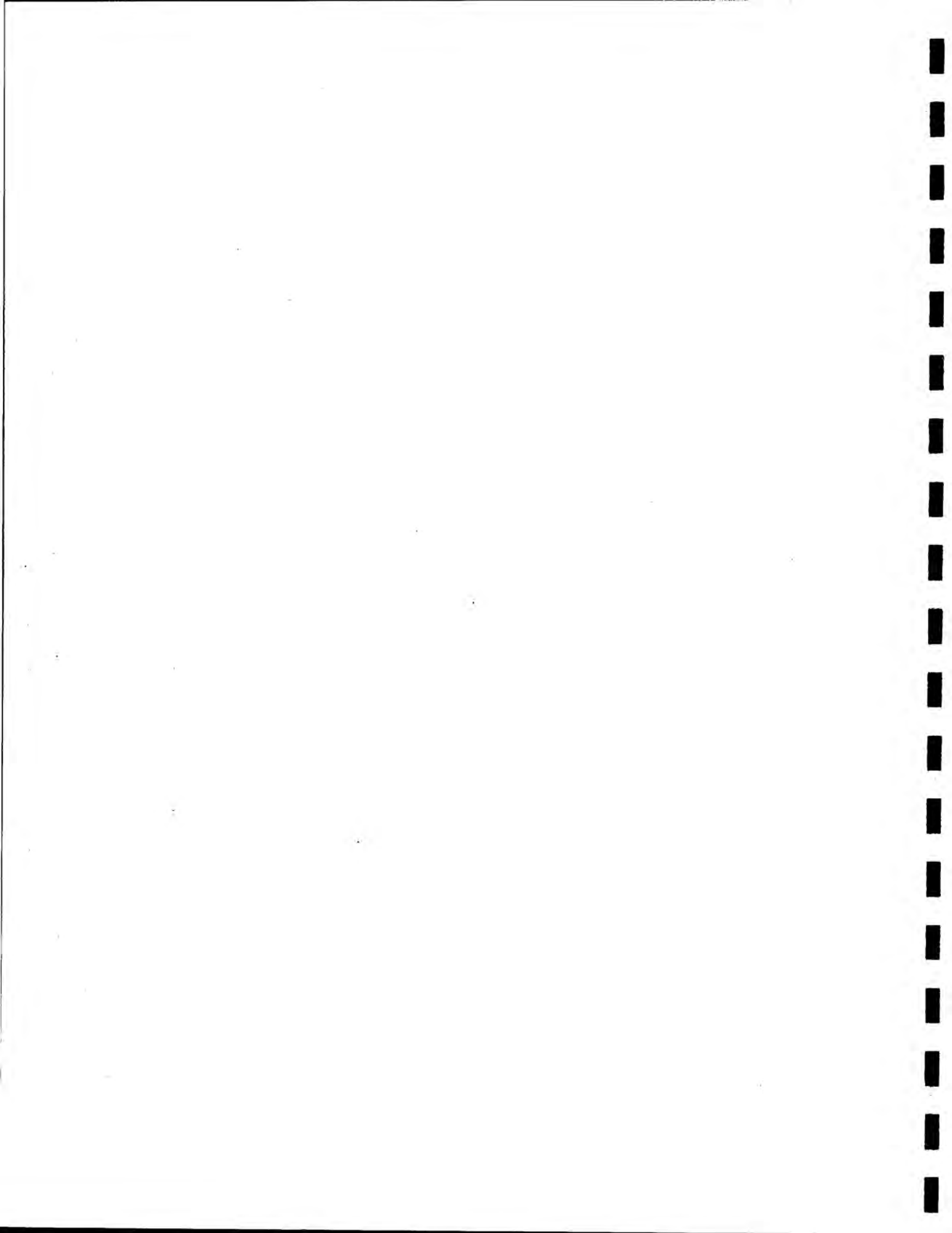
-In some cases the patient will show gait pattern reversal, often this is doctor diagnostic error. 10% of all patients will show this reversal due to a dorsal or dorso-lumbar fixation. Detorquing occurs at T7 and any fixation above or below will block therapeutics of longer stride and "wind patient up" again.

-Indebted to Dr. Jimmy Durlacher of Palmer College for his information on nasal breathing and ionization (right nasal breath activating left brain and vice-versa). Thank you Dr. Durlacher.

-Travell's book "MYOFASCIAL PAIN AND DYSFUNCTION":

1. Trigger points will TL.

2. Hard, heavy pressure will fatigue trigger point. Muscle stretching should increase its strength; if not do fascial flush or "spray-n-stretch" technique. Very good for sports injury.



DR. GOODHEART'S RESEARCH TAPES

TAPE 81

-1-

Strain/Counterstrain

-The cerebellum processes information from muscle spindle cells and golgi tendon organs. It is part of the extrapyramidal system which modulates motor activity.

-A large part of the dorsal spinal cerebellar tract (DSCT) receives fibers from Group 1a which originate in the annulospiral endings of the spindle.

-Group 1b are from golgi tendon organs (GTO) and Group 2 are from muscle spindle cells and they travel to the same side of the anterior lobe of the cerebellum. The DSCT carries information from both the GTO and the spindle cell.

-GTO's inhibit contraction while spindle cells facilitate contraction.

-DSCT conduction time is between 2.5 to 6 milliseconds. The ventral spinal cerebellar tract (VSCT), while it carries exclusively GTO information, it is in contrast in that it is somewhat faster in conduction, between 2.5 to 4 milliseconds.

-VSCT fibers cross in the spinal cord, recross in the cerebellum and terminate in the vermis of the intermediate lobe on the same side as the GTO of origin. They terminate in the cerebellar cortex "mossy fibers". Most fibers terminate ipsilateral, but an appreciable amount connect contralateral.

-Clinical importance of both ipsilateral and contralateral afferent fiber connections adds significance to bilateral effects observed in unilateral cerebellar pathway interruptions.

-The only other major pathway carrying muscle receptor information is the olivospinocerebellar tract which is related to both the DSCT and VSCT. By crossing and recrossing, there are predominantly cerebellar projections via the anterior olive, although some fibers terminate in the contralateral cerebellum.

-The olivospinocerebellar tract (OSCT) carries afferents from Group 1a and Group 2 from contralateral and predominantly ipsilateral lower limb.

-Conduction time for the OSCT is much longer at 18 to 25 milliseconds, compared with the DSCT at 2.5 to 6 milliseconds, and the VSCT at 2.5 to 4 milliseconds.

-The only output (efferent) channel of the cerebellum is via the Purkinje cells which discharge into the cerebellar nuclei, Deiter's nucleus, the bulbar reticular formation, and the eye muscles (this is what led to EID).

-Rusche, a researcher, stated that the cerebellum acts as a comparator or error detector in response to movements by processing exclusive sensory information from the muscles by feedback from the cerebellar cortex.

-The cerebellum, in controlling movement, acts as a cerebral mechanism, processing information not only from muscles but from the cortex of the brain stem.

-Purkinje cells are monosynaptic and inhibitory to the Deiter's nucleus cells or the intercerebellar nuclei.

-Eccles, another cerebellar researcher, states that the entire cerebellar output is transmitted to the central nervous system by turning down the background noise. Therefore, the cerebellum as a comparator, compares standard error from the fibers of the VSCT at 2.5 to 4 milliseconds, the DSCT at 2.5 to 6 milliseconds, and the OSCT at 18 to 25 milliseconds.

-It's as if you are walking on a hill, the lower leg is straight and the upper leg bends to compensate for the slope and keep the shoulders level.

-When there is spinal or body distortion, musculoskeletal distortion, or athletic injury, the body by way of the cerebellum compares the error. The comparison is in the standard error between the first, second, and third volley of impulses during the execution of movements. This is compared with the other side or with previous information. As a result, it acts as a comparator, correlator, and compensator.

-The muscle spindle cells are important in understanding athletic injury.

-Basically there are two types of spindle cells (fibers), nuclear chain fibers and nuclear bag fibers. Spindle

cells are exquisitely sensitive to changes in length.

-With skill and experience, one can judge (to the ounce) differences in two weights held in hand. The same is true in skiing as the legs become sensitive to the change of terrain and compensate.

-The patient in an antalgic position is as if the spine were strained in extension. It's as if the muscles on the front of the spine (front of the back) have been strained and the body is trying to splint in a forward position.

-These injuries result from sudden movements i.e. when you open a door while someone is opening it from the other side, you misjudge the force and produce a jerky response, often resultant in injury. The spindle cell is taken by surprise and the speed differential that should take place does not. The muscle is strained since it lengthened faster than it could accommodate the length change.

-“STRAIN AND COUNTERSTRAIN”, by Lawrence Jones, D.O.

-Most joint dysfunction pain is position oriented. Dysfunction may not result from strain/sprain itself as has been supposed, but from occurrence during the time the body was reacting to the strain/sprain.

-Objective palpable evidence of continuing dysfunction is not found in the overstretched tissue but rather in its antagonists. These antagonists suffer severe shortening followed by a rapid, panic-like lengthening. When the spindle cell is taken by surprise and fails to release in time, the resultant rapid lengthening is termed “sprain”.

-Many joints react as if they were actually strained. A normal joint put into a strain position will elicit pain, whereas moving it from this position will ease pain. In joint dysfunction it acts as though the joint were being continually strained. This is due to implication of the proprioceptors (nerve endings) which are activated with joint dysfunction.

-1975, Irwin Korr advanced a neural basis concept for joint dysfunction, incriminating the muscle spindle. Korr stated, “One distinction may be worth mentioning. Although discharges of both types of endings are more or less proportional to length, the primary annulospiral endings have an additional feature. That is, in its frequency of firing during its stretch, it is in proportion to the rate of change. That is, that the secondary endings apparently report the length at any moment, but the primary endings report both the velocity of stretch, hence joint motion, and length, hence joint position. The primary ending therefore provides a predictive or anticipatory input to the nervous system.”

-If imagining the muscle spindle of the muscle on the opposite side of the joint (opposite the strained muscle) has almost negative proprioceptive input since it is so extremely shortened. In addition, the reciprocal inhibition reflex from the strained side causes a further drop in the input to lower the rate of impulse from that proprioceptor.

-The body, reacting to the emergency strain, straightens the joint, stretching the hypershort muscle and spindle cell with an inappropriate message of strain.

-Jones states, “One would think that the central nervous system through a reduced outflow of gamma motor neuron would relax interfusal fibers of the spindle cell enough to restore the primary proprioceptors to a normal state of firing.”

-Korr offers the hypothesis that the central nervous system, seeking a response from the hypershortened and silent primary endings begins an extraordinary outflow followed by unusually fast stretching resulting in high gamma gain that the body is unable to reduce to normal.

-During treatment, the position of comfort is usually identical to that of the original strain. This shortens the muscle with the spindle dysfunction allowing the nerve endings to cease their dysfunction.

-Korr states, “The shortened spindle nevertheless continues to fire, despite the slackening of the main muscle, and the central nervous system is gradually enabled to turn the gamma discharge down and in turn enables the muscle to return to easy neutral at its resting length. In effect the patient has been led through a repetition of the lesioning process; with, however, two essential differences. First, that in slow motion we rebalance with slow muscular forces, and second, there had been no surprises for the central nervous system. The spindle has continued to report throughout.”

-Jones recommends original stretch be maintained for 90 seconds for adequate decrease in proprioceptor firing rate. To avoid reexciting the dysfunction reflex, the stretch must be returned to neutral very slowly.

-Decreased tenderness and trigger point softening should be noted during this technique.

-“STRAIN AND COUNTERSTRAIN”, by Lawrence Jones, D.O., from The American Academy of Osteo-

pathy, 2630 Airport Rd., Colorado Springs, Colorado 80910, published 1981.

-A patient with back or sacroiliac pain will also have tender areas on the anterior of the body. I.e. pain in the posterior knee, ankle or hip will also have anterior tenderness as if the anterior had also been strained.

-If posterior pain, examine anterior trigger area for pain on palpation. Bend the seated patient forward or forward and lateral until a position is found which decreases the anterior palpatory pain.

-The degree of motion change is very limited. You are attempting to return the spindle cell to its original setpoint while lengthening the muscle. Once the position of decreased palpatory pain is reached, hold this trigger point for 90 seconds and then slowly return the joint to the normal resting position.

-Example: An elbow in extension with a sudden flexion injury. Difficulty in flexion results. Treat by putting the elbow into extension while palpating trigger points (TP) in the triceps and biceps. Rotate the arm internally or externally until the point of palpatory pain is reduced and hold the TP 90 seconds. By spreading the TP and using respiration, the holding time reduces to 30 seconds. Anterior pains require inspiration, posterior pains require expiration, while treating. Range of motion and muscle strength should increase.

-Rule of thumb is to put the patient in a position that is opposite the position of pain.

-“Weakness or pain on exertion usually occurs when an effort is made against any resistance or gravity that stretches the muscle containing the tender point.”

-Sometimes the muscle weakness will be in the antagonist of the painful muscle.

-Anterior tender points need flexion, posterior need extension.

-In general, the closer the point to the sagittal midline, the more flexion/extension is needed. Further from midline requires more lateral bending.

-The bending away from the tender point might be explained by the mechanics of an unstable vertical spinal column. The side of spinal convexity does the work of resisting gravity. It is relieved by exaggeration of the existing convexities, stretching the muscles containing the tender points.

-Jones states: “In a general sense, physicians have listened to histories of back strain and back injury so long that they may automatically think of them as synonymous. However, strain is a one time tissue injury resulting from overstretching. Healing should be complete within a few days. Sprains differ only in degree, with a definite rupture of tissues and greater inflammation than injury described as strain. Neither should give rise to long lasting and often progressive pain syndrome.”

-The old saying “a sprain or strain is worse than a break” is probably because pain from strain eventually becomes joint dysfunction whereas a fracture can heal.

-Prophylactic stretching before exercise is beneficial. A very slow return from stretch should be used. A muscle should become stronger upon stretch, if not, it needs fascial flush. To insure no further stretch weakness, 5 microgms. of B12 three times a day should be given and treat the NL and NV.

-Jones' STRAIN AND COUNTERSTRAIN contains charts for TP pressure amounts at different areas of the body.

-Travell has popularized the trigger point therapy. Her method involves stretching the muscle and using a fluoromethane spray or injection, whereas Jones uses the opposite in terms of positioning the muscle.

-Diagnose the TP needing treatment by TL if there are tender points anterior or posterior. An example is a low back pain which often shows a TP on the ramus of the pubic bone. The patient is flexed anterior and usually laterally away from the tender point.

-A patient complaining of a sprained thumb with pain in the opponens muscle and inability to extend. Painful TP found in the extensor which was reduced with extension and supination/pronation. Immediately able to grasp with the hand again.

-For lower sacroiliac pain, extend the leg by placing the doctor's leg underneath and slightly abduct/adduct the leg while palpating the point adjacent to the coccyx.

-The range of motion is very minute where decreased pain is noticed. Once that point is found, the muscle stops its heavy gamma output.

-Anterior points can be treated with the patient flexed while seated or lying supine with the knees flexed to the chest.

-Remember, after the 90 second hold, return the body back to its normal position, i.e. slowly lower the leg if you are treating the posterior sacroiliac pain.

-Depressed second or third rib is often found with retrograde disturbance. If golgi tendon and spindle cell treatment to the pectoralis minor does not decrease lateral chest pain, use strain/counterstrain with forward and lateral flexion.

-Strain/counterstrain release of the pectoralis minor can raise vital capacity from 5 liters up to 6 liters. In mentally depressed patients it may have the opposite effect.

-Differential diagnosis; A Travell TP will weaken with a stretch of the muscle, requiring spray and stretch or fascial flush. A Jones muscle TP will weaken after the muscle is placed in maximum contraction.

-Measure lateral leg abduction on a patient with anterolateral ramus TP on the pubic bone. By releasing the TP on the left, for example, the right leg abduction should increase 25-30 degrees after treatment.

-An exception: the occiput, atlas, and axis many times have posterior TP which are treated with anterior flexion.

-The fatigue of adrenal dysfunction and hypotension is associated with a point on the sternum center at the sixth or seventh rib level. By treating this point in anterior flexion with strain/counterstrain there will be changes observed in the blood pressure. This is probably dealing with the aortic sinus reflex part of the postural baroreceptor mechanism. This point may be a factor in recurrent anterior dorsals.

-BRAIN AND MIND BULLETIN, Jan. 1, 1983, Vol. 8, No. 3, David Chenoff Kalsa of the Salk Institute for Biological Studies says, "The nose is far more than an olfactory device. Discovering this is like finding a new sense. A simple breathing exercise enables people to alter short term brain hemisphere dominance at will. The breathing cycle is linked to hemisphere dominance and the exercise has implications for voluntary control of body mind. The forthcoming issue of HUMAN NEUROBIOLOGY reports the discovery of a direct relationship between brain activity and the nasal cycle alterations of congestion and decongestion in the nasal passages. When air flow is more free in one nostril, the opposite hemisphere is currently dominant. Forceful breathing through the congested nostril awakens the less dominant hemisphere. Responses have shown a consistent relationship between nasal air flow and cerebral dominance on all frequencies, alpha, theta, and beta. The nose is an instrument for altering cortical activity. The cycle of alternating hemisphere dominance in humans and dolphins has been confirmed in four other laboratories."

-Kalsa and three other researchers demonstrated the first link between this cycle and the autonomic nervous system. Kalsa said the nasal cycle may be a window on one of our bodies most important rhythms. He also suspects it is linked with the basic rest and activity cycle, including the sleep cycle which alternates between REM and non-REM sleep. Right nostril, left hemisphere dominance corresponds to phases of increased activity, left nostril, right hemisphere dominance corresponds to the rest phase. Therefore this correlates with the patient taking a longer left step with a left nostril breath every third step.

DR. GOODHEART'S RESEARCH TAPES

TAPE 82

-1-

Fascial Flush and Strain-Counterstrain

-“MYOFASCIAL PAIN AND DYSFUNCTION- THE TRIGGER POINT MANUAL”, by Janet Travell and David G. Simons, Williams and Wilkins Co., 1983, 428 East Preston St., Baltimore, Maryland 21202. This is the first of two planned volumes and it deals with the upper half of the body.

-“STRAIN AND COUNTERSTRAIN”, Lawrence Jones, D.O., available from The American Academy of Osteopathy, 2630 Airport Rd., Colorado Springs, Colorado 80910.

-These two methods have a dichotomy.

-Travell stretches the muscle (spray muscle under stretch or use fascial flush); relationship with vitamin B12. The procedure is to test a muscle in Kendall and Kendall fashion. Stretch the muscle; if the muscle weakens, use stretch-n-spray or fascial flush and give 5 mcgs. of vitamin B12 three times daily (use a B12-Folic Acid combination).

-Strain-Counterstrain's trigger points are similar to Travell. Refer to the chart of trigger points. Instead of a stretch, Jones puts the origin and insertion as close together as possible. Two muscle spindle cell types, one sensitive to length, the other sensitive to rate of change of length. It's as if the annulospiral spindle cell (sensitive to rate) is “asleep at the switch” and as you go to stand up for example, you lengthen the muscle, but you don't lengthen it fast enough for the spindle cell which is sensitive to the rate of change of length to accomplish; you literally strain the muscle because you lengthen it faster than it can let it go. Under these conditions you strain the muscles of the front of your back, for example the psoas. The body compensates by keeping you bent forward so it is reasonable to assume that the muscle is shortened and must be lengthened.

-“THE NEUROBIOLOGICAL MECHANISMS AND MANIPULATIVE THERAPY”, Erwin Core, Plenum Press, NY and London, 1977. In reference to annulospiral spindle cells “one distinction may be worth mentioning although discharges of both types of endings are more or less proportional to length, the primary annulospiral ending has the additional feature that its frequency of firing during a stretch is proportional to the rate of change. That is, the secondary ending apparently reports length at any moment but the primary ending reports both velocity of stretch and hence of joint motion, and length, hence joint position. The primary ending thereby provides a predictive or anticipatory input to the nervous system.”

-The primary ending muscle cell in the triceps opposite a strained biceps; the triceps is at its minimal limit of stretch (shortened due to straight arm). Input of its proprioception is almost negligible, and add to this reciprocal inhibition that comes from the reflexes of the overstretched side. The body reacts to the strain and suddenly and forcibly straightens the joint or flexes the joint. Stretching the hypershortened muscle (biceps contracting), the proprioceptor reports strain even before it reaches the normal length of the triceps. Once the message of strain is sent out, even where there is none, it cannot be turned off by the body. You'd think the nervous system would cause a reduced outflow with the gamma motoneuron to relax interfusal fibers enough to restore primary proprioception to a normal rate of firing. Core offers the hypothesis that the central nervous system seeking a response from the hypershortened and silent primary ending begins an outflow followed by unusually fast stretching, resulting in high gamma gain that the body is unable to reduce to normal.

-Trigger points can be treated via fascial flush, Nimmo (fatigue the trigger point), or Strain-Counterstrain.

-In Strain-Counterstrain, the anterior muscles are put into flexion and the posterior muscles are put into extension.

-If the spindle cell of the psoas thinks it has been strained, it keeps you bent forward. The trigger point is relieved when the origin and insertion of the muscle is brought together, and the muscle is allowed to start over. This must be held for 90 seconds, and as Dr. Dan Duffy said about that length of time, “It'll never sell”.

-The way to diagnose the need for Strain-Counterstrain is to have the patient actively contract the muscle

and then it goes weak. A good example is the trigger point found on the anterior portion of the pubic ramus (see chart). Helps when the patient is brought into flexion by sitting up or bringing the knees up (shortens the psoas). Before treating, test the psoas for strength and challenge against the 5 factors, still strong. Then have the patient put the psoas into maximal contraction (knee to chin, over the center, and external rotation of the femur), and then re-test to see if it is now weak. Another example is the levator scapula. Rule out the 5 factors, and check after maximal contraction (elevate shoulder, laterally flex the head). Number 44 (lower pole of L5) (see chart) often is adjacent to the SI joint, or it may be number 35; usually reflects the gluteus maximus. Rule out gait, 5 factors, TL CV or GV to make sure they are negative. Put the gluteus max into maximal contraction and check for weakening.

-To make sure it was not a response of maximal contraction with immediate relaxation, GJG waited 30-40 seconds up to 1.5 minutes to avoid any reciprocal inhibition which might possibly occur to any muscle. Maximal contraction is the best way to diagnose the need for Strain-Counterstrain.

-The gluteus max trigger point may be located near the upper or lower SI joint, more near the dollar sign described by DeJarnette. The doctor places their flexed knee on the table and puts the patient's extended thigh over the doctor's knee and keeps raising the leg in extension, medially, laterally, internal or external rotation until the pain stops, this is the position of maximum comfort. Then spread your fingers on the spindle cell area at the trigger point; hold the spread point for 30 seconds. 1-repalpate to see if the pain lessened, 2-retest the muscle after maximal contraction to stay strong, and 3-there is an increase of range of motion and flexibility, and increase of patient response. Occasionally the patient may be sore the next day, caution them and explain that it is due to the unloading of lactic acid. If necessary have them cold pack the area for 10-15 minutes, use cold tap water, not ice. If more acute leave on for 15-20 minutes. Cold makes the body flush blood into the area and warm it up.

-The nutritional aspect holds the same as for what the muscle is related to, i.e. pectoralis major sternal and vitamin A and liver.

-This Strain-Counterstrain will help extraordinarily in patient's with hypoadrenia and you just can't get their blood pressure up especially when the 5 factors don't help show sartorius/gracilis weakness, or with hypothyroidism and you can't get the temperature up. This is the concept that the muscles are pumps to the organs.

-Remember that the patient must be PASSIVE while treating with Strain-Counterstrain.

-Diagnose the need, supply the need, and observe the result.

-To recap:

1. Muscle that is strong, 5 factors, gait, etc. are ruled out.
2. Put the muscle into maximal contraction which causes weakness.
3. See if the proper nutrition associated with the muscle will negate the weakness.
4. Find the trigger point and place the muscle into passive shortening until the pain has lessened, anterior body into flexion, posterior body into extension. Hold the trigger point while spreading apart with your fingers for 30 seconds.
5. Retest muscle after maximal contraction for strength. Check for decreased pain and increased range of motion.

-Common muscles are psoas, gluteus max, levator scapula, SCM, splenius capitus.

-If multiple trigger points are found all over the body, they need a source of phosphatase (Osteoglan, Osteotrophic, or Ostogen) or raw potato.

-Back to hypoadrenia and Strain-Counterstrain: Sometimes you find a trigger point in the sternalis muscle on the nipple line (level may vary), but it generally represents an anterior segment. GJG believes it represents the aortic sinus. Test point for tenderness; then put the patient's head into hard flexion and lateral flexion or rotation until the pain decreases. This is still in the research phase, but if there is pain in the sternalis muscle (can't maximally contract the sternalis) which is a part of the pectoralis major sternal, treat with Strain-Counterstrain and this seems to help blood pressure and morning fatigue. The sternalis may represent a bilateral pectoralis major sternal or clavicular. Often the sternalis is very tender after treatment indicating a large amount of lactic acid.

Electron Poising

-Cells are linked to each other by vitamin A and D, like kids at a football game with their elbows linked and rocking back and forth.

-Cells have bions and organelles as part of their makeup, and they have metabolism and reproduction. Trace minerals allow the cell to communicate with itself; trace minerals are ergodizing agents, allows cells to function under different conditions.

-Cells are kept from overoxidation by vitamin E and into overreduction by vitamin C. They are balanced by a three sided pyramid made up of cystine, glycine, and glutamic acid. The pyramid is glutathione which is selenium-dependent. Selenium supplementation improves chemical tolerance to chemically hypersensitive patients; from the International Journal of Biosocial Research, Vol.3 No.1, 1982. Only known role of selenium is a co-enzyme for the antioxidant enzyme glutathione peroxidase. Glutathione peroxidase along with selenium affords a protection against both the inflammatory effects of chemical hypersensitivities and also the carcinogenic effects of environmental chemicals that cause oxidative damage preventable by increased glutathione peroxidase activity. This is an electron poisoning pattern.

-Stephen Levine of the Allergy Research Group mentions in his work an article in Environmental Health, Vol.10, 1965. "Ozone tolerance provides cross protection against many other chemical agents, including nitrogen dioxide, phosgene, chlorinated hydrocarbons, hydrogen sulfide, nitrosylchloride, naffidylthiurea, and germanium oxide. A basic toxicological mechanism underlies their common action and not similarity of chemical structure. The author (Steffinger) suggests that increased lung glutathione may account for the adaptation. There is evidence that may lead one to suspect that the tolerance may actually induce some chronic toxicologic effect. Sounds like the masking phenomenon seen in chronically ecologically ill patients. As you gain tolerance, you set yourself up for eventual degenerative disease. The activity of antioxidants, i.e. vitamin E, is known along with superoxide dismutase and catalase. Phagocytes, when stimulated, will increase production of superoxide radicals and hydrogen peroxide 20 fold. Produced as enemy action takes place, it is their weapons against invading pathogens. Unfortunately the superoxide radical and hydrogen peroxide also damage the membranes of adjacent cells. Because superoxide dismutase and glutathione peroxidase are intracellular, there is less antioxidant protection for the exterior of the cell. Lysosomal inflammatory products are liberated from dead cells that cause further inflammation. Toxic effect of hydroxy radicals and other toxic oxygen and related changes in those tissues that are going on oxidative-reductural potentials that sometimes produce the inflammatory prostaglandins. Glutathione peroxidase is critical to protection of cell membrane from oxidant damage, yet the enzyme is destroyed by ozone, peroxide lipids and other oxidants, and is protected by vitamin E and C. (Sounds like electron poisoning). The activity is reduced during fasting and may account for the increased sensitivity to chemical oxidants exhibited by patients after a so-called therapeutic fast."

-Harry Demopolous in his spinal cord injury material says "due to the molecular properties of oxygen, spontaneous oxidative free radical reactions with membrane lipids can occur and must be prevented by a spectrum of endogenous antioxidant nutrient and free radical controlling enzymes. Some things that produce the hyperreactivity of the various chemicals, and especially when there is not enough glutathione peroxidase, there is a decrease in the T-suppressor cells which is a common finding in ecologically ill patients. The bottom line is that vitamin E and selenium supplementation can increase antibody production 7 fold in mice. Dietary selenium at levels above those accepted as nutritionally adequate, 1 part per million, enhanced the primary immune response."

-Other works suggest that selenium and vitamin E are synergistic to improved tissue response.

-"Protection against formaldehyde, formaldehydeurea, and other agents and individual protection against aromatic hydrocarbons can be accomplished by vitamin C which is a predisposing factor in benzene intoxication."

-Calabrese showed that "vitamin C protects animals and humans against benzene toxicity and there were also three other nutrients, selenium, methionine, and iron. Methionine is part of the two sulfhydryl amino acids (methionine and cystine) which is part of glutathione peroxidase." All part of the electron poisoning system.

-"Antioxidant mechanisms are either deficient or lacking in chemically sensitive individuals. Basically, it is not immunological, but is due to inflammatory mediators such as prostaglandins, which is influenced by glutathione peroxidase and vitamin E." Must use vitamin E, selenium, and some of the trace minerals which is further evidence for the long term use of Poiseplex, EBA, ACP, E, chlorophyll, and trace minerals. Further information from Allergy Research Group, 2336 C. Stanwell Circle, Concord, CA 94520, phone number 415-685-1228. Thank you Michael Rosebaum, Jeffrey Reinhardt, and Stephen Levine as well as Dr. Hoops.

-Chronic candida albicans stimulates phagocytes to produce excessive superoxide and hydrogen peroxide which then adds to the oxidant stress and further stimulates the production of inflammatory prostaglandins. In this manner a vicious cycle is formed and therefore attention to the use of vitamin E and selenium will help neutralize that, in the light of decreased immunity that some people have chronic infections, the one good prostaglandin prostacyclin is directly related to vitamin E. Vitamin E protects PGI2 synthetase from destruction by lipid peroxidation, the rancidity response in spinal cord injuries.

DR. GOODHEART'S RESEARCH TAPES

TAPE 83

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-“STRAIN AND COUNTERSTRAIN”, by Lawrence Jones, D.O. can be obtained in hardcover for \$35 plus \$4 postage and handling or in softbound for \$25 plus \$3 postage and handling from the American Academy of Osteopathy, PO Box 750, Newark, Ohio 43055, phone number 614-349-8701. Note change from Tape 82. Dr. Walther is stocking the softcover and you can order from Systems DC, 275 West Abriendo Ave., Pueblo, Colorado 81004.

-AK Volume II “HEAD, NECK, JAW PAIN AND DYSFUNCTION—THE STOMATOGNATHIC SYSTEM” is now out. Thank you Dr. Walther.

-“DENTAL CLINICS OF NORTH AMERICA” for July is out, W.B. Saunders. GJG contributed the AK portion to Dr. Gelb's compendium on the TMJ.

Strain/Counterstrain

-To reiterate Strain/Counterstrain: A strong intact muscle that goes weak after maximal contraction. Find and palpate the trigger point. Shorten the muscle until the pain is reduced. In the case of the levator scapula, put the head into extension to decrease pain 50-60%. Then laterally flex the head away from the side of trigger point usually (sometimes towards same side) with continued extension until the pain has gone completely away. Spread fingers over the trigger point with a heavy pressure. Spreading over the muscle spindle actually makes it contract, this is what you want, need to bring the origin and insertion together to make the muscle think it is not strained.

-The first three cervicals posteriorly responds better to flexion than extension. This is what GJG has found and Jones says the same thing.

-Hypoadrenic patient, especially with morning fatigue. There will be a very tender trigger point over the sternum between the 4th-6th ribs centrally; GJG believes it is the aortic sinus. Test the pectoralis major sternal or clavicular bilaterally for strength. Cross the arms and put into a maximal contraction and retest for weakening. This indicates Strain/Counterstrain in the sternalis. Rule out lymphatic congestion in Retrograde or the diaphragm NL; the sternalis will be pinpoint tenderness between the 4th-6th ribs. Put the head into firm flexion to relieve the pain. If the sartorius/gracilis was weak prior to the sternalis trigger point, it will strengthen and improve adrenal symptoms.

-Academy of Osteopathy is present in the Journal of Manipulative and Physiologic Therapeutics, Vol. 6, No. 2, June 1983. There is a reply by GJG and Dr. Poortinga to the Triano article on nutritional support and muscle testing.

-A comment about AK at the California Chiropractic Association's meeting that was in a publication that is sent free is being handled through ethical channels. More later. If an unsolicited publication contains material that you don't like, do as GJG does and put “refused” on it and return it to sender.

-Athletic injuries in runners, etc., who showed peroneus longus, brevis, and tertius and posterior tibial muscle weakness. However, some did not show weakness in the clear, or challenge against right NL with right muscle, left NL with left muscle, right NL with left muscle, or left NL with right muscle, but with TL to both NL at the same time you get a weakening. Therefore, in injuries, double TL against injury on one side. This also goes for the posterior NL. GJG is seeing this more often.

Concept of the Hundredth Monkey

-While studying a particular Japanese monkey, scientists provided them with sweet potatoes dropped in the sand. The monkeys liked the potatoes but disliked the dirt on them. One of the female monkeys found that she could solve the problem by washing the potatoes in a nearby stream, and she taught it to her playmates, and so forth. It spread to many types of animals, and the scientists observed this between 1952-58. Now, suppose that one morning 99 monkeys could wash their potatoes and later that morning a hundredth monkey learned, in other words, a critical mass. By that night, all the monkeys in the tribe were washing their potatoes. The added energy of the hundredth monkey somehow created an ideological breakthrough. The most surprising thing that the scientists observed was that the habit of washing the potatoes seemed to spontaneously jump across the sea to other colonies of monkeys 30-40 miles away. This is described in a book called "LIFE TIDE", by Lyle Watson, Bantam Books, 1980, on pages 147-148. When a certain critical number achieve an awareness, the awareness can be communicated from mind to mind. Although the exact number may vary, the hundredth monkey phenomenon means that when only limited numbers of people know of a new way, it may remain the consciousness property of those people. There is a point at which, if only one more person tunes into a new awareness, a field is strengthened, so that this awareness reaches almost everyone. Experiments of Dr. Rhine at Duke repeatedly demonstrate that individuals can communicate private information to each other even though located in different places.

-A group of trigger points causes noxious impulses instead of a normal interchange of impulses producing a noise-free environment (Ponesis). Dysponesis is neurological noise; the trigger points cause neurological noise. When the trigger points are starting to be released, you get a situation where the normal level of nervous system takes place and you get a critical mass in reverse. Once you get past a certain point, the body spontaneously starts to improve.

-Reading referral: "PHYSIOPATHOLOGY AND TREATMENT OF FUNCTIONAL DISORDERS-Including anxiety states and depression, and the role of biofeedback training", by George Whatmoore, PhD, M.D., and Daniel Coley, M.D., Groom and Stratton.

-GJG is keen on eliminating as much as possible to help the patient's body start anew. If there is a lot of "noise" like trigger points, the body can't hear the normal signals and leads to dysfunction (dysponesis).

-David Van Wych, head of the department of surgery at the University of Arizona College of Medicine, Tucson, Arizona says, "Blood-lymph loop insures a stable tissue environment with efficient lengths to regional and systemic immune defences. When lymph circulation is impaired through lymph blockade or lymph leakage, this environmental pattern deteriorates and immune defences break down." Get the NL, NV, and cranial receptors working, keeping the level of noise below the critical mass in reverse, the body can start to heal itself. The normal self-correcting pattern of the body can do so when the signals of the body are clear.

Nutrition

-On Tape 82 we talked about selenium, electron poisoning, and long term therapy with agents like Poiseplex. Results are coming in on some of GJG's patients. He has found that 200 mcgs. of selenium daily with 200 mcgs. of iodine (trace mineral source) useful (he uses Alleraid). Example- a girl sensitive to cats, 2 units of vitamin E and 5-10 mcgs. of selenium in a product three times daily produced a good response. Generalized muscle weakness could be dehydration, multinutrient loss, but adding a source of selenium and trace mineral from kelp (Alleraid) fixes this. Blood allergy, something in the system that they are sensitive to; many things can neutralize and selenium has been found to be one.

-Rats exposed to lethal doses of ozone died; rats exposed to sublethal doses of ozone did not die, and when re-exposed to lethal doses of ozone, they did not die. They found high amounts of glutathione, glutathione reductase, vitamin E, etc. present in the lung tissue 2-3-4 times normal amounts, (also superoxide dismutase, catalase). This indicates the ability of the body to make a response, however, all the animals died later from neurodegenerative disorders. You rob Peter to pay Paul. The body reacts to petrol chemicals and hydrocarbons, etc. by depleting the tissues of the material that is needed. Refer to Tape 82. Need long term supplementation. Also continue to see the need for longer step during walking so that all corrections you make during the treatment will hold. Be sure to rule

our fixations, especially dorso-lumbar, dorsal, and upper cervical so that the body can be properly detorqued.

-Nutrition Foundation Monograph series, Academic Press, New York, San Francisco, London, 1977:
 -"The Chemical Sensors and Nutrition", by Morley Care and Owen Mallor. A good source to have for why nutrients work on the tongue.

-"Sugars and Nutrition".

-"Protein-Calorie Malnutrition".

-"Trace Elements in Human Health and Disease".

-"Zinc and Copper, Vol. II", 1976.

-"Essential and Toxic Elements", 1976.

-"Sensorineural Endocrine Reflexes and their Anticipatory and Optimum Role on Metabolism", by Stylianos Nicolaidis. "Role of sensory cephalic input is extended beyond the intestinal barrier and acts at the post-absorptive level as well. This theory extends to the cephalic level, the well known intestinal post-absorptive together with the pre-absorptive metabolic action on digestants. Though from the intestinal level a great deal of the message seems to be endocrine, such as gastrin or cholecystokinin. At the oral level the information seems to consist mainly of nervous discharges to which the central nervous system responds with neuroendocrine secretions. Oro-cephalic input seems to modulate the tonus of the response of organs in such a way that the absorbed substrates elicit responses in those organs directly, or through brain receptors which can correspond to the optimum metabolism of the absorbed substrates." There is a relationship between the tongue and different organs and validates what we've been saying.

-"Taste Stimuli and Pancreatic Functions", by Michael Naim and Morley Care. "Suggest that the alimentary tract is not a passive canal in metabolic regulation. There are gustatory metabolic reflexes which are initiated by foods and fluids acting at a peripheral level. Example of these anticipatory metabolic reflexes includes change in respiratory quotient in response to eating, hyperglycemic response to oral stimulation with saccharin or sucrose in hungry rats, the immediate (2-7 second latency) increase sweating by dehydrated human subjects upon drinking fluids, and in hyperhydrated rats the large increase in diuresis upon stimulation of 1-3 ml of water starting within one minute. Conversely, stimulation with 5% sodium chloride seemed to give an immediate inhibition of diuresis. Inhibition of diuresis has been shown by eating solid foods also. In each of these investigations, the physiological responses were extremely rapid, too rapid to be due to post-gestational effects. Post-gestational effects were ruled out on other grounds as well, including the use of the esophageal ligatures, the knowledge that the time required for the metabolism of ingested glucose to carbon dioxide is in the order of hours, not minutes. The metabolic changes produced by oral stimulation were anticipatory in the sense that they preceded but were in the same direction as the changes that had been produced by the substances as a result of the post-absorptive systemic influences."

Diabetes

-"VICTORY OVER DIABETES", William Philpot and Dwight Caleda, Keats Publishing Co., Connecticut. Test patient on foods they ate over the past 4 days, if weak, measure the vitamin C level. It is extraordinary what non-vitamin C foods do to vitamin C levels, whether increased or decreased, indicating mobilization or use of vitamin C. Instead of taking the food away from the patient, put them on a rotation diet pattern about every 4th-5th day. A good source of buffered vitamin C will keep the C in the ascorbic acid pathway rather than the dehydroascorbic acid pathway. Book is highly recommended. Appendix A, page 223 - "It's best to take the temperature via a biofeedback thermometer. The temperature is taken in the finger of the left hand, taken before the meal and periodically after the meal (one hour). If the temperature decreases, it suggests a reaction. If the food is metabolically handled properly, the temperature usually increases a few degrees. The patient eats four meals per day. Three in the office and one at home. A serum insulin spot check is made at a certain food when the blood sugar is high. Three hours later a urine sample is taken and tested for vitamin C, and will often reveal that C is deficient after such a reaction. A spot check is made on blood insulin after a person has reacted to a food with hyperglycemia. If the patient has insulin dependent diabetes, test the first food in the morning before insulin is given and if hyperglycemic reactions to the test food does not occur, or normalization of the blood sugar after the test does occur within a couple of hours, then insulin is not administered." GJG has found that vitamin C and rotation diet and muscle testing helps to drop blood sugar, decrease symp-

toms, and decrease acetic acid, ketones, etc.

-Correct your ICAK listing of Dr. Herbert Anderson's phone number- 617-395-5948.

-Dr. Evan Mladenoff's presentation at the San Diego meeting was very commendable.

Torticollis

-Dr. Gerald Poortinga, thank you for the article: "Postural Laterality, Torticollis, and Torsion Dystonia", by L. Stejskal and Z. Tomanek, JOURNAL OF NEUROLOGY, NEUROSURGERY, AND PSYCHIATRY, 1981, Vol. 44, pages 1029-1034. Work of the Department of Otolaryngology, Charles University, Prague, Czechoslovakia. Study of 63 patients with torticollis and 33 normal subjects. "Torticollis and torsion dystonia may be due to the release of a postural rotational laterality in predisposed subjects and not due to a presumed asymmetric lesion of the brain stem. Stereotyped movements are a striking feature in axial dyskinesias, torsion dystonia, and torticollis, involuntary movement of the head, neck, and trunk, and limbs are repeated in the same plane and the same direction. Another characteristic sign of axial dyskinesia is the rotational asymmetry of the nonvolitional movement. A more or less marked turning movement to the right or left is present in every patient, whereas, flexion, extension, and turning of the head may not always be present. Post-mortem findings contrast with the stereotyped and asymmetric clinical findings. A decreased number of ganglia cells in the cortex, cerebellum, and basal ganglia, mainly in the caudate nucleus and putamen have been reported by many authors. Only two others, Hessler and Deckman describe unilateral cell loss in the left thalamus in the case of predominantly left sided torsion dystonia. (Here's the important part). All other authors were unable to find any pathomorphological changes which could be correlated to the torticollis and torsion dystonia. The question is asked, What is the reason for the stereotyped rotational postures in patients suffering from torticollis and torsion dystonia? Is it possible that a pre-existing rotational laterality is unmasked by the disease? Accordingly, postural and related functions were tested in a group of patients with torticollis and a control group of normal subjects. 63 adult patients, 33 men, 30 women, age between 17 and 57 years from time of onset with mean age of 34.3. 53 had isolated torticollis, 10 had torticollis with dystonic movement of the limbs. These were divided into two groups based on direction of head rotation, L (left rotated) and R (right rotated). There were 33 left and 30 right. Direction of head rotation was determined by fine wire electromyography of the sternocleidomastoid, scalenus, levator scapula, splenius and by photographs from four different standing positions. The objection that the laterality of motor functions could be the result of, and not the reason for, the asymmetric involuntary posture was irrelevant because not only patients with marked dyskinesia were tested (54%), but also those who had partially or completely recovered. Laterality of the hand was tested by 16 maneuvers. The laterality of the auditory system was tested by means of a dichotic listening test in which 20 pairs of 3 digit figures were synchronously delivered to both ears to determine a dominant ear. For vestibular function, the duration, total amplitude, and maximum velocity of a low phase of caloric nystagmus elicited by the technique of Fitzgerald and Halpike were registered by means of electronystagography in total darkness without a fixation point. The electronystagography was only elicited by cold water of 20 degrees C. This was suitable for statistical evaluation of all cases. No difference in hand laterality was observed between the torticollis, left and right groups, and normal subjects. There was no correlation between dominant hand and the direction of torticollis. 92% of the subjects were right handed. No difference in ear laterality was noted between the two torticollis groups and the normal subjects. There was no correlation between the predominant ear and the torticollis. The right ear was dominant in 73% of the subjects. Nystagmus elicited by cold water was exaggerated bilaterally in both groups turning right and left, exceeding the mean values by 15-70% of the total amplitude. Nystagmus elicited by cold water in both torticollis groups was asymmetric. Nystagmus with the slow phase in the direction of head rotation was of longer duration, greater amplitude, and higher velocity. There is a correlation between the greater nystagmus and the torticollis. The direction of the nystagmus asymmetry was the same in all 20 patients reexamined, the slow phase being constant with the direction of the torticollis. In walking, standing, and squatting, there was a greater tendency to turn left in the left

torticollis group than in the normals. There is a correlation between preferred direction and the direction of the torticollis. Concluded that both laterality of seizures and motor stereotypes was based on a predominant asymmetry of postural functions. This was found in a repetitive walking pattern of dogs, foxes, dingos, and wolves. Data suggests that in man there also exists a postural asymmetry laterality of rotational motor stereotypes."

-A predisposition for turning to the left prevails. In radiographs of the occipital condyles and C1, Jirout found a symmetrical position in 30% of healthy subjects. In other words, the external occipital protuberance and C1 central lamina position were aligned. 57% had condyle deviation to the right with head rotation left, 13% had left condyle deviation. EMG studies show a prevalence of activity in the left semispinalis neck movers in right handed standing subjects.

-With the patient lying supine, ask the patient to watch the numbers as you pull the tape of a tape measure. This produces a nystagmus flick. Hold the tape measure in your right hand in line with the patient's nose, and pull the tape to the patient's right with your left hand. This will uncover weakness in TS Line indicators that would not appear weak or may improve TL of a particular area. A high percentage in GJG's practice show a pattern to the right. A small percentage show a left pattern. About 30% show no apparent difference left to right.

-This nystagmus technique can help uncover hidden gait patterns, dural torque, and torsional dystonias.

-In dural torque, if you suspect a Category I and get a negative TL, by letting one leg slide over the side of the table, this will give a positive TL. This approach can be abbreviated by simply using the TL with one palm up and the other down on the sacroiliac joint. There is 100% correlation between findings using both these methods due to the positive and negative sidedness of the front and back of the body. The right dorsum is negative and the left dorsum is positive. The TL shows one side being either too negative or too positive. This is also the basis behind nutritional responses on right and left lingual tests.

-Use of nystagmus technique makes TL much more effective. In cases of strain/counterstrain, use of nystagmus saves the need to put the suspected muscle into maximal contraction, thereby saving time.

-Most patients cannot voluntarily flick their eyes to produce the desired nystagmus.

-According to Jirout, 70% of subjects showed a pattern with 100% showing dystonia or torticollis in the same direction as the eye laterality. This says that these people are "screwed up" too much or too little as far as their torque patterns.

-In patients not responding to usual dural torque therapy, nystagmus helps to uncover additional basic hidden treatment needs, i.e. prolonged neurolymphatic stimulation.

-Tennis balls placed behind the occiput (per Upledger, CRANIOSACRAL THERAPY) with the patient resting will negate any of the previous dural torque indicators, i.e. toe turn in. (CRANIOSACRAL THERAPY, Upledger et al, Eastland Press, Appendix F).

-Salk Institute research continues to show right nostril breathing activates left brain and vice versa. This controls ionization and is also related to the universal cranial fault.

-The interrelation between dural torque, postural laterality, cranial faults, and other related factors may seem tangled, but they are all concerned in the management of problem patients.

Strain/Counterstrain

-Fundikoshi and Omura, two Japanese researchers did research on decerebrate labyrinthectomized cats. By moving the head through tilting and rotation they observed EMG increases in jaw muscle activity. This suggests a strong relation between the jaw muscles and neck muscles with the tonic neck reflexes associated directly with the jaw muscles.

-Sternocleidomastoid and trapezius have a dual nerve supply which is important in gait. The sternocleidomastoid should test normal standing, but should weaken on the left when the left foot is forward and bearing weight, and consequently the right sternocleidomastoid should weaken because the left sternocleidomastoid should be "on". Both muscles cannot be "on" at the same time.

-There should therefore be a relationship between gait positions and jaw muscle activity.

-Wet finger TL and palpation of the medial pterygoid showed high number of patients with pain on one

side greater than the other.

-Three possible sore spots on the medial pterygoid; upper, middle and lower. The sorest of the three is selected.

-The external pterygoid is more difficult to palpate, but can be reached by insertion of the little finger into the pterygoid pocket to again locate the sorest of the three spots. The patient is then asked to advance the left leg and right arm and then the reverse, right leg and left arm, and there will be an increase in palpatory pain with one of those gait positions. This indicates correlation between jaw muscle activity and walking.

-Jaw muscles usually more sore on the side with poor toe turn in. There is definite connection between the jaw muscles and dural torque.

-TMJ TL was usually negative with this procedure except when a strong tugging footward traction of the skin on clenching of the teeth. This was neutralized by TL to the TMJ neurolymphatic at the second, third and fourth intercostal spaces anteriorly and posteriorly between the intertransverse processes. Treatment of these points did not change pain, however. Wondered if strain/counterstrain was involved.

-Establish a range of motion, for example, thigh abduction is usually 90-95 degrees on the average patient. Note this point and have the patient observe maximum point of motion prior to treatment.

-Locate the sorest spot on the medial pterygoid and place the patient's head into forced flexion and usually lateral flexion until 95-98% of the pain is reduced. Hold this position for about 90 seconds (20 patient respirations) with strain/counterstrain on the sore spot. Slowly return the head from the flexed position. Pain at the sore spot should be gone. Check opposite pterygoid for any change.

-There should be a 30 degree increase in the prior established range of motion.

-“Frozen shoulder” will show an increased motion. Changes in motion range and joint pains have been phenomenal.

-NL activity may be required if pain is not relieved.

-A strong correlation exists between the above correction and recurring dural torque. This does exactly what the tennis balls do, takes out the jamming of the suture by releasing the “on again, off again” relationship of the pterygoids to the pterygoid plate. This is the reason for continuing patient instruction for the longer step and necessity of tennis balls for five minute, three times a day.

-Nystagmus pattern allows diagnosis much more readily and allows recheck against the other five factors.

-Case Study: Patient with both catalepsy and narcolepsy. Initial exam showed weak quadriceps strengthened by NL activity. Also evidence of stress receptors and inducement by gait. She improved slowly but when nystagmus pattern to the right was used, the original quadriceps weakness returned which indicated that the NL had not been treated long enough. This shows a system of determining how long to treat NL, NV, and cranial technique, as well as an aid in locating problems on patients that don't TL easily.

-Symptoms caused by gait configurations/patterns can be abolished by rest. By using self-induced nystagmus, the symptoms can quickly be reproduced without walking.

-If a muscle is suspected of requiring strain/counterstrain, i.e. psoas strong in the clear, by inducing nystagmus the muscle will become very weak.

Holographic Subluxation

-Reading referral, “SPECIFIC MAJORS IN CHIROPRACTIC”, by Dr. Harry Nemiroff, New York, 1955.

-Volume 1 discusses arthritis, rheumatism, sciatica, sacroiliac pain, arm neuritis, and bursitis in observation of a sideslip.

-Idea of adjusting L5 on the right or left based on the painful transverse process which was ordinarily on the long leg, low buttock side (with the patient prone).

-Long left leg and low left buttock adjusted the L5 right posterior. Long right leg and low right buttock required a L5 left posterior adjustment.

-Recurring L5 disturbance was usually symptomatic of a lack of iron or aerobic faults in the muscles.

-GJG never exactly understood what Nemiroff meant by “spinous process bent” until holographic tech-

nique. Nerniroff (and B.J. Palmer) often talked of adjusting the spinous process.

-In patients who represented 30% of Jirout's x-ray studies, with the external occipital protuberance and C1 lined up, those patients would show a dural torque pattern, but instead of the subluxation or fixation occurring, the muscles simply pull on an intact segmental relationship, and this produces the holographic pattern. On the 70% fraction there are subluxations and fixations.

-A L5 subluxation will often not show in the clear. TL the spinous with one hand and the transverse process right or left with the other hand. When this is done during nystagmus, a high percentage will TL positive.

-Challenge holographically, pressing the L5 spinous and transverse together or apart and adjust accordingly in the direction causing weakness with the phase of respiration abolishing the weakness. GJG adjusts the L5 spinous with one thrust and the transverse with the other thrust. GJG can do it spontaneously and simultaneously in the cervical region, but not the lumbar region.

-Will find a higher incidence of TL with nystagmus, especially in difficult cases.

-Females with hot flashes will have a high percentage with L4 spinous bent to the left. TL both the right and left transverse against the spinous. By adding nystagmus you will increase your positive findings and the adjustment abolishes the hot flashes better than anything GJG has done nutritionally.

-Nutritional for hot flashes is based on adrenal insufficiency and iodine.

-A high right gluteal fold (buttock) with a right long leg generally indicates a T5 (D5) right spinous. The left gluteal fold superior with a left long leg indicates a T5 spinous left. Adjust accordingly.

-Evidence of torque pattern existence is very high and GJG is sure that under some conditions the vertebra subluxates and under others it simply bends the spinous.

-Reading referral, JOURNAL OF EXPERIMENTAL CHILD PSYCHOLOGY, Vol. 4, 1966. Original work from "Head Turning in the Human Neonate, Spontaneous Pattern", JOURNAL OF GENETIC PSYCHOLOGY, 1965, by Gerald Turkowitz, Edward Gordon, and Herbert Birch, Albert Einstein College of Medicine, Pediatrics Dept., Yeshiva University. Article dealt with newborn head position, turning, and lateralization of the neonate. Certainly a pattern exists for head turning and we are all turned in one direction or the other.

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Nemiroff Holographic Patterns

-“SPECIFIC MAJORS IN CHIROPRACTIC”, two texts, by Dr. Harry Nemiroff, 1485 East 172 St., Bronx, New York. He advocated that there was a troublesome sideslip in the body. He measured the length of the limb of the prone patient to determine if the right or left leg was long. He would also measure the gluteal folds. If the left gluteal fold was lower than the right, and if the left leg was longer, he postulated that L5 would be right posterior with pain over the right transverse process. This is general; there are many things that affect gluteal folds and leg length, but it would make changes in leg length. This is similar to DeJarnette's blocking of the Category III. 1983 SOT Manual “In Category I, the short leg block is through the acetabulum. The short leg block for the Category III is oblique because we are dealing with a pelvis that is locked on one side, and that is usually the short leg side.” When applying the concept of holography, there was a very high correlation of L5 on the right with a long left leg and a low left gluteal fold. Instead of L5 right posterior, it was L5 on the right either spinous and transverse separated or approximated determined via challenge. Most common is separation. Same for a right long leg and right lower buttock which indicates L5 on the left, mostly holographic.

-For hot flashes, try adjusting L4 spinous from left to right. Nemiroff thought the spinous was bent. The reason why the spinouses are bent is because the transverse and spinous being somewhat plastic in living bone would be pressed together or pulled apart, thereby changing the holographic resonance factor.

-Previously, an adjustment would alleviate patients symptoms, but pre- and post-treatment x-rays show the same or sometimes worsened abnormality.

-Nemiroff postulates that if the right gluteal fold is high and the right leg is long, this is T5 right spinous bent. GJG has found that T5 right separation of the spinous and transverse is a high correlation. This follows general meric concept, the patient may have digestive upsets. Sometimes it is T6.

-Nemiroff has found if the leg lengths are equal, but the left buttock was lower, this represents Sacral 1 (S1) left. (Some people feel that there is limited motion between the sacral segments). Positive TL with the left hand on the left side of the sacrum and the right hand on the spinous. Challenge by separation and approximation, and adjust as per challenge with a sharp thrust.

-If both gluteal lines are even, but one leg is longer, i.e. right long leg, this indicates L5 is inferior on the right and S1 is superior on the left. Challenge to L5 right inferior or S1 left superior separately won't show. TL L5 spinous and S1 on the left together. Challenge simultaneously, down on S1 and up on L5 transverse. L5 and the sacrum are fixed and moving together.

-A list of specific symptoms with associated holographic levels is available.

-A patient with a blocked nose with nasal breathing on one side, associated with small intestine and its NL reflex. Use a mirror and have the patient breathe out through the nose with the mouth closed and a frosted area shows where the warm air comes out. See a change in shape of the frosted area when there is blockage. Nemiroff finds C5 spinous bent to the right regardless of the side of blockage. (GJG noted in 1955 that adjusting C5 on the sorest lamina would help drainage.) Usually adjust the spinous from right to left and the transverse from left to right holographically. Helps to increase the frosted area on the mirror.

-“Nervous bladder” is where the patient needs to urinate frequently, as often as every half hour. Volume is not great, no signs of cystitis, and the urine is negative for inflammation. L2 spinous bent to the right, holographic is usually on the right and spreading of the spinous and transverse.

Strain/Counterstrain

-Palpation of the internal pterygoid muscle is done by a gloved little finger between the teeth and up into

pterygoid pocket. Use 2-4 pounds of pressure and check for the most painful point. Find the most tender internal or external pterygoid. This represents jamming of the normal sphenobasilar symphysis potential for movement. The pterygoid muscles are active during gait. It is GJG's impression that the pterygoid goes on at the same time the arm goes forward during gait. After eliciting pain, have the patient go into a gait configuration and a lot of patients will show a change in the palpatory pain. Some people can't detect a change in pain threshold very well. Again, elicit the pain, then put the patient's head into forceful flexion and elicit the pain response reduced to at least 90%. May need some rotation or lateral flexion. Prior to strain/counterstrain of the pterygoid, do a particular range of motion, i.e. leg abduction (90 degrees), and after strain/counterstrain, it will increase by about 20 degrees, or infraspinatus relaxation state by having the patient put their right hand behind their head and touch the left cheek and vice-versa, will increase after strain/counterstrain.

-Noted on a patient while doing external pterygoid strain/counterstrain, the patient took a deep breath and the pain stopped, but when he exhaled the pain returned. The patient is put into flexion for anterior muscles, extension for posterior muscles; this is explained by movement of the occiput on C1 and all the spinous processes of the cervicals move inferiorly with inspiration, and superiorly with expiration. The neutral setpoint between inspiration and expiration is not neutral, but in flexion or extension. When the patient is put into flexion and holds inspiration, it takes them out of extension, and vice-versa. Identify by finding a strain/counterstrain muscle need; then find if inspiration or expiration negates the maximal contraction weakness. Then use strain/counterstrain and use inspiration if flexion, or expiration if extension. Exception is piriformis and the upper three posterior cervicals which respond better with flexion. Inspiration/expiration with strain/counterstrain will shorten the time of 30 seconds needed. (Dr. Dan Duffy should appreciate this!).

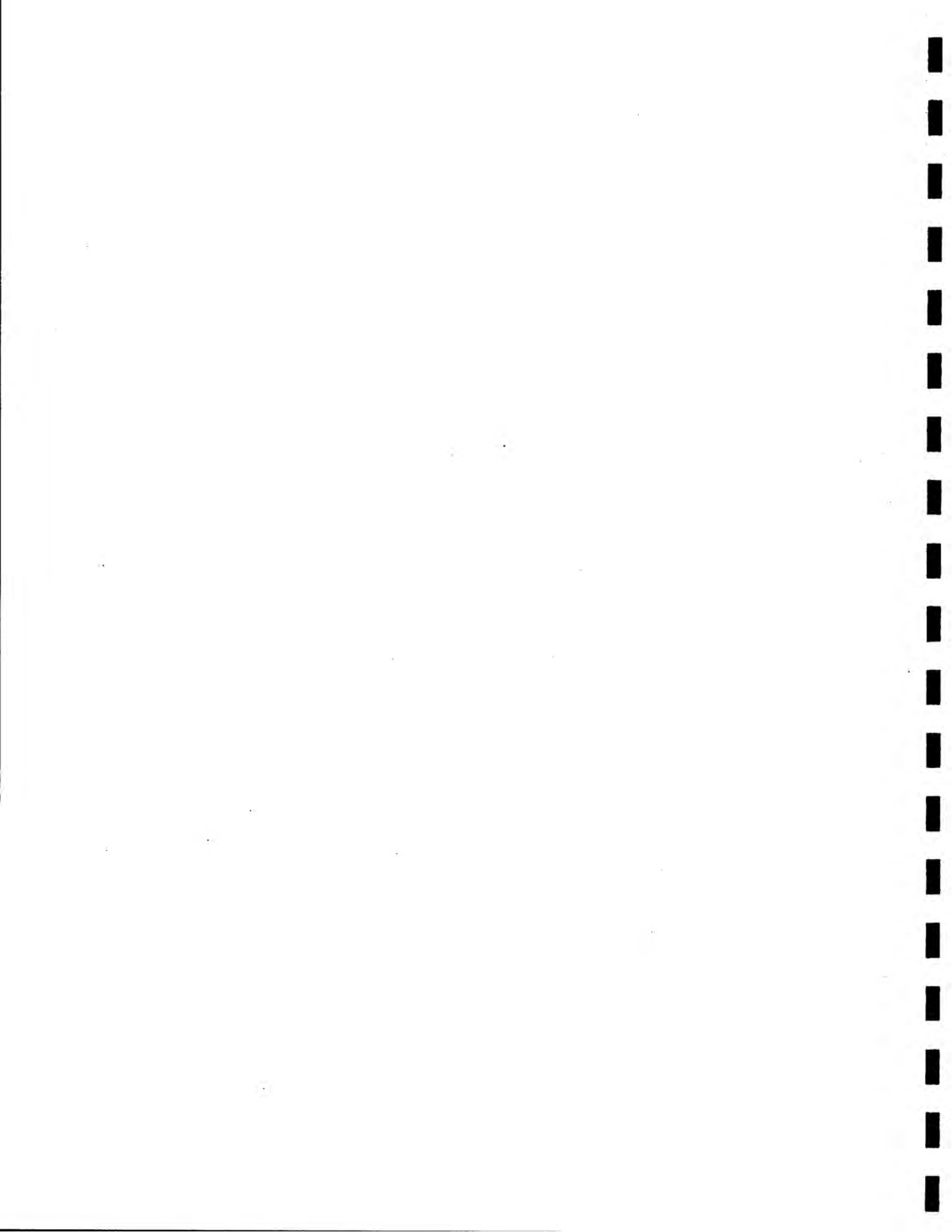
-Upper cervical fixations are still prevalent, but putting the head into extreme flexion or extension can uncover subclinical bilateral gluteus maximus weakness. Then see if inspiration or expiration negates the bilateral gluteus maximus weakness. Usually with flexion, inspiration negates, and extension, expiration negates. Adjust the upper cervical fixation as usual, but have the patient use the phase of respiration that negated the weakness at the time of the adjustment. This can also be applied to a bilateral gluteus maximus weakness in the clear without head in flexion or extension.

-Internal or external pterygoid strain/counterstrain is the upper half of dural torque with the pelvis being the lower half. This is correlated with a high degree of upper cervical fixations due to the tonic neck reflexes and the jaw (in decerebrate animals, when the head is moved, the jaw moves; however, when the first three cervical nerves are cut, the jaws do not move indicating a relationship between the jaw and neck muscles.)

-From "OCCLUSION AND FUNCTION", by Peter Neff, D.D.S. "The lateral pterygoid has the origin of the superior head at the inferotemporal surface of the greater wing of the sphenoid, and the inferior head at the lateral surface of the lateral pterygoid plate. Both insert on the anterior position of the condylar neck and temporomandibular joint capsule. The medial pterygoid originates from the medial surface of the lateral pterygoid plate and pyramidal process of the palatine bone and maxillary tuberosity. The insertion is on the posterior lower portion of the medial surface of the ramus and the angle of the mandible." Both muscles therefore attach to cranial bones which move with respiration. If one side is not functioning, respiration continues to jam it. This may be responsible for ongoing cranial corrections needed, or a "retracing" factor.

-Dental Clinics of America, July 1983, "THE TEMPOROMANDIBULAR JOINT DYSFUNCTION AND TREATMENT", by Eric Paul Shaber, D.D.S. "Facial pain can be characterized as neuritic, vascular, or muscular. Neuritic accounts for 2%, vascular for 8-10%, and muscular (or more accurately myofascial pain) for 80-90% of pain perceived that is in our own particular professional area of responsibility. Huxley laid the foundation about skeletal muscle kinetics. Myosin, the thick filament, which has at its periphery small sperm-like ATP-splitting heads. These myosin heads interact with the smaller actin filament splitting ATP, thereby creating movement, ultimately work. This is a simplistic schematization, in actuality, the entire myosin-actin complex has been characterized as the myofibrillar contractile system and is composed of five essential components, and these are the things that are important. The contractile proteins, which are basically actin and myosin, the regulatory proteins, the sarcoplasmic reticulum (SR), calcium, and ATP. The contractile proteins are the thin actin filaments and the thick myosin filaments, and actin and myosin in complex are able to hydrolyze ATP, thereby acting as ATPase, releasing high energy particles.

Recent literature teaches us that if purified actin and purified myosin were placed together in a single beaker, one would see the production of heat. This is a unique and highly unusual biochemical response, therefore, one might ask if actin and myosin in a complex together can create heat and movement, why does not our muscular system continue to fasciculate because of actin-myosin complexing. The answer lies with the secondary component of the myofibrillar contractile system, the regulatory proteins. The regulatory proteins, the contractile inhibitory troponin (CIT) and tropomyosin prevent constant muscular fasciculation from occurring. Simply stated, the regulatory proteins act as an inhibitory force associated with the actin filament that prevents the myosin head from interacting with its actin linkage, therefore preventing aberrant muscular movement. The regulatory proteins in complex recognize calcium as the signal to allow actin and myosin complex and to initiate contraction. Calcium is stored in a delicate intramuscular membrane called the sarcoplasmic reticulum (SR) and acts as the eliminator of the inhibition caused by the regulatory proteins, thereby allowing subsequent muscular depolarization. It's important to note that calcium is not an activator of muscular contraction. Calcium acts by releasing the inhibitory function of the processes regulated by the tropomyosin and troponin. With the contractile proteins, regulatory proteins, SR, and calcium, one is ready to perform mechanical-chemical transduction; that is work. All that is necessary for the machine to operate now is the addition of fuel which is ATP, the energy currency of the body. It's the facilitator of enzymatic reactions in all systems of the body. The addition of ATP allows the muscular system to operate allowing the myosin head to react with actin forming contraction. Just as importantly, the addition of ATP allows muscles to relax. It requires just as much ATP to relax a muscle as it is to contract a muscle. The following remarks are hypothetical: we know that ATP is necessary for contraction of actin and myosin. Conversely, we know that ATP is necessary for relaxation of contractile protein. Prolonged or sustained muscular contraction will cause a disruption of the delicate SR. This disruption will in turn cause the release of the free calcium ions that are stored within. These excessive free calcium ions will remove the regulatory protein's inhibitory process on the contractile proteins, yielding actin-myosin complexing and causing muscular shortening which is called Calcium Excess Shortening. This may explain the tense fiber found in the absence of action potentials. This now shortened muscle or muscle fiber will by necessity experience an increase in metabolic demands due to the fact that there are more actin in complex with more myosin. These additional metabolic demands will cause a depletion of ATP. This may be thought of as muscular fatigue. This depletion of ATP or muscular fatigue will intensify the actin-myosin binding. This is called ATP Depletion Shortening. At this point, actin and myosin are bound by two discreet processes, the release of free calcium by the SR and actin-myosin being bound due to the depletion of ATP preventing contractile protein disassociation. This actin-myosin complexing will cause a mechanical interruption of blood flow through this area of biochemical derangement, and this area of blood flow restriction is called vasoconstriction. Vasoconstriction by definition will cause a decrease of oxygen coursing through the muscular fibers that are affected, shifting to anaerobic metabolism. Anaerobic metabolism leads to decreased pH and accumulation of nocogenic and spasmogenic by-products called the biogenic amines. They sometimes use valium to get rid of biogenic amines. These noxious cellular metabolites cause the activation of Group 3 and 4 muscle nociceptor fibers that in turn cause pain. This pain and further exaggerated central response reflex phenomenon creates increased accumulation of biogenic amines and intensified vasoconstriction. (This may explain the localized twitch response (Travell) and the jump sign, as well as maximal contraction muscle weakness). In addition, this intensified vasoconstriction of a central origin coupled with a mechanical origin will cause the ultimate inactivation of ATP-dependent calcium pump, impossible for the muscle fiber to reabsorb the free calcium ions back into the SR, therefore, a three stage causal etiology can be postulated; 1. calcium pump inactivation, 2. ATP depletion, and 3. increased free calcium from the SR creating a vicious, deteriorative biochemical cycle. This constant biochemical cycle will then result in the production of spasmogenic agents, biogenic amines, while decreasing the efficiency of the cells to produce high energy compounds (ATP) that can facilitate muscular relaxation. When muscles are pathologically shortened and painful, and it is concomitant inability for the host organism to accommodate, overt disease occurs. In the region of the TMJ, this muscular pathology can and does create postural disorders. Guarding homeostatic problems then force the patient to hold the jaw in an abnormal position in order to not be painful. This obviously creates the framework for malocclusion problems, chronic mandibular excursive disorders, and possible discal internal derangements."



DR. GOODHEART'S RESEARCH TAPES

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Candida Albicans

- Orlan Truss, a physician in the south, has written much about Candida Albicans (CA) and general practice.
- Most usual medical approach is anti-fungal agent Nystatin and avoid yeast products.
- Schroedinger has mentioned about the use of selenium. "BIOLOGY IN MEDICINE", by Schroedinger, 1981. When white blood cells are made deficient in selenium they are attacked by CA. Many agents which promote immunity are basically used to prevent lipid peroxidation.
- Symptoms can be depression, anxiety, irritability, lethargy, heartburn, indigestion, food allergies, acne, headaches, recurring genitourinary infections, premenstrual problems.
- Jeffrey Bland, nutritional biochemist, praises the work of Truss in Alabama for his observation of CA proliferation in the gastrointestinal tract after antibiotic and oral contraceptives.
- Dietary supplement found useful is 200-400 mcg. of selenium per day with 200 mg. of trace minerals. Alleraid is a mineral/iodine source. Alleraid is available from Allergy Research Group, Concord, CA. Alleraid and Electron Poisoning substance is recommended as the regime.
- Easier to bolster immune mechanism rather than eliminate yeast foods or enlist a rigid dietary restriction.
- 5% boric acid ointment for local mucous membrane problems 2-3 times per day.
- Dr. Gerald Poortinga is responsible for much CA background information.
- ARCHIVES OF DERMATOLOGY, Vol. 84, 1964. A simple fungus stain procedure.
- "Treatment of Vulvovaginal Candidiasis with Boric Acid", by Suvate and Weed, OBSTETRICS AND GYNECOLOGY, Vol.43, No. 6, June 1974. Reprints available from GJG's office.
- Superoxide dismutase added to selenium and mineral regime is also helpful.
- Wally Schmitt has a paper on CA treatment in the Collected Papers.
- The optimum selenium level should not exceed 400 mcg.
- Alleraid can be obtained from the Allergy Research Group, Dr. Steven Levine, 2336 C Stanwell Circle, Concord, CA 94524, 415-685-1228.

Strain/Counterstrain

- Some patients require treatment with both flexion and extension. Generally, pain on the posterior requires putting the patient into extension, and anterior pain requires flexion.
- The objective is to put the muscle into passive shortening.
- The exception is the first three cervicals which should be flexed while treating and the piriformis should have the leg put into flexion rather than extension.
- The patient takes a deep breath and holds the breath while in flexion, and holds out expiration during extension. This facilitates correction.
- The vertebral setpoint of the spinous process moves inferior with inspiration, superiorly with expiration. The neutral setpoint of the vertebra should correspond mechanically to the neutral setpoint of respiration. When the respiratory and vertebral setpoints are asynchronous, the body tries to move the vertebra either up or down to coincide with the respiration.
- Lowell Ward, Spinal Stressology, discusses the body overreacting or underreacting to a spinal problem. His newer concepts seem to correspond with AK approach to strain/counterstrain.
- Gary Klepper's article relates to meningeal stress. Filum terminale attaching to the coccyx acts as a "take up" mechanism to regulate spinal cord length. Without this mechanism there is a meningeal compression within the skull. Ward has a procedure to correct this.

-Replacement of the coccyx back into proper position will produce height changes of $\frac{1}{4}$ - $\frac{1}{2}$ inch. The coccyx should be balanced against the five factors and treated with strain/counterstrain. Check fascial flush.

-Paracoccygeal muscles are the levator ani and coccygeus. Use the response of the body to strain/counterstrain or fascial flush. Recheck against TL to the stress center.

-Lowell Ward says, "When you have a pelvic defense decrease, there is a synchronous decrease in the primary curve. Secondary curve, which is like an overdefense, increases. Patient becomes sick or disabled from the overdefense or overreaction, rather than a defense breakdown. The reason for this hyperelongation is that it decreases the compression on the brain. Radiographically, further proof can be seen by an increased opacity differential in the trapezius at shoulder level. Increased density means possible compression of the brainstem and cranial nerves. Cross-check this by palpation of the muscles, sitting and standing."

-Upper cervical fixations often uncovered by head flexion or extension.

-Also check dural torque. Untorque patient from the bottom using gait procedures and from the top down by upper cervical fixation and balancing the pterygoids.

-Tonic neck reflexes are related to the jaw muscles. Nomura's research (Tape 85) with labyrinthectomized animals showed electromyographically measured activity of the jaw muscles with head movement. When severing the first three cervical spinal nerves of the animal the muscle activity ceased. This is the basis for the patient to detorque themselves.

-"Postural Laterality and Torticollis and Torsion Dystonia", by Stejkal and Tomanek, JOURNAL OF NEUROLOGY, NEUROSURGERY, AND PSYCHIATRY, 1981. "Data is available to suggest that in healthy men there are found to exist a postural asymmetry laterality and rotational motor stereotype. A predisposition for turning to the left prevails. Radiographs of occipital condyles and atlas, Jirout found a symmetrical position in 30% of healthy subjects, but in 57% the condyles were deviated to the right (head rotated to the left), and 13% the condyles deviated to the left (head rotated to the right). EMG studies show prevalence of the left semispinalis neck muscles which are prime movers of the head in right handed standing subjects."

-DIGEST OF CHIROPRACTIC ECONOMICS, Jan.-Feb., 1984. Jirout discusses vertebral synkinesias which are tiny movements supporting the main kinetic movement. The study concerned with the craniocervical junction and lateral inclination of the head and neck. Dislocation of the occiput on atlas to the opposite side resulting from levering in the base of the skull can be seen in most cases of lateral inclination of the head/neck. This should not be interpreted as a dislocation of the atlas to the side of inclination. Rather the head must be manipulated on the atlas and not inversely. Rotation between occiput and atlas exists in maximum forced rotation and also atlas rotates as part of lateral inclination mechanism of the head and neck.

-Rotation is most frequent to the side opposite the inclination as a result of sternocleidomastoid contraction during initiation of lateral inclination.

-A synkinetic axis rotation toward the inclination concurrently takes place with atlas rotation. About 20% of radiographs show no axis rotation.

-This axis rotational synkinesis is most probably due to traction of the lateral cervical group of muscles, rectus capitis, dorsalis major, obliquus atlantis, rectus capitis posticus major, superior and inferior obliques.

-Synkinesis takes place in two phases:

1. Axis moves immediately at the beginning of lateral head inclination, moving on C3. C2 and C3 facets in close contact and rotation is symmetrical about a midline axis. C3 tilt is in sagittal, horizontal, and frontal planes. In this phase the transverse direction is unchanged in the relationship between atlas and axis. At a given point unilateral traction of the cervical muscles occurs with vigorous traction causing further rotation of C2 around an asymmetrical axis located approximately in the region of the articular process of the opposite side, namely the side from which the inclination occurs.

2. In this phase a medial dislocation of axis facet occurs beneath atlas on the inclination side, while on the opposite side the structures remain aligned. If the synkinesis is adequate, shift of the axis can be seen bilaterally.

-If the head is tilted sharply down on right, the spinous process of axis, and many times atlas, rotates toward the side of the tilt according to Jirout.

-German publication, Department of Neuroradiology and Neurological Clinic, Charles University, Prague.

Czechoslovakia. Jirout: Reaction of the lower cervical vertebrae to movements of the head is discussed. If the head is tilted back, the spinous processes should approximate and should distance with the head bent forward. "We further tried to deliberately suppress the action of this traction component. It seemed natural that this cranial traction and resultant ventral tilting of the vertebrae could be accentuated by antiflexion of the head where difference between the external occipital protuberance and lower cervical spinous processes is increased. When the head is retroflexed, slackening of the ligament and decrease in ventral tilting might be expected. Surprisingly the effect was just the reverse. Retroflexion of the head was associated with ventral tilting of the vertebrae (upward). This occurred in 67 cases in all cervical vertebrae or at least C5-C7. Of these, C2 and C7 were tilted in 44 cases with C5 and C7 tilted in 23 cases. Dorsal (downward) tilting was seen between C2 and C4. These findings were exactly the same in sitting and recumbency. Dorsal tilting usually occurred with antiflexion of the head. 62 cases showed this dorsal tilting at least between C5 and C7. Dorsal tilting of C2 and C7 occurred in 32 cases while 30 cases C2, C5, and C7 tilting occurred with no tilting between C2 and C4. 53 cases showed dorsal tilting at the first thoracic vertebra also, both sitting and recumbent. This patterning probably has to do with tension of the nuchal ligament."

-Posterior portion of the nuchal ligament passes only from the external occipital protuberance to the spinous process of the lower cervical vertebrae (C6-7). The anterior portion connects from the median nuchal line and anterior occipital bone to the spinous processes of the cervical vertebrae and the posterior nuchal band.

-With retroflexion, posterior nuchal ligament becomes relaxed while the anterior portion becomes stretched, causing the ventral tilt of the lower cervical vertebrae.

-Antiflexion causes anterior portion relaxation, with dorsal levering at the base of the skull. Caudal traction of the upper thoracic spine is released causing a reduction in tilt in the lower thoracic vertebrae.

-Maximal vertebral tilting at the C5 vertebra with retroflexion seems to support this concept.

-The above is rationale for flexion of the upper cervicals while treating with the strain/counterstrain technique while the lower cervical (nuchal ligament area) is treated with extension.

-If an upper cervical fixation does not show with neutral head position, put the head into flexion or extension to uncover the bilateral gluteus maximus weakness. There is a respiratory factor with inspiration/expiration neutralizing the muscle weakness. GJG usually finds inspiration.

-Also check pitch, roll, yaw, and tilt, and TMJ/medial pterygoid.

-Acute pain patterns are responding well to strain/counterstrain and holographic correction with a higher yield on pain reduction.

-Any area adjusted mechanically should be adjusted holographically, i.e. upper cervical fixation.

-Occipital faults should be checked holographically.

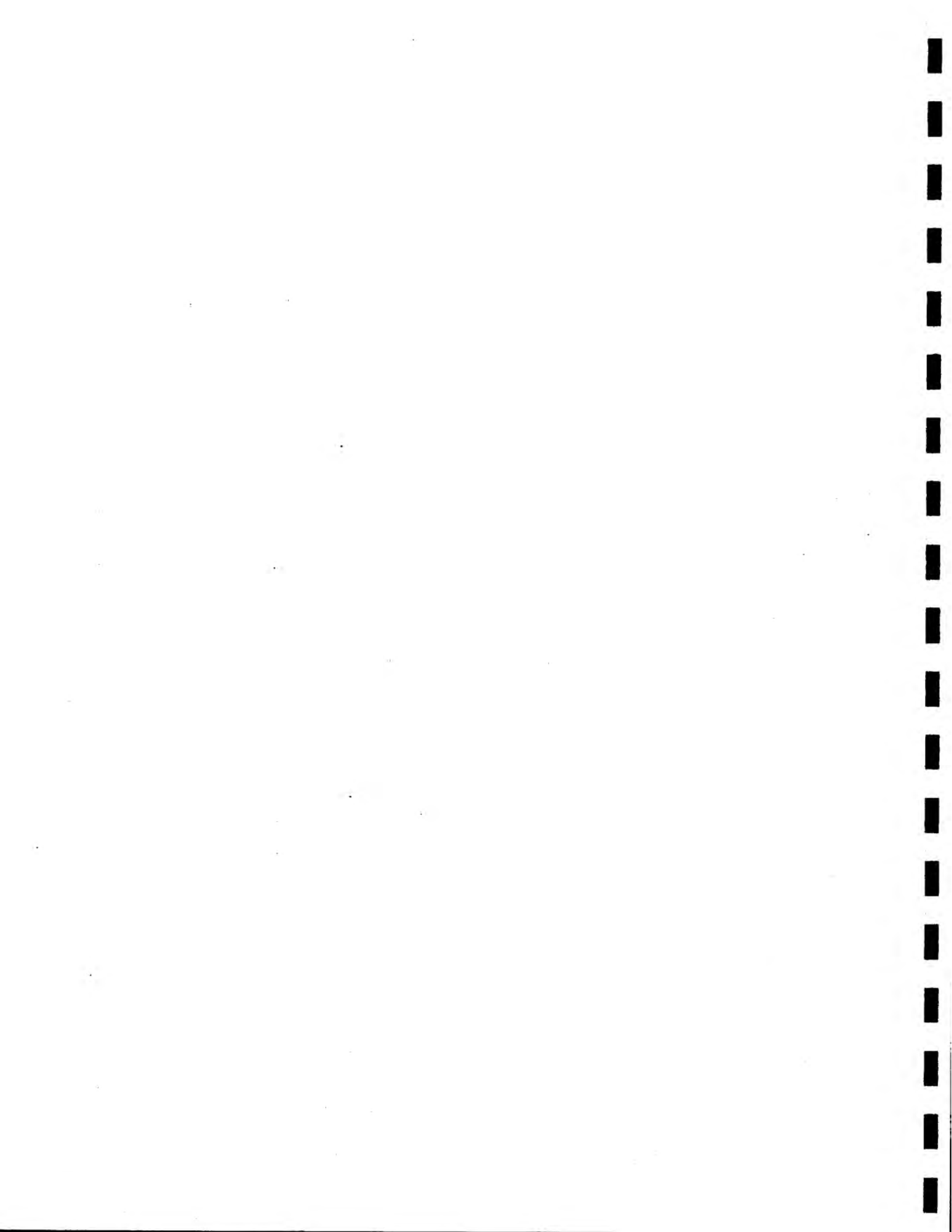
-Years ago, discovered that on 14x36 full spine X-rays that vertebral segments at the ends of long curves would not move and hence the concept of fixations; adjusting more than one vertebrae at a time (Vladoff technique).

-Muscles move vertebrae. Whenever a muscle is in dysfunction due to trauma, infection, etc., all it usually wants is to go back where it came from. When this is done through various factors, spindle cell, etc., and combined with holographic analysis, efficiency of postural correction and relief of pain is increased.

-In the thoracics it may be necessary to simply challenge for holographic since it is difficult to TL. Check with respiration. A large number found with inspiration.

-Jirout material can be requested from GJG's office.

-"Subluxation Specific, Adjustment Specific", by Donald McDowell, AUSTRALIAN CHIROPRACTIC ASSOCIATION JOURNAL, Vol. 13, No. 1, April, 1983. McDowell quotes B.J. Palmer as "subluxations are produced when muscles are caught relaxed and unprepared for an emergency situation. The same accident occurring to muscles contracted would not produce a subluxation." (Excerpt from B.J. Palmer, "SUBLUXATION SPECIFIC, ADJUSTMENT SPECIFIC", 1934).



DR. GOODHEART'S RESEARCH TAPES

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Neurotransmitters

-Fredrick Workman, a neuroendocrinologist, Massachusetts Institute of Technology in Cambridge has studied the role of nutrients in the synthesis of neurotransmitters (NT). NT are manufactured at the nerve terminal and uses a specific nutrient as a precursor. NT are released and pass on information across the synapse to other neurons, muscles, or secretory cells.

-The 1982 Manual talks of tryptophane and tyrosine and levels of serotonin, catecholamines, and acetylcholine. There are 34 known NT available in the spinal cord and brain.

-Workman tried to increase the levels of serotonin and tryptophane in the brain by giving rats proteins rich in amino acids including tryptophane. To their surprise, the levels of serotonin and tryptophane decreased. Paradoxically, the meal that enhanced serotonin production was the meal that lacked tryptophane entirely.

-Carbohydrate meal causes insulin secretion which coerces all the amino acids from the blood, but leaves tryptophane alone since it binds protein albumin in the bloodstream. It then increases the ratio of tryptophane to other amino acids, thereby improving the opportunity for tryptophane to get into the brain.

-SCIENCE NEWS, April 7, 1984, Vol. 125, "Food For Mind and Mood", by S. Ricebird. Talks about tyrosine yielding serotonin, dopamine, norepinephrine, and epinephrine. Lecithin phosphatidyl choline yields choline, and through cholinesterase you get acetylcholine. Acetylcholine goes into the synapse, transmits a signal to another neuron and then is broken down by acetylcholinesterase and converted to choline to be taken up by the nerve or returned to the bloodstream in equilibrium.

-Alzheimer's disease is thought to be due to a loss of acetylcholine neurons; other NT are decreased to a lesser degree. All body cells use lecithin to build and maintain the cell wall. Choline neurons can use the lecithin membrane as a reserve when the external supply of choline gets low. When demand is greater than supply, the cells cannibalize their own membrane lecithin. Cholinergic neurons are more vulnerable than others. Plasma choline is higher in infants than adults due to increased production of nerve membranes.

-Workman has found that tyrosine is useful in treating blood pressure problems. Same level of tyrosine will lower blood pressure in hypertensive rats and raise blood pressure in hypotensive rats. The brain can change the frequency of firing of neurons and alter sensitivity of neurons to changes in precursor supplies. The number of NT across the synapse depends on both the number produced and frequency of firing; nutrients can be used to selectively amplify transmission by increasing release of NT.

-Tyrosine (5% of diet) produces catecholamines, dopamine, norepinephrine, and epinephrine, "anti-stress" substances, maintain normal blood pressure, helps in early Parkinson's, and in depression. In hypertensive animals, the brain cells call on norepinephrine and epinephrine neurons to fire frequently in the brainstem because they act to lower blood pressure. The same for hypotension, except the neurons that fire are located outside the brain in the sympathetic nervous system, and these will produce increased norepinephrine and epinephrine thus raising blood pressure. Workman says that when the blood pressure is normal, the firing frequency changes so that the neurons become insensitive to additional tyrosine.

-You see more weight loss advertisements than weight gain, and it's safe to say that our culture is the eat and get fat type, lazy, and on the parasympathetic cholinergic side. The opposite is not often found, the energetic, slim and trim, fight or flee, sympathetic side.

-Acetylcholine is released at ALL autonomic preganglionic neurons, ALL postganglionic neurons of the cholinergic system, and even some of the postganglionic adrenergic neurons. Choline is needed three times as much as adrenalin, and the body is prejudiced towards the eat and get fat side of the nervous system. (Lack of acetylcholine can affect preganglionic function of the adrenergic system.) Therefore, a deficiency of choline may be contrary to what some people think, a common thing.

-If you challenge the adrenergic nervous system in a hypoadrenic patient (paradoxical pupil dilation to light, postural hypotension, positive Rogoff's sign, etc.) the sartorius/gracilis may be helped by a source of adrenal tissue, and sodium sources such as squash, zucchini, celery, and green beans. There is increased sodium on the Koensberg test on urine, they are dumping sodium, or you may see decreased sodium because the body is conserving it. If the adrenergic system is deficient in NT at the preganglionic sites, sources of adrenal produce profound weakness of the sartorius/gracilis/posterior tibial if they are strong in the clear and TL to one of the five factors strengthens, placing adrenal on the tongue will weaken. The weakness will occur in adrenal-related muscles as well as muscles related to the area of the patient's complaint, i.e. shoulder muscles in a shoulder complaint. The addition of choline (GJG uses 178 mg. of Standard Process choline) to the tongue neutralizes the weakness of the adrenal muscles and complaint-related muscles. 1982 Manual on page 65 has a discussion of NT effects. Some patients respond to lecithin and not choline, so lecithin is a better source; but in general, the adrenal-fatigue patients, they need choline, even though they respond to both choline and lecithin. There has not been any odor noticed. Workman noted that some patients had a fish-like odor due to bacterial decomposition in the gut. Use as an indicator the failure of the nervous system to produce weakness when the cholinergic side is challenged by adrenal placed on the tongue, and the rate of the patient's symptoms to be reduced.

-“HUMAN BIOCHEMISTRY”, by Kleiner, 3rd Edition. “...report a curious effect of choline deficiency. If very young rats are kept on a choline deficient diet for six days and then are given a normal diet, they eventually develop high blood pressure. This indicates some of the diseases of adult life are due to unbalanced diets for relatively short periods during childhood. A low choline diet produces hemorrhages in the kidneys and the eyes, in addition to fatty livers in young rats, and if the diet is low in methionine as well, the hemorrhagic condition appears in other organs. The compound is widely distributed and no deficiency need ordinarily be expected. The most important sources in our diets are cereals, bread, meat, and egg yolk.” GJG and Dr. Schmitt believe that there is a strong deficiency of choline that can exist in the average patient.

-“UNDERSTANDING THE SCIENTIFIC BASES OF HUMAN MOVEMENT”, O'Connell and Gardner. Talk of acetylcholine operating at the synapses within the central nervous system, terminals of motor neurons and their recurrent collaterals at their synapses with certain cells. Recurrent collaterals are the Renshaw cells. Some evidence that glycine may act as a NT for the inhibitory feedback of the Renshaw cell. It is certain that acetylcholine and norepinephrine are widely involved in central nervous system transmission. There are other NT, especially in the brain; GABA (Gamma Amino Butyric Acid) an inhibitory NT, histamine, 5-Hydroxy-tryptamine (serotonin), and Dihydroxyphenylalanine (dopamine).

-Myasthenia gravis is managed by neostigmine to inhibit acetylcholinesterase which keeps acetylcholine from being broken down.

-Some NT are made from glucose.

-Acetylcholine, serotonin, and adrenalin depend on diet for their manufacture and how they are used in the body.

-Acetylcholine is necessary for all body movement and is vital to memory. Lack of acetylcholine causes movement disorders and memory loss, even mania, hyperactivity. Lecithin is broken down to choline which makes acetylcholine. We get most of the source of choline in our diets from lecithin.

-Serotonin affects perception and growth. Lack of serotonin causes depression, insomnia, and increased sensitivity to pain. Some people use tryptophane as a serotonin precursor to help these conditions. The body can't manufacture tryptophane, and must get it in the diet in meat, fish, eggs, and milk.

-Amino acids do not cross the brain tissue as easily as they cross body cells. In the late 1960's, the blood-brain barrier was discovered to be a group of specialized endothelial cells that line the capillaries and are tightly meshed. This protects the brain from rapid changes in the rate at which compounds in the blood circulate go into the brain. If too much salt got into the brain, it would swell up and be damaged as there is no place for the brain to go. When choline is needed in the brain, there is a specific transport across the endothelial cells; the choline is taken to the nerve where it is converted to acetylcholine. Acetylcholine is stored in synaptic vesicles at the axonal end. Acetylcholine is released when the neuron fires into the synapse (0.00002 mm) and enters a receptor on the dendrite, therefore a chemical signal. Can vary the signal strength by increasing or decreasing the NT. It doesn't change

the signal, only the volume.

-The vagus nerve was the first nerve to be kept under observation. Two frog hearts were kept alive in separate solutions, and fluid that bathed one heart was allowed move to the second heart. The vagus nerve of the first heart was stimulated to decrease heart rate and the second heart rate also decreased indicating a substance released from the first heart's stimulated nerve was transmitted by the fluid to influence the second heart.

-GJG has a few kids he's treating that were under water for as long as a half hour, but due to the mammalian diving reflex, their throats were closed off preventing any water from entering the lungs. One in particular functions only at the brainstem level, the head is turned sharply to the right, is nonresponsive to ordinary stimulation, and has limited visual and oral perception. GJG used Beginning and End Technique (B&E) until the temperature decreased on the forehead. He powdered some of the 178 mg. choline and put the choline on the tongue and saw a sharp one degree drop. Another choline showed another one degree drop. With the addition of B&E, the temperature dropped further.

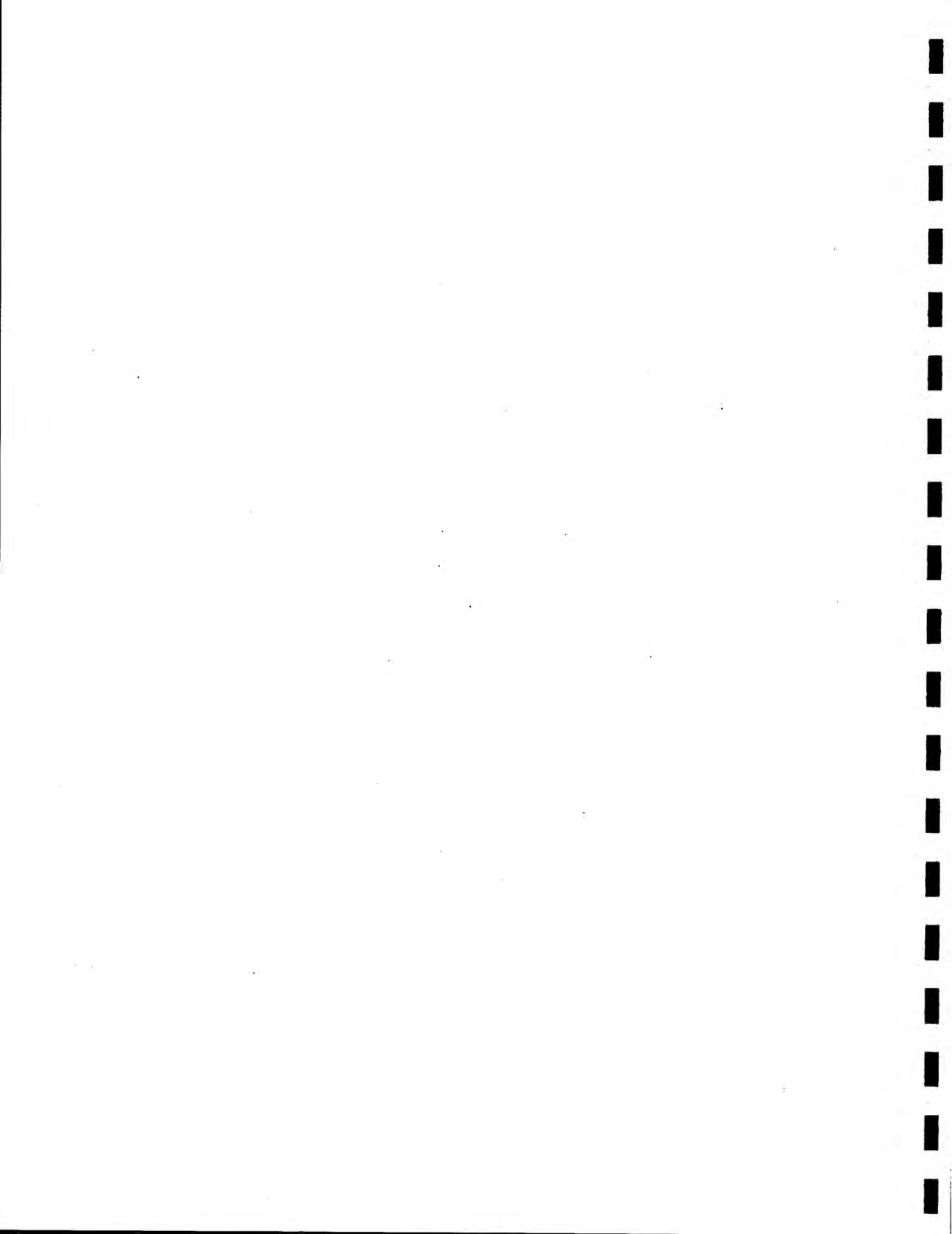
-A Spinal Cord Injury (SCI) patient of Dr. DiPaolo was treated by GJG. He put a thermistor on the quadriceps and turned off the opposite triceps via spindle cell. Instead of using a previously used pathway that GJG felt may be a conditioned reflex, he turned off the triceps using the revenue sharing relationship between the arm and contralateral leg. This causes an increase in temperature over the quadriceps. Forearm extensor muscles as the treating muscles with the thermistor on the anterior tibial contralaterally is another example. The patient was given choline every 2-3 minutes and this caused an increase in temperature without muscle spindle activity on the forearm extensors. With muscle spindle activity, the temperature increased more.

-Congratulations to Bill Kelley, 6910 Kingston Pike, Knoxville, Tennessee, phone 615-588-5730 for being chosen by the United States Olympic Team to spend a two week indoctrination period at Colorado Springs preliminary to eventual placement on either the International Festival Of Sports team or the US Olympic Team.

-GJG is a director of the National Chiropractic Mutual Insurance Co. Most often malpractice suits against chiropractors is the failure to diagnose properly. "FOR THE DEFENSE", June 1984, by Thomas Jensen deals with a chiropractic cross examination, questions, etc. It is good to have on file in case something comes up, and to be prepared for the other side.

-JMPT, Vol.7, No. 2, June 1984, "Diagnosis of Thyroid Function-Applied Kinesiology Compared to Clinical Observations and Laboratory Tests", by Terry Franks, Grace Jacobs, and Philip Gillman. "AK enhanced but did not replace clinical-laboratory diagnosis of thyroid function. Preliminary evidence indicates that there may be significant correlation between certain AK tests and elevated LDH in the serum." JMPT is a highly recommended journal to receive.

-Thank you all for the grandfather clock.



DR. GOODHEART'S RESEARCH TAPES

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Salivary pH

-The pH of the mouth should be 7.6 in adults and 7.8 in children. There are many factors that affect relative pH.

-“APPLIED NUTRITION”, by Harold Hawkins, International Academy of Applied Nutrition. Discusses pH of the mouth.

-Relationship between the pH of the mouth and the buffer value of the saliva, and phosphorous level. Increased phosphorous equals an acid pH generally. Acid pH calls for reduction of high sulfur foods such as mustard or eggs, or foods high in organic acids like cranberries, prunes, oranges, grapefruits, and tomatoes.

-Natural fats increase or alkalize the saliva pH.

-Hawkins says that adults saliva should be 7.6, and their urine 6.2 pH; children (less than 14 years old) should have saliva 7.8 and urine 6.0 pH. By introducing one class of foods at a time, these values could be changed. A high fat diet and introduction of one food at a time could increase saliva pH and decrease urine pH.

-Refer to the chart included with the tape. Level 3 has butter, creams, fats, and oils that decrease saliva acidity and increase urine acidity. Vegetables, potatoes, and fruit decrease urinary pH and decrease salivary pH. Meat, fish, eggs, and cottage cheese increase urinary and increase salivary acidity.

-GJG notices patients with a high vegetable and fruit intake have an alkaline urine. A lot of patients have a urine pH too high and salivary pH too low.

-1976 Manual on page 64 discusses oral pH “measured by a device that measures electronically, putting the LED device against the tongue. Harold Hawkins, D.D.S. in “Applied Nutrition” says that samples taken found a pH in an adult absolutely free of dental disease to be 7.6 and in a child under 14, 7.8. We rarely find this level. We find that a salivary pH of 7.0-7.2 seems to accommodate itself to fairly good health.”

-GJG measures salivary pH with Hydriion paper (obtained from local supplier or Standard Process). He often sees pH below 7.2. Authorities give the pH lower because that's the way it is in the general population. Of 16 patients measured, only one was in the 7 range, the rest were below it. Usual recommendation for low pH patient is to increase the content of natural fats in the diet (GRASS - Generally Regarded AS Safe) meaning olive oil, butter, linseed oil, lard, and sesame oil. Stay away from fried foods, prepared salad dressings, prepared mayonnaise due to the high content of trans fats.

-Endocardiographic tracings on all of GJG's patients show a high percentage of diminished or absent second sound, frequently with the second sound in the pulmonary area being high, meaning low adrenal function. This is often correlated with low salivary pH.

-Popular “buzz” words these days are EFA, EPO, Max-EPA. Vitamin F (EFA) have been around for a long time.

-Precursors of Prostaglandin (PG) 1 and PG2 are corn, safflower, olive, cottonseed, sunflower, peanut, and Evening Primrose oils.

-David Horrobin says that Evening Primrose Oil (EPO) has a label quality which does not have the material in it. He has guidelines for use, do not be fooled by labels.

-The oils listed above are a source of omega-6-fatty acids (fats which yield linoleic and gamma linolenic acids which are precursors to PG). Omega-3-fatty acids are precursors to PG3 and PG4. Omega-3 series sources are linseed (flaxseed) oil, and the Northern oils (walnut, soy, wheatgerm, chestnut, other beans).

-PG are local hormones with a short action time. They are both pro- and anti-inflammatory.

-Chart that Dr. Schmitt has developed about the PG is available.

-Level of EFA influences pH.

-Repeated muscle testing that causes muscle weakness (10 times in 20 seconds) shows the need for iron

supplementation (18 mg. of iron, three times a day).

-Repeated muscle testing that causes weakness (20 times in 20 seconds) shows the need for pantothenic acid supplementation (100 mg.).

-In some patients who showed a need for iron, it was found that after they had taken the iron and had neutralized the weakness that they continued to show other muscles that did not respond when tested repeatedly. These patients also had low salivary pH. He found that different oils would neutralize the weakness found not only in a single muscle, but in multiple muscles. (Multiple muscles weak with repeated muscle testing). Use essential fatty acids in the omega-6 and omega-3 series (linseed and fish oils). Fish oils break down into EPA which influences phospholipase levels and phosphatidylcholine levels. See Dr. Schmitt's flow chart on fatty acids.

-Test multiple muscles repeatedly and if they weaken, this is the need for essential fatty acids. This helps to change salivary pH.

-Fat and cholesterol are not dirty words, they are necessary for hormone precursors. HDL and LDL's have made a big difference in how people view towards fat in general. Most people eat the wrong kind of fats and not enough good fats.

-GJG uses 6.0-8.0 Hydrion paper or the digital readout.

-Linum-B6 or EPO is used to test against the multiple muscle weakness with repeated testing. One or both may show as being needed.

-PG3 series is stimulated by things that cause reduction in the body - Vitamin C, low doses of E, oxygen, B6, and magnesium. PG3 series is inhibited by aspirin, nonsteroidal anti-inflammatory drugs (NSAID) which are used in inflammatory diseases, high levels of vitamin E, EPA, dihomogammalinolenic acid. PG3 and PG4 series are balanced by PG1 and PG2 series. PG1 are stimulated by vitamin E low dose, vitamin C, oxygen, alcohol, niacin, B6, magnesium, penicillin. PG1 is inhibited by NSAID (Motrin, Ibuprofen), lithium, steroids, food additives. PG2 is inhibited by things that inhibit delta-5-desaturase, EPA, alpha linolenic acid. Arachidonic acid is the precursor to PG2 series, stimulated by low dose vitamin E, vitamin C, B6, magnesium, oxygen, cyclooxygenase enzyme complex; inhibited by aspirin, NSAID, high dose vitamin E, DGLA.

-Way to explain to patients; there are four PG, two are good and two are bad, and they must be balanced. In general, natural fats and oils produce a balance and unnatural fats and oils produce an imbalance. Way to tell is to do exhaustive, complicated EFA studies on the blood (Monroe Lab) or you can repeatedly test multiple muscles for weakness and see a response to omega-6 and omega-3 fatty acids. Most common response is to linseed oil, Complex T (sesame oil), Max-EPA, and lecithin.

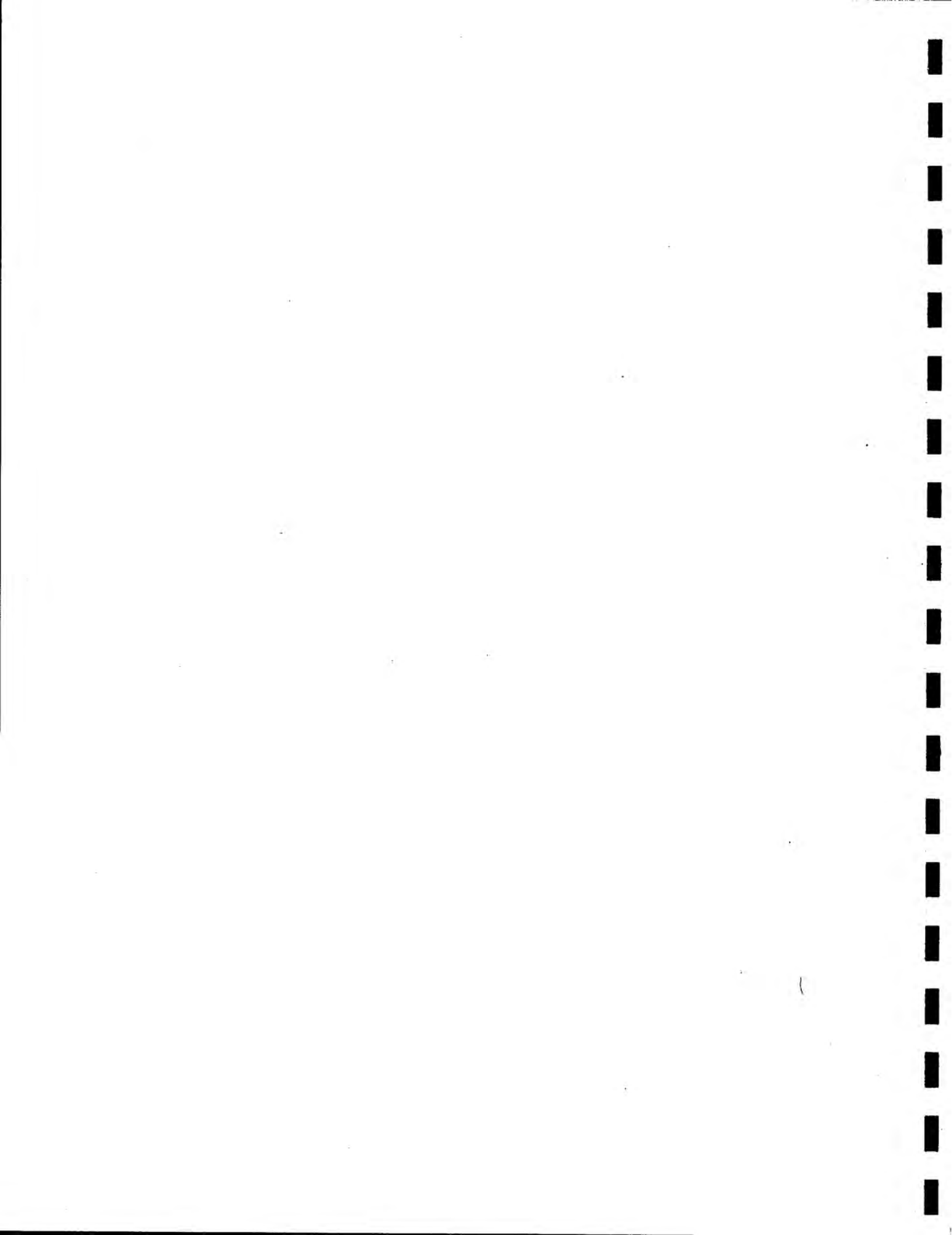
-Essential Fatty Acid Deficiencies Diagnostic Checklist that the patient fills out. Divided into arthropathies, neuropathies, psychopathies, rheumatoid, osteoarthritis, bursitis, Meniere's disease, glaucoma, otosclerosis, allergies (air, food, immune), Myasthenia gravis, cold sensitivity, neuralgic, fascitis, sciatic, epididymitis, migraines, paresthesias, muscle cramping, abrupt change in visual acuity, popping ears, hiatal hernia, aspirin gastritis, peptic ulcer, Irritable Bowel Syndrome, diverticulitis, depression, anxiety, manic-depressive, schizophrenia, mental retardation, epilepsy, seizure, central temporal narcolepsy, hyperactivity, hands dry and fissured, feet dry and scaling, forearms, shin scaling, roughness of the upper arms, thighs, buttocks, dandruff, ear scaling, eyelids scaling, psoriasis, discoloration, age spots, vitiligo, dry hair, alopecia, acne, premenstrual tension, menstrual irregularities, infertility, menopausal depression, menopausal hot flashes, diabetes, thyroid, pituitary, adrenal insufficiency, high blood pressure, kidney disease, high serum cholesterol, triglycerides, arteriosclerosis, heart attack, stroke, obesity, neoplastic colonic problems, fiber deficiencies, bowel movement frequency disorder, hemorrhoids, constipation, abnormal laboratory findings, EKG, CAT Scans, reactions to medications, miscellaneous (infections, chronic boils, folliculitis, problems with fatigue, sleep, easy bruising, alcohol intolerance, glossitis, stomatitis, vaginitis, urethritis).

-"THE EFA AND PG IN HUMAN HEALTH AND DISEASE", an audio cassette series from Creative Audio, 8751 Osborn, Highland, Indiana, 46322, phone 219-838-2770.

-Addition to Pitch, Roll, Yaw, Tilt. Put the patient in pitch position, head up and knees up that shows weak with a deep breath, like an inspiration challenge and you would think that you would push back on the muscles. Further evaluation of this actually shows an inspiration assist. This seems paradoxical. These patients had cold

feet in common. A plethysmograph or thermistor was placed on the feet. Treatment was to push the mastoids anterior on inspiration and push the atlas spinous process up towards the external occipital protuberance on expiration. Do for 2-3 minutes and see a change in plethysmographic/thermistor readings by warming up the foot. This would negate the pitch-inspiration weakness. With neck flexion, you would expect the spinouses to separate, and come together in extension; however, under these conditions, the spinouses come together in flexion and separate in extension. The cervicals get out of synch, and the treatment gets it back to normal. More later.

-“BREAKTHROUGH FOR DYSLEXIA AND LEARNING ABILITIES”, by Carl Ferrari, Exposition Press, Smithtown, New York. Represents his experience with dyslexics, etc. A good reference book.



DR. GOODHEART'S RESEARCH TAPES

TAPE 89

-1-

Pre- and Postcordial Tap

The 1981 Research Manual called attention to Dwight Kinney in a paper presented to the Minneapolis Osteopathic Society "about the molecular electromagnetic potency of the blood corpuscles as the impelling power of the circulation of the blood rather than that of muscular activity of the heart. The cerebrospinal fluid circulates under the same law. The science of our day has demonstrated that the world is one giant magnet and that electricity is the moving force of the universe. Instruments now used by science are able to discover the existence of forces of that power, in rock substances and all living things. The human brain is now known to be a powerhouse maintaining a rate of 12 pulsations a second. Each of the brain's millions of molecules is an electric dynamo, and every blood corpuscle carries its millions of electrons carrying electric power. This is the power factor in the circulation of blood and not the muscular action of the heart which is a regulator of the volume. A very superficial knowledge of the hydrodynamics would show the heart would be incapable of producing the power necessary to send the blood current through all the tissues involved and then return it in the venous and lymphatic system. The amount in efficiency of this electromagnetic power is naturally attendant on our reserve of vitality."

"PRIMER OF CARDIOLOGY", by George E. Burch, Lea and Febiger. Given to GJG by Dr. Royal Lee. In reference to edema, "a discussion of cardiac edema cannot be adequate without a brief review of the known mechanisms concerned with the exchange of fluid between 1. the body as a whole and the environment, and 2. the tissues and the bloodstream. The ideas and the explanations presented here include many of the generally accepted ones. They are grossly inadequate. Fortunately the forces concerned with water exchange do not exist as generally presented. If they did, it wouldn't require much imagination to see that we would be constantly edematous from the waist down. The arguments as accepted and discussed today make only interesting reading. No adequate explanation exists. Nevertheless, because these theories are generally accepted concepts, students are called upon to recite them, and more important, they contain some truth. Furthermore, their inadequacies lead to thought and modifications have been made in order to approach more accurately the observed facts."

See Figure 40 from "The Diagnosis of Congestive Heart Failure" from "AN APPROACH TO THE DIAGNOSIS OF HEART DISEASE", by Burch. "Diagrammatic presentation of the water compartments in exchange in normal adult man under basal conditions in a comfortable environment. The forces usually considered in the transfer of water across the capillary membrane are shown. These are average volumes reduced to the phlebostatic level (venous level). In a normal, intact person, all water and electrolytes are taken in through the gastrointestinal tract, whereas a loss occurs from the body at many sites, the lungs, anus, sweat glands, skin, kidneys. The loss through tears, oral, nasal, vaginal secretions is slight. Postpartally the female loses water through the mammary glands. Rate of water turnover in the body; more than 6500 liters (greater than 20 barrels of water) pass between the blood vessels and the intracellular spaces daily. 180 liters filter through the glomeruli daily. Sodium is reabsorbed in the proximal tubules of the kidney. In normal persons, there is a steady balance between water and electrolyte intake and output. More than 50 pounds of sodium chloride diffuse back and forth across the capillary walls daily." From Figure 42, "In Congestive Heart Failure, the water exchange is essentially as it is shown in Figure 40, except that which is concerned with the tissues and kidneys. The figure summarizes the forces concerned in edema formation. It must be admitted that when cardiac edema is in the process of formation, water and sodium are retained, that is, the kidneys fail to excrete them. The mechanism for the retention of water and sodium remains obscure. The rate of reabsorption of sodium by the proximal tubules is increased in Congestive Heart Failure and water is retained in the tissues to maintain an isotonic state. There is also an increase in blood volume, and venous hypertension is present. Whether or not the latter precedes the edema is not known. Because of the venous hypertension or the increase in hydrostatic pressure of the capillaries, water loss in the tissue spaces is favored. Since the concentration of protein in the tissue fluid is not increased, capillary permeability cannot be increased in Congestive Heart Failure. The diagram

shows the kidney to be mainly responsible for the edema in Congestive Heart Failure (CHF). Dotted arrows represent the normal forces, solid arrows indicate those forces changed by CHF."

"Conduction tissue of the heart is highly specialized muscle which transmits impulses with great repetitivity seen on EKG. SA node is the normal pacemaker of the heart, site of impulse formation. AV node insures proper asynchronous contraction of the atria and ventricles by delaying the cardiac impulse from the atria for an adequate length of time to insure proper timing of the ventricular contraction, thus resulting in efficient cardiac hemodynamics. Bundle of His, bundle branches, and Purkinje system provide adequate and prompt distribution of the impulse to the ventricular musculature. Conduction tissue is described as SA node located on the posterior wall of the right atrium near the entrance of the vena cava. Conduction from this node occurs across the atrial musculature to the AV node which is located posteriorly at the junction of the atrial and ventricular septa (near the center). Transmission of the impulse occurs throughout the atrial musculature, but is prevented from entering the ventricle by the unresponsive fibrous ring. This ring constitutes the skeletal framework of the heart and supports the valves and great vessels. The only normal pathway into the ventricles is through the Bundle of His which extends into the interventricular septum at which point it divides and continues down each side of the interventricular septum posteriorly to the respective interventricular surfaces. Its structure is very similar to a bundle as it leaves the septum, it often courses as a discreet band across the cavity of the heart, especially on the right (sometimes called a moderator band). As it spreads out along the ventricle it branches and finally divides into terminal arborizations which are called the Purkinje fibers or Purkinje system. Most of the early impulses to the septum are transmitted by the left bundle branch. Complex autonomic innervation from both the sympathetic and parasympathetic, and is responsible for the irregular sinus rhythm and physiological variations in the cardiac rate and certain irregularities."

"Ringer developed an artificial plasma solution in as far as the chief inorganic salts are concerned. Ringer drew attention to the fact that the importance of the three cations sodium, potassium, and calcium had to be in the same proportion as in plasma for the maintenance of normal cardiac action. Ringer's solution contains the three elements in forms of chloride, sodium chloride, potassium chloride, and calcium chloride. Modifications have been made. Locke's solution has sodium bicarbonate and glucose, Turrodes has magnesium chloride and acid and sodium phosphates. Designed to change the concentration of hydrogen ions. The nitrogenous concepts, proteins and urea, have little effect on the beat. Ringer observed that if the heart was perfused with a 0.6% sodium chloride solution, a few beats were exercised and continued, but then the heart stopped in diastole. The addition of calcium restored the beat for a time, but again, the heart came to a standstill, this time in systole. The addition of potassium antagonized the calcium effect, the beat recommenced and was maintained. It is well known that calcium in excess or even in normal concentrations in the absence of potassium lengthens systole at the expense of diastole. The heart finally stops in the fully contracted state and is called calcium rigor. Potassium acts in a reversed manner if in excess or unbalanced by calcium. More and more of the cardiac cycle is accompanied by the diastole and the heart eventually comes to the relaxed state of so-called potassium inhibition. A solution containing calcium and potassium alone will not sustain the beat. Sodium is essential. The manner in which sodium acts is not clearly demonstrable according to Best and Taylor, as is with other cations, but it is certain that the excitability and the contractability of the heart muscle cannot be maintained in its absence. Underlying physical or chemical changes through which these elements influence the heart beat, little is definitely known. Calcium decreases and potassium increases the permeability of the cell membrane. According to some, the excitability and susceptibility of the muscle fiber to contraction is dependent upon the relative concentrations of hydrogen ions on the two sides of the cell membrane. The calcium and potassium ions through altering the cell permeability may in this way affect the diffusion of hydrogen ions across the membrane and so vary the concentration on the two sides. Acids, when added in moderate excess act like potassium in that they favor relaxation of the cardiac muscle. The heart finally comes to rest in diastole. Alkalis on the other hand, serve to prolong the systole and shorten the diastole. In this way, they act like calcium. Acids depress and alkalis increase the conductivity between the AV bundle. When the pH of the fluid perfusing the isolated mammalian heart was reduced to 7.0, complete heart block occurred. The higher tension of carbon dioxide during muscular activity probably exerts a beneficial effect at that time upon cardiac behavior. During exercise, the blood flow through the muscles is greatly augmented and a larger volume of blood is returned to the right side of the heart. The rise in carbon dioxide tension will favor more complete relaxation of the cardiac muscle for the accom-

odation of the greater load of venous blood"

-Best and Taylor say "that the myogenic theory as to origin of the heart is pretty well documented. In the embryo chick, the rudimentary heart shows rythical contractions after 36 hours, and ganglion cells do not appear until after the sixth day. The heart of the human fetus commences to beat after only three weeks of gestation. Nervous elements do not appear until almost two weeks later. The muscular tissue of the apex is said to be free from ganglion cells, yet a strip from that region beats rythically. If zig-zag cuts are made in the ventricle so as to interrupt any nervous path of transmission that might exist, the synchness of the heart beat is unaffected. In several invertebrate hearts no ganglion cells can be demonstrated." What they're saying is that the heart seems to be able to beat on its own.

-GJG does phonocardiographic (PCG) tracings on patients' hearts, and he finds in the average patient a disturbance of the rate of the valve functions as measured by the PCG. Quite often the cardiac rate is different at each valve as opposed to the pulse rate at the radial artery. Cardiac valve rates do not parallel the pulse rate and usually the arterial side of the heart is different from the venous side and quite often the different forms of valve action on the arterial side and the venous side are different themselves. For example, a person with a pulse rate of 72 may have a mitral valve rate at 68, tricuspid at 76, aortic at 74, and pulmonary at 67. Some patients would have all four valves at the same rate or within one beat and it would parallel the heart rate. Why was this?

-GJG feels that the heart has a mind of its own, and it reacts to the sodium, potassium, and calcium as described above. The heart doesn't have enough power to push the blood throughout the entire circulatory system. The blood vessel walls, red blood cells, white blood cells, and platelets all have positive charges and repel each other. There must be some mechanism by which the 7 micron red blood cell can go through a 3 micron capillary and it is due to the positive charge and possible changes in the charges, such as when the red blood cell loses oxygen and picks up carbon dioxide. GJG used to measure the oxyhemoglobin reduction time of red blood cells by using a hand-held spectroscope over the web of the thumb, and with an intense light, the oxyhemoglobin spectrum would change to a different spectrum as the red blood cells picked up carbon dioxide. The time was 22 seconds. If lower than 22 seconds, something was wrong with the gonadal tissues, and if it was higher, something was wrong with the thyroid and pituitary. Used as a method of diagnosis, the Jules Samuel technique.

-The bible says, "As a man thinketh in his heart, so is he," and "Where a man's heart is, there will his treasure be". Implies that even at that time, the people had an idea of the brain, yet they spoke as above. What if there is another brain somewhere?

-Patient that had a pectoralis major sternal (PMS) weak only on right brain activity. Usual way to treat is to tap the right side of the skull with left brain activity to change the resonance factor. This was successful. To show the patient that it was not a temporary thing, he tapped the left skull with right brain activity and this brought the PMS weakness back. A range of motion, blood pressure, and a PCG tracing of the patient's arrhythmia were used. Suppose there is another brain somewhere in the body. GJG tried tapping the feet, knees, pelvis, buttocks, arms, clavicles, and ribs with left brain activity, but the PMS remained weak on right brain activity. Then he tapped the precordial area on the chest (Precordial Tap), (the right side of the heart is approximately matched to the right side of the sternum), and he tapped both the front and back of the right side of the heart for 1 to 1.5 minutes and the PMS no longer weakened with right brain activity. Reversal of this by tapping the left skull with right brain activity was not successful. Therefore the heart rules the head. There was a change in the arrhythmia, a remarkable increase in range of motion.

-GJG has shown changes in PCG, blood pressure, blood pressure cuff around the calf, thermistor, range of motion, plethysmography, liquid crystal thermography, heart rate after Pre- and Postcordial Tap. He is convinced that the heart is the second brain. It has holographic patterns that correspond to the brain.

-Nutrition has not yet been thoroughly researched.

-Heart can determine if something needs more blood flow. If the arterial side of the heart is not doing its part, the venous side gets backed up, and the arterial side must work overtime to catch up. That's why there are differences in the four valves heart rate and why they seldom correspond to the actual pulse rate. When the holographic and right and left brain concepts are applied to the heart, the valvular rates start to approximate. The arterial and venous sides balance out. This improves the quality of the patient's life.

-Prostacyclin is the only prostaglandin that can survive more than one passage through the lungs. Each organ makes its own prostaglandins.

-GJG believes that the brain, heart, and liver are a triangle. The heart is the neutral part of the triangle. Efforts to balance the brain and liver, the heart keeps the balance. May be why the heart is off to the left.

-"A BIPOLAR THEORY OF LIVING PROCESSES", by George Kryle, McMillan and Co., 1926. Given to GJG by Dr. Royal Lee. "It is primarily essential therefore, to consider the operation of a cell as a bipolar unit. The nucleus of a cell is comparatively acid, the cytoplasm is comparatively alkaline. The nucleus and cytoplasm are separated by a semi-permeable film of very low conductivity that these characteristics of the cell indicate a difference in electrical potential between the nucleus and the cytoplasm. We may therefore consider the cell as a bipolar mechanism, the nucleus being the positive element, the cytoplasm the negative element. The oxidation in the nucleus appears to be on a higher scale than the oxidation of the cytoplasm, and therefore as electrical tension increases in the nucleus, the current breaks through, the potential in the nucleus falls, and in consequence, the current is interrupted. Since the potential is again restored by oxidation, we can see that an interrupted current passes continuously from the positive nucleus to the negative cytoplasm, and in consequence, a charge is accumulated on the surface films. These films of infinite thickness and high dielectric capacity are peculiarly adapted to the storage and adaptive discharge of electrical energy. In accordance with the bipolar theory, we would expect that the electrical conductivity of cells would vary with stimulation and depression, and that the conductivity of the part of lowest potential, the liver, would vary in opposite directions." When Kryle examined dying patients, the closer to death they were, the less difference there was between the brain and liver. As long as there is a difference in potential between the brain and the liver, there was life. "Stimulation, he expected would cause opposite effects on the temperature of the brain and the liver, and other relatively negative organs. On testing those assumptions, he found the temperature of the brain was increased and that of the liver and other negative organs was decreased or unchanged in the acute stages of stimulation by motion, physical injury, strychnine injection, or injection of adrenalin when the output of adrenalin was artificially increased by asphyxia in the excitement stage. On the other hand, if he was correct in his assumption that the liver is the center of negativity and essential to keeping the circuit on the bipolar mechanism free from chemical byproducts, then if the liver were removed, we would expect that the circuit of the bipolar mechanism would become progressively interfered with, and finally be completely blocked with the resultant establishment of equilibrium or death. He found by experiment that when the great circuit that energizes the organism was broken by the removal of the negative pole of the liver, the temperature of the brain steadily fell until death occurred. Also, when stimulation such as adrenalin were given, heat production, oxidation within the brain, bereft of its negative pole was almost or entirely prevented. Again, in accordance with the bipolar theory, we'd expect to find a steady fall in the temperature of the brain when the semipermeable films around the cells, the charges upon which govern the oxidation, were rendered less permeable. We found that in states of deep ether anaesthesia, which lessens the permeability of these films, in hence, interferes with the oxidation, the temperature of the brain and liver fell steadily until death occurred. On the other hand, in nitrous oxide anaesthesia, which interferes with oxidation itself, but does not interfere with the permeability of the lipid films surrounding the cells, the temperature of the brain decreased much more slowly."

Frontal Bone

-A patient with a facial tick unilaterally on which a number of things were done, rotation diet, cranial work, etc. Strain/Counterstrain of the external pterygoid in strong flexion and slight rotation and lateral flexion diminished the facial spasm, but when she stood up, it returned in full force, and diminished when lying down. GJG did anterograde, etc. (gravity).

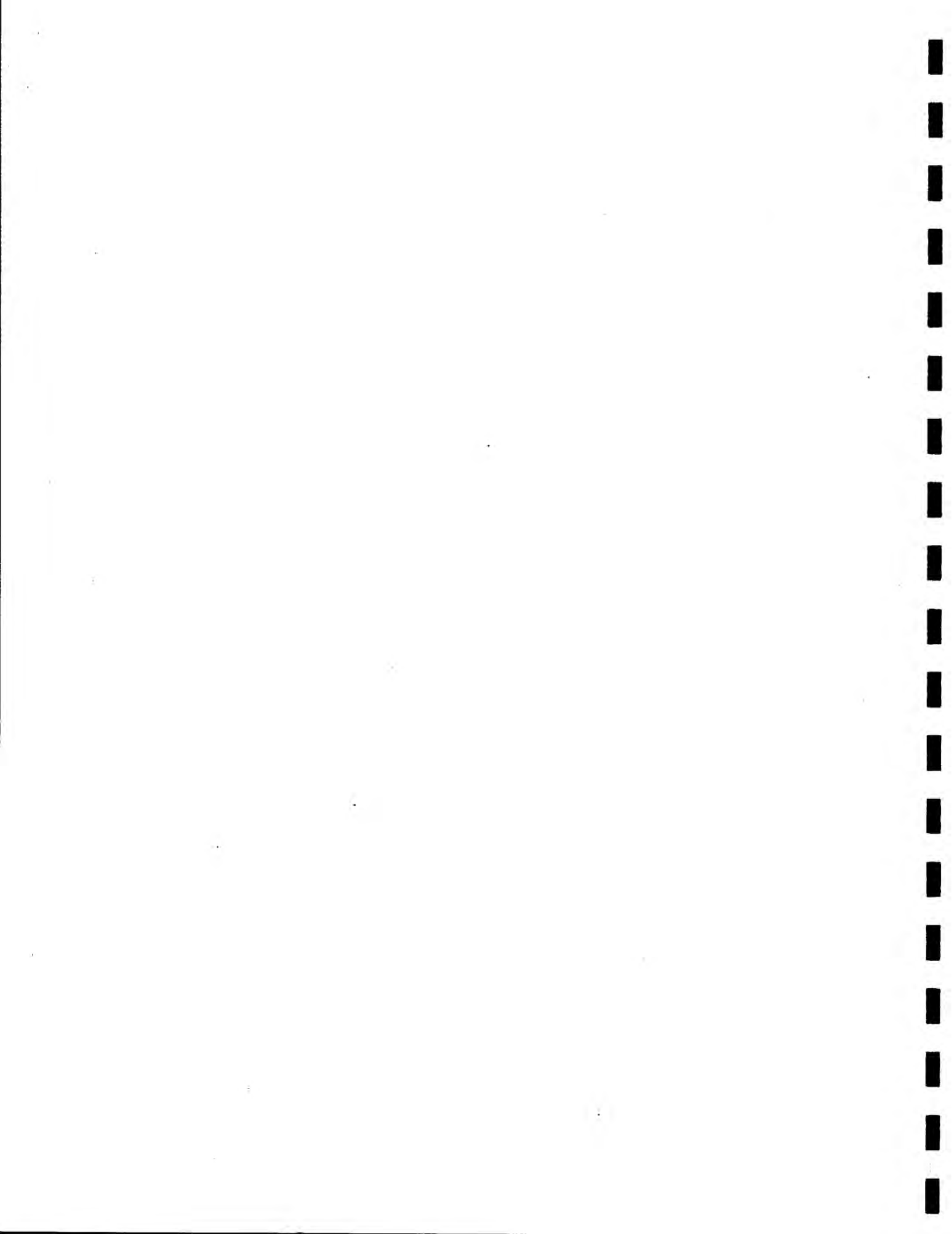
-Two divisions of the external pterygoid, one opens and one closes the jaw (contrary to some anatomy books). DENTAL CLINICS OF NORTH AMERICA in which GJG wrote the AK section, "In man, the external pterygoid muscle is difficult to study in an effort to determine the activity of the two sections. Macnamara, Journal of Anatomy, 1973 studied the muscle in Rhesus monkeys which has an anatomic arrangement similar to man. He found the inferior head, the larger head acted in opening movements of the mandible. No activity was noted in

closing movements or in swallowing. On the other hand, the superior head was not active during opening, but was during chewing motions, and closing motions, and clenching the teeth, and during deglutition. He theorized the superior head position to stabilize the condylar head and disc against the articular eminence during closing movements of the mandible while the inferior head assisted in translation of the condylar head downward, anteriorly, and contralaterally during opening movements. This is supported by Grant, 1973, Journal of Anatomy, who studied the movement arms of both muscle heads which are collectively called the external pterygoid in man and the Rhesus monkey. Particularly in the rest position, the superior head has the effect of closing the jaws, while the inferior head has the effect of opening them. Two heads are therefore antagonists, thus the external pterygoid must be considered as two muscles."

-GJG assumed that the external pterygoid was in a state of contraction pulling the sphenoid down and the frontal bone came with it. When he released the external pterygoid with strain/counterstrain, the sphenoid came up and bumped against the frontal bone. As long as there was no gravity acting, there was enough of a couple or a space that you did not find the pattern, but the temporalis had undoubtedly adapted to the lowered sphenoid on that side, and when the patient stood up, it was enough to aggravate the situation. By placing her hand on the frontal bone and TLing, he got nothing. Pressing upwards towards the vertex, there was a response, negated with inspiration, showing a cranial respiratory activity. He used a vertex pressure of five pounds while releasing with muscle spindle and golgi tendon organ the activity of the temporalis on that side with a complete resolution of the facial tick.

-TL to the frontal bone is usually negative, but lifting up on it gives a weakness which is negated by respiration, usually inspiration. Lifting up on the frontal bone after releasing the pterygoid by strain/counterstrain, and then using origin-insertion technique to release the temporalis (within and out of the mouth), and then muscle spindle cell to especially the anterior portion of the frontal bone from the jammed down position.

-Upledger in "CRANIOSACRAL THERAPY" says "for purposes of craniosacral diagnosis and therapy, and to begin to appreciate the significance of the dural membrane system, you might consider the bones of the cranial vault simply as hard places in the dural membrane. The anterior inferior extreme of the falx cerebri attaches to the floor of the cranial vault of the crista galli of the ethmoid bone and to the ethmoid notch of the frontal bone. The attachment then follows the midline superiorly inside the cranial vault along the internal aspect of the metopic suture under the bregma, underneath the sagittal suture, and underneath lambda to the internal occipital protuberance, it forms the sagittal venous sinus as it passes along the internal surface of the midline of the superior aspect of the cranial vault. The inferior and free border of the falx cerebri affords passage for the inferior venous sinus." The frontal bone is intimately associated with the reciprocal tension membrane and this is why it is fundamental in any pterygoid problem.



DR. GOODHEART'S RESEARCH TAPES

TAPE 90

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Alcoholism

"ALCOHOLISM, THE NUTRITIONAL APPROACH", by Roger Williams, University of Texas Press, P.O. Box 7819, Austin, Texas 78712. "Roger Williams, responsible for the concept of biochemical and biological individuality as well as genototropic concepts of susceptibility to illness. He believes alcoholism is a physical and usually a curable disease. He recognizes that psychiatry, medicine, and religion as well as nutrition all play a part in the rehabilitation of an alcoholic. He asserts that unless the body chemistry is so adjusted that the appetite mechanisms function properly, nothing can bring success. The best hope for an alcoholic is prevention through dietary content and controls. Williams advocates the use of 1-1.5 gms. of glutamine daily in addition to supplementation. He recommends 70 gms. of protein daily which is equal to 2½ ounces. One would require one pound of meat to get 2½ ounces due to 60% water content, or 10 ounces of cheese, or 10 eggs, or 8 ½ pint glasses of milk. He recommends a high protein supplement called Provomalt by Humanic Brands, Inc., New Jersey. It has 57% protein, and is palatable like malted milk. The original supplement Williams recommended was marketed by Eli Lilly, Tycopan. The same supplement under the name Nutricall is available at mailorder prices from The Vitamin Quota, 1125 Crenshaw Blvd., Los Angeles, CA, or 88 Broadway at 19th, New York, NY. He receives no revenue from the sale of the supplement. The information regarding it has been made public and he does not collect any money from sales of the books dealing with the disease. Any reputable firms may by applying in writing obtain permission without fee to market the supplement and to use the writer's name in connection with it providing acceptable assurances are made that there will be no abuse. He reserves the right to review all such form relations before they are offered by sale, advertising, or release. All the entire royalties from the present volume are going to The National Council on Alcoholism, Inc., Mrs. Marty Mann, Executive Director, New York Academy of Medicine Building, 2 East 103rd St., New York. Unfortunately, because of biochemical individuality, nutritional supplementation must be to some extent on a trial and error basis. What works for one may not work effectively for another. What is needed at one stage in one alcoholic may be more necessary than at a later stage. One suggestion of beginning with 3 unit dosages or capsules per day and building up to 9 unit dosages per day within a week or 10 days is as good of a general recommendation as he can make. If an individual alcoholic finds that abstinence is maintained with 9 capsules per day and he continues to eat high quality foods, it may be possible to cut the supplement back to 6 or even 1 capsule per day without the impairment of his improved condition. If he is consistently abstinent over a period of time and his life and associations are such that he can have a reasonable hope of remaining so, and if in addition he watches the quality of his diet, it may be possible for him to abandon nutritional supplements entirely. Each individual case must be handled separately on the basis of the best judgement available. He also recommends that a second supplement may be used to an advantage, containing trace minerals, and he recommends manganese 5 mgs., iron 10 mgs., copper 2 mgs., cobalt 0.05 mgs., zinc 5 mgs., iodine 0.05 mgs., molybdenum 0.20 mgs. He recommends the work of L.L. Rogers and R.B. Pelton from THE QUARTERLY JOURNAL OF THE STUDIES ON ALCOHOL, Vol. 18, No. 4, 1957, pages 581-587, "Glutamine and the Treatment of Alcoholism". On the basis of present knowledge and under prevailing conditions, the recommended amount of glutamine is 1-2 gms. per day. More than this would be beneficial if the price weren't too prohibitive. It is safe to say that no one would take enough to do the slightest damage since it is a natural and harmless food substance. Along with general recommendations; rest, exercise, recreational activities (in and out of doors)." GJG has used glutamine in difficult alcohol problems and it helps, a useful thing.

-Roger Williams, "There is a wide variation in individual patterns, not only in gross and microscopic anatomical variations, but also differences in blood and body compositions, differences in enzyme levels, endocrine activity, excretion patterns, responses to chemicals, and nutritional need. In each one of these areas there may be found items in which differences between normal individuals are not 25 or 50% variant, but actually 500-1000%. The blood of two normal individuals collected under the same basal conditions may vary with respect to their content of

specific fat-like substances by as much as 8-16 fold. The acetylcholine and histamine contents in normal blood samples may vary at least 8 fold. The gastric juices of one normal individual may have 400 times as much pepsin in it as that of his normal neighbor and we differ in our bones, the density of bones in some normal young men have been found in very careful x-ray studies to be 5.7 times greater than normal young men of the same age. Five enzymes have been studied from this viewpoint with sufficient thoroughness that we can say that the levels vary markedly and are characteristic for each individual. Alkaline phosphatase levels vary in normal individuals in at least over a five fold range. Cholinesterase varies similarly in a three fold range. The arginase in red blood cells, the range is at least four fold and for serum amylase, 50 fold, and for beta-glucuronidase, 10 fold. Endocrine glands vary widely from individual to individual. The thyroid gland may vary in weight among normal individuals from 8-50 gms., the parathyroids, which are 2 or 12 in number, may vary in weight from 50-300 mgs., the testes in normal males weigh from 10-45 gms., the ovaries in females vary in weight from 2-10 gms. and contain at birth 30,000-400,000 ova, the pineal gland weighs from 50-400 mgs., the pancreas glands may contain from 200,000-2,500,000 Islands of Langerhans where insulin is produced, adrenal cortices of different individuals are said to vary about 10 fold in thickness. It should be emphasized that the values given above are normal ones. When treating alcoholics, it's a highly individual thing. The addition of choline and trace minerals far exceeds the spiritual aspects of Alcoholics Anonymous or the avoidance routine such as antabuse or conditioned reflex behaviors."

"5 MINUTE PHOBIA CURE", by Roger Callahan, a member of the ICAK, Enterprise Publications, Delaware. Most phobias are related to the stomach meridian (95%). Others to the spleen meridian. Challenge for the ST alarm point to show against patient thinking about the phobia. Uses Beginning and End Technique on the ST meridian which worked for 7 out of 10 patients. Some patients are psychologically reversed. The patient says, "I would like to be 100% healthy and not have whatever the symptom is" and they would weaken (i.e. bilateral PMC), and saying "I want to be ill and continue to have symptoms" would strengthen them. Psychophysiological reversal interferes with the usual treatment. Stimulating SI3 will reverse. GJG found that weightbearing or a gait position may make the psychological reversal return after successful treatment, which requires treatment in that position.

"CHEMICAL PREVENTION OF CARDIAC NECROSES", by Hans Selye, Ronald Press, New York. "Even the most conservative evaluation of the findings cannot fail to raise the hope that such a protection by electrolytes may also be effective in prophylaxis at least some of the cardiopathies of man. It is rather unlikening that all the manifold experimental cardiopathies should depend upon mechanisms that are wholly unrelated to pathogenesis of the histologically similar cardiac diseases of man. Besides, a good deal of evidence suggests that certain clinical conditions are closely related to the type of experimental cardiopathies that can be prevented by potassium chloride or magnesium chloride."

-On the chemical side of changing right or left brain cardiac activity, addition of Min-Tran with potassium and magnesium will neutralize the right or left brain weakness which is changed by pre- and postcordial tapping.

-Trying to reverse pre- and postcordial tap technique is not a good idea; GJG finds symptoms arise when you do so.

-GJG wrote in 1971, "Naturally the head tilt must be corrected by way of the usual patterns of the splenius capitis, sternocleidomastoid, anterior scalenes, but if the head tilt persists despite balance of these structures, it will generally be due to the action of the sacrospinalis and two distinct patterns have evolved in this situation. It was first discovered in its primary form unrelated sacrospinalis imbalance by Dr. Keck. He observed that under some circumstances that when general spinal tension was on the high side of the occiput, there was an anterior atlas, and when it was on the low side, there was disturbances in the atlantooccipital junction." When the occiput was found low on the side of sacrospinalis tension, there was a high percentage of upper cervical fixations except those with a TMJ problem masking the upper cervical fix which is later uncovered. Also find if you press four fingers into the patient's costotransverse angle of the lower four ribs and let it rebound and then test for cervical tension; one or the other side will show lessened sacrospinalis tension on the low side. Those four ribs show directional challenge and must be adjusted as per research manual or by placing a folded gown opposite side found to reduce tension on the

standing patient allowing the ribs to come backwards. When the occiput is high on the side of sacrospinalis tension, an anterior atlas may be present. Most posterior portion of the ramus of the jaw will be extremely tender on the anterior atlas side. Activate the three NL of the weak sacrospinalis and the NV and reevaluate head tilt. To adjust an anterior atlas, put the patient supine with the side of the anterior atlas up. Contact the mastoid process on the up side and the head is cradled on the down side. Mastoid contact is thrust with the pisiform with the line of drive directly towards the bridge of the nose. Repalpate for decreased pain at the posterior ramus of the jaw.

-Shortened, hypertonic sacrospinalis may cause unlevel shoulders without any spinal problems. Recommend that the patient lay on a tennis ball in their tight iliocostalis lumborum for 15 minutes along with treating the sacrospinalis factors to help relieve the hypertonicity.

-Don't forget Vitamin ACP in sacrospinalis problems.

-“THE POCKET TS LINE MANUAL”, by Brice Vickery, D.C., with illustrations by R.W. Heggic, P.O. Box 623, West Redding, Connecticut 06896, 203-938-9000, \$35.

-“DR. ABRAVANEL'S BODY TYPE AND LIFETIME NUTRITION PLAN”, Elliot D. Abravanel, M.D., Bantam Books. Recommended for your patients to apply to their own diets and to include doctor's monitoring of supplementation.

-Dr. D.E. Schneider, “When the human embryo is forming, the heart and brain develop in the same area. The heart is in part nervous tissue and additionally has the capacity for manufacturing and storing certain highly potent chemicals that exercise a regulatory effect on the body including the brain. There is evidence for a two way relationship between the mind and the heart, even though the mind has its effect on the heart, the heart in turn may influence the mind intensely.”

-Donald T. Lund, a psychiatrist and consultant to a heart transplant surgeon says that “heart transplant patients where the nerves connecting the heart and the brain are severed, have severe emotional problems after the surgery. The new heart is still able to operate as a pump, having its own power supply and timing mechanisms independent of the general nervous system for giving impulses to the heart muscle, but is only responding sluggishly to outside influences. The heart in turn registers few if any cofactors of motivation. To one extent the nerve endings of the body and the new heart are able to make some connections is not clear, but it cannot be ruled out that several factors causing serious mental aberration and disorientation are being reported in heart transplant patients by the doctors who have done the surgery.”

-MEDICAL WORLD NEWS, May 23, 1969, “What Does A New Heart Do To The Mind?”, “reported at Stanford's University Medical Center a 45 year old man that received a new heart from a 20 year old donor, told his friends that he was celebrating his 20th birthday. Another recipient resolved to live up to the sterling reputation of the prominent local citizen who was his donor. A third man expressed great fear of feminization after receiving a woman's heart, although he was somewhat modified when he learned women live longer than men. Dr. Lund says that these patients are some of the less severe mental aberrations observed in a series of 13 transplants over the last six months. Though 5 patients in the series have survived as of early this month, 4 of them were leading fairly lives, 3 of the non-survivors became psychotic before they died last year, and 2 others have become psychotic this year. While giving of the drug prednisone, the mind worrying effects of serious operations and long confinement under intensive care are given by Dr. Lund as the chief causes of the strange personality disorders.”

-“Dr. Schneider sees other factors modifying Dr. Lund's explanations for the psychosis encountered in the heart transplant series. Dr. Schneider continues to maintain that the heart is more than a pump, it is a neuroendocrine battery, it has a little brain of its own. The SA, AV nodes and the conduction bundle and the little waves from this bundle can be seen and discerned along with each heart valve waves on the ECG. Beyond this, the heart's extensive manufacture and storage of catecholamines may affect the levels of these neurohormones in the hypothalamus. Many non-heart transplant patients who were given prednisone, or confined for long periods didn't get psychoses.”

-Proverb 423, “More than all else, that is to guard and safeguard your heart, for out of it are the sources of life.” “Love God with your whole heart as well as your whole mind”, Matthew 22:37. Interesting that the distinc-

tion between the heart and the mind is made.

-“THE EMOTIONS AND BODILY CHANGES”, Columbia University Press, 1954. Quotes Brahn who says that “anxiety is an inner tactile sensation bound up with a special end apparatus located in the cardiac tissue which is well supplied with sensory nerve endings.”

DR. GOODHEART'S RESEARCH TAPES

TAPE 91

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"Backache Relief"

The DETROIT FREE PRESS had an article on backache relief reported by a friend of GJG. He mentioned AK and the benefits he received. He also mentioned "BACKACHE RELIEF", by Klein and Sobel, Time Books, a division of Random House, 1985. "The ultimate second opinion from back pain sufferers nationwide who share their successful healing experiences." Documents over 100 different doctors, treatments, self-help, etc. "The information, ratings, and advice in this book are based on the results of the most extensive survey of back patients ever undertaken. Individuals that volunteered to participate in this survey by responding to public notices and advertisements in the following publications; American Business, Columbia Journalism Review, East-West, Family Weekly, In These Times, Money's Worth, Mother Jones, New Era, New York Magazine, New York Times, Prevention, and Saturday Review. In addition, some participants referred us to other back sufferers who became participants. 93 of the total 492 participants responded by telephone. We interviewed them for an average of 45 minutes. The remaining participants inquired by mail and were sent a questionnaire. When we received a completed questionnaire, we followed up by telephone whenever necessary to expand or clarify a point of information. Nearly 40% of the individuals surveyed were readers of the Family Weekly. This magazine is distributed to more than 200 medium sized American cities and the demographics of these closely match that of the general population. Survey participants represent every stratum of American society from the wealthy and famous to those who can no longer afford medical treatment.....At least 55% of the participants were male, 44% were female, 1% chose not to answer the question on sex. The vast majority of individuals were under age 50. Persons 18 and younger constituted 1% of the sample, 19-29 were 28%, 30-49 were 44%, 50-64 were 18%, and 65 and older were 7%. These findings concur with available research about the sex and age of back sufferers. All participants, whether orally or in writing, answered questions contained in a two page questionnaire. Topics included type of practitioner seen, diagnosis reached, treatment advice received, evaluation of each practitioner and treatment, exercise frequency and source of instruction, emotional stresses and its role in back pain and the practitioner's approach to it, tips for back sufferers and personal data which was optional. Two years passed from the time of the first public notice and the result of this survey were tabulated. When the number of participants reached 100, significant trends were already apparent for the most widely seen practitioners, orthopedists, chiropractors, general practitioners, physical therapists, and osteopaths. At 200, the reasons behind the trends were clear, and more than 25 different kinds of health care specialists and 35 different kinds of treatment have been reported. However, these could not be adequately evaluated. At 400, we had enough data to appraise virtually every kind of practitioner and treatment available to back sufferers. Why then was the final count 492? Because the authors had a whim to have participants from every one of the 50 states.....page 50, "Kinesiologist In Backache Relief. With their special training in muscles and movement, these specialists can alleviate many kinds of back pain. The eight kinesiologists seen in this survey were chiropractors who had received additional degree in kinesiology, the study of mechanics and anatomy in motion. They were able to help 6 of the 8 participants which is impressive considering that all these patients were severely limited by low back pain, sciatica, or a ruptured disc. Kinesiologists usually employ the same techniques as chiropractors, including a gentle form of manipulation. But their expertise in the area of movement seems to give them a substantial added advantage. Note, chiropractors which advertise the use of kinesiology usually do not have a degree in kinesiology. One disabled back sufferer, a health educator, was in severe pain during the 5 years she saw chiropractors, orthopedists, neurosurgeons, and physical therapists. After a few months of treatment by a kinesiologist, she made a complete recovery. 'Applied Kinesiology, heat, massage, acupressure, gentle adjustments, and stretching exercise finally helped me', she said. Although it is impossible to find a listing of kinesiologists in the telephone directory, you can learn the name of one practicing in your area by calling 313-962-6484. This is a referral service operated by Dr. George Goodheart, Detroit, Michigan, the aptly named father of kinesiology. In 1980, Dr. Goodheart was the first in his field to be invited by the U.S. Olympic Committee to work with American athletes. Further information and

referrals are available from the International College of Applied Kinesiologists, 1800 Park Ave., P.O. Box 680547, Park City, Utah 84068, 801-649-0882." On page 103, "Kinesiology- AK integrates the advantages of manipulation and individual exercise with the knowledge of how to put your muscles in working order. Here are the specifics of how to find one of these relatively few kinesiologists who treat back sufferers. Number of survey participants- 8, provided dramatic long term help- 50%, provided moderate long term help- 25%, provided temporary help- 12.5%, ineffective- 12.5%, made patient feel worse- 0%. Few medical disciplines are as potentially useful to back sufferers as kinesiology, the study of the principles of mechanics of movement. Applied Kinesiology involves the use of a wide range of non-drug, non-surgical procedures ranging from manipulation to massage to exercise. But what stands out most in the minds of the survey participants who had AK treatments was the kinesiologist's interest and knowledge about muscles. For example, 5 of the 6 participants reported that the muscles in their back, hips, or legs were measured and tested for strength and flexibility and that specific corrective movements and exercises were prescribed after evaluation. There are fewer than a thousand clinical kinesiologists, but you can get the name of a practitioner in your area by calling 313-962-6484, Dr. George Goodheart, 542 Michigan Building, Detroit, Michigan 48226, or 801-649-0082, ICAK, 1800 Park Ave., P.O. Box 680547, Park City, Utah 84068." This book is highly recommended to have on hand to show patients.

Spinal Length

-Length of the spine from the external occipital protuberance (EOP) to the tip of the coccyx in health should have no difference of more than a 1/2 inch sitting, standing, and lying. Use a nap measure or tapeless measure.

-GJG had a physician who was scheduled for back surgery and had a difference of 4 inches from sitting, standing, and lying. He was 4 inches taller when standing than when lying. Correction of fixations and muscle balancing helped the pain, but not with the spinal length differences.

-Alf Brieg says that there is a 2-2.5 inch difference in the dural tube, it folds up when sitting and expands when standing.

-Measuring from the EOP to the coccyx with a straight edge gives no difference; the curves of the spine must be measured.

-Meningeal release by an intrarectal contact by Lowell Ward of Stressology is involved and complicated.

-Filum terminale attaches to the first coccygeal segment, and good sacral attachment (see Chris Harrison's paper in The Collected Papers). He says that it's hard to think that dural tension could cause cranial faults except those that might alter an occipital level.

-Palpate neck flexors or extensors for the most pain response. Place one hand on the painful neck flexor or extensor, the other hand use a finger contact on the coccyx contour. Apply a cephal pressure on the coccyx but do so all along the contour of the coccyx until the pain is relieved at the neck, usually straight cephal, about 12-14 pounds of pressure. The length of the spine will change following this coccygeal tension release/coccygeal lift technique/meningeal release. The neck flexor or extensor pain is relieved.

-This coccygeal tension release brought the spinal length of the physician with the previous 4 inch difference to within 1/2 inch. Also helped a patient that was supposed to have a hip prosthesis put in due to painful hip joints. Releasing the coccyx tension released the hip jamming.

-Be sure to check dural torque with blocks under contralateral ischium and glenoid against right and left brain activity to help bring it out. If evidence of dural torque is gone, then recheck against right and left brain activity and if it returns, this indicates the need to educate the patient in walking with one leg longer.

-Reactive sternocleidomastoid and contralateral psoas. May suspect this if when testing a gluteus maximus, there is a restriction of femoral motion due to the reactive psoas.

-Alf Brieg's book, "ADVERSE MECHANICAL TENSION IN THE CENTRAL NERVOUS SYSTEM; AN ANALYSIS OF CAUSE AND EFFECT; Relief by Functional Neurosurgery", Almqvist and Wiksell Intl., Stockholm, Sweden and John Riley and Sons, New York, London, Sydney, Toronto. Out of print. "Since the biomechanics of the central nervous system was published in 1960, there has been an encouraging growth of interest in the topic. The investigation reported that there was originally prompted by the observation on radiographs that flexion of the neck

led to cranialward displacement of silver clips that had been firmly clamped on close to the upper cervical spinal cord. Interest was accordingly centered on the previously undescribed physiological deformation of the tissues of the spinal cord due to normal movements of the spine. In subsequent research, the aim has been to investigate the effects that artificial deforming forces applied to the spinal cord and meninges in situ exert upon the nervous system from the brainstem to the conus medularis and the associated cranial and spinal nerves. These effects have been studied macroscopically, microscopically, and with the help of photoelastic models."

-Upledger in "CRANIOSACRAL THERAPY", see TAPE 80, page 2 for quote.

-The coccygeal lift to relieve tension has extraordinary results with pain as well as changing spinal length.

-If the right and left brain are not used equally, that may make an existing dural torque worse. Left brain is most common; right brain is more common in schizophrenics.

-Jim Cox in an article in *CHIROPRACTIC ECONOMICS* shows that no change in CT scans on patients that had evidence of disc protrusion or herniated nucleus pulposis before and after treatment. Some patients had no sciatica and some still had sciatica, and there was no way of telling off of the CT scans as to who was better and who was not because there was no change. It's probably due to dural sleeve tension.

-Congratulations to Bill Kelley of Knoxville, Tennessee for being appointed to the International Festival of Sports Physician's Team, the only chiropractor. This is the preliminary to being appointed at the next Olympic games.

-Cephal dural attachment is at the second and third cervical vertebrae and at the foramen magnum, especially the cranial sutures.

-Measurements of the pinal height from the EOP to the tip of the coccyx, with a tapeless measure, shows a difference of 1/2 inch from lying to sitting to standing, in healthy individuals. This is in the 70-95 year old group.

-In those patients in the 30-50 year old group with pain, they will show up to a 4 inch difference in spinal length with position change. These changes are occurring within the kyphosis and lordosis of the spine.

-Coccygeal Lift Technique: Coccygeal Lift seems to help. Following the coccygeal border with your index finger, you then lift the coccyx straight upward towards the head. Use some palpatory pain indicator (anterior neck flexors) to determine direction, usually lift straight up with 12-14 pounds of pressure. Add a caudal pressure to the first three cervicals coincident with respiration.

-TL for this to the coccyx with the patient applying a firm traction to the feet. Also a two hand TL to the upper three cervicals with a footward traction and respiration. Inspiration will usually abolish the weakness.

-Another distraction technique on the skull: Patient puts hands on the occiput to pull it apart. A positive TL will usually abolish with inspiration. Combine the two movements for correction by squeezing the occiput together while pushing downward on the first three cervicals.

-After this therapy the spinal measurements change by approximately an inch shorter. This is done after you've corrected pelvic categories, fixations, etc. No measurement change means some type of fixation is still present.

-Tapeless measure can be obtained by contacting Joanne Goodheart.

-The coccygeal technique works for recurrent dural torque patterns which do not seem to correct.

Iliolumbar Ligament

-Reading source: "CLASSIFICATION OF CONNECTIVE TISSUE", Warick and Williams Edition of Gray's Anatomy. "Regular connective tissue is predominantly collagenous, but elastic components also occur, as in the ligamentum flavum of the vertebral laminae, and in the vocal cords. A smaller proportion of elastic elements is also present between the collagen lamellae of many collagen ligaments and fascia. In other sites the collagen fibers may form precise geometrical patterns as in the cornea."

-Fundamentally, due to elasticity, ligaments stretch.

-Reading reference: "SKELETAL DISABILITY TREATED BY PROLOTHERAPY; FIBROBLASTIC PROLIFERATION", by George S. Hackett, Third Edition, 1956, Thomas Books. Hackett would inject sclerosing solutions at ligament insertions to produce a tightening of the ligament.

-Gillette said ligaments were loosened. By applying therapies we are under the premise that muscles and ligaments want to return to where they came from.

-Reading referral: "VERTEBRAL COLUMN, LIFELINE OF THE BODY", by Fred Illi, 1951, National College of Chiropractic, Chicago. Page 17, "In the light of our studies with the movement of the sacrum, as affected by normal sacroiliac (SI) effort, we find that when a step forward is made with the right leg; the accompanying muscle and play will draw the right horn wing of the sacrum posterior and superior, as in a closing drawing compass, while concurrently, the left horn wing is carried anterior and towards the inferior limits of the articulation, opening the compass. With the right leg extended forward and the sacrum on the right side positioned posteriorly and superiorly, there is a correspondingly oblique anterior and lateral rotation of the iliac wing, and because of the attachments of the iliolumbar ligament of that side, the right transverse process of the fifth lumbar is drawn forward, forcing the vertebral body into rotation toward the left. (On the left, as indicated above, the picture is dimetrically the opposite). The sacrum has glided anterior and inferior while the iliac portion of the innominate has rotated posterior, and as a result the attached iliolumbar ligament pulls the left transverse process of the fifth lumbar posteriorward, thus augmenting the rotation of the vertebral body to the left. This movement is followed by all the other lumbar vertebrae but to a steadily diminishing degree."

-Essentially the ilium moves forward, the sacrum moves backwards, the L5 moves forward due to the iliolumbar ligament although it is slightly more complicated than that.

-Illi states: "Supplanting the legs with iron tubes fixed in each acetabulum, oil was injected into the SI

joints. Finally the moment for the big experiment. Our objective was to move the two iron tubes alternately up and down, and thus attempt enforced movement of the innominates similar to their assumed movements in the act of locomotion. If not just my imagination, the sacrum was supposed to exhibit a compensatory brief gyrating motion, obliquely up and down, and concurrently anteriorly and posteriorly between the innominates. Thus, describing an almost horizontal figure eight. At the beginning, our experiment seemed to fail. Suddenly, the miracle took place, the sacrum moved regularly just as a well wound small machine. It was precisely what I had foreseen. The articulating surface of the ilium is broader than the corresponding one of the sacrum. The articulating surface of the sacrum is longer than the corresponding one of the ilium. The SI ligaments are stronger on the posterior side than on the anterior. (Very important). There are interosseous ligaments criss-crossing to unite the area loosely immediately around the articulating surfaces. There exists an interarticular cartilage, a synovial membrane enclosing synovial fluid, and there is also Illi's ligament, unknown until the present. It's greater part lies within the synovial membrane and originates by three or four digitations at a point about one cm. not half above the superior border of the articulating surfaces of the ilium. These digitations converge to enter the joint capsule to form a strong, single band which inserts about half of a centimeter in back of the anterior superior margin of the articulating surface of the sacrum." This publication gives diagrams illustrating this movement.

Illi continues: "Later I discovered that the vertebral column is bent forward upon a fixed pelvis. The sacrum does not move anteriorly as one would expect but performs a rotation on its perpendicular axis. On each examined cadaver, the movement was asymmetrical to a variable extent. The fifth lumbar vertebra deviated in the opposite direction from the torsion of the sacrum."

-Warwick and Williams Gray's Anatomy: "The Lumbosacral Joint- The iliolumbar ligament is attached to the tip and the lower and front part of the transverse process of the fifth lumbar vertebra and occasionally has an additional weak attachment to the transverse process of the fourth. It radiates as it passes laterally and is attached by two main bands to the pelvis. The lower band, often termed the lumbosacral ligament, runs from the inferior aspect of the fifth lumbar transverse process to the anterior part of the upper surface of the lateral part of the sacrum, blending with ventral SI ligament. The upper, which gives partial origin to the quadratus lumborum, is attached to the crest of ilium, immediately in front of the SI joint and is continuous above with the thoracolumbar fascia. The pelvic ligaments, especially the iliolumbar, have a supportive function at the lumbosacral junction. It has origin from the infero-lateral margin of the transverse processes of L4 and L5. These two origins and their tendons are anatomically independent in their course. It inserts into the most medial point of the iliac crest and into the anterior and posterior surface of the ilium. The L4 segment arises from the TP of L4. This part passes steeply inferiorly and laterally reaching the anterior surface of the ilium, lateral to the SI joint. The L5 section divides into two, immediately at the TP origin of L5, fibers arising from the tip pass almost perfectly horizontal to the iliac tuberosity, reaching the anterior part of the ilium where they insert together with fibers from L4. Fibers arising from L5 TP pass laterally inferior (almost vertically, and this is the important part) to the anterior side of the ilium reaching the linea terminalis, where they insert together with the anterior SI ligament. The iliolumbar ligament transmits the motion of the hip bones to the L4 and L5 vertebrae."

-Check for and fix any categories in the pelvis or the dural torquing.

-Iliolumbar Ligament Challenge and Therapy: Challenge by pressing the two ends of the ligament together, a positive challenge will weaken an indicator muscle. This challenge was first found using a double hamstring test. Respiration does not seem to elicit a change.

-Stretching a ligament on the anterior will cause a reciprocal weakening of a posterior muscle. For example, extension of the shoulder with arm abduction will strain the acromioclavicular ligament, inhibiting the posterior deltoid and facilitating the anterior deltoid in an effort to prevent that strain.

-In the iliolumbar ligament, it's as if it were trying to return to where it had come from. Strain/counterstrain to the medial gluteus maximus with the leg in extreme extension is required. With a knee under the extended leg, palpate the trigger point with one hand while approximating the iliolumbar ligament ends together.

-A patient had a problem with nasal blockage after 2-3 miles of running. Had been previously unable to affect more than a 15% decrease in symptoms during a visit. We presumed that he had a tight iliolumbar ligament on one side, preventing the excursion of the lumbar following the ilium. Holographic technique to C5 had minimal effect.

THYROID- I am feeling very depressed; I am light and buoyant.

STOMACH- I am disappointed/disgusted; I am content.

HEART- I am angry; I love and forgive.

CIRCULATION SEX- I am jealous/remorseful/I have regret/sexual tension; I am relaxed/generous.

LARGE INTESTINE- I am guilty; I have self worth.

KIDNEY- I am plagued with sexual indecision; I feel sexually balanced/I am sexually secure.

SPLEEN- I am anxious about the future; I have faith in the future.

GALL BLADDER- I am full of rage; I am full of love.

LIVER- I am unhappy/sad; I am happy.

LUNG- I am intolerant; I am tolerant.

BLADDER- I am restless/impatient; I am at peace/harmony.

SMALL INTESTINE- I am sad/I feel sorrow; I am joyful.

-Best to use the patient's name when they vocalize it, i.e. "John is sad, John is glad".

DR. GOODHEART'S RESEARCH TAPES

TAPE 94

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-GJG has moved his office to 20567 Mack Ave., Grosse Pointe Woods, Michigan 48236, 881-0662, 0663, 0664, 0665, (5532 - private line).

Manubrium

-Conception Vessel (CV) and Governing Vessel (GV) being separated by having the lips apart and then testing muscles as determined by the TS Line reveals alterations in meridians which induce a spurious emotion which may be a stumbling block to the patient getting better.

-Lips apart, lips together concept brought about testing associated point against lips apart or together and found a higher percentage of discovery which were negative to TL before.

-Wondered why associated points didn't show up more often. TL to an associated point and lips apart gives a higher percentage of discovery.

-After fixing the manubrial junction with an upward thrust and the thymus thump, TL the associated point with lips apart or use the phrase associated with that organ, there will be a holographic subluxation.

-See increased range of motion and vital capacity after holographic subluxation correction.

Tibetan Acupuncture

-Tibetan concepts of energy vary from China, Korea, and Japan. Original acupuncture ideas came from India. Tibetans say there are only three meridians; right is biliary, center (CV, GV) is air, and left is mucous or phlegm.

-Alexander Canon wrote about Tibetan acupuncture, but his drawings are hard to understand, the pattern starts at the stomach meridian and seems to follow the stomach meridian, but crosses over to the opposite leg and goes down to the second toe.

-**"TIBETAN BUDDHIST MEDICINE AND PSYCHIATRY- THE DIAMOND HEALING"**, by Terry Clifford, Samuel Weisser, Inc., Yorkbeach, Maine, 1984. Page 140 has a figure showing the secret points on the spine. Vertebrae 1, 6, and 7 are used most often. 6 is called the secret point of life force. Method of numbering the vertebrae is different. The first vertebra in Tibetan system is C7. Wind is the energy. Acupuncture meridian therapy does not stimulate, but detours energy back into channels. Needle insertion, moxabustion, etc., detours energy in the three meridians. The right stomach meridian is the bile meridian. They say that many diseases are due to too much or not enough bile (i.e. digestive problems). Lack of wind causes failure to drive biliary energy. Central meridian (air/wind) is a combination of CV and GV. The stomach meridian on the left is the phlegm/mucous meridian (or lymph). Lack of air causes things to not move well.

-GJG wondered why some patients burp after manipulation.

-Ergman in **"CONTROL OF CIRCULATION"** described a method of using a pressor test, running fingers down the spine and observing which areas of the spine turn red or white and correlate it with blood pressure. Ethyl chloride is used on the red areas if the blood pressure is less than 120, if 120-140 then red needed cold and white needed warmth, and greater than 140 needed warmth over white areas. After doing this technique, the patients would burp.

-Procedure for Tibetan acupuncture:

-TL the pulse points, if positive, treat in the usual fashion.

-TL the pulse points, if negative to FID, etc., have the patient wrap their fingers around the pulse points and simultaneously TL right and left K27. If positive, identify the meridian. It is often LV/GB on the left and ST/SP/P on the right, or CV/GV. (Hardly ever found SI as Roger Callahan says in psychological reversal. TL to the beginning

and end points of SI on the involved TMJ side would show psychological reversal).

-TL the right cheek, ST 1, just under the orbit and the other hand touching the same side upper thoracics. If positive, inspiration will negate. Also check left ST 1 and left upper thoracics.

-If the pulse point was CV/GV, TL the CV and GV end points for the positive response, then determine upper vs. lower wind, TL GV against the center of the spine, then TL CV against the center of the spine. Usually upper thoracics or lumbar.

-Get a vital capacity reading.

-Check for holographic subluxation in the area that gave the positive TL; correct, and then retake the vital capacity. Should get a phenomenal change. Interestingly enough, it will go down if the wrong correction is made.

-Cloacal-type reflex in the inguinal region affects circulation in the opposite leg. Increased a plethysmographic reading of one leg by doing the cloacal reflex of the opposite inguinal region. There is a Tibetan explanation. Path of fiery principle of light and warmth is the area and reflex where the stomach meridian crosses at the groin.

-Muscle testing machine for objective findings. Prestige Line Health Products, 5 Inez Dr., P.O. Box F, Brentwood, New York 11717, 516-273-3636 or 718-297-0600.

DR. GOODHEART'S RESEARCH TAPES

TAPE 95

-1-

Skin Stretch and Vibrate Technique

-Cutaneous receptors for touch, pressure, and vibration. Type I receptors are slowly adapting Merkel's cells (disc cells) in hairy and non-hairy skin; located in bunches at the dermal-epidermal junction just below the stratum germinatum; both static position and velocity receptors (mostly velocity); large diameter, heavily myelinated, and relatively fast conducting fibers. Type II receptors are slow adapting Ruffini endings; located at the dermal-epidermal junction in hairy and non-hairy skin; conveys position and velocity (mostly position). Hair receptors (trichotactile) detect light tactile sensations; have G1 and G2 endings that are sensitive to bending of the hair; located in hair follicles; fast adapting; convey pure velocity. Meissner's corpuscles are specialized endings appearing as gelatinous bags located in the dermal papillae of non-hairy skin; fast adapting velocity receptor that responds to deformation of the skin by pressure. Pacinean corpuscles are large encapsulated endings located in the hypodermis, subcutaneous; fast adapting; pure pressure receptors that give rise to an afferent fiber centrally; adequate stimulus is vibratory pressure of the skin.

-Besides informing the central nervous system about the position and movement of the body, joint information is used co-functionally with intermuscular receptor information to regulate afferent innervation of related muscles. Lesions that affect proprioceptive input in joints and ligaments are accompanied by disturbed coordination and ataxic gait. Position sense modalities provide precise information to the sensory cortex via the dorsal column medial lemniscus (DCML). Some receptors respond only to joint movement, some only to steady position. These constitute awareness of movement or kinesthesia.

-If the body thinks the arm is up in the air and then test the latissimus dorsi (lats), it is weak. Can do this by stretching the skin over the lats, and the body thinks the arm is up and the lats will test weak.

-If a muscle weakens after being stretched, this is the need for fascial flush.

-Recurrent weak pectoralis major sternal (PMS) in tennis players. They would respond well to AK treatment, but as soon as they played tennis, it would return.

-Suppose that the skin over the rhomboid and PMS are out of synch with the rest of the body. Bringing the arm forward stretches the rhomboid skin and therefore the PMS is functioning.

-Manual stretching of the skin over the rhomboid caused immediate strengthening of the PMS independent of other factors, but only lasted 20-30 seconds.

-Pacinean corpuscles are sensitive to tap and vibration.

-“MEDICAL NEUROBIOLOGY”, by Kaufman and Willis, C.V. Mosley. Chart included with this tape of the peripheral nervous system's cutaneous receptor organs, along with the class of receptors, functional category, morphological category, frequency range, size of axon, probable sensory rate, and type of skin.

-Pacinean frequency is 60-300 Hz., Meissner's is 5-40 Hz.

-GJG then stretched and vibrated the skin over the rhomboid for 20 seconds and the PMS remained strong.

-There is no nutritional correlation yet.

-Persistent muscle weakness; stretch the skin over the area that normally would be stretched if that muscle were to be used. I.e. if using the hamstring, the skin over the quadriceps is stretched and the quadriceps should weaken. If the hamstrings were weak, stretching the skin over the quadriceps would strengthen it. Treatment is to stretch and vibrate the skin over the quadriceps for 20-30 seconds.

-Can also use the Myomatic machine at 300 Hz. with the Q-tip probe for 30 seconds over the skin. This is not necessary, can use hands.

-When the skin is out of synch with the muscle, this is where the importance of the Pacinean corpuscles comes in. This method is diagnostic and therapeutic.

-If testing the deltoid, by raising the arm up, it stretches the skin over the anterior and posterior axilla. If you just stretch the skin over the anterior and posterior axilla, it tells the body that the arm is going up. If the deltoid

weakens after the stretching, the skin and the deltoid are out of synch. Treatment is to stretch and vibrate the skin, even though it produced weakness.

-If the skin is stretched over the jaw, the body thinks the jaw is opened. Because the jaw is homuncular, if the skin is stretched over it, any muscle will weaken if the jaw muscles and skin are out of synch.

-Stretching the skin over a muscle should weaken it, this is the normal pattern. If it doesn't, do the stretch and vibrate over the muscle.

-Good for recurrent and painful TMJ problems that require repeated strain/counterstrain. The painful pterygoid pocket reduces with stretch and vibration of the skin over the masseter. After this treatment, stretching the jaw skin will not weaken any indicator muscle.

-If the patient can only flex and touch their knees, many times stretching the skin over the sacrospinalis, gluteus maximus, and even the hamstrings will allow them to flex further. The effect will fade away unless you stretch and vibrate the skin.

-Psoriasis usually appears on the extensor surfaces of the elbow and knee. Normally, if the skin is stretched over the knee, that means the hamstring is contracting and the quadriceps should weaken. But if you do this on a psoriasis patient, the opposite occurs, the hamstring weakens. If you do this in areas free from psoriasis, it will respond normally. This seems to be therapeutic for the psoriasis skin (the stretching and vibrating). This is only an auxiliary modality for psoriasis in addition to the other things you do for it.

-Acne is also a regional skin disorder (head) as well as eczema which appears initially on the flexor surfaces of the knee and elbow. Again, the stretch and vibrate is an auxiliary modality to help increase circulation of the skin.

-300 Hz. is the frequency which GJG has found the Pacinean corpuscles to respond.

-300 Hz. is effective at the first tonification points using Melzack-Wall pain control with the Myomatic.

-Tapping of acupuncture points, and pre- and postcordial tap are done at 300 Hz.

-A muscle responds at its golgi tendon organ and muscle spindle cell to the length of the muscle in inches, expressed in tenths. I.e. quadriceps 22 inches long responds to 2.2 Hz.

-A Pacinean corpuscle responds to 300 Hz. regardless of its location.

-Acupuncture points can be stimulated by as little as 0.6 Hz.

Tibetan Acupuncture

-Three main meridians, the other 9 are auxiliary.

-Identification:

-TL the pulse points; if positive, proceed as usual.

-TL the pulse points; if negative, have the patient wrap fingers around the pulse points and TL simultaneously with K27 right and left, if positive here, the meridian system is disturbed. Negates with respiration, usually inspiration. Commonly the left side is LV/GB, the right side is LU/LI.

-TL the right ST1 under the orbit and the left hand over the right shoulder to T1,2,3,4 area. If positive, need to check for holographic subluxation at T1,2, or 3. Also check left ST1 and left shoulder. Negates with respiration, usually inspiration.

-TL CV and GV points at the upper and lower lips, if positive, have the patient TL spinous processes of the upper thoracics and all lumbar and thoracics as best as they can touch until an area shows positive. Adjust that spinous for a holographic subluxation.

-Can also challenge the rib at the level of the holographic subluxation by challenging the vertebrocostal junction, usually in the same direction (together or apart) that the vertebra was holographically adjusted. Find the phase of respiration that negates the challenge, and adjust on that phase.

-Get an increase in vital capacity by 20-30% after holographic subluxation. A Pulmometer gives an LED readout, doesn't accumulate saliva, Kinetix, Rte. 17N, Upper Saddle River, NJ 07458.

-Thank you Jimmy Durlacher for reaching Earl Nightingale and for his support of AK. 7300 N. Lehigh Ave., Chicago, IL 60648. "Insight" is a good tape for inspiration, subscription is recommended.

DR. GOODHEART'S RESEARCH TAPES

TAPE 96

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Body Into Distortion (BID)

-“POSTURE AND PAIN”, by Kendall, Kendall, and Boynton, Williams and Wilkins, 1952. Section on the alignment of lateral posture, “The anatomical structures which coincide with the line of reference (lateral plumbline) should pass slightly posterior to the apex of the coronal suture, pass through the external acoustic meatus, through the dens/odontoid process of the axis, through the bodies of the cervical vertebrae, through the bodies of the lumbar vertebrae, through the sacral promontory, slightly posterior to the center of the hip joint, slightly anterior to the center of the knee joint, and slightly anterior to the lateral malleolus through the calcaneal-cuboid joint. The line of reference of the AP posture corresponds to the median plane of the body as well as the PA posture.” Using a plumbline for posture is highly recommended.

-GJG, Dr. Harper at Texas College, Dr. DeJarnette, Dr. Lowell Ward, and the original Carver ideas have all said that you should never adjust the body away from the plumbline. If the center of the body is to the right of the plumbline and you have to adjust from left to right, this moves the patient further away from the plumbline. The patient should be placed such that they are on the plumbline and then adjust so that it is compatible.

-Test muscles in different positions, supine, prone, sitting, standing, gait.

-1964 Research Manual had charts on the consensus of opinion on innervation of muscles. GJG found that a weak muscle did not always correlate to a subluxation of the motor unit around the innervating nerve root by being negative to TL and challenge. The weak muscle would however respond to some of the 5 IVF factors.

-BID (Body Into Distortion) is placing the body into its existing distortion pattern. I.e. if the patient's I/AM is anterior to the lateral plumbline, by putting the patient's head into forward flexion, more muscle weaknesses will become evident. This is especially true for muscles that are evidently weak on postural analysis, but do not show weak in the clear or as a 51%er. Putting the body into distortion helps uncover the weakness, and from there you can determine what factors are necessary.

-GJG had a patient whose abductor digiti quinti, flexor carpi radialis and ulnaris, biceps, brachialis, triceps, deltoid, and supraspinatus were weak when the head was placed into flexion. This indicates a structural problem, dural torque, coccygeal lift. If it does not show in the clear, put the patient into BID to uncover. In the cervical spine, it may not TL, but will challenge usually in an inferior direction, but could be in any direction. Make the adjustment with the head in extension because flexion is what brought on the weakness. (Thank you, John Bandy, for this concept).

-Subclinical lumbar disc is uncovered by challenging the TP's of two vertebrae by spreading or approximating. Most common is separating. If the challenge was found with BID, then counter the distortion while you make the adjustment. I.e. right L3-4 separation challenges positive with the trunk in right lateral flexion, but strengthens when the hips and legs are moved to the left, so the adjustment is made by spreading right L3-4 TP's with the hips and legs to the left.

-Implementation of BID depends on your table and ingenuity. You can use blocks under shoulders and hips, laterally flex the trunk, extension and flexion of the cervical or lumbar spine via manipulation of your table, etc.

-It's usually a structural correction that is needed in the cervical spine and a disc correction needed in the lumbar spine.

-GJG disagrees with John Bandy about the segmental level of disc involvement. Discs cause unique segmental motor involvements. Dural torque affects multiple dural sleeves and that's why there are multiple motor innervation problems when the patient is put into distortion rather than disc involvement at all cervical levels.

-“LOW BACK PAIN AND LEG PAIN FROM HERNIATED CERVICAL DISC”, by Herman Kabat, M.D., PhD, Warren H. Green, Inc., Publishing Co., St. Louis, MO. Also “HERNIATED CERVICAL DISC INSTRUCTION MANUAL FOR PATIENTS”, same as above.

-Patient's who show a zinc deficiency on the Zinc Tally Test often have a recurrent cranial fault of inspiration or expiration, mostly an expiration challenge. Found that a zinc chelate with trace amounts of copper neutralized the expiration challenge. Still correct the inspiration assist and the zinc chelate will not allow reversal back to the expiration challenge.

-“MEDICAL NEUROBIOLOGY”, by Kaufman and Willis, 1985. Section on CSF discusses the choroid plexus making the spinal fluid and constituents, and it also sets up the high level of carbonic acid anhydrase (CAA) in the spinal fluid. CAA is zinc dependant and is tied up with making the CSF more of an electrolyte. 90% of the body zinc is tied up in CAA. Zinc will help the recurring inspiration or expiration cranial fault. Exception is the patient who needs potassium, calcium, and zinc.

-Also in “MEDICAL NEUROBIOLOGY” they talk about the glycine pool and that it seems to eliminate residual spasticity. In tetanus, the tetanic convulsion is the inability of the glycine (inhibitory neurotransmitter).

-A patient that went from a flaccid paralysis to a spastic paralysis, the usual spinal cord injury (SCI) procedures were done (myointerlink) but the temperature would not change until Collagen C, a source of glycine, was given. The paralysis went back to a more manageable flaccid state. The patient went into spastic paralysis after efforts to increase upper body strength were introduced.

-Glycine works as the nutrition for strain/counterstrain muscles, especially Collagen C.

-“HARPER'S REVIEW OF BIOCHEMISTRY”, by Martin, Mays, Rodwell, Grenner, Lang Medical Publications, Los Altos, CA 94023. Page 493, “Collagen is the major macromolecule of connective tissue, the most common protein in the animal world. Discusses the twisted left handed helixes of three residues per turn. These triple helix molecules unique to collagen are then associated bilaterally and longitudinally in fibers and fibrils. The other striking characteristic of collagen is that glycine constitutes every third residue in the triple helical portion of each alpha chain. Glycine is the only amino acid small enough to exist in the limited space available down the central core of the triple helical molecule, thus the central core is only glycine molecules.” Older people eat pig's and chicken feet and it happens to contain a lot of glycine.

-THE NEW YORK MAGAZINE, March, 1986 and COSMOPOLITAN, March, 1986 both have articles on back pain, chiropractic, and AK.

-The Valentine's book on AK is available from DC Publications, David Walther.

-Lecture material of GJG, Beardall, and Bandy from the Ski and Technique seminar available from Paul Wyatt, Nutri-West, in Douglas, Wyoming.

-Thank you to anyone that sent GJG a copy of the article from SCIENTIFIC AMERICAN, “The Heart as an Endocrine Gland” or from DISCOVER, “The Electric Man”, by Dr. Bjorn Nordenstrom “who claims he has found in the human body sources of electrical activity that are the very foundation in the healing process and is critical in the flow of blood.”

-Skin Stretch and Vibrate Technique: When the skin is stretched over a muscle, it means that the muscle opposite it is functioning, and the muscle under the skin should weaken. If a muscle does not weaken after the skin over it has been stretched, then therapeutic stretch and vibrate is needed, and also natural sources of vitamin B should be increased to avoid recidivism.

GLUCOSE METABOLISM

-The 80-100 mg% of blood glucose is used preferentially for the brain, must have a constant supply. Other organs can use fatty acids.

-Hepatic glycogen is the immediate source of endogenous glucose. During deprivation, amino acids, lactates, pyruvates, and glycerol can be converted to glucose via gluconeogenesis in the liver.

-After a meal, simple sugars are absorbed by the brush border of the small intestine and complex carbohydrates are broken down by enzymes in the small intestine to smaller molecules which eventually yield glucose.

-The new load of glucose stimulates insulin secretion and suppresses liver glycogenolysis. Some glucose is used immediately, the rest is stored as glycogen in the liver or muscle, or is synthesized into triglycerides by the liver and stored in adipose tissue.

-Insulin release stimulates the assimilation of nutrients from the plasma, and controls mobilization of fat and carbohydrate. In the liver, insulin promotes storage of glucose as glycogen; also promotes fatty acid production from glucose. In muscle, insulin increases the storage of amino acids as proteins and promotes membrane transports of amino acids, sugars, and especially potassium. In adipose tissue it promotes triglyceride storage and inhibits mobilization of fatty acids.

-Pancreatic beta cells store insulin as granules which are released by changes in concentration of glucose in the presence of adequate amounts of calcium (important point).

-Glucose stimulation causes an initial rapid insulin release followed by a lower sustained output which gradually rises over time.

-About half the insulin released is cleared after the first pass through the liver, by insulinase. Sustained stimulation by glucose increases the long term supply of insulin by enhanced biosynthesis. This rapid rate of degradation allows changes in insulin secretion to compensate rapidly for fluctuations in the blood glucose levels.

-Insulin release is also controlled by other nutrients, hormones, gut, and neural factors to provide for a smoothly integrated flow of metabolism, especially intracellular calcium.

-Insulin "unlocks" muscle and fat cells to the entry of glucose. This unlocking occurs when the insulin binds to the insulin receptor on the cell surface. Amount of glucose transported depends on the number of receptor sites, and the degree to which the insulin binds to the receptor proteins.

-When utilization and production of glucose are equal, plasma glucose level is constant.

-Decreased blood glucose (as in utilization during exercise) shuts off insulin, and causes the pancreas to secrete glucagon which increases blood glucose levels by breaking down glycogen.

-Type I, Insulin Dependent Diabetes Mellitus (IDDM), juveniles (less than 21 years), abrupt onset of symptoms, require insulin, difficult to manage, usually an absolute deficiency of insulin.

-Type II, Non-Insulin Dependent Diabetes Mellitus (NIDDM), results from a combination of factors, perhaps familial/genetic, impaired insulin beta cell islet function is present, excessive carbohydrate intake, obesity. Can be controlled by diet and nutritional supplementation. These patients may require insulin for the correction of symptomatic or fasting high glucose levels, or during surgery.

-Evidence of inadequate suppression of hepatic glucose production. Glucagon stimulates hepatic glucose formation, and oral glucose inhibits it (stimulates insulin which inhibits glucagon).

-In normal persons given glucose intravenously, enough to raise plasma insulin levels, the

amount of glucose produced by the liver decreases. Attributed to release in response to increased glucose levels.

-Faced by a large daily glucose level, the beta cells adapt by increasing their storage of insulin levels and become more sensitive to a given glucose load (increased glucose = increased insulin). Eventually the cell "tires out" and the beta cell malfunctions in NIDDM. They don't respond as well to increased demands for insulin.

-The patients with NIDDM would show a latissimus dorsi weakness, but after a period of treatment, it would not show any more.

-TL to the NL of the pancreas and liver would give a positive response, indicating that the pancreas and liver were not communicating. Pancreas would produce too much glucagon which would convert liver glycogen into glucose which causes insulin secretion, if there was not enough insulin, the glucose would stay high. Find this problem by TLing the liver and pancreas NL. However, treatment of the two reflexes did not give a therapeutic response, although the muscles improved. A factor of translation was missing.

-Small intestine was the missing link. TL the right small intestine NL against the liver NL (anterior or posterior) would cause weakening of the quadriceps. This was consistent in patient's that showed reactive hypoglycemia and also diabetes. Activation of the NL of the small intestine and liver would show changes on a reflectometer measurement of glucose.

-Don't forget the rest of the body in treating these patients, cranial, categories, dural torque, etc.

-Communication between the liver, small intestine, and pancreas is necessary. More findings of liver and small intestine rather than liver and pancreas.

-Production of triglyceride-rich lipoproteins and their peripheral utilizations is modulated by insulin. Too much insulin stimulates the liver to overproduce the triglycerides; too little insulin prevents plasma triglycerides from being utilized peripherally. Regardless of the cause of hyperlipidemia, the net effect in people with sugar changes is an elevation in serum lipoproteins, which then contributes (with smoking, hypertension, etc.) to atherosclerosis.

-Insulin resistance is defined as an abnormal function of insulin at a peripheral target cell. The amount of insulin present does not work as well as would be expected. Most obese patients have been found to have a smaller than normal number of functioning insulin receptors. Insulin receptor number and post-receptor defect is an abnormal action of insulin within the cell due to a lack of available calcium. This combination leads to a decreased insulin sensitivity and a decreased response. With time, the post-receptor defect gets worse as the blood sugar severity exists.

-Oral sulfonureas increase insulin release by acting directly on the pancreatic beta cells, direct depolarization of the beta cells leads to an increase in the intracellular calcium; calcium releases insulin from the beta granules. This occurs in the absence of glucose stimulation. Calcium into the cell has been overlooked. Calcium not only increases insulin, but if the intracellular calcium rises, it makes the beta cell more susceptible to glucose stimulation, which then makes glucose stimulation more effective. Calcium level has also a relationship to the suppression of glucagon release. One of the sources of the extra sugar in diabetes or in reactive hypoglycemia is the glucose that comes from glycogen that is stored in the liver. The breakdown of glycogen to glucose is mediated by glucagon. Normalize glucagon and you'll normalize the sugar level.

-Find liver and small intestine most often, liver and pancreas less often. In some patients you'll find and fix this, but you don't find a change in the blood or urine glucose level, or urinary or salivary pH; in this case, do it in BID.

ACID/ALKALINE BALANCE

-Saliva pH should be 7.2 for relatively good health. If too acid, increase natural fats like

evening primrose oil, linseed oil, etc. to raise the pH.

-If natural fats give no response, may find pyruvic acid accumulating in a vitamin B deficient patient who shows a slow pulse rate (60's), decreased temperature (less than 97.8), poor breath holding time (less than 40 seconds). Needs vitamin B complex that contains B4. B1 and B4 occur in nature together. B4 is called adenine.

-Patient is in pain (i.e. sciatica), have them measure their saliva pH at home every day in the morning and evening for a 1-2 week period and record. Acid pain is helped by alkalis; alkali pain is helped by acids. That's why the Vermont vinegar and honey or acid calcium works generally. Use liquid phosphoric acid or potassium or sodium bicarb.

-Alkaline urine is not considered normal, but in some patients, it keeps them out of pain. Same for acid urine, if it is alkalinized, the patient's pain (i.e. sciatica) may return.

-Three types of people: Metabolic, Catabolic, Anabolic; hard to classify people into one of these.

BID

-Emergency patient in acute pain (low back), moderate inclination of the spine to the left, and the head to the right. Could not find categories with TL or challenge.

-Putting the patient into BID, trunk left and head down right immediately showed a Category II on the right, however the SOT UOMS on the left, and there was not a double lesion.

-When making the mechanical correction, place the patient opposite the BID, in the patient above, put the trunk right and head left and then adjust the RPI.

-Thank you John Bandy and Gerry Deutsch.

AK PRESS

-Thorsen publication of a book on AK by the Valentines' is available from Dave Walther, Systems DC.

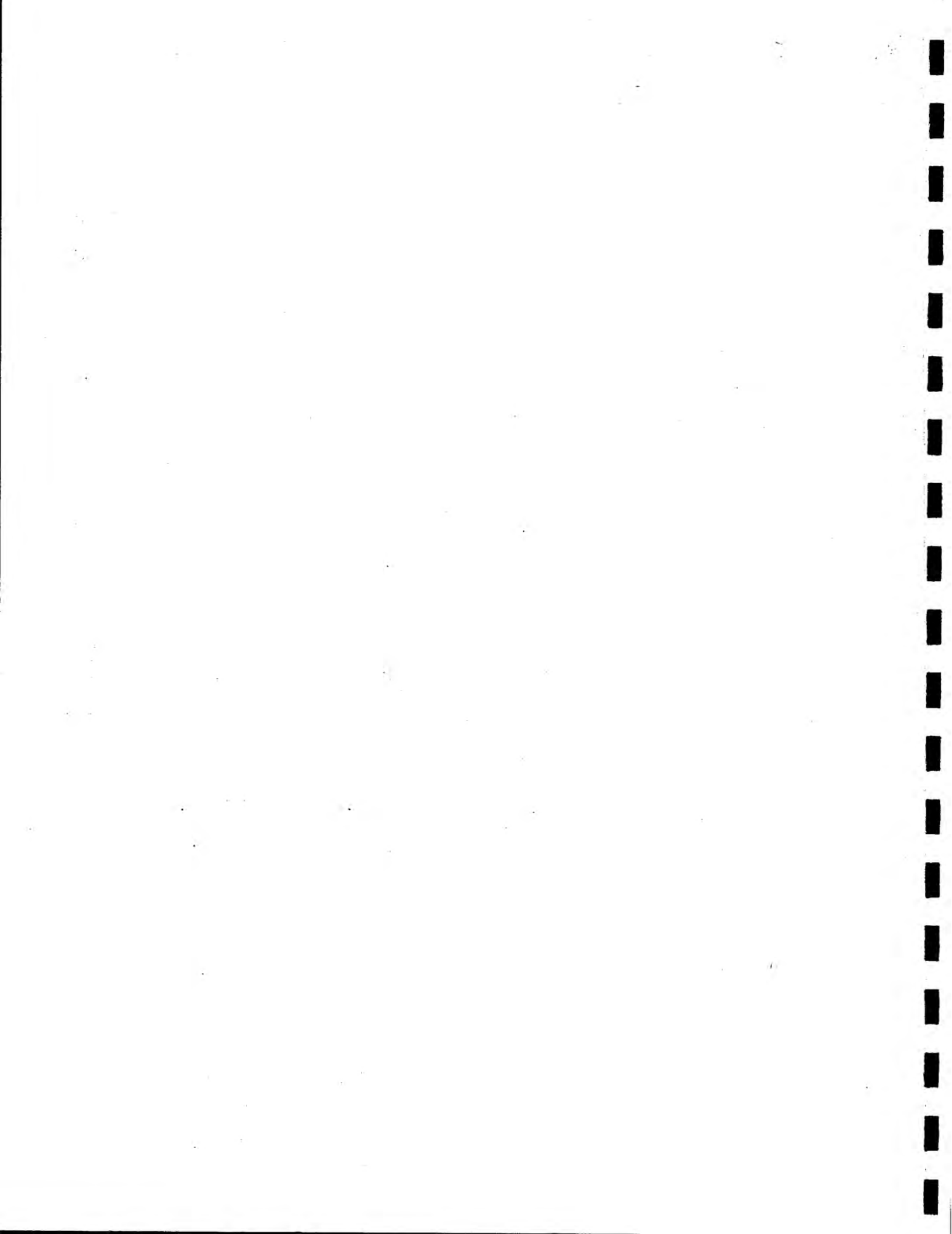
-HARPER'S MAGAZINE, page 83.

-COSMOPOLITAN, March 1986.

-NEW YORK MAGAZINE, March 10, 1986.

-TOWNSEND NEWSLETTER, May 1986 from Jimmy Durlacher, has two articles on AK.

-GALA, a German publication, September 1986.



DR. GOODHEART'S RESEARCH TAPES

TAPE 98

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DURAL TORQUE

-“ADVERSE MECHANICAL TENSION IN THE CENTRAL NERVOUS SYSTEM, AN ANALYSIS OF CAUSE AND EFFECT; Relief by Functional Neurosurgery”, by Alf Brieg, out of print, Almquist and Wiksell, International, Stockholm, Sweden or John Riley and Sons, NY, London, Sydney, and Toronto. This is the dural torque reference book.

-The spinal cord can get longer than the spinal column.

-Post-mortems of patients with MS, ALS, and Myaesthesia gravis, when the spinal cord is transected the cord separates by 2-3 cm.; whereas patients that die of other causes do not. Patients with chronic illnesses who die from some other cause, transection of the cord does not separate, but if the head is placed into minimal flexion, the cord separates. Transection of normal patients does not give separation.

-Live patients with difficult scoliosis, vital capacity and other measurable signs were measured pre- and post-transection of the filum terminale to relieve tension and there was a tremendous change in the vital capacity and other signs.

-Dura attaches to the sutures, foramen magnum, C1, 2, 3, and S2, the filum terminale attaches at coccyx 1. Disturbances at the attachments causes adverse tension on the dura. If you pull on the back of someone's office jacket, they cannot raise their arms, or if you pull up on the collar, they cannot let the arms down.

-“The Surgical Measures for Reducing the Tension in the Spinal Cord”. “Alf Brieg says the surgical measures intended to produce decompression often have a different biomechanical effect. Only if the object is to alleviate established compression is the use of the term justifiable. It is inappropriate for leaving unilateral thrusts. After transverse section of the cord on post-mortem subjects, the transected ends can under certain conditions separate at any level. So long as the lordosis is maintained, the tract will be slack and no separation will occur. Retraction starts in the neutral position of the spine in which there is a change from the low tension phase to the high tension phase. The distance between the cut ends increases as the spine is flexed (page 182). (Page 183) The Hospital For Sick Children, Toronto; 28 children with diastomatomyelia and scoliosis underwent an operation in which a thickened and widened filum terminale was surgically severed. Most of the children displayed a post-operative improvement with the disappearance of neurological signs and symptoms. This would seem to indicate the operation corrected a situation where the cord had been pressed against and stretched over the bony or fibrous bar within the canal or otherwise deformed canal during flexion of the spine. The immediate relaxation of the pons cord tract that is required for adequate treatment of the patient with fresh compressive spinal cord injury may possibly be obtained most reliably by immobilizing the head and cervical spine in slight extension with an adjustable halo splint.” (Important in spinal cord injury patients is to put them into extension).

BID

-BID uncovers basic structural faults (categories, fixations) that provide relief just as in the patient who shows the need for structural correction in the clear.

-Amblyopia in children who are strabismic with one eye medial or lateral, this gives double vision. “SHUFFLE BRAIN”, by Paul Peach, about hologrammic activity. The brain suppresses the double vision and the child gets a “lazy eye” and the good eye is patched to work the lazy eye. The

brain has a picture of how the body should be, if the pelvis is out then it doesn't match the picture and there is pain. This is innate.

-“Hologrammic Representation of Our Nervous System”, by Paul Spriesser, especially vision and hearing.

-Must be precise with BID, put the patient supine or prone in the same distortions as when they are standing. You can't test the patient for a lot of things while standing, too awkward.

-GJG lately has seen acute subdeltoid bursitis, Trigeminal neuralgia, and had problems dealing with them.

-Strain/counterstrain nutrient seems to be collagen.

-Folic acid is the nutrient that allows us to differentiate right and left, up and down, front and back.

-If BID were a factor in patients, then what was the common nutrient deficiency?

-Trigeminal neuralgia and acute subdeltoid bursitis, there was evidence to increase vitamin B. There was acid saliva pH, decreased pulse rate, decreased temperature, and poor breath holding time. Vitamins B and G were given with good results; but a loading dose of B12-Folic acid improved the pain pattern. B1 and B4 (adenine) are linked. Step ladder dosage of B and G, 6 B to 3 G and 5 mgs. B12, 1 mg. Folic acid and keep increasing the dosages to 15-20 mgs. B12 with 3-4 mgs. Folic acid, this helped the pain. Therefore pain associated with BID indicates the need to increase B and G.

-95% of BID patients will show evidence of a category I or II, upper cervical fix, PRYT, etc., BASIC faults. Category II usually adjusted on blocks rather than a high velocity sideline. Category I challenge on the PSIS and ischium while in BID.

-“It puts the doctor back in control”, Dan Duffy. “Another piece of the jigsaw puzzle”, Sheldon Deal.

-WINDSURF, Jan., 1986, (an international board sailing magazine), article on AK.

-Small intestine/liver/pancreas relationship in diabetes. Refer to 1986 Research Manual for technique.

-Check for second heart sound absence in one or more valve areas with a stethoscope or transitorized PCG. This shows lack of calcium, may need essential fatty acids (vitamin F).

VOMITING AND NAUSEA IN PREGNANCY

-Vomiting/nausea factor; rapid growth of the fetus produces protomorphogens (PMG) which requires the liver to modify it. Improve liver function and you'll help the average patient.

-AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY, Vol. 64, No. 2, Aug., 1962, “The Use of Menadione Bisulfite and Ascorbic Acid in the Treatment of Nausea and Vomiting of Pregnancy”, by Merkel. (Vitamins K and C). “There are many reasons and many theories. Current theories include the possible presence of a fetal or placental toxin, or some disturbance of hormonal equilibrium, inadequate utilization of chorionic gonadotropin, temporary suppression of adrenal function, excessive protein in maternal diet, exogenous factors. While physical factors are undoubtedly concerned, the observations also suggest that a large psychologic component is present in nausea and vomiting of pregnancy, some women don't want to be pregnant. It is impossible to say that it is caused by physical factors or psychological factors. Merkel postulates the occurrence of nausea and vomiting of pregnancy depends on the transfer of a vomiting factor from the placental or fetal circulation to the mother, and the cause of this transfer in most women is some abnormality, functional or organic, in the placenta or uterine base. He reported that using vitamin C and K to decrease placental capillary permeability, thus preventing the transfer of the vomiting factor, was

used in a series of 70 consecutive cases of nausea and/or vomiting, from mild to severe. 33 women were first pregnant, 37 were pregnant before, 7 Rh-, 63 Rh+. All given daily orally 25 mgs. ascorbic acid and 5 mgs. menadione bisulfite without any attempt at psychotherapy or other suggestive measures. The prothrombin levels in blood and the bleeding time of each patient were determined both prior to and after the medication. Treatment was continued for 30 days until withdrawal of the medication produced no reoccurrence of the vomiting. 64 of the patients reported complete remittance of the symptoms, within 72 hours they were relieved of the vomiting, but continued to have nausea after prolonged and increased amounts of medication. 3 received no apparent relief, but 64 did. In advanced cases of hyperemesis gravidarum, and pseudocyesis, the medication appeared to be dramatically beneficial when other treatments were failing. 3 patients required continued medication until delivery. Preliminary studies of vitamin C alone revealed no improvement while studies with vitamin K showed improvement in 50%. During the study it became evident that oral iron treatment used in treatment of iron deficient anemia caused little or no GI absorption and iron absorption was enhanced. A new, effective, inexpensive treatment was found. Also useful in reduction of GI symptoms following ingestion of iron salts. Vitamin K and vitamin C alone failed to give satisfactory relief from the nausea and vomiting. In all cases, the prothrombin time and bleeding time were normal both before and after medication."

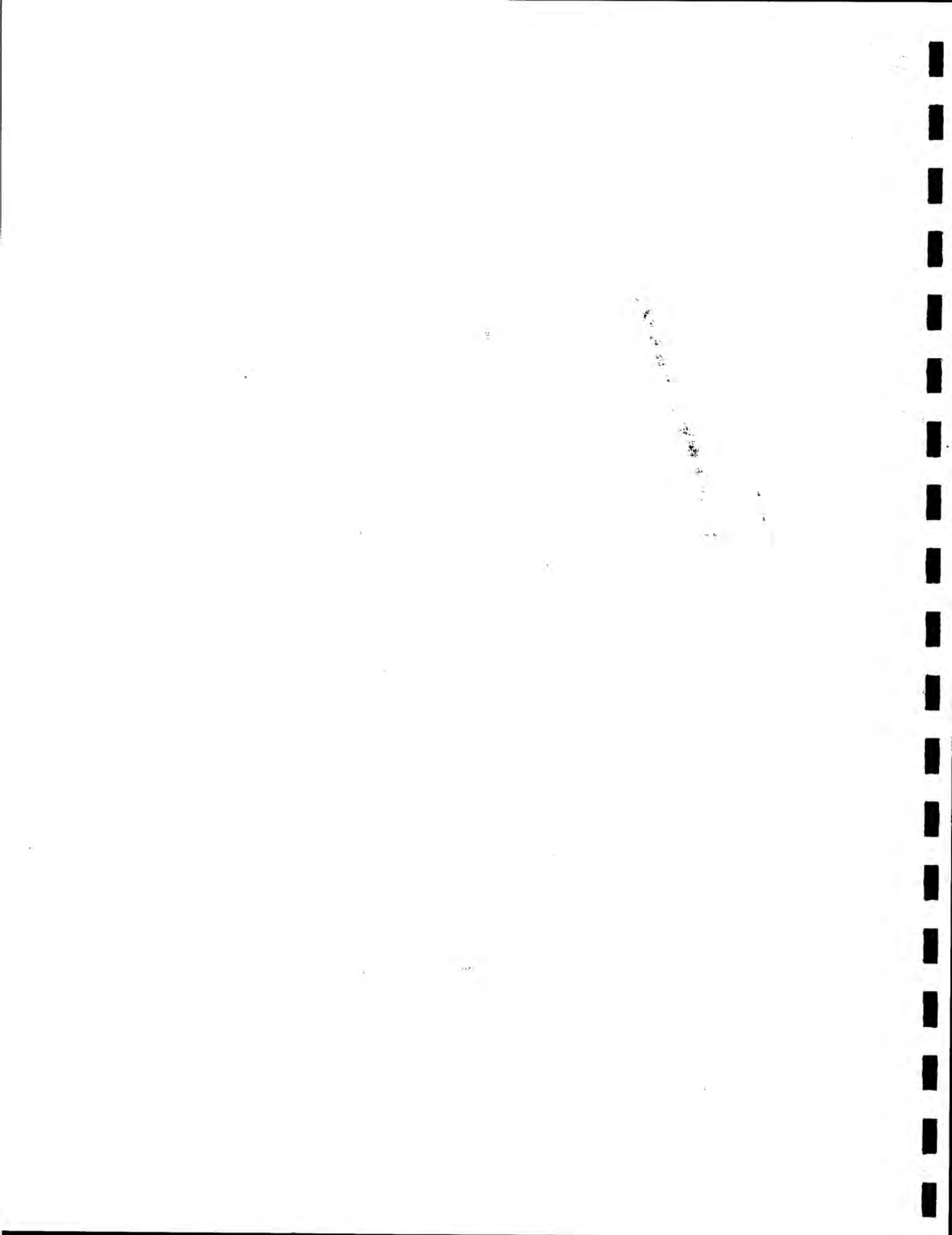
-GJG uses a natural source of vitamin C and a natural source of vitamin K from chlorophyll. Use the Lingual Ascorbic Acid Time (LAAT) test to determine how much vitamin C is necessary (approximately 25 mgs. t.i.d.). Chlorophyll or straight vitamin K can be used.

-Ever 5 IVF factors, and possibly mechanical problems that change the center of gravity may induce nausea and vomiting.

-Thank you, Dr. Kotsonis.

-Objects placed on the outside of the body has an effect; GJG discovered it was related to the color of the object. Even though some effects take place, it is discounted that there is reliable effect with objects on the body.

-Be a devil's advocate on any research you do.



SEVEN CONDITIONS OF MUSCLE BALANCE

-Sheldon Deal and Richard Utt on the "Seven Conditions of Muscle Balance". "Abstract: Several new concepts in muscle testing were introduced. First, the idea of testing an isolated muscle from extension towards contraction. The concept of a frozen and flaccid imbalance conditions are explained leading to six different conditions of muscle imbalance. Examples of correction technique including the new Proprioception Integration Technique (PIT) and examples of typical physiological implications of these imbalanced states are given."

-Not every weak muscle means organ dysfunction, but an organ dysfunction will give a muscle weakness.

-Common is teres minor/thyroid. Patient has a low axillary temperature (less than 97.8-98.2) and a slow Achilles tendon reflex time (400-450 msec.). Sometimes the temperature is low, but the Achilles time is accelerated, the nervous system is trying to compensate by pushing the other glands. Sometimes the temperature is normal with the Achilles time 400-450 msec., RNA will open the cell door so T4 can get in. 5 IVF factors, cranial inspiration/expiration, and fascial flush to the teres minor often increases temperature.

-Muscle acts to flush (pump) the organ; moves lymph.

-Golgi Tendon Organ (GTO) and Muscle Spindle (MS) turn muscles on and off.

-Reactive muscles documented by Triano and Davis of National College of Chiropractic.

-Running a meridian from beginning to end strengthens a muscle; from end to beginning turns muscle off.

-Often cannot turn off peroneus tertius on the bladder meridian by sedation points, usually means (in traditional acupuncture) that its coupled meridian is under; however GJG does not believe this is true. Go to the connecting (Luo) point between the bladder and kidney meridians as well as the Luo point for GV on the sternum and tap. Lack of forward flexion due to a tight sacrospinalis (on bladder meridian) will be helped after the Luo point is treated.

-Deal and Utt's premise: if you test a muscle, you should be able to turn it off. If you can't turn it off, it means the muscle is turned on. The most logical expression of where to turn it into a normal pattern is to go to its antagonist. Test a muscle from contraction to extension; if weak, go to the origin and insertion and turn it off, in many instances it will not weaken. I.e. the pectoralis major sternal (PMS) won't weaken with origin and insertion turn off, especially in patients with liver problems. The muscle is turned on and won't turn off. Go to its antagonist muscle and contract the antagonist (gives a loud signal to the first muscle) and the first muscle will now turn off. To accomplish this, use the Proprioception Integration Technique.

-1986 ICAK Collected Papers, page 75-91, description of Deal and Utt's article. "The first of the new concepts is that we also test the muscle from extension towards contraction, and the muscle now extended to its fullest with all its fibers as close to alignment as possible without many of its fibers being twisted. This is the opposite condition of conventional muscle testing. In the usual muscle testing theory, we understand we are not testing a muscle that has been extended, because we can only test a muscle in its contraction state. This is true as far as the original concept goes, but the muscle in its extended state is in a sense still isolated. It is the proprioception of the isolated muscle that sends signals to the CNS, to the brain, and back from the brain to the CNS and to the antagonistic muscles. Now testing the extended muscle from extension back towards contraction is in reality testing the antagonistic muscles as a group."

-Deal and Utt; "Two types of frozen conditions of muscles. A hypofrozen occurs when you try to sedate a muscle using any sedation technique and the muscle fails to unlock from contraction to extension, (origin-insertion, MS, acupuncture sedation points, or running the meridian). A hyperfrozen condition when by the use of any of the tonification techniques, the muscle fails to unlock from extension to contraction (i.e., tonification of the triceps should turn off the biceps)."

-If the muscle is a pump for an organ and it fails to unlock when it should, or its antagonist when tonified fails to unlock the primary muscle, the muscle is in the isolated situation where it cannot be used as an indicator muscle for other circuits because it won't turn off (frozen). Deal says that any testing done with this frozen muscle is a waste of time unless you eliminate the frozen muscle.

-"To check for a hypofrozen muscle we first test the muscle in contraction towards extension. If we find that the muscle locks, we know that it is not hypo, but it could be hypofrozen. To check for the possible frozen condition, we next attempt to sedate it. We can do this by any of the usual sedation techniques, such as pulling apart the origin and insertion to activate the GTO. Now we test the muscle again from contraction towards extension. If the muscle is balanced, it will respond to the sedation stimulation and unlock. If the muscle does not respond to the sedation when tested from contraction to extension and remains locked, it is hypofrozen."

-"We test for a hyperfrozen in much the same fashion, except that now we test the muscle from extension to contraction and then tonify it to make the frozen muscle test. We could tonify the muscle by pushing together at the origin and insertion points or pulling apart the belly of the muscle, etc."

-"There are a number of different methods for correcting the 6 out of balance muscle conditions. The basic Proprioception Integration Technique (PIT) will now be discussed briefly. When you find an out of balance muscle that you cannot correct with PIT or previously out of balance muscle that will not hold a correction, you need to look for the physiological imbalance that is causing the muscle to remain imbalanced. The out of balance condition will be permanently cleared only after you clear the underlying causative factor. This is particularly important with frozen muscles. Some frozen muscles have been frozen for many years. Very likely these muscles will require more elaborate treatment than PIT to unfreeze. There are other methods that we can use to correct frozen muscles. Some of these would be to use NL, NV, structural, nutritional, emotional, Bach flowers, and simple acupressure correction techniques."

-GJG has modified this. If you find a muscle that won't turn off, go to the opposite muscle and have the patient contract that muscle, and then stimulate the GTO and/or MS to turn it on. This sends a louder signal to the first muscle to turn off, and will turn off when retested. This increases lymphatic drainage, increases vital capacity, etc. For example, the biceps won't turn off, contract the triceps and turn on with GTO/MS, then recheck biceps for turning off.

-Gluteus medius pattern in an antalgic disc patient, right hip to the right and left shoulder to the left, a left gluteus medius pattern. Check the gluteus medius turn off if it doesn't, contract the adductors and GTO/MS to turn on, recheck the gluteus medius to turn off. This helps the antalgia. Also use adductors for a tensor fascia lata that won't turn off. This will help a difficult bowel problem patient.

CATARACTS AND ELECTRON POISING

-GJG had been successful with adult cataract formation using Hydrosulfosol, but it is not being produced anymore. Lately he's been using a zinc-vitamin C eye drop.

-"CATARACT BREAKTHROUGH", by Alex Durarte, The International Institute of Natural Health Sciences, Inc., P.O. Box 5550, Huntington Beach, CA 92648. Use of glutathione, C, E, A, selenium, the electron poisoning complex.

-The 1979 Research Manual, page 66-72 has the information on electron poisoning. Bions are capable of metabolism and reproduction, bions are within the cell. Cells are linked by vitamin A. Trace minerals regulate metabolism.

-Propeller with a pivot at the center, upper portion of the propeller is thyroid dependent, the lower portion is steroid dependent, disulfide quinone oxidation system goes to hydroquinone and sulfhydryl reduction system.

-Cataract lens is devoid of sulfur. Glutathione is cystine, glycine, and glutamic acid and along with vitamin C helps with cataracts. Glutathione peroxidase is a selenium dependent and copper requiring enzyme, sulfhydryl dependent.

-75% of persons age 65 and older have a cataract according to the National Society for the Prevention of Blindness. If greater than 50 years of age, you have a 50% chance of getting a lens opacity. Cataracts are the leading cause of blindness. 20% incidence of complications with cataract surgery.

-EBA, Poiseplex, E-poise used as a prevention, also a source of multi-factorial amino acids, especially those connected with the formation of glutathione, cystine, glycine, and glutamic acid.

-Pyramid of cystine, glycine, and glutamic acid (glutathione), vitamin E antioxidant, vitamin C antireductant, vitamin A connections, trace minerals represent semi-circular canals to keep balance. Oxidation and reduction of sulfur groups are reversible; disulfide quinone groups are oxidized and then reduced to hydroquinone and sulfhydryl. Like a two cylinder opposed piston engine, it goes from an explosion on one side to the other, the crank shaft turns, the propeller moves and is fastened to the crank with iron.

-1982 Collected Papers, "The Link Between the Nervous System and Body Chemistry", by Walter Schmitt.

-1983 Research Manual, oxygen/carbon dioxide effects. People at the adrenal end of the electron poisoning curve are weakened by carbon dioxide; people at the thyroid end of the curve are weakened by oxygen. What weakens them is what they need. "To stress what we have said earlier, we have discussed the alkaline ash/acid ash minerals in reference to over and under oxidation, and also on the electron poisoning curve, and also the relative relations which exist on the electron poisoning curve between manganese and zinc. This is the point; the simple differentiation, the simple situation is that you need a long term set point support which would be EBA or Poiseplex or Catelyn; then you support the lower left hand side of the curve with the alkaline ash minerals, while you supply those on the right hand side of the curve with acid ash minerals, continuing to use what we have learned in the past about right and left brain."

-1981 Research Manual, "To insure the overall pattern, we highly recommend the use of electron poisoning activity to be certain there is sufficient glutathione synthetase, glutathione peroxidase, and glutathione reductase in the system. One mechanism stands out. Antioxidant protection in the living is a function of structural integrity. A piece of tissue freshly removed from the body can be left on a laboratory bench for 5 days without going rancid. Homogenized, it will immediately rancidify. The statement that all ingredients of free radical oxidation are present in living tissue must therefore be qualified. The ingredients are present but as long as the structure is preserved, they are prevented from interacting. This fits directly into the electron poisoning concepts. The combination of the use of SOD, vitamin E, electron poisoning agents, and electron balancing agents that are manufactured by several companies to assist in electron poisoning concepts makes the care of some of the degenerative muscular conditions a lot easier. Certainly, in recent cases we have seen where there have been acute problems, where the patient has suddenly gone into a multiple sclerosis situation, or can no longer walk. There has been a rapid turn around of patients we have seen. These patients are not large in number. Naturally, and therefore one swallow doesn't make it summer, so to speak, but put together it points very strongly to the cozy relationship that exists between superoxide radical production, electron poisoning, and rancidity reactions that occur."

-Cataract patients-use SOD. Also check possible calcium problems due to parathyroid, check the levator scapulae, especially to be sure that you can turn it on and off as well as checking it against strain/counterstrain.

BID

-Patient who shows no need for taking a right or left long step anymore, but still has a postural distortion; by putting the patient into BID, the need for right or left longer step may show up. This is in a small percentage of patients (about 20%). Indicated in clonic, chronic, tonic, intermittent torticollis patients.

-Thank you Dan Duffy and Bill Kelley for the continued support of GJG Educational Foundation.

DR. GOODHEART'S RESEARCH TAPES

TAPE 100

-1-

SPONDYLOGENIC REFLEX TECHNIQUE

"MANUAL MEDICINE DIAGNOSTICS", by Jairi Dvorak and Voclav Dvorak, available from George Verlage (Stuttgart and New York) and Thieme Stratton Inc., New York, cost about \$49. Indebted to Jeff Weber for introducing the book. Initial inscription: "George, thank you for making my practice less of playing the piano, and more of the violin." Jeff did a beautiful job on the New York television during interplay with a Cornell orthoped. This book has the anatomical review for the the iliolumbar ligament. Dvorak and Dvorak have empirically validated spinal manipulation. They did two things; they injected the vertebral facet joints with hypertonic saline at varied injection rates and also tried opening and stimulating them and doing before and after EMG studies to compare the two stimuli methods. Page 24 under Neuropathology of the Vertebral Joint: "In anesthetized cats, the joint capsule and the articular nerve (in this case C3-C4) were microsurgically exposed. Using a probe and stimulator, the joint capsule was irritated to stimulate the mechanoreceptors. A substantially lower voltage (2 volts) was necessary than for the stimulation of the nociceptors (8 volts)." The spondylogenic reflex syndrome (SRS) that Wyke talked of is shown in the text and reveals the reflexogenic relationship between the receptors of the fibrous joint capsule, the apophyseal joints and the peripheral musculature. The book contains before and after EMG to illustrate this. In 1975, Pearl used this explanation for so-called referred pain. In 1979, Wyke suspected multisynaptic intraspinal tracts both ascending to the brain stem and descending to the basic nuclei of the lower spinal cord. Page 32 under Differential Diagnosis of Radicular and Spondylogenic Reflex Pain Syndromes, "...clinical experiments have demonstrated that local and referred pain occurs upon mechanical or chemical stimulation of different spinal and paraspinal structures when injecting hypertonic sodium chloride solution into the paravertebral musculature, ligaments, and apophyseal joints, or when scratching the periosteum with a needle. Local and referred pain was elicited in every instance..."

-Clinically, very little change was elicited after disturbed segment was adjusted. The correlation did not seem to reduce the associated pain referral pattern. GJG feels that the key to this pattern is the Lovett brother reactivity pattern and the SOT occipital fibers. (See page 67 of Walther Volume I). In essence, the atlas corresponds with L5, axis with L4, C3, with L3, etc.

-Lovett reactors were initially not found to be involved when analyzed by palpation. DeJarnette called this the R and C (resistance and contraction factor) which involved finding what part of the vertebral segment hurt most, which was held while stimulating the corresponding Lovett vertebra. Example; painful left L5 TP would warrant stimulation of C1 on the right until tenderness at L5 disappeared. A mechanical adjustment would then be made at C1 in this example. This is similar to the combination during ligament interlink.

-Fixations can be uncovered through TL often by putting the patient into BID (Body Into Distortion) while doing TL. A high percentage of fixations were found to correspond to forced expiration, meaning that respiration was out of phase with gait.

-Type I mechanoreceptors in the apophyseal joints consist of 3-8 encapsulated globular corpuscles about 100 micrometers by 40 micrometers which are in the outer layer of the fibrous joint capsule. The afferent nerves are thinly myelinated (6-9 micrometers) with three functions. 1. Slowly adapting receptors controlling tension of the outer joint capsule. 2. Inhibit via synapses the centripetal flow of activity from Type IV nociceptors (inhibit pain impulses). 3. Tonic reflex effects on muscles of neck, jaw, limbs, and eye.

-Type II mechanoreceptors which are oblong, conical thickly encapsulated corpuscles in the deep layer of the fibrous joint capsule. Three function: 1. Rapid adaptation (less than .05 seconds) with low threshold for changes in tension of the joint capsule. 2. Phasic reflex on neck, jaw, eye muscles. 3. Reduce nociceptive activity of joint capsule.

-Type III are similar to Golgi tendon receptor.

-Type IV nociceptors are ubiquitous in the joint. 1. Tonic reflex on jaw, neck, eye muscles. 2. Evoke pain. 3. Reflex respiratory and cardiovascular effects.

-An L3 lumbar segment dysfunction. The zone of irritation may be on the right. Muscles involved would be the gluteus maximus and minimus, longissimus thoracis, spinalis, multifidus, rotatores, trapezius, semispinalis capitis, interspinalis, rectus capitis lateralis (on the opposite side of the irritation (on the left) as the longissimus thoracis).

-A T5 dysfunction shows gluteus minimus, iliolumbar ligament, levator scapula on the right, scalenus medius, scalenus anticus, longis capitis, longissimus thoracis, semispinalis cervicis, multifidus, rotatores, trapezius, semispinalis capitis, supraspinus ligament, etc.

-Stimulation at these levels produced measurable change in the function of these muscles.

-If you adjust the L3 or the T5 segment and repalpate the muscular areas of pain there is not a significant change in the level of tenderness. But if you examine the Lovett reactor, there is no evidence of positive TL, etc., yet it is involved during BID with respiration.

-A low frequency tap (1 per second) on the spinous process or transverse process will significantly reduce the pain in the referred muscle pain areas of the segment in lesion.

-Tapping is on the Lovett reactor segment.

-In addition to tapping, sometimes you must push both transverse processes caudally about 25 times (1 per second) on the Lovett vertebra (i.e. if you adjust T7 you would do this pushing at T4).

-GJG has used tapping of vertebrae to counter the gravity effect and also administer wheat germ oil for recurring fixations.

-This tapping phenomenon may explain the occasional response to the Activator.

-This technique will abolish a strain/counterstrain in the gluteus maximus 60-80% of the time after correction.

-On the chart accompanying this tape, muscles are shown that are sore 90% of the time when corresponding segment is in dysfunction. Other muscles not associated will palpate normally.

-Dvorak book should be ordered directly from the publisher.

PHEROMONES

-“THE SOUL OF THE GHOST MOTH”, by Phillip S. Callahan, Devon Adair Co., 143 Sound Beach Ave., Greenwich, CT 06870. Callahan is an entomologist and is credited with the discovery of pheromones, and also was involved with developing the AN System beam which was used as a guiding mechanism for navigation during WWII. This helped pilots find the runways for landing. Thank you Gerald Poortinga for introducing the book. Author's note from the book, “This work was composed in 1977. At that time all my research had been concentrated on insect sex pheromones, chemicals released by the female insect to attract the male. Experimentally, merely tapping or vibrating certain organic molecules at extremely low frequencies (ELF) 1-1000 Hz stimulates the molecule to emit a narrow band coherent far infrared radiation. There is at present no good theoretical or mathematical explanation as to why the molecule should behave in this manner. It is the humming or vibration of the insect that indicates that such infrared emissions are stimulated by the ELF. Since 1977, I have obtained emissions from plant hormones, human testosterone, human breath, numerous plant and animal scents. In all over 10,000 far infrared spectrums have

been accumulated for organic molecules. I have also standardized the infrared emission....I call this emissions mazerlike....I believe these are frequencies of life. I believe diseases like cancer involve distorted communication between organic control chemicals and cells. Hopefully we will be able to decode these mazerlike signals and eventually cure such cellular dysfunction with far infrared mazerlike radiations of extremely low energy. With very few exceptions, almost all great scientific discoveries have been made by looking at nature and then devising experiments to see how natural systems work. For example, the wing in flight....I am currently working on mathematical models to explain this theory. Scientists interested may obtain information by writing to me."

-The infrared band is the carrier wave for the pheromones, which attracts the male to the female. Pheromones would work beautifully in the lab but not in a natural outdoor setting. Callahan found that these pheromones needed the infrared carrier band to be activated. The infrared wave length is species specific and is picked up by the antenna much like a television wave.

-Callahan's main interest as entomology professor at the University of Florida is insect control without pesticide use.

-"TUNING INTO NATURE- SOLAR ENERGY INFRARED RADIATION AND THE INSECT COMMUNICATION SYSTEM", also by Callahan and available from Devon Adair Co. This book also studies why different insects are attracted to different objects.

-"ANCIENT MYSTERIES- MODERN VISIONS", by Callahan, Acres USA, P.O. Box 9547, Kansas.

ALZHEIMER'S DISEASE

-"PHYSICIAN'S GUIDE TO NUTRITION IN HEALTH CARE", by Carl Pfeiffer, M.D., PhD., Brain Bio center, Nathan Keats Publishing Co., New Canon, CT. "In Creutzfeldt-Jacobs disease and other cases of pre-senile dementia a correlation between low blood spermine levels has been found. Spermine, a simple polyamine is in large quantities in semen, blood, and brain. It is measured low in patients with memory loss for recent events and low in cases of senile and pre-senile dementia. Patients on estrogen therapy and hypoglycemics also show low spermine levels. Spermine levels decrease with age. Young patients with Tourette's and nervous tics can also have low levels. Spermine and spermidine levels can be increased by trace element supplementation, especially manganese in combination with zinc."

-Ornithine is the precursor to spermine/spermidine. ¼ teaspoon three times a day of ornithine in patients with Alzheimer's, premature senility, or loss of memory seems to help. We also find quadricep weakness, small intestine absorption problems. These patients are usually on RNA also.

-"HARPER'S REVIEW OF BIOCHEMISTRY", 20th Edition, Lange Publications, Los Altos, CA 94023. "Ornithine and methionine serves as a precursor to the ubiquitous mammalian and bacterial polyamine spermine and spermidine. Normal humans synthesize about 0.5 millimoles per day. Pharmacological doses of the polyamines are hypothermic and hypotensive. Spermidine and spermine are implicated in diverse physiological processes that share as a common thread a close relationship to cell proliferation and growth. As a consequence of their multiple positive charges, polyamines associate readily with polyanions, such as DNA and RNA, have been implicated in such fundamental processes as stimulation of DNA and RNA synthesis. DNA stabilization, and packaging of DNA and bacteriophages, etc...." Chapter 23 of HARPER'S is highly recommended reading.

-Tourette's: We use a protein and test various muscles against ornithine and patients then assimilate proteins better.

-David Leaf has observed that chewing and ingesting a specific nutrient for a particular

muscle will greatly reduce palpatory pain in the NL for the muscle. The nutrient most needed will decrease the pain the greatest.

-**"BIOLOGICALLY CLOSED ELECTRICAL CIRCUITS- THE CLINICAL, EXPERIMENTAL, AND THEORETICAL EVIDENCE FOR AN ADDITIONAL CIRCULATORY SYSTEM"**, by Bjorn Nordenstrom, Nordic Medical Publications. Nordenstrom says that blood vessels are electrical cables rather than circulatory.

-**Congratulations to the Blaichs on their marriage.**

DR. GOODHEART'S RESEARCH TAPES

TAPE 101

-1-

WINTER ICAK MEETING AT KEY WEST

-Papers presented:

- "But What If There Is No Water In The Hose?" Schmitt.
- "Aerobic Deficiency Syndrome" Maffetone.
- "Molybdenum and Candida" Schmitt.
- "Interexaminer Agreement in AK Manual Muscle Testing" Conable and Hanicke.
Conable also presented a technique for NV that speeds up coccygeal lift.
- "Cranial Sacral Syndrome" Rosen.
- "Zinc Tally and Cranial/TMJ Faults" Zadkin.
- "First Metatarsal Jam Short Shoe Syndrome" Maffetone.
- "Musical Kinesiology" Thomas.
- "Tree of Life and the Kabala" Schustermann.
- "Spondylogenic Reflex Syndrome" Goodheart.
- Excellent talent show at the meeting.
- Thank you Lance West and David Leaf for taping.

NEUROPEPTIDAL ENTERIC HOLOGRAPHIC TECHNIQUE (NEHT)

-Fatty acids are very well absorbed in the upper jejunum of the small intestine. Pancreatic lipase and bile salts are required for proper absorption. Bile salts emulsify and the lipase aids in catalysis of the lipolases and amylases of triglyceride. About 75% of fatty acids are converted to free fatty acids. Chylomicrons (0.5-1.0 microns) are the particles in which the triglycerides are contained at absorption. Chylomicrons consist of 86% triglyceride, 3% cholesterol, 9% phospholipid, 2% protein. Chylomicrons are carried in the lymph system since they are too large to pass into capillaries. The lymph system absorbs a great deal of fat. Cholesterol crosses the cell membrane very slowly.

-*"The Wisdom of the Receptors, Neuropeptides, Emotions, and the Body Mind"*, Candace B. Pert, INSTITUTE OF ADVANCEMENT OF HEALTH, Vol. 3, No. 3, Summer 1986. (Thank you whoever sent this to GJG, the envelope it came in was inadvertently lost). Pert suggests that neuropeptides and their receptors form a network within the body. She feels that this is the key to understanding the connection between mind and body. Pert initially worked with Solomon Snyder on opiate receptors. Receptors are scattered through brain and body. She said that if there were receptors for exogenous chemicals, then those chemicals must also be produced endogenously to fit that receptor. This led to the discovery of endorphins which is a neuropeptide, which are strings of linked amino acids produced by nerve cells in the brain. The brain produces large quantities of beta-endorphins and much is found in the pituitary gland. Peptides come directly from DNA, there is no enzyme in between. DNA has the "code" for the neuroreceptors. Receptors for the beta-endorphin are made of the same material except that they are much bigger. Beta-endorphin has 30 amino acids but the opiate receptor for it turns out to have 20,000 amino acids. Neuropeptides and their receptors are highly specific for each other in this complex system. This has shown that synapses on axons are not as important for message transmission as we once thought. Particularly synapses help muscle contraction. When a cell releases the neuropeptide, it can act at a receptor relatively distant from the secretion, due to the high specificity.

-By radioactive tagging, every enzyme that is released in the small intestine has also been

found within the hypothalamus. It is as if there is a small hologram of the small intestine secretions in the hypothalamus.

-GJG thinks that the hypothalamus has the capability of organizing the digestion of particular amounts of food in accordance with the body's needs for that day in regards to protein, fat, and carbohydrate. This would explain why some people with high calorie intakes may not gain weight and vice versa.

-Hypothalamic control of digestion may be similar to a phase hologram with an "FM" regulation. The plexus of Auerbach and Meissner act like "auto pilots" in controlling small intestine activity while a person is sleeping. Problems arise when the person awakes and the "auto pilot" control of the small intestine won't shut off.

-Case example: Patient with no signs of small intestine involvement. Adequate vitamin C intake via diet but had a LAAT of 30/40 (Normal = 10-20). Negative TL to the small intestine NL and NV. Positive TL to the acupuncture alarm for small intestine only when she was in a BID configuration. No result by treating the tonification points or sedation points. By treating the NL, even though it did not TL, the small intestine alarm point and the associated point were negated, as well as the small intestine beginning and end points. This dropped the LAAT to 15/10 after treatment. Then adjusted spondylogenic pattern as well as the Lovett. The small intestine alarm point was now positive again, and continued NL activity dropped the LAAT to 5/8.

-It was hypothesized that this patient had a small intestine that was "still asleep" in response to the holographic neuropeptid effect from the hypothalamus. Consequently, specific nutrients were failing to be absorbed.

-This case was the basis for the concept that NL stimulus is the key for stimulating utilization of outside materials for digestion. Small intestine is the mediator between these outside materials and the internal environment of the body.

-Many "problem" patients that have adequate doses of supplementation may show deficiency due to this problem of selective small intestine absorption.

-Diagnosis: 1. Test small intestine muscle (quadriceps or abdominal) with the patient in and out of BID and TL to the NL. 2. Have the patient close eyes for about 20 seconds. (This is also used for front/hind brain, but without the TL). (Rule out pineal). Seems to be associated with eye closing that occurs with sleep.

-JOURNAL OF IMMUNOLOGY, 1985, 35:2, carried the article entitled "The Neuropeptides and the Neuroreceptors: A Psychosomatic Network", by Pert. NEURAL SCIENCE, 1984, 13:191, "Molecular Regulation of Brain Function, A New View", by Pert and Schmitt.

-The Dvorak/Dvorak Lovett reactor will often times not show unless there is TL with respiration (usually expiration) i.e., T7 with TL to T4 on expiration is treated by pushing the spinous process inferior with the thumb and superior with 2 fingers on the ribs.

-Weight bearing will change the TL pattern often times. A high percentage will change with weight bearing. This becomes important when realizing that the majority of people don't sleep walk, and many who do are found to have some small intestine problem.

-Some patient's spines are asleep when the person is awake and the spine is awake while the patient sleeps.

-Tapping the Lovett reactor on the spinous process is required. Refinement may include a right transverse process tap to C1 for a left posterior L5 in order to effect a good response.

-There may be a need for holographic treatment of the corresponding Lovett; usually a transverse spread.

-Another treatment requirement may be a respiratory assist to the ribs and spinous. An expiratory challenge; push down on the spinous and up on the ribs.

-Tapping seems to be the most effective for removing palpatory pain. At 1 cycle per second.

-Tough TMJ problems requiring strain/counterstrain or palpatory tenderness of the medial

or lateral pterygoid may respond to Spondylogenic Reflex Syndrome approach (commonly T7 with T4 tap). Recheck TL and palpatory pain.

-Pert's work reveals overwhelming specificity of the central nervous system.

-It seems that Melzack-Wall tapping, stimulating endorphins, may explain why vertebral tapping will release other similar neuropeptides. This is conjectural yet feasible. This may explain some facets of Activator Methods.

-Chapter 15 "Treat Instead of a Treatment" in the Richard Restak book, *THE BRAIN, THE LAST FRONTIER*, Doubleday and Co., Garden City, New York. "Talks of Pert, Hopkins, Snyder, etc. achieving the goal of separating the true receptors from the counterfeit receptors by hopping up the radioactivity per molecule of naloxone. This way only small amounts of the radioactivity tagged drug needed to be injected. After washing away the weak non-specific binding sites, naloxone only adhered to those cells specifically organized to receive narcotics. Naloxone is a morphine antagonist; altered only a small portion of the morphine molecule. Naloxone completely reversed the effects of morphine by displacing morphine in the nerve cell receptor membrane. Naloxone is used in emergency rooms throughout the world to bring morphine addicts out of dangerous morphine and heroin coma. Naloxone acts so speedily that it actually begins to take effect before the syringe is out of the arm. This suggests that the drug has greater affinity for the patient's opiate receptors than morphine or heroin itself. Naloxone does appear to displace the opiate restoring consciousness, quickening respiration, instantly bringing on a state of morphine withdrawal, by occupying the receptor sites and thus effectively keeping the morphine out without triggering the chemical reaction that brings on a high. Unfortunately, naloxone's effects are too short-lived to have it serve as a pain killer itself."

-Candace Pert: "I have noted that 50-60 substances are now considered to be neuropeptides, many of them are the natural analogs of psychoactive drugs. A major unexpected source is hormones. Hormones are historically produced by glands, not nerve cells. The pancreatic hormone insulin has now been found to have receptors in the brain, especially in the amygdala and hypothalamus. The limbic (emotional) center of the brain is also the "seat" for most of the neuropeptides. A nodal point in the dorsal horn of the spinal cord is the spot where touch sensory information is first processed. We have found that for virtually all the senses for which we know the entry area, the spot is always a nodal point for neuropeptid receptors. Angiotensin, another classical peptide and also known to be a neuropeptide. When we map for angiotensin receptors in the brain, we again find little hot spots in the amygdala. It has long been known that angiotensin mediates thirst. If one implants a tube in the area of a rat's brain that is rich with angiotensin receptors and drops a little angiotensin down the tube, within 10 seconds the rat will start to drink water, even though it is totally seeded with water. Chemically speaking it alters consciousness which makes a person say "I want something to drink". Every neuropeptide we have looked for using an elegant design by my colleague Michael Ruff, is also on human monocytes. Monocytes have receptors for opiates, PCP, etc. These emotion controlling biochemicals actually appear to control the routing and migration of monocytes which are so pivotal to the immune system. They communicate with B cells and T cells and interact within the system to fight disease and decide between "self" and "non-self" deciding which cells need to be destroyed and which restored. The monocyte is circulating and can connect with any number of neuropeptides because it has a receptor to do so. Moreover, the cells of the immune system also manufacture the neuropeptides. In other words they are making the same chemicals which control moods in the brain. Again, brain and body. Cholecystokinin, another neuropeptide, was just sequenced and first discovered by its action on the gut. Pharmacologic beginnings for the search for receptors, people would string up gut muscles and watch the contraction. Since the gut contained functioning receptors, it was used to isolate and determine the chemical structures, the bioactivity in tissue extracts. It turns out that CCK is highly involved with food satiety. Doses of CCK make you not want to eat anymore. We originally showed that the brain and the spleen (the

brain of the immune system) had receptors for CCK. So, brain, gut, and immune system can all be affected by CCK." So conceivably there is the communication between the "awake" stage and the "sleep" stage of the small intestine function.

-Dr. Jim Durlacher, our PR man, has advocated the use of local TV stations for health program exposure of AK. Contact Dr. Durlacher for more information. He recommends contacting the station's health reporter to obtain an interview.

CRANIAL FAULT/ZINC/OXYGEN-CARBON DIOXIDE SETPOINT

-The 1986 Research Manual, pages 10-12. "Ever since the original article came out in LANCET, Nov., 1984, regarding the inability of some subjects to taste the saturated solution of zinc we have been using the Zinc Tally material with good results. We have been trying different forms of zinc to satisfy what we feel is a need in most patients to increase either the intake or the metabolism of zinc. I happened to find this on patients who are zinc deficient on the Zinc Tally and who have been given a variety of forms of zinc. Some have been given a combination of trace minerals with zinc. Some had been given chelates and I found in these patients that is a constant feature to have a reoccurring cranial fault of an expiration or inspiration challenge. In other words, the muscles would be strong until you had the patient take a deep breath in deeply or out deeply. It seemed a high percentage of patients we saw had it on the expiration challenge. Because I was checking the zinc level each time I'd see the patient, every 2 or 3 weeks, I thought it might be induced by the zinc. So I tried observing on some patients who we didn't do a Zinc Tally on whether or not that was true. Then following its discovery checking the Zinc Tally and found a close correlation between those who showed a Zinc Tally pattern of deficiency. Ninety percent of all the zinc in the body is tied up in carbonic acid anhydrase and that seems to improve many functional disturbances. Especially if you find a reoccurring cranial fault especially of an expiration or inspiration challenge. There does seem to be an exception which we have found occasionally. This is a patient that needs both a form of potassium and also calcium but that seems to be the rare exception. On terms of frequency that seems to be a fairly frequent pattern that we see in patients especially the more difficult ones. We tried to see if this had any relationship and we found that in this part of the country when we used a zinc chelate with very small traces of copper that would neutralize the expiration challenge. Naturally, we fixed the cranial fault, basically inspiration assist, but we found that giving the patient a form of zinc chelate would neutralize the expiration challenge. Doing it consistently I have seen only one patient out of over 700 who showed an expiration challenge who did not show a marked zinc deficiency. This patient had a moderate zinc deficiency and did not respond to any form of zinc. We had tried a sulfate form, picolinate form, Zinc Tally itself and we had tried the zinc from a variety of sources but the zinc chelate with a small amount of trace copper seemed to be, in this part of the country, again the answer to that. That has appreciably helped our situation. In the 1985 edition of "MEDICAL NEUROBIOLOGY", by Kauffman and Willis the section on cerebrospinal fluid they spend some time discussing the fact that the addition to the choroid plexus is making spinal fluid and all its constituents it also sets up a relatively high level of carbonic anhydrase in the spinal fluid. That carbonic anhydrase which as you know is zinc dependent is tied up in making the spinal fluid more electrolized. It is just as if carbonic acid anhydrase acts as battery acid in the battery and makes the unit more of a power pack."

-In vitro, carbon dioxide dissolves slowly in water and evaporates slowly, the two at an even rate. In the body, the rate of entrance of carbon dioxide in the body fluids is the same as in vitro, but dissolving out of carbon dioxide is 500 times faster; this is due to carbonic acid anhydrase.

-Retrograde test to see if there is interference with the thoracic duct entering the left subclavian vein at the median cephalic area. Pectoralis minor is stretched and impinges the median cephalic area. Tony Brea, D.C. in New York mentioned that he did not have a table to put the patient in the position, and he was elevating the limbs to parallel the retrograde pattern, and he noted when he was testing the right pectoralis major sternal (PMS), it would be strong, but when the patient raised

their head it tested weak. This is another system for testing the right thoracic duct and its entrance into the right median cephalic portion of the right subclavian vein. 90% of lymph drains to the left subclavian vein; 10% into the right subclavian vein which drains the right head, right arm, right mediastinum, and upper liver. To test the right thoracic duct, the patient is horizontal and supine, test the right PMS, then have the patient raise their head, now the PMS is weak. GJG found that consistently with this pattern of arm and head up, that inspiration would negate the weakness. To understand this, he had the patient raise the chest up without taking any air in, and it also negated the weakness, indicating a muscular involvement and rib position. Normal rib inclination is 34 degrees, sometimes higher. Idea of an oxygen-carbon dioxide respiratory setpoint of the oxygen-carbon dioxide center that may possibly influence position of the thorax relative to the ribs. Activation of the NL just above the xiphoid on the sternum and the NV at the Angle of Louie of the pectoralis minor would get an expiration challenge consistently negated by zinc.

-Asthmatics that received advanced origin-insertion technique would then show an immediate increase in vital capacity. However, in some patients, it took 30 minutes for the increase in vital capacity to be evident, sometimes the vital capacity went down despite the patient's feeling of well being. This is explained by the oxygen-carbondioxide center activity.

-“WHAT TO DO ABOUT YOUR BRAIN INJURED CHILD, OR YOUR BRAIN DAMAGED, MENTALLY RETARDED, MENTALLY DEFICIENT, CEREBRAL PALSIED, SPASTIC, RIGID, EPILEPTIC, AUTISTIC, ATHETOID, HYPERACTIVE CHILD”, by Glen Demond, Doubleday and Co., Garden City, NY. Thank you Jerry Morantz. Page 100, “Of neurologist Temple Fay, he also told us long ago of the use of carbon dioxide in the treatment of epileptics who are subject to seizures or convulsions. His theory has been that an epileptic undergoes a convulsion and it is a reflex protest against the temporary insufficiency of oxygen to the brain, much as a fish out of water flops this way and that trying to get back in. Fay therefore administered oxygen during the convulsive seizures, and as he stated the result, the patient had promptly bigger and better seizures. The experiment was obviously a failure, but no one knew better than Fay that carbon dioxide is one of the most powerful dilators known to man. That is to say that the rich carbon dioxide content in the bloodstream will cause the blood vessel to dilate or open wider, thus permitting the flow of a greater volume of blood to the brain and a consequent increase in the amount of oxygen available to the brain. This, of course, was the reason the experiment failed. By giving the patient oxygen, he had actually cut down the carbon dioxide and thus constricted the blood vessels and as a result, finally reduced rather than increased oxygen to the brain. Then, of course, Fay performed the exact opposite experiment. Fay now gave carbon dioxide to patients while they were having convulsive seizures. He did this with hundreds of patients. He found that by doing so, it resulted in a reduction in the severity of the seizures and the length and frequency of seizures. It has long been recognized that the well human being operated well or badly in direct relationship to the adequacy of usable oxygen supply available at the brain level.”

-As long as the EOP is 2 degrees warmer than the vertex, that is good insurance against convulsions. Beginning and End technique does this.

-To get more oxygen to the brain, use the rebreathing technique of your own air, just as if for someone who is hyperventilating.

-Checked cranial faults and made corrections on patients who exhibited the pattern that Brea spoke of, right arm problems, and then lifting the head caused weakness. Treat the pectoralis minor via origin-insertion to increase tone, also NL and NV. Retesting would show strength. Then with an expiration challenge, the PMS would again weaken with the head up. Inspiration assist abolished this, but there was no increase in range of motion (i.e. LaSague, leg abduction, etc.). Tried having the patient rebreath their own air (masking) using a plastic glove 5 times (10 times if a large patient) and retested for range of motion, which was still negligible. However, combining the cranial technique inspiration assist (or conceivably expiration assist) with masking (rebreathing own air), this

corrected those patients and increased range of motion, and the patient had a sense of well being, and an increase in vital capacity. 20% did not increase vital capacity, so on these patients oral and nasal inspiratory oxygen weakened them, they were candidates for further masking (more rebreathing, 15-20 times), but the vital capacity did not change. 5 inspirations of oxygen and a source of zinc chelate (Zincate from NutriWest), there was neutralization of the weakness from breathing oxygen, and with a few exceptions, increased vital capacity.

-Carbonic acid anhydrase which is zinc dependent is in short supply due either to failure of small intestine absorption, or due to fixation of it, or failure of duodenal zinc proper level, or decrease of carbonic acid anhydrase pool due to lack of circulating zinc.

-Cranial technique and sacral respiratory technique is now done with masking, having the patient rebreath their own carbon dioxide which results in vasodilation and increases the amount of oxygen, so that the oxygen-carbon dioxide center is diagnostic and therapeutic. This increases range of motion.

-“CARBON DIOXIDE THERAPY”, by L.J. Meduna, 1950. “Gallhorn and Yesnick reported that an intact cat's metrazol, piquitoxin, and other agents, strichnine, and camphor-induced convulsions that were stopped by inhalation of 15% carbon dioxide, but not by low partial pressures of oxygen. If the carotid sinus had been denervated bilaterally and the vagi cut, the effects were reversed, in other words, the normal nervous system action seems to enhance that. The same investigator Yesnick, Gallhorn, and Darrow noted that in cats and dogs, stimulation of the carotid sinus nerve inhibited convulsions which otherwise would have been produced by metrazol, picquitoxin, and strichnine, they also found that injection of small amounts of epinephrine temporarily inhibited the convulsions and that by tilting the head of the animal downward it stopped them also. That the buffer action of the buffer nerves, if the carotid sinus and vagi inhibited convulsions and that with the carotid sinus and vagi intact, hypercapnia inhibited convulsions, and hypoxia had no effect. Hypoxia decreases the brain's ability to convulse as do the sinus/vagi depressor reflexes.”

-GJG recommends routine cranial respiratory activity and sacral respiratory activity be done with masking (use a rubber glove). Exception is those patients who feel threatened by it. Amount of air in a room contains about 0.3% carbon dioxide, and rebreathing your own air gives a greater vasodilation and increases oxygen to the brain and central nervous system and gets a better functioning response. Seems to be independent of cranial technique itself, carbon dioxide itself, but is a result of cranial inspiration assist with masking.

-“HARPER'S REVIEW OF BIOCHEMISTRY”, Lange Medical Publications, Los Altos, CA, edited by Martin, Mayes, Rodwell, and Granner. “Structure of hemoglobin having multiple subunits has already been described. The hemoglobin molecule consists of 4 protein chains or subunits, 2 designated alpha, 2 designated beta.... Hemoglobin molecule and its subunits contain mostly hydrophobic amino acids internally (there are 20 amino acids, 9 are hydrophobic, 6 are hydrophilic) and hydrophilic amino acids on the surfaces. The hemoglobin molecule is waxy inside and soapy outside, making it soluble in water but impermeable to water. Each subunit contains one heme moiety hidden within the waxy pocket. In addition to transporting oxygen from the lungs to the peripheral tissues, hemoglobin facilitates the transfer of carbon dioxide from the tissue to the lungs for exhaustion. Hemoglobin can bind carbon dioxide directly when the oxygen is released in about 15% of the carbon dioxide carried in the blood is carried directly on the hemoglobin molecule. However, as carbon dioxide is absorbed in the blood, the carbonic acid anhydrase in erythrocytes catalyzes the formation of carbonic acid. Carbonic acid rapidly disassociates into bicarbonate and proton, the equilibrium being towards disassociation. To avoid extreme danger of increasing the acidity of the blood, there must exist a buffering system to absorb this excess proton. Hemoglobin binds two protons for every four oxygen molecules lost, and thus providing a major buffering capacity of the blood and in the lungs the process is reversed. As the oxygen binds to the deoxygenated hemoglobin, protons are released and combine with the bicarbonate to drive the bicarbonate towards car-

bonic acid. With the aid of the very efficient carbonic acid anhydrase, the carbonic acid forms carbon dioxide which is exhaled, thus the binding of oxygen forces the exhalation of carbon dioxide. This reversible phenomenon is called the Bohr effect. The Bohr effect is a property of the tetrameric hemoglobin and is dependent upon its heme-heme interaction or cooperation effects. Myoglobin does not exhibit this Bohr effect."

-Carbonic acid anhydrase influences production of hydrochloric acid, bicarbonate by the pancreas, electrolytic property of the spinal fluid, hydrogen molecules to keep the urine acid, very important in the release of carbon dioxide. If there are insufficient amounts of zinc, there is a slight deficiency of carbonic acid anhydrase. Zinc helps this, and also via chemoreceptors in the hypothalamus, the resting point of the respiratory activity of the ribs, should be at a neutral point between inspiration and expiration, but a good number of people seem to inspire a lot and expire a little, or vice versa.

-See changes in plumblin, and on the Metrecom with the use of zinc.

-“DRUG INDUCED NUTRITIONAL DEFICIENCIES”, by Daphne Roe, M.D., the AVI Publishing Co., Westport, CT. Page 48, “There is also evidence that zinc deficiency interferes with vitamin A utilization, probably because the zinc-dependent enzyme, alcohol dehydrogenase, is necessary to retinol oxidation in tissues such as the liver, retina, and testes. Transport of zinc in the blood involves binding of the mineral several plasma proteins and amino acids. The work of Boyett and Sullivan (1970) indicated that zinc tightly bound to transferrin and to alpha-2-macroglobulin. Parisi and Vallee (1970) isolated alpha-2-macroglobulin from serum and showed that it contained 30 to 40% of total serum zinc. For many years, it has been known that zinc is bound to plasma albumin, though it has been suggested that zinc easily detached from this binding site (Vikbladh). Prasad and Oberleas (1970) studied amino acid binding of zinc in vitro and concluded that binding to specific amino acids may be important in zinc transport. Giroud and Henkin (1972) found that cysteine and histidine are the most important amino acid ligands for zinc in plasma.”

-Histidine, arginine, lysine, glutamine, aspartic acid are neutral amino acids. Serine, threonine, cystine, tyramine, etc. are hydrophobic. Hydrophilic are glycine, alanine, valine, leucine, proline, phenylalanine, tryptophane, methionine, isoleucine. The small intestine will preferentially pick up zinc in the proximal small intestine, and in rats zinc absorption is regulated by the zinc content in the duodenal mucosa. NEHT (Neuropeptidic Enteric Holographic Technique) will assure good small intestine absorption.

-Amino acid has a carbonyl -COOH and makes it an acid. Amine is a base because it picks up protons in a solution. Left side, amine end of an amino acid attracts positively charged hydrogen ions while the right side -COOH gives off hydrogen ions.

-Coenzyme Q takes the pain out of NL reflex (1-2 mgs up to 10 mgs, tid), from David Leaf.

-To reiterate the right thoracic duct technique

-Patient on their back.

-Test any muscles on the right side, intact.

-Weakens when the patient raises their head or if in retrograde.

-Pectoralis minor is stretched impinging the thoracic duct.

-Treat the NL just above the xiphoid vigorously. (Zinc may take the pain out of the NL). Treat the NV at the Angle of Louie.

-Recheck, should be strong.

-Inspire and expire, usually expiration will reweaken.

-Origin-insertion technique to the pectoralis minor.

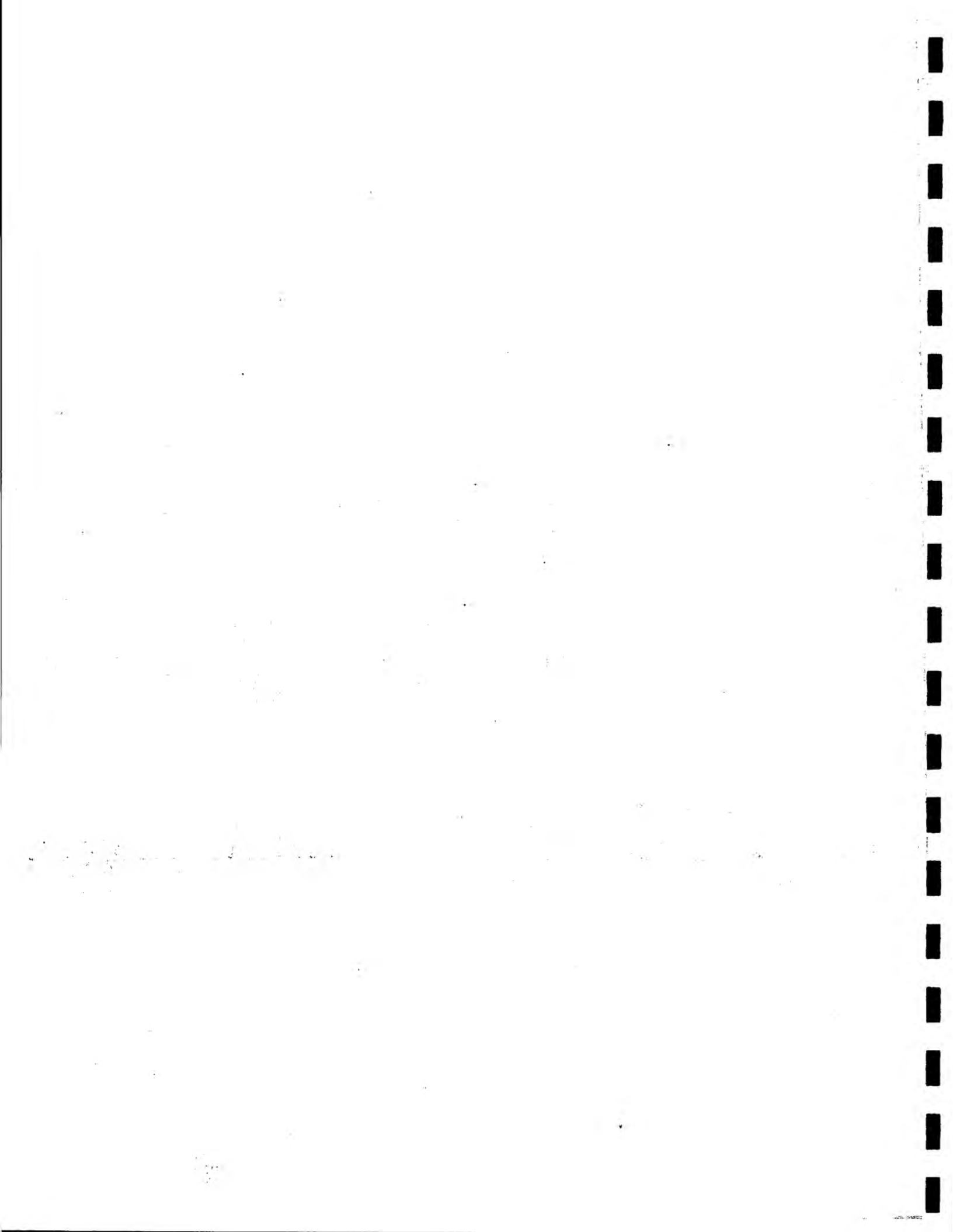
-Give zinc. May need small intestine NL activity, histidine, or cystine to facilitate the transport of zinc.

-Skeletal muscle cells are facultative, they can extract energy from glucose via anaerobiosis/fermentation; when oxygen is present, some cells prefer to burn glucose by oxidation. Aerobic

exercise produces lactic acid, the chemistry is glucose converted to lactic acid plus 47 calories of energy, 119 calories per pound. With the presence of oxygen the reaction changes, glucose plus oxygen gives carbon dioxide and water and 639 calories. Oxidation of glucose gives more calories per pound (1614) compared with glucose fermentation with lactic acid as a by-product. Consequently, with aerobic process, lactic acid is not produced and 13 times as much energy is created. The complete oxidation of glucose is the most important way to turn food into energy. This process involves several intermediate steps. Aerobic glycolysis is the first three step process of life energies production. Also Krebs's cycle, and electron respiration. In the first step glucose is converted to pyruvate is converted to citrate which is used in the citric acid cycle or Krebs's cycle as fuel. Oxaloacetate is formed and turns into citrate again. The energy from the Krebs's cycle is in the form of NADH, nicotinamide adenine dinucleotide. NAD provides the basis for the third step during the electron respiration, electrons that have been added to NAD during the Krebs's cycle are taken away during this step and given to oxygen (the oxygen breathes in electrons and the process is called electron respiration). The real energy occurs when electrons given to NAD during the Krebs's cycle have the energy they release during the respiratory step. When oxygen breathes in electrons another very important molecule, ADP, becomes energized by taking on additional phosphate molecules becoming ATP (adenosine triphosphate). ATP gives up energy by giving up a phosphate. All body cells use this. The maximum amount of oxygen is dependent upon the relative position of ubiquitous carbonic acid anhydrase which is zinc dependent.

-**"THE BODY QUANTUM, THE NEW PHYSICS OF BODY, MIND, AND HEALTH"**, by Fred Allen Wolf, McMillan. Thank you David Leaf.

-NAD is the important molecule in the breathing cycle. Redox, reduction, oxidation of chemical reactions. When a molecule gives up an electron it is undergoing oxidation, it passes from the reduced form to the oxidized form. Sufficient oxidation reflects itself in the right amounts of carbonic acid anhydrase.



DR. GOODHEART'S RESEARCH TAPES

TAPE 103

-1-

-Much gratitude to Terry Underwood and her organization for making the Washington meeting a success.

SPONDYLOGENIC REFLEX TECHNIQUE

-Dvorak and Dvorak work shows high incidence of subluxation between the T6-T8 area since this is a pivot point of the spine during walking. In HUMAN WALKING, by Inman et al, says that with a left step all the vertebrae below T7 rotate clockwise, and above T7 rotate counterclockwise. Therefore, between T6-T8 is the highest area of torsion.

-The Lovett reactor of these subluxations may require holographic technique or testing against respiration. If expiration weakens then the Lovett spinous should be pressed inferior with inspiration as the ribheads are pushed superior. This does not correct the characteristic pain patterns found by Dvorak and Dvorak. Pain reduction occurs with tapping the Lovett vertebra at a 1 Hz frequency (1 per second) about 30-40 times.

-These painful muscle points were previously respondent to strain/counterstrain therapy. S/CS is suggested on any muscles that don't respond to the tapping.

-Recurrent patterns of T7/T4 involvement may need glycine since this seems to be the specific nutrient for S/CS muscles. This was based on the observation that a paralyzed patient with spasticity was given 180 mgs. per hour of glycine which transformed his spastic paralysis to a flaccid paralysis.

-David Leaf has found that the co-factor for glycine utilization is Folic acid, primarily, also manganese, B6, and magnesium to a lesser extent.

-Procedure: After finding a subluxation and adjusting that level, tap the Lovett spinous, etc. as described. Ask the patient to contract buttock muscles, spinal extensors, shoulder extensors, posterior neck flexors, etc. as they arch head and shoulders up from the table. If repalpation of involved muscles reveal tenderness, give patient folic acid and repalpat. If tenderness has decreased there is a need for folic acid. Often there is switching or right/left brain factor also involved in this recurrent Lovett reactor.

-Insalivation will also abolish the previously found switching and split brain problems.

-Persistent switching pattern may also be a hypercontracted subclavius. We are working on a pattern seen in patients that have a "mid-switching" in which there is neither a homolateral or contralateral pattern. This shows that they can switch either left or right. This correlates with a magnesium deficiency or a strain/counterstrain requirement of the subclavius. Subclavius is usually very tender. Treatment is passive shortening of the subclavius with patient inspiration while doctor spreads the trigger point for 30-40 seconds. Residual pain on palpation can be decreased with magnesium. (Magnesium lactate by Standard Process).

-Highly recommended is Dvorak and Dvorak, "MANUAL MEDICINE" available through David Walther and Systems DC, or Thieme Stratton.

MUSCLE MERIDIANS

-Patients with recurring pain patterns: TL the pulse points with BID or gait if necessary. Test active pulse point associated muscle (again with BID, etc.) then palpate the muscle meridian for painful areas. Tap tonification point of the meridian (i.e. liver 8 for liver). Most often this will not

decrease pain. Tap the beginning and end points for the coupled meridian (i.e. gall bladder B&E) on the same side. Continue the B&E tap until all muscle meridian pain is decreased. Recheck against gait, etc.

-French researchers have traced meridians with radioisotopes finding that degenerative conditions have a slow meridian energy flow and inflammatory conditions have a fast energy flow. Inflammatory conditions are treated by slowing down: tap the beginning point at a SLOW rate of 0.1 Hz. and the end point at a faster rate of 1 Hz. For degenerative conditions: exactly opposite, tap the B point faster at 1 Hz. and the E point at a slow rate of 0.1 Hz. (a tenth as fast as the B point). Sometimes this has to be repeated.

-There is good evidence from Myerson at Dulane that the right thoracic duct drains both lungs and heart. This is important in lung conditions. Test the PMS with the head in flexion off the table. Weakness in this position denotes right thoracic duct. The pectoralis minor NL is superior to the xiphoid. Palpate NL pain against a source of zinc. Correct form of chewed zinc will neutralize the pain.

ALTERNATE NASAL RESPIRATORY TECHNIQUE

-Good evidence that nostril dominance for air flow changes back and forth every 20 minutes from the right to the left, etc. This explains why wind and barometric changes are a factor in certain illnesses.

-Evidence from the Sulk Institute that breathing in through the left nostril turns on the right brain, and breathing through the right nostril turns on the left brain. Found universal cranial fault associated with right and left nostril breathing.

-Large number of patients who did not show a universal fault and previously had shown it and had it corrected, who continue to show weakness on left or right nasal respiration. Many had chronic obstructive pulmonary disease (COPD), asthma, fatigue, recurring muscle weakness, and unresponding pain.

-Alternate nasal respiratory activity occasionally altered by left or right brain activity. The patient weakens on right nostril breathing, utilizing right or left brain activity would change it. Used to have the patient concentrate on breathing through the left nostril if the right nostril weakened them. A chronic, clonic, tonic, intermittent torticollis patient improved with this.

-Right lung is positive in the front, negative in the back. Left lung is positive in the back, negative in the front.

-Failure of metal objects properly grounded in an operating room sometimes caused lung explosion under anaesthesia.

-24-27 tracheal rings act as atomic accelerators, the trachea does not just mix air, it can modify and add to oxygen's negative charge, and would be more attracted to the positive right lung in the front and the positive left lung in the back.

-Procedure:

-Test vital capacity (Vitalor or spirometry), take the average of three.

-Left nasal inspiration and test indicator muscle.

-Right nasal inspiration and test indicator muscle.

-Rule out TL to the nose without breathing, very rare.

-Whichever nostril weakens, test against right and left brain activity, and observe abolishment of weakness.

-Test weak nasal side against lingual receptors against vitamin B and vitamin G (Standard Process or NutriWest).

-If left nasal inspiration weakens = over negative.

- If right nasal inspiration weakens = over positive.
- Left nasal inspiration weakens, tap the right front rib cage and back left rib cage on right or left brain activity that abolished.
- Right nasal inspiration weakens, tap the left front rib cage and back right rib cage on right or left brain activity that abolished.
- Tap the rib cage (similar to pre- and postcordial tap), the rib cage has memory also.
- Ingest and chew B and G or both. (The taste nerve is innervated by the Solitary Nucleus. The oxygen-carbon dioxide respiratory center also under control of the Solitary Nucleus. Oxygen-Carbon dioxide setpoint can be disturbed by right thoracic duct or by right and left nostril breathing.)
- Put B or G or both on the tongue following previous chewing and ingestion, recheck right and left nostril inspiration to rule out weakness.
- Recheck vital capacity (average 3), should increase 20%.
- Maintain B or G or both for 2 weeks. Recommend high natural B foods like wheat germ.

ZINC

- DRUG INDUCED NUTRITIONAL DEFICIENCIES, Daphne A. Roe, M.D., AVI Publishing Co., Westport, CT.
- Zinc Tally identifies zinc deficiency.
- LANCET, Nov., 1984. Serum zinc is not a good system for measurement of zinc deficiency.
- 70% show positive ZincTally response, some mild, some more severe zinc deficiency. Not very many are normal. Many are taking a source of zinc.
- NEHT, once fixed, increases zinc absorption.
- Alcohol, certain chelating agents, glucocorticoids and estrogen can upset zinc levels.
- 90% of zinc in the body hooked to carbonic acid anhydrase which lets carbon dioxide unload. Oxygen and carbon dioxide dissolve in water at about the same rate. Oxygen and carbon dioxide dissolve in blood at about the same rate. But carbon dioxide leaves 500 times faster due to carbonic acid anhydrase.
- Zinc is needed for wound healing.
- Phytates are neutralized by leavening. Phytates are high in cereal products. Lack of phosphatase promotes high levels of phytate. Phytic acid sometimes interferes with zinc absorption. Recognize that increasing the intake of cereals can cause a zinc deficiency pattern.
- Appropriate zinc given (not just in response to muscle testing, but a response to pain) to hyperactive kids can help. This was noted by Bob Peschak.
- Foods with good zinc level are red meat, seafoods (oysters, herring).
- Cereals and grains, which are low in zinc, have phytates which form insoluble zinc complexes.
- Seminal fluid contains a large amount of zinc.
- Zinc is required for B6 to do its job, and B3 (niacinamide) needs B6 to be formed. B6 is required for a lot of reactions, so be sure that zinc is there to provide a stimulus in the NAD oxidation-reduction action that is needed for healing.
- 1986 Research Manual, zinc and expiration cranial fault. Al Zarkin also has a paper on this relationship in the Collected Papers.
- Chezyn (Standard Process) and Zincate (NutriWest) are good zinc sources.

HOLOGRAMMIC BRAIN

- SCIENCE, Jan. 30, 1987, paraphrased in The Detroit Free Press where they said "The

Brain A Computer? No Way". Tried to show that the brain preprograms itself prior to the initiation of a stimulus. The brain is more of a hologram rather than a computer (although the computer analogy to explain the brain is useful). There is good evidence that the computer metaphor is not the actual thing; and when you use the computer metaphor, you are using something that is not proven in the first place. There is good evidence that the brain is more of a hologram.

-Paul Spreiser's paper on holographic cranial faults is highly recommended.

-THE BRAIN, THE LAST FRONTIER, by Richard Restak. When in a completely sound proof room and a light is shone into the eyes, not only does the optic cortex fire, but also the acoustic cortex. When in an entirely light proof room, a sound into the ear causes the acoustic and optic cortex fires. There are always two things going on from every stimulus.

-Used to think that to move the right index finger, the left brain would fire just prior to it moving. Updated technological observations show that there are five things that happen prior to the actual firing on the left side of the brain for the right index finger. The brain receives two impulses on the right and left milliseconds prior to motion induced. It receives two more impulses on the right and left. Finally the fifth impulse is like the older idea.

-Hologrammic model of the brain is a better model to use.

-The brain has a three dimensional image of the body holographically. When the body does not fit this, there is a signal, may be positive or negative in intensity. Finding this with the Metrecom.

METRECOM

-Metrecom based on 1000 healthy Canadian people's spines between the ages of 15-85. Computer model of the spine. Measure with a goniometer the relative position of vertebrae left and right, up and down, forward and back.

-Find a high incidence of inferior lumbar and superior cervicals, as well as moderate rotations. Usual TL of the area won't show the subluxation, but when the lesion is exaggerated with TL (i.e. lordosing the lumbar or kyphosing the cervicals) it will show.

-Metrecom done weight bearing as well as with a step forward with the right and left feet. In these positions, many times the lumbar inferiority will move in a superior or inferior direction by one or two vertebra. TL the lumbar in a lordosed position with a block placed narrow under the hip, wide near knee, and have patient in a position of gait. This finds the need to correct a vertebra one level up or down from the previous level corrected with patient in normal weight bearing position. Need to check patients in gait position.

-So in your difficult patients, check for inferior lumbar and superior cervicals by positioning into lordosis and kyphosis and also in gait.

-Metrecom finds subliminal subluxations that the body has adapted to. It's like living next to a glue factory, after awhile, you don't smell it anymore.

-May see sensory response and no motor deficit, or motor deficit with no sensory change. Motor and sensory fibers come out of the IVF at two different places. In the 1987 Research Manual, there will be a depiction of the anatomically valid observation that there is a difference in the position of the sensory and motor fibers. We do see sensory deficits (numbness, tingling, etc.) with lack of muscle response or see muscle weakness without sensory deficit.

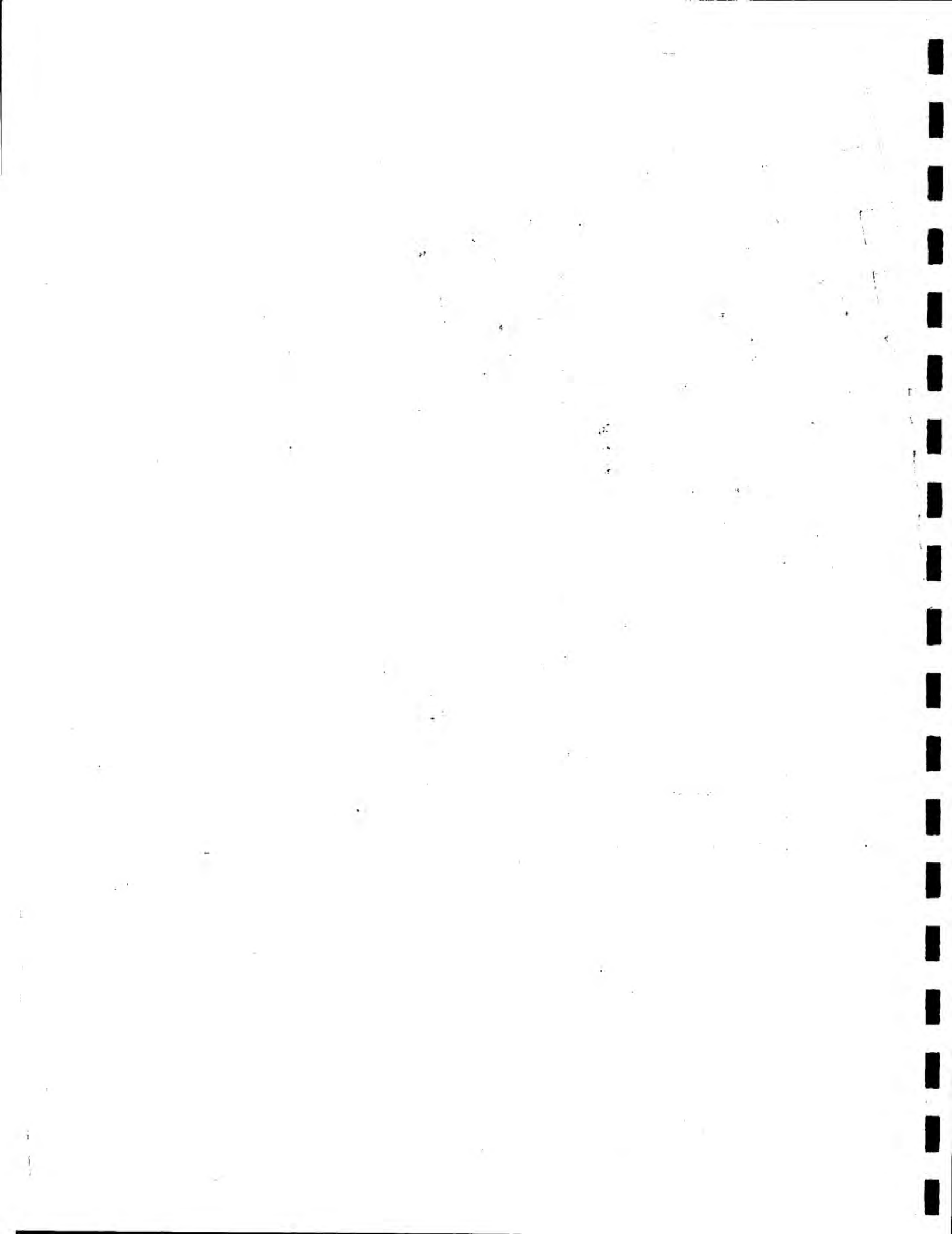
-GJG made an appearance at the Institute for the Development of Human Potential in Philadelphia through the efforts of Jerry Morantz. Read COMA AROUSAL, THE USE OF THE FAMILY AS A TEAM, Doubleday, by Edward Lewin, a specialist in coma arousal. They use at least two senses for stimulation at a time.

-Candace Pert states that the hypothalamus has hologrammic microrepresentation of all the

chemicals that are needed for the body's needs at the time, and the small intestine acts on that. Original basis of NEHT.

-Ebstein-Barr virus causes mononucleosis, lymph problems and some carcinomas of the throat, is similar to the AIDS virus. Pert has found a substance that allows the hypothalamus to recognize the Ebstein-Barr virus and AIDS virus, which the body sometimes recognizes as a hormone.

-Pert's neuropeptidal blocking agent was approved faster than any other substance by the FDA; it was Substance P.



DR. GOODHEART'S RESEARCH TAPES

TAPE 104

-1-

"DO DISC LESIONS PRODUCE PAIN?"

-GJG treated a patient recently who had been helped following disc surgery for symptoms of sciatica and disc displacement. Used the coccygeal lift, Category II, and the Bunyon technique with good pain resolution. Unfortunately the pain response would only last three or four days. He was kind enough to send GJG some material from the University of Miami's Comprehensive Pain and Rehabilitation Center, at the South Shore Hospital and Medical Center. The director is Reuben E. Rosemhoff, M.D., Doctor of Medical Science, and Renee Steele Rosemhoff, R.N., M.B.A. They specialize in pain relief in chronic back problems.

-In a very painful Category II, we occasionally recommend ice to be applied to the sacroiliac joint, and we recommend that the patient move as much as possible, rather than remaining seated or statically in bed. Place 6-7 or 12 ice cubes in a plastic bag and have the patient hold that over the SI joint of maximum pain, on the left or right SI, or the sacrolumbar area. Ice it 15-20 minutes of each hour, along with increased motion, following the proper adjustment of the Category II and if the Category I is painful recommend the same. This is the only time ice was used in this particular type of lesion.

-GJG recently finished treating a patient who had a diagnosis of a disc lesion by nuclear magnetic resonance, had been given a variety of therapeutic measures, had no atrophy, but was in great pain.

-It's GJG's opinion that many disc lesions represent the same thing that you see when one side of your nose swells up during a cold, or loss of voice with laryngitis, he thinks a cold can settle in a disc as well as it can settle in the nose or throat. Treat the same way as a cold, dehydrate the patient, increase all avenues of elimination, take an enema, hot bath, make them perspire, limit food intake. Results are very good.

-In Jim Cox's article, they did studies of patients with sciatic pain who had been given Cat Scans and they showed evidence of a disc protrusion. 50% of the patients recovered under conservative care. When the Cat Scans were repeated, it was impossible to tell which patients had not recovered from the sciatica, and which patients had recovered. In other words, the Cat Scan was exactly the same on the 50% who recovered as it was in those who still had pain. Those who had pain and those who did not have pain could not be distinguished.

-THE ADVANCES OF PAIN RESEARCH AND THERAPY, by H.L. Fields, Raven Press, NY, 1985, Hubert L. Rosemhoff has a very interesting article "Do Herniated Discs Produce Pain". "The symptom complex of back pain extending into the legs; sciatica is traditionally conceived as being presumably due to herniated discs. (In other words, pinching or compression of one or more spinal roots). By estimate, 200,000 to 450,000 operations are performed annually for this presumed condition. Physiological studies, however, demonstrate that except for transient pain when first impacted, sustained nerve root pressure does not produce further pain. There may be numbness or loss of function, for example when one leg falls asleep when sitting too long, but it is not a painful event. Therefore other causes must be considered as the agent giving rise to pain. It follows that successful definition of such, with appropriate treatment, may result in relief or prevention of pain and disability without resorting to surgery with its attending risks and failures. It is the thesis of this presentation that the assorted musculoskeletal system is responsible for initiating these phenomena. These structures are extraspinal in their surrounding perispinal muscles, buttocks, hips, and legs. These peripheral sites and syndromes are treatable and when treatment is successful, function is

restored and pain is alleviated without the need to correct any number of intracranial entities that have been traditionally designated as being competent causes for the pain in the neurological deficit. From simple inspection of human anatomy it is ⁱⁿ~~in~~ ^{Biological} ~~of~~ that all low back injuries must be associated with soft tissue abnormalities because ^{of} ~~of~~ ^{of} ~~of~~ the protective covering offered by the muscle represents the bulk of the anatomy affected. Even ^{far} ~~far~~ ^{it} ~~it~~ applied reach sufficient strength to herniate a ruptured disc, these forces must be transmitted through the overlying tissue that binds the spine together as a functioning unit. These tissues, when injured, undergo breakdown of cell membranes to arachidonic acid from the biosynthesis of chemicals like prostaglandins and their associated products ensue. One important issue to this process is the introduction of a state of hyperalgesia, following which a pain signal will evolve when excessive mechanical stimulation occurs or when compounds of the reaction of injury, like histamine or bradykinin are produced. **THE NERVE ITSELF DOES NOT ORIGINATE THE PAIN SIGNAL.** Nociceptors (chemical stimulation responders) are stimulated to originate the transmission of a signal. Whether or not sensory neurotransmitters like Substance P, somatostatin, etc., or some other substances are mediated is another problem for the investigators. Now, repeating again, the discussion that the disordered musculoskeletal system is responsible for initiating these phenomenon, is there clinical support for this thesis? There is, and this is the primary thing and it is just astounding when you think about it. One basic clinical observation is that when individuals are operated on under local anaesthesia, the nerve root that is distorted by the herniated disc is quite irritable on manipulation and stimulation, which is what one would expect. This is productive of a painful state, but it is primarily a dysthetic response. If the nerve immediately above or below the pathological root is manipulated there is no painful sensation. It follows then that the pathological route is undergoing an irritated phenomena rendering the system hyperalgesic. These pathological axons respond to algescic chemicals such as histamine and bradykinin, and these algescic chemicals excite the nociceptor nerve endings whereas normal axons do not. The algescic chemicals derive from the soft tissue injury. In other words, if the nerve above or below the area is stimulated by pressure, it does not produce pain. If algescic chemicals are painted on the nerve that is irritated, it produces pain. If the algescic chemicals are painted on the non-irritated nerve, it does not produce pain. The experiments at Colorado Unibersity with Dr. Sue put pressure on a nerve, and then took the nerve itself and finely comminuted that nerve, and then injected that into an animal, and then repeated the experiment with the opposite nerve, the opposite IVF was not compromised, it did not cause any trouble. In other words there was a toxic reaction to the nerve irritability side and a non-toxic reaction to the non-nerve-irritability side. The cell membranes of the injured soft tissues break down to arachidonic acid which is then biosynthesized into prostaglandins, thromboxane, monohydryl fatty acids, and the leucotrienes. These, individually and collectively are involved in the reactions to injury producing hyperalgesia, vascular instability and inflammatory reaction with loss of function. The symptoms produced depends on the relative portion of these substances at the site of injury. For example, prostaglandins produce vasodilation and the part feels warm. Thromboxanes produce vasoconstriction and the part feels cold. The leucotrienes produce inflammation leading to development of focal trigger points. So also does a deficiency of folic acid. These substances when interacted with the polypeptides, reactions to injury like bradykinin and histamine, or in the presence of excessive mechanical stimulation, a subluxation, go on to evolve into the nociceptive impulse to be accepted by the receptor for transmission upward into the central nervous system. (These reactions are inhibited by aspirin, steroids, and other related products which then provides a rationale for those who treat pharmacologically for the pharmacological treatment). Even more interesting is the reversal of these same phenomenon by focal physical forms of energy, such as application of ice, which well establishes a method for eliminating or averting tissue reaction injury. Vigorous action of the musculoskeletal system also limits the reaction of injury as neuropeptidal enkephalins released at 2-3 times the baseline rate's

levels so beta endorphins naturally rise, and the levels of neuropeptidal enkephalins that are released at three times baseline levels serve as the endogenous pain control system. It follows that the therapeutic application of these basic principles should lead us to prescribe the use of ice and various exercise rather than the traditional weeks of bed rest, analgesics, and muscle relaxants."

-It is GJG's impression that our method of treating disc lesions is based upon a faulty concept. Many times the simple correction of existing faults, either by high or low velocity without any torque, is productive of good response and then use every measure at your disposal to improve body function. In Category II the use of veal bone is essential. Sometimes one tablet every 15-20 minutes, the local application of ice and many times the local application of a counter-irritant such as a capsuline ointment that you can get from Boericke and Tafel.

-With the use of the Metrecom, you can find injuries that have bradykinin and histamine acting as mediators for the inflammatory response. Have the patient therapy localize the lumbar spine with marked lordosis; if positive, it indicates that there is an inferior lumbar. With correction of the lumbar inferiority, the patient's subluxative process has improved as is shown by negative therapy localization in the lordotic position, and there is some patient response. Then have the patient therapy localize the same lumbar area and use repeated testing (as in identifying the need for increased fatty acid intake like primrose oil, linseed oil, Linum B6, Vitamin F, etc.). Repeated muscle testing with the hands therapy localizing the lumbar area in particular would show a response, whereas repeated muscle testing with the hands NOT on therapy localization to the lumbar area would not.

-To repeat; following the initial subluxative correction, the patient no longer shows a therapy localization response in the lordotic position but continues to have a modicum of pain. If you test the muscle repeatedly with TL of the lumbar spine and it is positive, it will negate if you give a source of fatty acids. This indicates that the patient needs more clinical recovery and that is why the patient still has pain despite the relative disappearance of the subluxated process inducing a problem in the lumbar spine as measured by X-ray, palpation, or the Metrecom.

-“There is now found prostaglandin, hyperalgesia, chemical mediation of pain signals by bradykinin and histamine as mentioned earlier and further spread of this process through the surrounding tissue. There further ensues a number of secondary facts like muscle contraction, referred pain, autonomic reflex change and antidromic impulses. These represent themselves as clear-cut clinical phenomenon on physical examination, typically represented as trigger points and myofascial pain syndromes seen in the trochanteric ischial and sacroiliac areas. These muscle contractions produce restricted range of motion which creates further pain. This is not reflex muscle contraction as previously thought, it is in fact a chemical phenomenon where the traumatized tissue muscle releases calcium ions that bind with ATP for an uncontrolled contraction with pain and tenderness, vasoconstriction, decreased blood supply and energy deficit contracture.”

-1984 Research Manual, page 80, the work of Paul Shafer, a dentist who quoted Huxley, and he talked about the contractile protein filaments, both actin and myosin, and their relationship to calcium. “The regulatory proteins in complex recognize calcium as a signal to allow actin and myosin complex to form and initiate contraction. Calcium, stored in delicate sarcoplasmic reticulum, acts as the elimination of inhibition caused by the regulatory proteins, thereby allowing subsequent muscular depolarization. It is important to note that calcium is not an activator of the muscle contraction, calcium acts by releasing the inhibitory function of the processes regulated by tropomyosin and troponin. In fact, I have seen cases where calcium has been definitely contraindicated. We say that we know ATP is required for contraction with actin and myosin as discussed above. Conversely we know that ATP is necessary for the relaxation of contractile proteins. Prolonged or sustained muscular contraction will cause an interruption of the delicate sarcoplasmic reticulum. This interruption, in turn, will cause disruption of the release of free calcium ions that are stored within. These excessive free calcium ions will remove the regulatory protein's inhibitory

process on the contractile protein yielding actin-myosin complexing and causing. This is the so-called "calcium excess shortening". Here is the potential explanation: the fiber band which is found with the absence of action potentials for trigger potentials, the band that seems tense but you don't get an action potential for trigger potentials that's shortened muscle or muscular fiber will, by necessity, experience an increase in metabolic demands will cause the depletion of ATP and this may be thought of as muscular fatigue and muscular fatigue or depletion of ATP will then intensify the actin-myosin binding and this is "ATP depletion shortening". At this point, actin and myosin are bound by two discrete products that release free calcium from the sarcoplasmic reticulum and the actin and myosin being bound by the depletion of ATP preventing contractile protein disassociation. This actin-myosin complexing will cause a mechanical interruption of blood flow through the area of biochemical derangement. This decrease in blood flow is called vasoconstriction." A great deal of this is quoting from Paul Shaber, D.D.S., who contributed an article entitled "Temporomandibular Joint Dysfunction and Treatment" in THE DENTAL CLINICS OF NORTH AMERICA, for July 1983, the same issue that GJG contributed the section on Applied Kinesiology. Dr. Shaber says that neuritic pain accounts for about 2% of all the pain received in the facial region. Vascular pain is from 1-10%. Therefore, muscular pain or more accurately, myofascial pain, accounts for 88-90% of all the pain perceived in his own professional area of responsibility.

"The muscle contraction produces restricted ranges of motion which creates further pain. This is not, as mentioned earlier, a reflex muscle contraction. It is in fact, the chemical phenomenon where the traumatized muscle releases calcium ions which combined with ATP for an uncontrolled contraction with pain, vasoconstriction decreased blood supply and energy deficit contribute to the restricted range of motion and tendon and fascial shortening. The result is a functional disability. It is further clinical proof that immobilization, a traditional mode of treatment and emotional tension are prime contributors to the production of disability. Hence, the conclusion that treatment programs should avoid immobilization but it should incorporate relaxation and behavioral modification techniques to eliminate tension and stress. The outstanding symptoms of a low back disorder is pain. Full examination of the patient finds only 3-25% of these individuals with bona fide neurological deficits. These syndromes include referred pain syndrome primarily involving the sciatic nerve. The nidus for the reference points include soft tissue injuries and inflammations, particularly in the low back and hip, giving rise to sciatica. Further confirmation of these principles is provided by our clinical experience of the past five years and more than 1,000 patients for whom studious attention to the correction of peripheral musculoskeletal disorder alone, without surgical correction, have demonstrated intraspinal compressive lesions like herniated discs or bony stenosis has led to restoration of functional capacities and major relief or abolition of the painful state. The central space occupying lesions have been left in situ without surgical removal. The peripheral mechanism has been treated and restoration of function has occurred and has been sustained in long term followup studies (up to seven years). Clinicians must be willing to revise traditional, classical tenets when presented with laboratory investigative data that support new methods of treatment as just presented. Surgery for low back pain disorders has been virtually eliminated, even when all the classical, clinical and traditional indications for surgery have existed. Herniated disc with chronic nerve root compression, per se, do not directly produce pain."

-To confirm Rosemhoff's concepts that herniated discs do not produce pain but it is the musculoskeletal reactions. If you check the patient initially for repeated muscle weakness, you may find it; or you may only find it on therapy localization to the intervertebral disc area with the patient in a profoundly lordotic position which may show a subluxated process. After correcting the subluxation, many times you will see the evidence that repeated testing will produce a response

which is indicative of the need to try for some of the non-inflammatory prostaglandins such as fatty acids. There is good evidence that if aspirin or steroids relieve it there is a prostaglandin involvement. GJG is not advocating the use of aspirin or acetylsalicylic acid or steroids in any way, but they are primarily diagnostic and interrogation of the patient may yield that information.

"NON-OPERATIVE TREATMENT OF THE FAILED BACK SYNDROME PRESENTING WITH CHRONIC PAIN", by Rosemhoff. "The treating physician must recognize the nature of the injury so as to prescribe proper diagnostic treatment and testing to follow. Most important in this analysis is the recognition that pain is derived, most commonly, from a soft tissue disease utilizing the nervous system only as a communicator to the brain for the signal of disturbance in the periphery. Once understood, the soft tissue or myofascial syndrome is easily recognized; treatment can be swift and efficient. And low back pain, the common gluteal myofascial syndromes, produce trigger points over the hip at the trochanteric bursa creating sciatic referred pain. The other ends of this muscular arrangement are at the sacroiliac area, and the ischial tuberosity. These syndromes feature painful weight-bearing and sitting; standing and walking becomes torturous. The injured muscle, such as the quadratus lumborum sustain contractures as a result of the trauma resulting in pelvic tilt or antalgic scoliosis. Paraspinal muscles of the back participate both posterior and anterior and the mechanical malalignment occurs when the iliopsoas contracture induces sustained anterior flexion. These abnormalities are then worsened by the injudicious choice of bedrest, muscle relaxants, and excessive analgesia which augment the mechanical dysfunction by disuse and deconditioning. The appropriate therapy consists of mobilization with intense and aggressive activation and physical therapy programs to stretch and release the contracted muscles and their accompanying restricted joint motion. Physical modality such as ice, not drugs, to desensitize and reduce the inflammatory reactions of the affected area are available and easy to use. Ice as a therapeutic modality that has long been overlooked as a primary mode of treatment for the reaction injury and inflammation. Heat is best to use to soften tightened contractures in preparation for physical therapy. Supplementary use of prostaglandin inhibitors to reduce inflammation to inhibit chemical reactions to pain is important." Here again he talks about aspirin, which we don't use, but which gives us a clue. (Consult Dr. Walter Schmitt's observations on fatty acids).

LIPASE

"ENZYME NUTRITION", by Dr. Everett Howell in it he talks about food enzymes and our internal enzymes becoming depleted and therefore we should pay attention to the food enzymes that are available or supplement them. Here is where some of the anti-inflammatory enzymes relate to the previous discussion "Do Disc Lesions Produce Pain." Lipase patterns certainly are a factor in the production of all the present interest in cholesterol levels, HDL, lipid, triglyceride levels, and the HDL to cholesterol ratio. It is reasonable to believe that foods themselves contain enzymes for their digestion. Many animal protein products contain the protease cathepsin for self-digestion. The hanging of meat is a commonplace pattern for many fine restaurants and food purveyors. The enhancement of self-digestion goes ahead in both protein and carbohydrate foods. Most proteins contain proteolytic enzymes, most carbohydrate foods contain amylolytic enzymes and most fats contain lipolytic enzymes and the body produces a series of digestive juices and enzymes to break down the particular food products we use in our diet.

-Postprandial leukocytosis really means that the white count goes up if you eat cooked food but does not go up if you eat non-cooked food. At the Bircher Benner Clinic they found that if you only eat raw food, postprandial leukocytosis did not occur. If you ate raw food with cooked food, kept the cooked food to a minimum, and ate twice as much raw food, you did not get a postprandial leukocytosis. The postprandial leukocytosis is really the work of Kutchakoff who wrote "THE INFLUENCE OF FOOD COOKING ON THE BLOOD FORMULA OF MAN", Institute of

Clinical Chemistry at LaSanne, Switzerland and from the proceedings of the First International Congress of Microbiology which was translated by the Lee Foundation for Nutritional Research in Milwaukee, WI. Kuchakoff found that the body reacts in an unusual fashion. When we eat foods lacking in enzymes, it acts the same way as it would against an invasion of an infectious virus or bacteria. It increases the number of white blood cells and this is the process or phenomenon known as leukocytosis, therefore postprandial leukocytosis is a daily pattern in many people. The leukocytosis reaction takes place in the blood the moment the food enters the stomach (mastication softens that reaction). Raw, natural foods produce no reaction. Cooked raw food produces a change in the number of white blood cells but the percentage stays the same. Manufactured food, such as sugar, wine, and chocolate produces change in both the number and percentage. All raw food has a critical temperature of its own which must not be surpassed. Drinking water, after being heated for ½ hour at 87 degrees does not produce a change in the blood, but the same water at 88 degrees does produce a change. The critical temperatures are not the same for all foods. It varies within a range of 10 degrees. If cooked food is eaten along with the same raw product in the raw state, there is no reaction. In other words, the raw product can reestablish the virtue of the product altered by surpassing its own critical temperature. Raw products should therefore be mixed with products of the same critical temperature. This is the reason many people eat foods that are raw along with cooked foods. The critical temperature, for example milk is 191, cereals 192, butter 196, and potatoes 200. The proportion which raw products must be added to cooked food is confined to twice the amount. For water the minimum is 50%, in other words, if you have water that has been cooked or heated to 87 degrees and 88 degrees, you would have to mix 50% of the 87 water with the water heated to 88 to make it neutralized. That is the reason why many people eat the salad first and/or last. GJG's observation has been that there must be a balance between the cooked and raw food. Many foods can have enzymes and some of those enzymes are disturbed by cooking. Foods that contain starches usually contain amylolytic enzymes and foods that contain protein contain proteolytic enzymes and foods that contain fat contain lipolytic enzymes. In general those enzymes which are not preserved due to cooking and which are not reinforced by anything that is raw, must be made up by the pancreas. The pancreas is usually on a lipase deficit because the pasturization of milk (which produces the butter, milk and cheese which are main sources of fat in the diet) the enzyme level that is designed to show pasturization is present is the absence of a small percentage of phosphatase, an enzyme which is even more critical to temperature changes than lipase. Freezing and cooking meats reduces the lipase and those carbohydrate substances that are high in natural fats, when cooked, produce the same deficiencies in lipase which then means the pancreas has to produce more. There is well-founded information that pancreatic support helps an inflammatory process. Now we have an additional reason to try the use of a pancreatic product that contains a high level of lipase.

-A saliva pH of 6.2 indicates the need of more fats and oils. Patients that have a skin fold fat of 35 or 40 (female normal is 22, male is 15-17) indicates they are storing and not burning fats. Muscle weakness on repeated testing in a multiple fashion indicates the need for increased fats and yet by the same token the skin fold fat is almost double normal. Something is not functioning and sometimes the pancreas does not produce enough lipase because of the lack of natural lipase. The only non-oil good source of lipase is in the avocado and other relatively high fat containing foods which are eaten raw. Adding pancreatic enzymes to the disc lesion pattern has a good effect.

PYRAMIDALIS

-The pyramidalis is a muscle that starts at the symphysis pubis and runs about halfway up to umbilicus, and many times it will TL at the origin and insertion. The more contraction one sees in the back muscles, the more it indicates the pyramidalis, which is sort of a tension setter, is

causes your muscles to harden even more. Once they position have them move back away from their knees until they feel their abdominal musculature come into play at a moderate degree. To find this moderate degree it is necessary, of course, to start going back a few inches and return. If this was easy go back a few more inches and return. Keep it up until they find a spot where they are getting a mild workout. Once again, the body is a good estimate of what it can do. It may be that they will go too far back on one occasion to a point where they can't make it back to the starting position. If this happens just let them collapse on the floor, use their arms to get back in the starting position, and resume the exercise. Start with a degree of effort that allows them to hold the position for 15-20 seconds. The last few seconds the belly muscles will begin to quiver, work for a full 20 second sitback before quivering commences and then try a deeper sitback. When they are back tolerating a 20 second sitback, you can proceed to load up the exercise by moving their arms and putting them in front of them. You can fold them on their chest to increase resistance. This change may take them back to 15 seconds. The next position is with their arms folded and resting on the chest. When that has been mastered move their hands behind their head. Finally move their arms above their head. Caution, tell them, Don't swing your arms, they are elevated for added weight." In other words, divide up the thing into four 20 degree patterns so that they are starting off practically sitting up, and each time they go back 20 degrees and try to hold that for 15-20 seconds, they should be slightly shaking at the end of those 15-20 seconds. Have them do that 2-3 minutes morning and night.

-Using the sitback technique, coupled with pyramidalis technique, coupled with local ice if it is a Category II or local application of cold to the area. If it is musculature, use a prostaglandin inhibitor such as the oils, primrose, linseed, linum B6, check the pH, check TL against the area involved and test for repeated muscle testing of the indicator muscle such as the hamstring. Add sources of pancreatic enzymes to ensure proper lipolytic action.

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DR. GOODHEART'S RESEARCH TAPES

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-1-

WRIST-ANKLE ACUPUNCTURE

-WAN KE ZHEN (WRIST ANKLE ACUPUNCTURE), by Dr. Zang Xin Shu, translated into Japanese by Mitsutane Sugi, Ido No Nippon Sha, 1979. Six points above each ankle and wrist associated with zones of the body. Each zone is coupled with an upper and a lower treatment point. Upper points located 2 finger widths above the crease of the wrist in flexion. Lower points located 3 finger widths above the tip of the ankle. Some do not correspond to acupuncture points as we know them. Circular (bracelet) pattern around the ankle and wrist. At the ankle, number 1 point is K7, 2 is K8, 3 is LV4½ (between LV4 and LV5), 4 is ST40½, 5 is GB39, 6 is BL59. On the wrist, 1 is HT4, 2 is P6, 3 is LU7, 4 is TH7, 5 is TH6, 6 is LI6.

-These points are successful in decreasing pain and increasing range of motion (GJG).

-EXTRAORDINARY VESSELS, by Kiiko Matsumoto and Steven Burch, Paradigm Pub., Brookline, MA, 1986. Shu zones are identified by their number and roughly analogous to the coupled meridians. Upper points control corresponding zones above the diaphragm and lower points control the zones below the diaphragm. Between the naval and diaphragm could be both.

-Dr. Shu has found extensive series of symptoms associated with these zones.

-TL the points on the ipsilateral ankle and contralateral hand on the ipsilateral wrist. TL the front and back of the ankle and wrist. This is a general screening. GJG has the patient sitting up with the knee bent and uses anterior neck flexors as an indicator muscle.

-For example, zone 6 includes the sacrum and spine and is often found in difficult back problems.

-Identify the patient's major pain and identify which zone it is in, then TL the wrist and ankle points to determine which points should be tapped.

-For example, GJG had a patient that had limited abduction of the left arm with pain in zones 3 and 5. Tapping of the 3 points on the wrist and ankle got 20 degrees of abduction; tapping the 5 points on the wrist and ankle produced a remarkable result of normal range of abduction and no pain. This pain had defied any efforts in the past to relieve it, NL supraspinatus, AC joint separation and taping.

-Dr. Shu's points are responsive to tapping at 1 Hz; highly particular, must be precise with TL. Decreases pain and increases range of motion in a patient in which you have done everything else.

-Screen by TLing the front of the ankle and wrist by wrapping hands around the anterior ankle and wrist. Same for the posterior ankle and wrist. Usually find on the same side. In a few patients, GJG found a few that were opposite, but they were switched.

-Always do the usual AK procedures, Categories, fixations, etc., and when that is exhausted, go on to this procedure. Mark the points, the patient can tap them at home.

-The faster you tap, the less it seems to work, tap at 1 Hz (1 tap per second). Can use the activator to stimulate.

-Acupuncture needles put into the points laterally and stimulated, then experimentally leave the needles in, this results in relief of pain immediately, then exacerbation of the pain the next day, then relief of pain. Tapping avoids this, and there is no need to penetrate the skin. Acuaid is not clinically necessary, but may help.

-Lower 6 zone- backache, tiredness of the lower back, sciatica, pain lateral edges of the sacrum. Lower 5- hip joint pain. Lower 4- pain in the thigh and knee, numbness or oversensitivity

of the limb. Lower 3- knee pains, etc.

-Accessory points that Dr. Shu has that are different from the main 12 points. GJG has not found these to be necessary. They represent activity of the extraordinary vessels and are not in the course of the regular meridians.

NEUROIMMUNE INTERACTIONS

-Epiphyseal areas are more important than generally believed. Sometimes see slipped epiphysis problems, use epiphysis to identify bone maturation, etc. There is some information on neuroendocrine and bone marrow factors that control marrow transplantation and tissue degeneration.

-Osteopuncture is when needles are applied to the periosteum rather than soft tissue.

-NEUROIMMUNE INTERACTIONS, Proceedings of the Second International Workshop on Neuroimmunomodulation, by Jankovich, Markovich, and Spector, New York Academy of Sciences, NY, NY, 1987. Thanks Jeff Weber. Institute for Integrative Biomedical Research, Walter Pierpaoli, Lohwistrasse 50, 8123 Ebmatingen, Switzerland. They identify in bone marrow transplantation a graph vs. host disease (GVHD), and factors that affect it. They found a tumor inhibitory activity in the bone marrow. "The experiments together indicated in the course of organ regeneration or more simply during tissue repair processes, factors are produced or their production or release increased which exert a prevalent inhibitory action expressed by the inhibition of compensatory liver growth or suppression of DNA synthesis in vitro. These unexpected findings in the course of tissue regeneration prompted us to investigate whether factors were present in bone marrow and other lymphohematopoietic organs in normal animals which regulate cell mitosis. The activity of those factors was examined for their in vitro activity of normal cells and the capacity to modify of a transplanted tumor. There was evidence that there were both growth promoters and inhibitors produced. Bone marrow is a morphostatic brain. Central role of the bone marrow in monitoring and regulation of growth, size, volume, weight, morphostasis, though powerful, prominently produced, non-proliferative, antimitotic activities. While not excluding the possibility of basic central bone marrow function may be delegated later in embryogenesis and the evolution of other peripheral stations like the spleen or other lymphopoietic tissues, we propose that the bone marrow is an organ that has evolutionary and still remains our main immunoregulatory and morphostatic device providing all the basic functions related to identify defense immunity and maintenance of self in the broadest significance. Wound healing as an evolutionary process and related to survival of the species is under close bone marrow control. The bone marrow will thus measure all changes in the continuity of the skin and mucosa by producing, promoting, and then inhibitory healing arresting factors."

TEMPOROSPHEOIDAL LOVETT REACTOR TAP

-Patient with blepharospasm, GJG fixed a bilateral anterior occiput, along with PRYT. 20 years later, she's developed cancer of the ovary and return of the blepharospasm. GJG found that it was a problem with the bladder meridian. Point found just posterior to the temporosphenoïdal line (TSL) that Tled and when tapped, it helped relieve the blepharospasm (the point was not on the bladder meridian). The point Tled and responded to respiration meaning it was a cranial pattern.

-TSL used as a diagnostically as a muscle weakness indicator; for the temporal tap behavior modification; TL the NL and NV and temporal tap to find the need for nutrition. GJG thinks the TSL represents a hypothalamic awareness.

-Patient's with named diseases i.e. colitis, their body has forgotten they have the disease

due to the adaptive ability of the body. The body forgets it has the problem and cannot take steps to correct it.

-After clearing the upper cervical fix and TMJ, and adjusting a thoracic segment, placing a thermistor on the glabella and tapping the Lovett vertebra level on the TSL will reduce the temperature as much as 2 degrees in a short time. In the cervical and lumbar areas, the primary area had to be tapped rather than the Lovett reactor. I.e. L3 subluxation, tapping C3 did not change the temperature, but tapping L3 on the TSL caused the temperature to drop.

-“Autogenic Tracing- The Method, Research, and Its Application in Medicine”, THE AMERICAN JOURNAL OF PSYCHOTHERAPY, Vol. 17, page 174-195, by Wolfgang Luthe. “Recommends a prophylactic rest, auto hypnosis, mental exercise which has clinical value. Tried to find a psychotherapeutic approach which would reduce or eliminate the unfavorable implications of contemporary hypnotherapy and the passivity of the patient and dependence on the therapist. He used 6 standards of exercise, verbal content of the standard form focused on the neuromuscular system (arms getting heavy), vasomotor system (abdomen is warm), but reiterated necessity to establish coolness of the forehead. Efforts were made to record temperature changes when the patient would report the coolness, and the distal extremity would increase in temperature, as well as heart rate and ST segment changes. Autogenic training means a modification of the corticodiencephalic relationship which allow natural forces to regain their otherwise restricted capacity for self regulatory normalization. The hypothesis implies that the function of the entire neural humeral axis cortex-thalamus-reticular system-hypothalamus-hypophysis-adrenals is directly involved in the therapeutic mechanism and is not unilaterally restricted to either bodily or mental functions.”

-Found a way to influence the hypothalamus by changing the temperature, reduces the setpoint. Normal glabellar temperature is 90-95 degrees. Patients in the 95 area are usually more difficult than those in the 91 area.

-Area on the TSL that is the Lovett reactor of T7 vertebra is T4, it will TL and change with respiration. Tapping the point can be very painful, can tap through the patient's hand over the TSL, tap at 1 Hz.

-Tap the Lovett reactor of the primary subluxation, and tap the Lovett reactor level on the TSL at 1 Hz for 1½-2 minutes, monitor temperature at the glabella for changes.

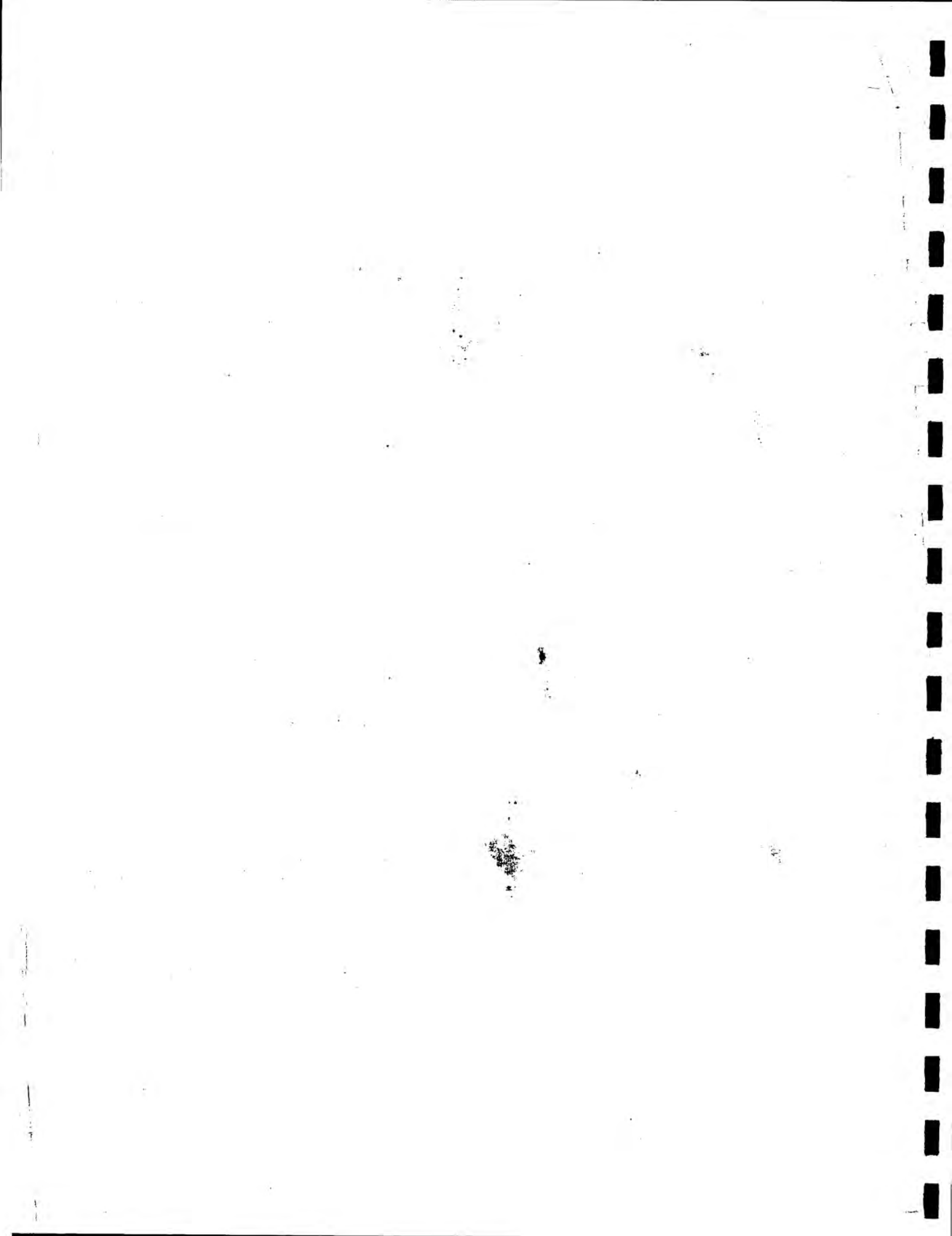
-This is useful especially in patients with recurring cranial faults.

-In difficult patients, tap the TSL on one side and the occiput on the other. The reason is that there are four major arteries that supply the head, the internal carotids and vertebral arteries, but 90% of blood leaves the head through the jugular foramen via the jugular vein which goes between the occiput and petrous portion of the temporal bone. Sometimes the blood can't leave the head fast enough and the head gets too warm. Significance of “keep a cool head”. When the TSL is locked (“rusted together”) and tapping it will help to loosen it.

-This technique of tapping the TSL has visceral effects. It changes vitamin C time, pH, cardiac rate, spinal accessory (trapezius), recurring cranial faults.

-This does not supercede B&E or cranials, etc.

-Simultaneous tapping of the right and left Lovett reactor on the TSL of the primary subluxation area in the dorsal area. In the lumbar and cervical areas, actually tap the primary lumbar or cervical subluxation level on the TSL.



drains most of the body's lymph and drains into the left subclavian vein. The right lymph duct drains the heart, both lungs, and right upper part of the body, and diaphragm into the right subclavian vein. Entrapment of the median cephalic portion of the subclavian vein can occur.

-In the supine patient, raising the right arm and head may weaken the right pectoralis major sternal (same as Retrograde).

-GJG started doing this on patients, especially asthmatics, standing up. They would not show it supine, but would show the right PMS weakness with the head in flexion while standing. Neutralized by NL (right 6th sternocostal joint and right 6th TP). Also find strain/counterstrain in the right PMS only in the standing position. Also find this frequently with the failure of appearance of a thoracolumbar fixation with the patient prone; but with standing, and on respiration (usually expiration) the bilateral lower traps would weaken. In patients with these two conditions, check internal rotation of the feet, and invariably one foot will not turn in as well, or if there is equal toe turn in, have the patient inspire and expire to check if one foot doesn't turn in as well. This will be negated by correction of the thoracolumbar fixation. Sometimes you have to turn off the psoas and or piriformis of the foot that doesn't turn in well.

-The spleen is located near the diaphragm and gets a pumping action.

-ESSENTIALS OF BODY MECHANICS, Goldthwait, 1935. "The respiratory action of the diaphragm is not its only function. It had a definite effect on the thoracic and abdominal veins which are attached to and pass through it. As the diaphragm descends in contraction and ascends in relaxation, all the organs and blood vessels attached to it must also ascend and descend. The ordinary breathing excursion in good body mechanics occurs at the middle of the extremes of excursions leaving a safety factor which can be drawn upon as in singing. In faulty body mechanics, especially when the patient's head is ahead of the posture line, where the origin and insertion of the diaphragm are too close together, the ordinary or natural respiratory excursion in the standing position occurs at about the mid point of the full inspiration. They note on surgery, especially of the posterior abdomen, that the inferior vena cava is lengthened and shortened with each excursion of the diaphragm. This increases and decreases the size of the vein and as a consequence, the amount of blood present. Because of this, every excursion forces the blood onward and upward on the right side of the heart, where it is more often pushed onward again. Therefore if the excursion is small, the venous excursion loses one of its most valuable aids; there is reason to expect congestion of the abdomen and pelvic organs, as well as back pressure in the legs as is seen in varicose veins. It also slows down the function of the spleen. The failure of the diaphragm to pump the blood to the right side of the heart is also an explanation as to why some people faint when they try to stand at attention for some time over and above the adrenals creating postural hypotension."

-BREATHE AWAY YOUR TENSIONS, Dr. Geba, Random House, Bookworks Book. A self help book in general breathing.

-(Clinician of the Month, a new feature on the Research Tapes. Members of the ICAK will give messages on techniques or opinions.)

-CANADIAN MEDICAL ASSOCIATION JOURNAL, July 7, 1979, Vol. 121, pg. 11. "Kingston and Mackenzie described a successful management of a pneumococemia in an asplenic 53 year old man who 18 years prior had his spleen removed for idiopathic thrombocytopenia. They also documented 25 other cases of pneumococemia, disseminated intravascular coagulation, and asplenia. Of the 25, 8 had undergone splenectomy for trauma, 2 had undergone incidental splenectomy during another operation, 2 had congenital asplenia, therefore 12 of the patients had no underlying disease. Only 1 of the 25 had survived the septic episodes 8 months to 25 years following the splenectomy. This syndrome documented the fact that frequency of sepsis with DIC in the splenic population cannot be determined." They are looking at removing the spleen in a different light because of the pneumonia that is so disastrous to asplenic patients.

-The spleen filters bacteria, it's the graveyard for red blood cells, acts as a lymphatic filter,

drains most of the body's lymph and drains into the left subclavian vein. The right lymph duct drains the heart, both lungs, and right upper part of the body, and diaphragm into the right subclavian vein. Entrapment of the median cephalic portion of the subclavian vein can occur.

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-The spleen filters bacteria, it's the graveyard for red blood cells, acts as a lymphatic filter,

acid, lysine, arginine, and histadine.

-These products have been produced by Paul White From NutriWest.

-Each of the water-loving amino acids were tested against left brain activity; each of the water-fearing amino acids were tested against right brain; each of the neutral amino acids were tested against front/hind brain. However, if you gave 5 of the 6 water-loving, 8 of the 9 water-fearing, or 4 of the 5 neutral amino acids, there was no effect.

-Some patients need both hydrophobic and neutral or hydrophilic and neutral.

-Patients in pain where there is metastasis, chewing the proper amino acid combination (they come as 10 mgs. each), the pain is immediately dissipated.

-Excellent adjunct to maintenance of immune function. The proper amino acids allow the right and left brain to work properly.

-Some patients may need Pre- and Post-cordial Tap and electron poisoning with right/left/front/hind brain weakening. The addition of amino acids gives immediate pain relief. It does not mean that if there is a disc, etc., that giving amino acids will get you off the hook in correcting it.

-Jeffrey Bland's Aug.-Sept. 1987 nutrition tape; vertebrates are susceptible to neoplastic diseases whereas non-vertebrates are not.

-Don't neglect the diaphragm, pec minor; often there is a strain/counterstrain need in the pec minor, NL at the 6th intercostal space, thoracolumbar fixation that may be uncovered with the patient standing against respiration. The diaphragm is another part of the immune system.

-Fred Alen Wolf, THE BODY QUANTUM, is the source where the amino acids came from.

DR. GOODHEART'S RESEARCH TAPES

TAPE 107

-1-

-1984 Research Manual, page 2, "...the spinal olivary tract has a relationship to both the dorsal spinal cerebellar tract and the ventral spinal cerebellar tract. By crossing and then recrossing, there are predominantly ipsilateral cerebellar projections via the anterior olive, although some of the fibers terminate in the contralateral cerebellum. The olivospinal cerebellar tract carries afferents from Group 1A and Group 2 from the contralateral and predominantly ipsilateral lower limb. The latency for the cerebellar response from the olivospinal stimulus is much longer here, in other words 18 to 25 milliseconds, than the time for the DSCT which is 2.5 to 6, or the time for the VSCT which is 2.5 to 4. There is a lot of afferent impulse processing in the cerebellum but there is only one output channel, the Purkinje cells, which are then discharged into the cerebellar nuclei - Deiters' nucleus, and the bulbar reticular formation, and the eye muscles. (This led to what we call EID). One of the researchers, a man named Rusche, has stated that by processing of exclusive sensory information from muscles and by feedback from the cerebellar cortex, the cerebellum functions as a comparator, or an error detector, in response to the execution of movements."

-Basis for relationship between eye muscles, dural torque and allergies.

-INVOLUNTARY MOVEMENT DISORDERS, by Cooper, Horbor Publisher. Uses liquid nitrogen freezing of the hypothalamus to change certain involuntary movement disorders. Source for the 1984 Reserach Manual material.

-Young females have more scoliosis because they grow faster than males do, sometimes the spine grows faster than the spinal cord can stretch, and nature puts a curve in to protect it.

-University of Toronto Children Hospital, cut filum terminale of scoliosis patients and saw an increase in vital capacity.

-A young female patient of GJG was treated and her height increased by 1.5 inches. She told her mother that she was all crooked and within 30 seconds she shortened up and said that she felt straight. When she was straight she felt crooked and vice versa. The next treatment, after she was balanced again she stood 1.5 inches taller, but GJG had her keep her eyes closed for 4 minutes, and she kept saying she was crooked. Upon opening her eyes for 30 seconds, she then resumed the scoliotic pattern. This lead to balancing the eye muscles in scoliosis. Use GTO on the globe of the eye at the insertion of the eye muscles.

-The dural attachment is at the sutures, C1-3, sacral segment 2, filum terminale, and coccyx 1.

-LOW BACK PAIN AND LEG PAIN FROM HERNIATED CERVICAL DISC", Cabot, Warren H. Greene Inc., St. Louis. Test wrist extensors for finding hidden cervical discs. Cervical discs (as well as spinal stenosis) can be aggravated by dural torque.

-Temporal bulge, allergies and the need for hydrochloric acid can be correlated with food testing (a particular food when insalivated makes a strong muscle weak if there is an allergy to it). There is one more step.

-FROGS INTO PRINCES; NEUROLINGUISTIC PROGRAMMING, Bandler and Grinder, 1979, Leo People Press, Box F, Utah.

-People take a longer step with the right leg, i.e. if lost in the woods, people walk in circles.

-Spinal length normally within .5 inch lying, sitting, and standing. Metrecom uncovers differences in length of the spine. Try to uncover problems with the position of the spine which is longest, i.e. if the spine is longest while sitting, then look for things in the sitting position (fixations, etc.)

tion, raising the right and lowering the left, with eyes closed, and then bring them back to a level position with the eyes still closed. Many people fail to do this. Some can level the right to the left but cannot level the left to the right, some have difficulty with both sides, but most have difficulty with the eyes open. The difference is when the eyes are closed. This is basically, as you know, proprioception. The body instinctively wants to be level. The head wishes to be level, as does the sacrum. Cloacal and righting reflexes are all evidences of this need, but the head must be level by level signal, and if the sacrum is off level, there is a failure of synchronization of the head level to the sacral level and vice versa. Small alterations in sacral level can be identified by a simple procedure. With the patient in a supine position, have him flex the knee of the right or left leg and test a convenient muscle or muscle group; we use the double pectoralis major clavicular, because of the recruitment factor reducing the percentage of error. The muscles will test strong. Then have the patient bring the flexed knee across the center of the body with no other change of position, stretching the piriformis on the involved side. There will be a marked weakening in a high percentage of patients who have alterations in sacral level. This synchronizes into the visual righting reflexes, as one can easily determine. With the muscles weakened by the flexed knee and medial position of the leg stretching the piriformis, the relationship to the eyes becomes obvious if one asks the patient to lateralize the eyes to the left or right and retests the musculature. There is a marked strengthening with lateralization of the eyes in one direction or the other, indicating this "synch relationship" of the righting reflexes to the sacral position. Implementation of this concept can be obtained by placing the patient in a prone position with the pelvis slightly elevated in the so-called Logan-basic position, and sacral challenging is attempted. Usually, all other things being equal, sacral challenge is negative with this type of patient, but becomes immediately positive when pressure is applied to the sacrum on the left or the right in a cephal direction, and the eyes lateralized left and/or right. The direction is not significant other than it acts as a screening process. Having discovered which side, being given pressure, weakens when the eyes are lateralized left or right, a simple respiratory challenge is then attempted. With pressure exerted on the sacrum with the eyes in the lateralized position that produces weakness, the patient is asked to take a deep breath and hold it and the muscles are tested, and then the patient is asked to let the breath out, and the muscles are tested. Find the phase of respiration which abolished the occulo-sacral challenge. Use the direction based on sacral position - i.e., if inspiration abolished the lateralized eye-sacral pattern, then push the sacrum in a cephal, floorward direction to reproduce the sacral inspiratory motion of respiration four or five times with the patient's respiratory inspiratory assistance. If expiration abolished the occul-sacral pattern, then get underneath the sacrum, press it in a cephal direction but towards the ceiling, with the patient in a prone position, for four or five respiration of an expiration phase. Retest against eyes lateralization and the patient will show no weakening, and there will be much finer coordination of the ocular, righting reflex and the sacral reflexes. This is just as if a tanker aircraft were attempting to refuel a fighter aircraft in flight. The fighter aircraft flies up to the bottom which carries the fuel, and once the fighter aircraft locks on to the boom nozzle, both aircraft attempt to fly a similar pattern, and the fuel flows into the fighter aircraft's tanks to enable it to remain aloft. The sacrum is the fighter aircraft; the righting reflexes of the inner ear and head are the tanker aircraft. The fuel line is the spine connecting the flight of the tanker aircraft and the fighter aircraft, which allows the fuel line to find its own direction without any effort. The spine aligns itself once the structure above and the structure below is in grouped geometric relationship. This ocular basic technique has a high percentage on both new and chronic patients and we find it to be a very practical and useful method of improving spinal function and spinal muscle balancing, especially in cases of scoliosis, recurring torticollis and recurring muscular imbalances of the entire body."

-Lang found that in addition to that, find the direction that abolishes the weakness induced by the allergen on the tongue; then fascially flush the eye muscles in the direction of correction, i.e. eyes up and left abolished weakness produced by allergen, push the eyes up and left and do

on phase of respiration that does not return weakness.

CLINICIAN OF THE MONTH

John Bandy, D.C. (JB)

-System of accessing information about glandular and visceral function from a higher level of nervous system not previously reached. System is a combination of techniques already in the ICAK; it is compiled in a useful format. Review the material in ICAK Collected Papers or seminars.

-Patient must be computer clear (switching, cloacal, gait, PRYT, hyoid, level legs).

-Beardall's computer concept is not related to analogy that the brain is a computer. Beardall made a functional analogy that the entire body is a computer in that it has input, processing, memory, and display and communicates in a binary language (applicable to AK because a muscle is either on or off). Beardall was aware that the brain is holographic and not computer-like.

-Begin procedure with concentric testing of one muscle representing each organ and gland, (this is gamma 2 weakness/Schmitt), this will be present bilaterally, although often one of the pairs of muscles will be what GJG calls a 51%er. Many 51%ers will weaken with TL of the beginning or end point of the associated Yang meridian on the face.

-Second step is to find a challenge that negates all the patient's gamma 2 weaknesses at once. Partial list; Schmitt's Pre-test imaging; GJG rebreathing; Beardall cranial hand modes (all indicate cranial problems); pulse point testing; acupuncture hand modes; antronex; allergy hand mode; Schmitt aspirin screen for fatty acid metabolism; K27; cross K27 which leads to Blaiich's human potential; Co Q 10 with acupuncture challenge leads to GJG NEHT; sugar, alcohol, clorox, caffeine, aldehyde, ammonia, Schmitt screen test; endocrine gland test points; endocrine hand mode; toxic metals; toxic metal hand mode; TMJ; chakras; hand modes for subtle body; Bach flowers; emotional reflexes; right and left brain activity; etc. Once challenge is found that strengthens all gamma 2 muscles, continue the challenge and advance and lock the patient with eyes open and closed. That means, while the patient continues to challenge positively, spread the legs apart at a 30 degree angle, patient closes eyes, internally rotate the femal heads by turning feet out, bring feet and turn up straight. This advances and locks the patient. Beardall developed advance and lock that allows accessing of all the information the body has related to a particular challenge, eliminates recidivism. Locate and correct all faults related to challenge, however you do this. JB uses Beardall's arm positions to locate structural, chemical, or psychologically related problems. Proceed to find the fault and fix with standard AK corrections. There will be mostly supraspinal faults, i.e. cranial, acupuncture (correct by tapping the B&E points on the head/GJG. TL either reflex points or NL to the organ/gland muscle. Find challenge to an acupuncture point, patient is weak, then TL to organs related to the gamma 2 muscles that you previously found, one of the organs will TL in relation to the acupuncture point you found, typically not the same organ as the point, patient TL reflex point to organ or NL while tapping the B&E points; this makes a connection between organs that may have been severed by some trauma, especially emotional trauma, as Dr. Diamond says, the acupuncture system is the connection between the psych and soma); upper cervical adjusting, left occiput (related to complicated acupuncture meridian disturbances, especially in 5 or more meridians); C1 anterior, posterior; C2; nutrition; Bach remedies; holographic cranial (Franks); some muscle NL, NV; occasional tapping K27 along with TL to an organ instead of points on the head; rarely adjusting below the upper cervical area. Keep finding and correcting faults by your favorite method until the patient enters what Beardall calls total yin. This is a state related to the patient being advanced and locked. All muscles in the body will be weak. Confirm by testing at least one muscle in each arm and leg. Once the patient reaches total yin, you put the legs back together (which brings patient back to strength), then retest the gamma 2 that were previously weak. If still weak or if one or more sets are still weak, repeat above procedures going back through the chall-

enges, find out what strengthens them, advance and lock, clear until yin, recheck and continue until patient is strong on all gamma 2 tests.

-Third step is to begin challenging the previously weak gamma 2 muscles, this time looking for weakness. List of challenges to use against strong muscles: aspirin, clorox, ammonia, aldehyde, acetone, cervical spine right and left, clockwise and counterclockwise torquing (Schmitt), antero-grade, retrograde (GJG), cross K27 (Blaich, Walther), sugar, caffeine, alcohol, the body has normal metabolic pathways, if a positive challenge, there is a problem with the pathway, toxic metals, toxic metal hand modes, sitting, allergies, allergy hand mode, etc. With a positive challenge (weakness in a gamma 2 muscle), continue challenge, advance and lock, clear until total yin, bring legs back together and rechallenge. Continue to challenge until the patient has no positive challenge.

-This is time consuming; JB works on 15 minute appointments, he works on positive challenges until the 15 minutes is up and stops. Patient returns until challenges are gone.

-Technique good for visceral problems or structural problems that don't respond to gamma 1 (eccentric muscle testing).

-GJG, Beardall, Schmitt, Franks, and Blaich - become familiar with them through their papers or seminars. JB recommends taking seminars from all ICAK Diplomates. There is a wealth of knowlege and a diversity of perspective unsurpassed by any other healing art in the world. We've only to reach out and take it. My sincere thanks to these men for all they've taught me, and to GJG for allowing me to share this with you. I look forward to seeing all of you in the future to share information and to collectively share our grief over Allen's tragic death. Peace.

-Clinician of the Month does not endorse or reject any material. Intended to strengthen the ICAK organization and research.

on the finger cot.

-1985 Research Manual quoting Illi, page 79, "Supplanting the legs with iron tubes fixed in each acetabulum, oil was injected into the sacroiliac joints. Finally the moment came to try the big experiment. The objective was to move the two iron tubes alternately up and down, and thus attempt enforced movement of the innominates, similar to their assumed movement in the normal act of locomotion. If my assumptions were not simply the fruit of over hopeful imagination, the sacrum was supposed to exhibit a compensatory, brief gyrating movement, obliquely up and down and concurrently anteriorly and posteriorly between the innominate bones, thus describing almost a horizontal figure eight. At the beginning, our experiment seemed to fail. My colleague glanced at me over his glasses, the students nudged one another...but suddenly the miracle took place; the sacrum moved regularly just as a well wound small machine. It was precisely what I had foreseen; cheers filled the dissection room while I fondly gazed at the pelvis. I made the following report about this experience: (1) The articulating surface of the ilium is broader than the corresponding one of the sacrum; (2) The articulating surface of the sacrum is longer than the corresponding one of the ilium; (3) The sacroiliac ligaments are stronger on the posterior side than on the anterior; (4) There are interosseous ligaments criss-crossing to unite the area loosely, immediately around the articulating surfaces; (5) There exists an interarticular cartilage; (6) A synovial membrane exists, enclosing the synovial fluid; (7) There exists a ligament, Illi's ligament, which was unknown up to the present time. Its greatest part lies within the synovial membrane. It originates by 3 or 4 digitations at a point about one centimeter and a half above the superior border of the articulating surface of the ilium. These digitations converge to enter the joint capsule; they form a strong single band, which inserts about a half a centimeter in back of the antero-superior margin of the articulating surface of the sacrum. Later I discovered that if the vertebral column is bent forward, upon a fixed pelvis, the sacrum does not move, as one might expect, anteriorward, but it performs a rotation around its perpendicular axis. On each examined cadaver, the movement was assymetrical and of variable extent. There was another surprising observation; the 5th lumbar vertebra deviated in the opposite direction from the torsion of the sacrum. To carry on my research work on this point, I had a special X-ray unit constructed, which enabled me to observe these phenomenon on the living body as well."

-L5 and the ilium move anterior with a step and the sacrum goes posterior, this is normal torsion pattern that occurs with walking. There is a horizontal figure eight configuration. If it rotates on a perpendicular axis with flexion/extension, what makes it rotate with flexion/extension and not in gait?

-Continue quoting from 1985 Research Manual, page 80, "Later I discovered that if the vertebral column is bent forward, upon a fixed pelvis, the sacrum does not move, as one might expect, anteriorward, but it performs a rotation around a perpendicular axis. On each examined cadaver, the movement was assymetrical and of variable extent. There was another surprising observation; the 5th lumbar vertebra deviated in the opposite direction from the torsion of the sacrum."

-Length of the spine should be within 14 mm between prone, sitting, and standing.

-Procedure:

1. Test piriformis in erect posture, should be strong.
2. Test piriformis in forward flexion, backwards extension, should be weak on the right side (of a righthand dominant person).
3. Test latissimus dorsi and upper trapezius, should be weak left side in forward flexion (strong in erect position).
4. Test SCM, should be weak on the right side in forward flexion, backward extension.

(When the piriformis weakens on one side, the opposite piriformis lets the sacrum move forward on that side, free from tension of the right piriformis. It weakens on the patient's dominant hand. This does not occur with sitting up, the spine must be flexed more to 30-40 degrees, chest will touch the

flexed thigh. If testing the piriformis while standing, the doctor should bend over so that the patient can rest their hands and stabilize on the doctor's back while they flex forward and are on one foot).

5. If testing the above muscles bilaterally does not show conformity to the forward flex pattern, suspect in decreasing incidence order;

Category I weight bearing, sitting or standing.

Category II weight bearing, sitting, or standing.

Sacral fixation or subluxation weight bearing, sitting or standing.

Lumbar 5 fixation or subluxation weight bearing, sitting or standing.

Occipitoatlantal fixation or subluxation, or upper cervical subluxation or fixation in weight bearing, sitting, or standing.

6. Correction of the above factors should re-establish normal sacral rotation on perpendicular axis on flexion and extension with compensatory Lumbar 5 counter rotation established by Fred Illi, D.C., 1952, National College Anatomy Lab. Correct all weight bearing problems in weight bearing position if possible.

-This is useful to find important factors that may only show in the seated position or standing position. (Patients don't have a chiropractic table attached to their abdomen.)

-ABSTRACT from GJG paper; "162 patients referred by other chiropractic physicians were examined and given an extensive diagnostic work of organ systems, which included a Metrecom of the musculoskeletal system. This analysis included a measurement of Cobb's angle in a linear computation of spinal line length. Spinal length was measured from C1 to coccyx 1. Measurement by computerized six transducer spinal goniometer probe was performed in sitting, standing, and prone standing modes. Cobb angle analysis revealed consistent thoracolumbar inferiorities. The level of inferiority varied in vertebral position in static standing and the simulated gait position, right and left step. An analysis of spinal length variance of sitting, standing and prone is presented. 81 double spinal length measurements were attempted. Spinal length was longer in the sit stand mode in 36 patients. Sitting length measurements exceeded standing length in all 36 patients. Standing measurements exceeded prone measurements in 43 patients. No difference was noted in 2 patients in the sit-stand and prone-stand mode. Examinations for fixations and subluxations on all patients should include evaluation in all modes of posture."

-The most difficult musculoskeletal, articular mobility patients presented with failure to have the pattern exhibit itself in flexion or extension. In quite a few patients, they could flex with weakness of the dominant piriformis, opposite latissimus and upper trapezius, dominant sternocleidomastoideus, but no weakness in extension; this was characteristic of patients with chronic back trouble. Partial disorganization with weakness of the piriformis with flexion/extension, but failure of the lat/uppertrap/SCM to weaken.

-Most common finding will be a Category I in weight bearing. Correct the lesion in the same position that you find them, i.e. Category I standing, put the blocks under the patient as they stand and face the upright table.

-The right piriformis weakens in almost everyone, including left handed people, includes the right SCM, left lat and left upper trap.

CLINICIAN OF THE MONTH

Daniel H. Duffy, D.C. (DHD)

-Topic is the temporomandibular joint (TMJ). DHD worked with a dental surgeon in Cleveland for 3 years. Unusual experience with TMJ cases, i.e. traumatic, prosthesis.

-The TMJ is a joint. Different people have different joint problems, i.e. ankle, knee, neck, TMJ, etc.

-Don't get mechanical in your approach to the TMJ; look at all factors; look at the TMJ as a SYMPTOM; take one step back until you find the CAUSE (i.e. strain/counterstrain trigger point, take a step back and find out why the trigger point is there, Dvorak and Dvorak often removes the need for S/CS).

-There is a mystery to be solved and you must gather clues to solve the mystery, i.e. saliva pH, breath holding time, vital capacity, posture, history, etc.

-The number one thing to do is to check head level. Head must be level first or the TMJ won't respond. Best to check on a plumbline.

-Frequency of occurrence: the first factor is most often a tight masseter/temporalis. Most dentists will increase the vertical dimension and this puts a stretch on the masseter/temporalis (TMJ closers) by using a splint. The splint helps somewhat, but in DHD's experience, there must be an active mechanical correction to obtain lasting results and the patient most often will be able to get rid of the splint.

-DHD works with a local dentist. DHD will treat the patient and then send them to the dentist for a splint to be made. Space treatments out 2 weeks to 1 month and then recheck with and without the splint, fix the TMJ and general physiology and structure; recheck the splint which will usually then weaken them, the dentist then refits the splint. Continue this until the splint is no longer needed. With a tight masseter/temporalis, go all over the bellies of the muscles and push together in small increments, and pull apart at the ends. Occasionally you need to fascially flush, stretch and spray often gives good results, especially when pain is concerned.

-The second factor is next in frequency of occurrence; the horizontal factor. DHD had a patient whose TMJ had a tremendous click. Her head looked as though it was compressed horizontally. He pulled apart on the mandible which made the click disappear for 2-3 openings of the mouth, but then the click would return. This opened up the horizontal factor. GJG later discovered the pineal cranial fault which is important in TMJ patients. The patient will look like their head is elongated and compressed. See GJG Research Manuals for this technique.

-The third factor is cranials. Cranial technique must be looked at in terms of muscle balance and not so much from a standpoint of cranial fault; an effect of cranial and cervical muscle imbalance, the SCM, upper trap, and splenius muscles insert into the skull and must be taken into consideration in cranial faults. Learn the little muscles of the skull and face. GJG has shown how you can create a momentary cranial bulge and cause weakness of the pectoralis major clavicular by turning on and off the small muscles, i.e. auricularis. There is muscle imbalance that goes along with cranial faults.

-The fourth factor is the adrenal factor, related to Deutsch's legament stretch. Stretching any ligament will weaken the sartorius/gracilis if the adrenals are involved, negated by the NL, NV, or adrenal substance. Patients with the adrenal factor will have a lot of pain with opening and closing, almost impossible to chew food. It's like an acute Category II of the TMJ. Some need prolonged NL treatment, Drenamin hourly for up to 2-3-4 days to get them over the acute situation. DHD recently discovered this is a way to uncover a hidden adrenal. The sartorius will weaken ONLY when the TMJ ligaments are stretched, not with a stretch of the finger, knee elbow, etc. ligaments, the patient must open the mouth wide to stretch the ligaments. Also, the TMJ stretch will not weaken a general indicator muscle, only the sartorius/adrenal indicator muscle. Occasionally this is a way to uncover an adrenal fault. The stressor must be removed (mental, chemical, or physical stressor). This requires some detective work and talking with the patient, i.e. nagging mother, 14 hour days for last few months, drinking 6 colas a day, etc. must be removed to get a result. And to repeat, they may need hourly doses of adrenal to pull them out.

-The fifth factor is the trigger point factor. Common to find an exquisitely tender trigger point in the area of the rhomboid, most often the right rhomboid (near the 2-3-4 ribs). Pumping of the trigger point may send a signal into the shoulder, neck, back; there may be pain, numbness, hot,

onmental pollutant and contaminant pathology including Agent Orange and paraquat (destroys marijuana) and dioxin. Dioxin and paraquat bind irreversibly to the melanin molecule. Melanin organizes free radicals (unpaired electrons blamed for the aging process). Theoretically aging may be due to depletion of melanin reserves."

-Bahr and associates, Institute for the Study of Consciousness, 2124 Benvenue Ave., Berkley, CA 94705.

-Melanin is an ancient pigment present at the inception of life. Present at both ends of the oocyte and the neural crest. Melanin is a heterogenous polymer composed of primarily tyrosine and tryptophane precursors. This maintains ionic covalence and probably metallic bonding arrangements providing each melanin molecule with a certain uniqueness. Phylogenetically neuromelanin has its peak concentrations in man. Strategically found in highly functional loci of the brain. Very stable both in vitro and in vivo and active metallic ion binding cation. (i.e. molybdenum, zinc, germanium, etc.). Binds readily to aromatic/lipid soluble compounds and produces functionally active free radicals and is a scavenger of free radicals like SOD. Melanin can simultaneously oxidize one substance while reducing another. Melanin is synthesized in leukocytes and mast cells and therefore may be transported like hormones via the circulation to access every cell as needed.

-Bahr proposes additional melanin functions: "Amorphous semi-conductor which regulates neuronal firing. An organic superconductor at room temperature and stores and releases energy similar to mitochondria. May direct embryologic tissue differentiation and regeneration. Melanin may direct mast cell function. It may direct homeostatic regulation of neuroendocrine function, immune response, tissue repair, autonomic nervous system, cytoprotective and cytotoxic role via its photon-phonon, and binds lipid soluble material. It may regulate enzyme and membrane activity via its control of metal ions functioning as co-factors. May regulate the various vitamins and co-factors involved in metabolism."

-Patients with rhythmic, diurnal, circadia, immune, allergic type problems are tested against tyrosine in the clear (one-eighth of a teaspoon) and against tryptophane. If tryptophane weakens give tyrosine. If tyrosine weakens, give tryptophane. Give 500 mgs. and chew it. Measure a range of motion, the needed nutrient when chewed will increase the range of motion, the opposite nutrient will decrease the range of motion.

-"Neuromelanin (and other pigments such as isopentanoind) functions as the major organizational molecule in the living system uses photoelectric (light), phonon (sound), free radical redox mechanisms, ion exchange and semi-conductor switching to direct energy to molecular systems and specific proteins and enzymes. Regulates molecular (wide range) interaction through divergent covalent modification. To support the hypothesis, established and proposed properties of melanin are reviewed, including the possibility that neuromelanin is capable of self-synthesis. Two melanocentric systems, key molecular systems in which melanin plays a role are examined. 1. Melanin-Purine-Pteridine Covalent Modification System. 2. Diffuse Neuroendocrine System. Embryologic direction and repair via sustained or direct current along the major homeostatic regulatory organs, autonomic, neuroendocrine, immunological."

-Melatonin is a hormone of the pineal gland. Swiss researchers feel that it is linked to longevity. 20% longer life in mice when added to drinking water.

-Pierre Poley fed melatonin to middle age male mice. Prolonged life of animals, exerted a positive performance, and reversed or delayed symptoms of age-related debility/disease/cosmetic decline in a dramatic fashion. These remarkable effects do not come as a surprise, although their dimensions surpassed our expectations." Noticed a difference in vigor, fur quality, motility and weight. Control mice lost weight until death, average 755 days. Treated maintained weight, death averaged 931 days. Aging initiated by pineal and decreased melatonin synthesis. (Test muscles with the lights off, if it weakens, this indicates the need for pineal and tryptophane or tyrosine, and to spread the jaw). Pineal acts as a regulator of the regulators changing both external (light, temp-

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crature, pheromones, humidity, antigens) and internal messages (cancer, psychogenics, auto-antigens) into neuroendocrine changes. Chemical blockage of melatonin pathways in mice will decrease antibody production. Mice given evening doses of melatonin with immunization had enhanced immune responses. Melatonin also has analgesic and anti-convulsant properties. Enhances immunity via the exogenous opiate system. Evening melatonin will decrease the immunosuppressive effects of acute anxiety. Stress in mice measured as increased thymus weight, increased susceptibility to infections, etc. Melatonin may regulate bone marrow production of tumor suppressing substances. Exogenous melatonin could be used as immunoprotective agents in environmental, social stress, etc.

-NutriWest is coming out with Electron Plus and tyrosine and Electron Plus with tryptophane.

-Give 500 mgs. of tryptophane or tyrosine as a supplement.

-Pretest the Nociceptor Screening Agents (Schmitt) against the melatonin hypothesis. Tyrosine and tryptophane should especially be checked against vitamin C and zinc. Clorox sniff test for inflammatory free radical process. Weakness usually requires small intestine NL activity or taurine and other anti-oxidants. Many times a tyrosine/tryptophane pre-screen will neutralize that pattern. Histamine allergies weaken with histidine. Yakriton will strengthen (antronex) and is further aided by vitamin C. Ascorbic acid won't help. These may also respond to tyrosine/tryptophane pre-screen and then addition of other supplements. Some patients may need both tyrosine and tryptophane. If any nociceptor screening agent (clorox, aspirin, etc.) are positive, also check for the need of tyrosine or tryptophane. If tryptophane weakens, give tyrosine and vice versa.

-Some patients will alternate between water-loving and water-fearing amino acids. Thyroidectomy patient: tried iodine and tyrosine and exogenous thyroid to maintain body temperature. Water-fearing amino acids gave a marked increase in daily axillary temperature lasting two months, then water-loving became effective for two months. Then water-fearing again. Tyrosine is in water-loving and tryptophane is in water-fearing. Using both tyrosine and tryptophane the patient has leveled off and doesn't require alteration between water-fearing and loving amino acids.

-Depressive cases: tryptophane is just as good as many of the psychotropic drugs. It has a general reputation as a "downer" used in sleep induction. Tyrosine generally regarded as an "upper" in thyroid function.

-Prematurely gray people, it's as if the body grabs the pigment of the hair to be used in the skin to guard against UV light. Often these people show the need for tyrosine or tryptophane.

-Pineal response shows a strong correlation for tyrosine/tryptophane need.

-Dr. Liebowitz shows a correlation between TL to CV/GV and the need for tyrosine and tryptophane.

-Bahr: "Calcium ion uptake and release by different vesicles i.e. endoplasmic reticulum may play a major role in gap function (opening/closing) of the nervous system. Carbonic acid anhydrase is activated by zinc ions and these are abundantly bound by melanin. Melanin therefore can selectively release and bind zinc ions to activate carbonic acid anhydrase. This changes the pH and opens and closes gap junctions in the nervous system and subtly modulates the intracellular sustained current. Zinc ions are also involved in ion-related membrane systems involving sodium, potassium, ATPase, calcium, adenylate cyclase, and guanidate cyclase."

-Bahr: "The organization of heavily melanocyte cells forming the grossly visible black pigmentation which moves into the folds of the neural groove and brings the neural groove together defines the formation of the neural crest system, which becomes the central nervous system. Melanin has direct control of the microtubular network that could be responsible for the neurulation process. Simultaneously, with the creation of these highly melanized cells on top of the fused neural tube is their strategic migration to multiple sites throughout the embryo collectively forming many of the components of the diffuse neuroendocrine system as well as other vital organizational struc-

tures. If melanin, through electrical and molecular mechanisms does indeed regulate the dispersal and function of the diverse neuroendocrine cells throughout the body, then it may justifiably be considered a homeostatic molecule. Its stability and resistance to chemical change may parallel its ability as a homeostatic neuroendocrine regulator. The neuroendocrine cells are dispersed strategically throughout the body and produce functional peptides and amines in these regions. For example, the carotid activation (stand up, sit) are highly melanized cells derived from the neural crest which are located in the carotid body. In order to homeostatically regulate one's cardiovascular response (pulse, blood pressure) you can change your position. The hypothalamus, pituitary, and pineal produce numerous peptide hormones, amine neurotransmitters that are utilized locally, are transported by long axons to other regions of the brain and selectively sink into and are taken up by the cerebrospinal fluid and transported through the bloodstream to other neuroendocrine loci (adrenal, thyroid, intestine, gonad). These diencephalic peptide hormones and amine neurotransmitters regulate the peripherally located neuroendocrine loci and we see feedback from them, thus serving vital homeostatic role. A significant imbalance in the release of these various neuroendocrine molecules could have severe or fatal consequences and instability in the neuromelanin system postulated to homeostatically regulate these neuroendocrine molecules could lead to neuroendocrine instabilities (endocrine disorders, mental abnormalities, autonomic nervous system and immunoregulatory imbalances). A good example of the problem with instability in melanin is the well known disorder Parkinson's Disease manifested by dysfunctional motor output and primarily involving an instability of the nigrostriatal neuromelanin system. Another postulated instability of the neuromelanin with consequent neuroendocrine anomalies is the relatively common disorder manic depression. The emotional and motivational disturbances prevalent in this abnormality will most likely be shown to be aberrant neuroendocrine functioning which is secondary to an instability of neuromelanin but in this case primarily involving the mesolimbic neuromelanin system." (It all depends on where it's lacking).

-There are some amelanotic animals, however, upon testing them with advanced technique, they found melanin.

-Bahr: "If melanin in its proposed coaxial control organization role with nucleic acid is so strategically important, why hasn't it received more attention? Several reasons for this neglect suggest obstacles in support of acceptance of the melanin organizational hypothesis. Melanin is an extremely stable molecule, highly resistant to dissolving by most acids and bases, and even quite resistant to advanced techniques such as electron spin resonance, x-ray refraction, and synchrotron radiation studies. This stability, which is remarkable for molecular structures, gives it a durability and permanence which ideally suits it for its hypothesized organizational role, but which simultaneously renders it relatively inaccessible to analysis making a kind of molecular black box. As a result, the synthesis and exact structure of melanin remains unknown. Even superficially illuminating is its heterogeneous molecular composition and its complex of multiple covalent areas and its presence in regions of high metabolic activity such as the brain stem, sites of origin of all catecholamine derivative pathways. However, we contend that neuromelanin is located at the origin of catecholaminergic pathways not primarily for cytoprotective reasons, but to organize and protect these pathways. Fortunately, this question of whether melanin is simply a breakdown polymer of catecholamine metabolism has been resolved experimentally by A.J. Castin and nobel laureate A.V. Chalot (worked with Selye). These noted researchers in neuroendocrinology have meticulously been investigating melanin, MSH (melanocyte stimulating hormone), and MIF (melanocyte stimulating hormone inhibiting factor), along with other peptide hormones for years. They have carefully followed the appearance and subsequent concentration of both catecholamines and melanin in developing rat brain. Their detailed analysis is demonstrated that the concentration of neuromelanin reaches a very stable adult level at 30 days of age, whereas the concentration of catecholamines (dopamines, norepinephrine) continues to increase from day one to day 60 or more. From this study and others, they conclude that neuromelanin is not just a metabolic wastebasket, but on the contrary, appears to have an important role in the functionings of the

brain and nervous system. Furthermore, these researchers believe that the function or functions of neuromelanin are probably due to a change in the state rather than a change in concentration.

-Challenge for the need for melanin precursors by challenging against tyrosine, if the patient weakens give tryptophane. Challenge against tryptophane, if weakness, give tyrosine. If you find a weak muscle that does not respond, test against tyrosine and tryptophane. GJG warns against using melatonin as a shortcut. You want to see the body's ability to deal with melatonin precursors rather than the finished product.

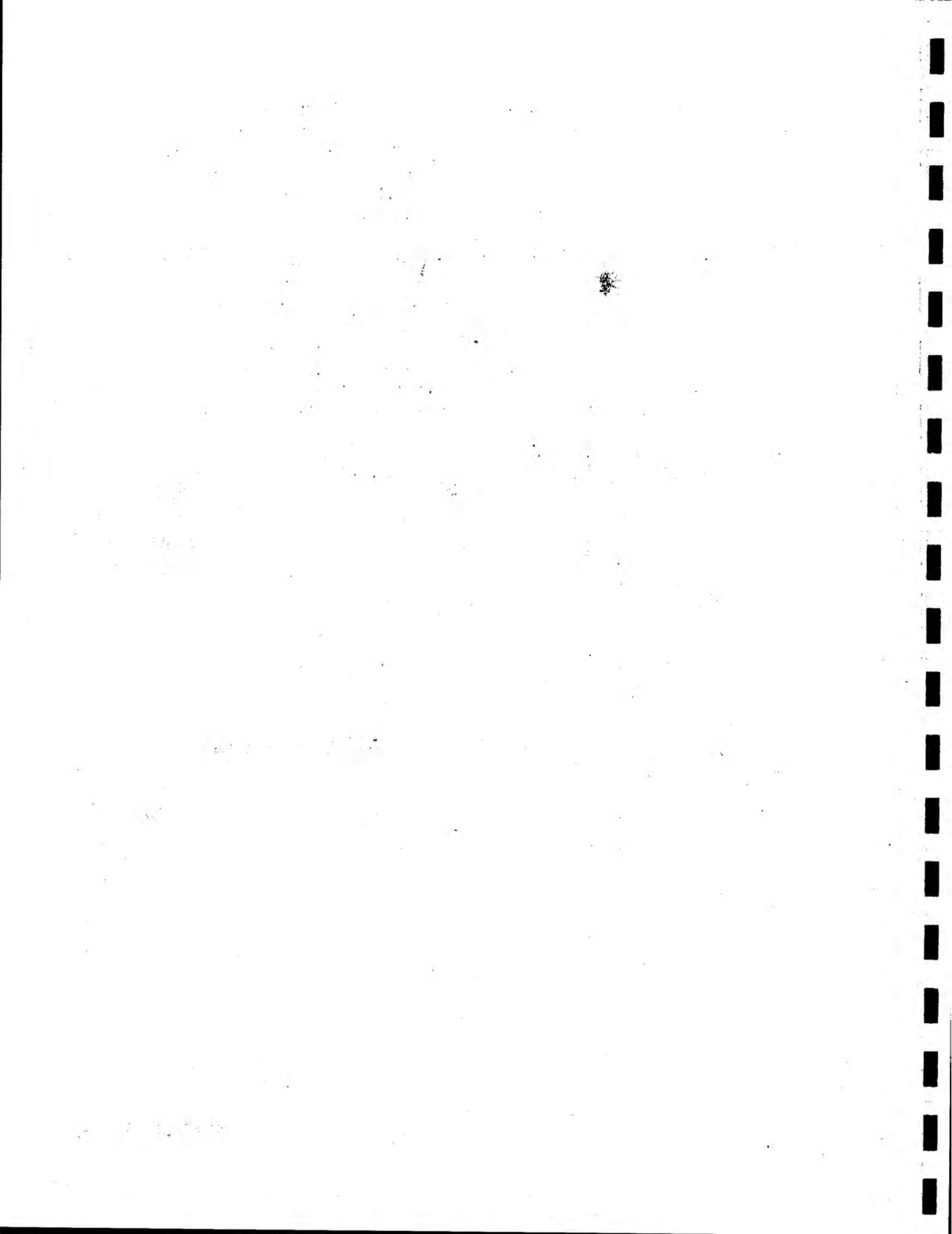
-Poley and Mastrani, IMMUNOLOGY LETTERS, 16-355-362. "It has become clear that the pineal has become the regulator of the regulators, because of its melatonin production. Aging is initiated in the pineal gland and age dependent symptoms of senescence may depend on progressive decline of melatonin synthesis in the pineal gland."

-Pineal won't make melanin from nothing, must have the precursors, must remove pressure from the pineal by spreading the jaw, must sometimes prime the pump by giving pineal substance.

-Pineal and melatonin are the regulators of the regulators. Translates external elements (light, temperature, pheromones) and internal factors (psychogenic, self-induced autoantigen, cancer cells) into neuroendocrine changes.

-Melanin Hypothesis ties into the Electron Poising Concept.

-NutriWest has 300 mgs. of tyrosine in Electron Plus and 300 mgs. of tryptophane in Electron Plus.



DR. GOODHEART'S RESEARCH TAPES

TAPE 110

-1-

-VERTEBRAL COLUMN: LIFELINE OF THE BODY, by Fred Illi, D.C., National College of chiropractic, Lombard, IL, 1957. Illi: "If we accept the concept of the orthodox school in relationship to the vertebral column and in mechanisms of forward bending we find ourselves in contradiction with certain prov~~er~~, indisputable facts which we cannot ignore, to wit. In forward flexion of the spine there is a definite torsion of the sacrum. The lumbar vertebrae, with forward bending receive the whole of the body weight along their anterior margins and rotate toward the low side of their base to accommodate this weight. Thus, forward bending is always attended by some degree of rotation of the vertebrae. This phenomenon always takes place on the same side, in forward bending, due to the asymmetry of the sacroiliac articulations. If the weight shifts in forward bending yet no step taken, this torsion is reduced to a minimum yet is enough to impart its direction (right or left) to the lumbar vertebral bodies, which are forced by weight bearing to shift from the center." Recall his experiment at the National College with a 23 year old male cadaver and the placement of a finger cot beneath the cauda equina. Flexion and concomitant rotation causes no pressure of the cord on the inflated finger cot. Straight flexion of the spine, without rotation squeezes the finger cot into two halves due to the strong traction of the spinal cord with no rotation. Illi: "The torsion of the sacrum when an individual bends forward, causes the same consequences on the forward step."

-BIOMECHANICS OF THE CENTRAL NERVOUS SYSTEM, Alf Breig, 1960. This idea of his was presented at the last meeting in Dearborn. Flexion and extension of the spine creates a perpendicular axial rotation of the sacrum and this has contributed to some of the ideas of Alf Breig with mechanical distortions of the spinal cord and the concept of spinal length which we measure via the Metrecom in lying, sitting, and standing positions. These positions should be a difference of less than 1/2 inch or 14 millimeters in any of those positions. Many people lose their curves and we examine them in the position of the longest spinal reading. Since the spinal cord is relatively inelastic and has a fixed length, we are very interested in the length of the spinal column. This is what lead to the development of the P.I. U.S. technique. P=right piriformis, L=left latissimus, U=left upper trapezius, S=right sternocleidomastoid.

-The right piriformis, left latissimus, right SCM, and left upper trap should all weaken with spinal flexion or extension, weight bearing or non-weight bearing. We call this the "new normal" of postural laterality. Test the right piriformis prone, sitting, and supine, should be strong. Should be weak on the right with forward flexion and backward extension.

-This follows the work of Turkowitz at Albert Einstein School of Medicine who found in newborn infants, within the first 100 hours of vaginal or caesarean delivery, lying quietly on their backs, all infants had their heads turned to the right. When the heads were centered, 88% of them turned their head back to the right. There is an inborn postural laterality.

-Test the piriformis in forward flexion, backwards extension, sitting, and standing, right and left lateral bending, supine and prone. Prone extension, have the patient on all fours and then flex the lumbar spine.

-Test the latissimus, upper trap, and SCM in all positions as well as to check for normal weakening.

-A sub-I has been added to the PLUS technique: PiLUS. I=iliacus. The right and left psoas will test strong in flexion and extension, but the right iliacus, due to the sacral base lateral attachment, will weaken when the patient flexes or extends. Perform this with the patient standing against a raised HiLo table with flexion and extension; the patient places their hands behind the sac-

rum for extension and grab sides of the table and flex.

-If the PiLUS pattern does not weaken normally, you will find in decreasing frequency: Category I weight bearing, sitting, and standing, Category II weight bearing, sitting, and standing, Category III weight bearing, sitting, and standing, Sacral fixation or subluxation, Yaw 2 weight bearing, sitting, and standing. Right iliacus malfunction usually shows that there is a need for right sacral basic contact, applied in standing or prone position. Coccygeal muscle rarely needs attention unless the patient complains of coccygeal problem. L5 fixation or subluxation weight bearing, sitting, or standing (Category III).

-For Category III correction (after DeJarnette): right short leg block under the femur, left long leg block under the ASIS. Illi states that when there is a disturbance in the spine, the pelvis is in a position of rest and the spine in a position of walk, or vice versa. This relates to Category III. Palpate the lumbar spine spinous processes, one painful, most commonly L5. Place blocks according to the short leg. The short leg block is the lever bracket. Number 1 position-large end of the block faces towards the head. No.2-half way between No.1 and horizontal. No. 3-horizontal. No. 4-large end of block points towards the feet. No.5-slightly further than No. 4. No. 6-almost parallel to the leg. Test a strong hamstring muscle, when the proper block position is attained, the hamstring will weaken, usually No. 6. This is the optimum position to allow for dual rotation of the walk position of the pelvis and the rest position of the spine or vice versa. The right block position will decrease spinous process sensitivity immediately. After 30-40 seconds, if the pain is not significantly decreased, move the block until the pain decreases. Also find a Dvorak and Dvorak pattern at L5: bilateral pain at the gluteals, lumbar and cervical pain. This pain will not go away with blocking (it will in 15 minutes, but this is impractical). Tap the occiput and temporal bones bilaterally for 60 seconds and this will decrease the pain of the L5 Dvorak and Dvorak.

-Continuation of frequency of lesions found if PLUS technique is not normal: Atlanto-occipital fixation/subluxation, upper cervical fixation/subluxation, rarely Limbic, Cervical disc (found by cervical compaction).

-Cervical compaction is used to realign cervical segments that have become distorted. With a step forward, the sacrum moves backward as the ilium and L5 move forward. This is taking place in the spine but you are not taking a step, so that you are in a step position with your pelvis, but not with the lumbar, thoracic, and cervical spine or vice versa. For the spine to laterally bend or extend, it has to flex, but the flexion should derotate when the spine is straightened. To get the cervical clear: measure cervical spine active range of motion, then passive range of motion (ROM). When there is more active ROM than passive, the cervical spine joints have been traumatized.

-Barry Wycke, M.D., an English neurologist, responsible for concepts of mechanoreceptors and nociceptors. He had his own cervical spine nerves on one side injected with novocaine, he experienced tinnitus, vertigo, nystagmus, and ataxic gait. He then repeated this on the opposite side when the first effects wore off; he again experienced symptoms. He then had both sides of the cervical spine nerves injected, and HE EXPERIENCED NO SYMPTOMS at all.

-Check the active ROM and then you perform passive ROM of the cervical spine on the patient. Invariably there will be a difference in ROM in lateral flexion or rotation, or both, rarely flexion or extension. There are four times as many mechanoreceptors in the neck (two types in the neck, three types in the rest of the spine), these mechanoreceptors suppress pain and have reflexive effects on the limbs, eyes, jaw, cardiovascular, and respiration.

-Compare active and passive ROM of the cervical spine. Some patients have increased active over passive and vice versa. This can be measured on the Metrecom. This causes subclinical activation of the nociceptors so there is no pain, however there is injury. Source of atlanto-occipital subluxation/fixation, or upper cervical subluxation/fixation, or lower cervical subluxation/fixation in weight bearing. Dvorak and Dvorak tapping of the lumbar spine should be performed as well.

-Correction of the above should re-establish normal sacral rotation on a parallel axis on

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-VERTEBRAL COLUMN: LIFELINE OF THE BODY, by Fred Illi, D.C., National College of chiropractic, Lombard, IL, 1957. Illi: "If we accept the concept of the orthodox school in relationship to the vertebral column and in mechanisms of forward bending we find ourselves in contradiction with certain provable, indisputable facts which we cannot ignore, to wit. In forward flexion of the spine there is a definite torsion of the sacrum. The lumbar vertebrae, with forward bending receive the whole of the body weight along their anterior margins and rotate toward the low side of their base to accommodate this weight. Thus, forward bending is always attended by some degree of rotation of the vertebrae. This phenomenon always takes place on the same side, in forward bending, due to the asymmetry of the sacroiliac articulations. If the weight shifts in forward bending yet no step taken, this torsion is reduced to a minimum yet is enough to impart its direction (right or left) to the lumbar vertebral bodies, which are forced by weight bearing to shift from the center." Recall his experiment at the National College with a 23 year old male cadaver and the placement of a finger cot beneath the cauda equina. Flexion and concomitant rotation causes no pressure of the cord on the inflated finger cot. Straight flexion of the spine, without rotation squeezes the finger cot into two halves due to the strong traction of the spinal cord with no rotation. Illi: "The torsion of the sacrum when an individual bends forward, causes the same consequences on the forward step."

-BIOMECHANICS OF THE CENTRAL NERVOUS SYSTEM, Alf Breig, 1960. This idea of his was presented at the last meeting in Dearborn. Flexion and extension of the spine creates a perpendicular axial rotation of the sacrum and this has contributed to some of the ideas of Alf Breig with mechanical distortions of the spinal cord and the concept of spinal length which we measure via the Metrecom in lying, sitting, and standing positions. These positions should be a difference of less than 1/2 inch or 14 millimeters in any of those positions. Many people lose their curves and we examine them in the position of the longest spinal reading. Since the spinal cord is relatively inelastic and has a fixed length, we are very interested in the length of the spinal column. This is what lead to the development of the P.L.U.S. technique. P=right piriformis, L=left latissimus, U=left upper trapezius, S=right sternocleidomastoid.

-The right piriformis, left latissimus, right SCM, and left upper trap should all weaken with spinal flexion or extension, weight bearing or non-weight bearing. We call this the "new normal" of postural laterality. Test the right piriformis prone, sitting, and supine, should be strong. Should be weak on the right with forward flexion and backward extension.

-This follows the work of Turkowitz at Albert Einstein School of Medicine who found in newborn infants, within the first 100 hours of vaginal or caesarean delivery, lying quietly on their backs, all infants had their heads turned to the right. When the heads were centered, 88% of them turned their head back to the right. There is an inborn postural laterality.

-Test the piriformis in forward flexion, backwards extension, sitting, and standing, right and left lateral bending, supine and prone. Prone extension, have the patient on all fours and then flex the lumbar spine.

-Test the latissimus, upper trap, and SCM in all positions as well as to check for normal weakening.

-A sub-I has been added to the PLUS technique: PiLUS. I=iliacus. The right and left psoas will test strong in flexion and extension, but the right iliacus, due to the sacral base lateral attachment, will weaken when the patient flexes or extends. Perform this with the patient standing against a raised HiLo table with flexion and extension; the patient places their hands behind the sac-

There are many sources of HCl: glutamic acid hydrochloride, aspartic acid hydrochloride, and betaine HCl. Betaine is considered inert. Betaine is a close relative of dimethylglycine, a neurotransmitter of great importance. It is the memory substance that lets the muscle go back where it came from. Trimethylglycine (betaine) is an essential derivative of the non-essential amino acid glycine. It combines with HCl to form betaine HCl which releases HCl in water. It has been used for years as a means of administering HCl. Dr. Royal Lee found that betaine destroyed tetanus toxin on contact. Its administration to a patient who is fighting a local infection is not a good idea because it breaks down resistance by temporarily aggravating the symptoms of the infective disease. Betaine is effective in destroying antibodies that hinders the development of the infective process. Wiping out antibodies is a good thing in some cases when new production takes place more promptly. Continuous use of betaine is unwise in an infection. I.e. patients with cholecystitis, need to thin the bile. GJG administered cholacol (bile) instead of betaine which may potentiate the infection. In allergic patients there is a pathologic sensitivity to certain proteins. The effect of betaine in wiping out certain antibodies is of benefit. Dr. Lee states "some believe pernicious anemia and other diseases such as myasthenia gravis where a pathological antibody is destroying vital cells, betaine here has the theoretical promise of benefit. It is an established fact that the normal control of organ and tissue growth is maintained in part by the action of antibodies to our own cells and proteins. It is clear that atrophy can result from excessive formation of any of these antibodies, whether in muscle cell or red blood cell".

-IMMUNITY AND SENSITIVITY AS FACTORS IN THE ETIOLOGY OF COMMON DISEASES, by Peterson and Good, Post Graduate Medicine, May 1962. "Hypersensitivity associated with the production of cross reacting antibodies made the basis for many diseases. So called autoimmune diseases characterized by the presence of antibodies against the patient's own tissues may involve cross reacting antibodies in some instances. For example, lupus erythematosus, the antibody is directed against the host cell nuclei may be elicited by an exogenous antigen rather than the host cell nuclei. There can be autoantibodies to isolated antigens in their tissues in the body which are essentially isolated from immunologically competent cells under normal conditions. If such tissues are exposed to trauma or disease, antibodies then may be produced. Such antibodies may really reflect this unusual exposure and may have other significance. They can also result in damage to the tissue. Sympathetic ophthalmia is a disease which illustrates this type of autoantibody, a penetrating injury or trauma to one eye exposes tissue previously well isolated from the rest of the body. Such tissue is not recognized as self by the antibody producing cells, but rather is considered foreign material. Antibodies and hypersensitivity are therefore produced which in turn may damage the other eye. Such a situation may also obtain where either autoantibodies are found against the heart after a MI or after heart surgery, antibodies against thymoglobulin following thyroid infection or surgery, antibodies against the pancreas in patients with cystic fibrosis of the pancreas or chronic pancreatitis and so forth."

-Duchenne muscular dystrophy patient had selective muscle weakness and responded well to 6-9 betafood a day (contains betaine). Same happened with the torticollis patient. Betaine is useful, but be sure not to use it if an infection is present.

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-Red, slow, aerobic muscle fibers have a sensitivity to stretch, results in a mild tonic activity, even at rest, the postural muscles are hooked up to a tonic neuron in the spinal cord (muscles of walking and standing). The postural muscles continue to have activity even at rest or with support.

-White, fast, anaerobic are phasic muscles, produce a quick change in body position by rapid movement, at rest they are electrically silent.

-Red slow fibers are divided into two subcategories by enzymatic activity, therefore muscle fibers are classified into three types which have been designated as A, B, and C.

-Type A fibers are the classic fast, white, phasic fibers. Type B and C are the two types of red fibers.

-There are different proportions of red to white, i.e. sprinters vs. long distance runners. This can be changed through training. Recent work indicates that percentage of fibers can be changed by physical activity.

-Erikson at the post-olympic conference of the American Orthopedic Association in 1980 discussed the Bergstrum needle for muscle biopsies. Data for capability of change of fibers comes from his work.

-Barry Wycke, director of the Neurological unit of the Royal College of Surgeons in London, has described the morphological and functional characteristics of the articular receptor systems. He states that there are Type 1, 2, and 3 in the spine. Type 1 and 2 are in the cervical spine only. There are Type 4 receptors in the cervical spine as well as the rest of the spine.

-Type 1 has static and dynamic mechanoreceptor activity, very low threshold, slowly adapting, and functions as a tonic reflexogenic effect on the neck, limb, jaw, and eye muscles. Have a sensitivity to stretch and therefore have a mild tonic activity even at rest. They also have postural and kinesthetic sensation and pain suppression.

-Type 2 fibers are dynamic mechanoreceptors, phasic, low threshold, rapidly adapting. Phasic reflexogenic effects on the neck, limb, jaw, and eyes muscles, and also on pain suppression.

-Type 3 responds to slow stretch only, not present in the cervical spine.

-Type 4 are located throughout the spine and are pain provoking, high threshold, not adapting, also have a tonic reflexogenic effect on the neck, limb, jaw, and eyes muscles. They produce evocation of pain. They also produce, when stimulated, respiratory and cardiovascular stimulation by anything that depolarizes them, either chemical or mechanical depolarization, therefore structural fault, or chemical/nutritional fault.

-Fast fibers metabolically produce a glycolytic activity, characterized by high ATPase and high levels of phosphopectokinase. Fast white fibers have a low myoglobin content and a high glycogen content. Less sodium and more potassium. Rapid loss of potassium during stimulation. Differences in concentration of amino acids on both sides.

-Slow fibers are metabolically oxidative and is indicated by high succinate dehydrogenase activity. Myoglobin is high, glycogen is very low. More sodium and less potassium. Rate of potassium depletion diminishes with continual stimulation.

-GJG working on a tennis player's shoulder, found that a fast stretch of the PMS produced weakness indicating need for fascial flush, but there was no weakness upon a slow stretch of the PMS. He also found that upon a fast contraction of the PMS there was a weakness produced upon a fast contraction of the PMS indicating the need for strain/counterstrain, but no weakness upon a slow contraction.

-Richard Bloom, D.C. discovered that with a slow stretch weakness that was corrected by

fascial flush would switch into a slow contraction weakness and vice versa. The same effect can be produced with fast stretch and contraction. The same effect is noticed in a weak in the clear and corrected using muscle spindle and golgi tendon organ (MS^{is}). Strengthen it. Muscles showing a slow contraction weakness, a slow stretch weakness, in the clear, the appropriate therapy would be to spread the spindle fibers apart followed by pressing the GTO apart. For muscles that weaken with fast contraction or stretch, the therapy of the spindle fibers followed by compression of the GTO.

-GJG found that in these cases, the muscle has to be turned on at its origin and turned off at the insertion as far as the GTO are concerned, or vice versa.

-This frequently accompanies a Category 1 or 2, or an upper cervical fixation. Test the gluteus maximus prone, standing or in EID to uncover the upper cervical fixation (UCF). Also test the gluteus maximus by fast contraction or stretch. A useful way to test this is to test the gluteus maximus with a straight leg test, not the bent knee test. You will see a weakness of the gluteus maximus with the straight leg test where it won't be weak on the bent knee test, especially if you accelerate the straight leg gluteus maximus test and use the same testing pressure at the popliteal area rather than lengthening the lever. Pressure at the attachment of the gluteus maximus at the femur with a cephal direction, along with a cephal pressure at the attachment at the ilium produces a rapid increase in the strength of the straight leg test and rapid abatement of clinical difficulty on movement or pain threshold upon palpation. The direction of pressure may need to go caudad. GJG does not know of a way to diagnose the direction of pressure, just do it both ways.

-It's possible in many patients that using the four types of muscle testing (slow stretch and contraction, fast stretch and contraction) that the fascial flush, strain/counterstrain, and muscle spindle/GTO therapy that we've been using is inappropriate, since it simply shifts the proprioceptors from one aberrant state to another and doesn't satisfy the four tests. Dr. Bloom found that compressing the MS fibers and then GTO fibers or spreading the MS and then the GTO is the correction. GJG does not find this. He finds the need to press the GTO at each end of the muscle in the same direction.

-This approach is useful in shoulder, knee, ankle, wrist, elbow injuries.

-If a fast stretch or contraction, or slow stretch or contraction is found in a muscle with multiple nerve supply, i.e. the deltoid, there may also be a spinal lesion associated from David Leaf.

-Fascial flush technique-also needs NL, NV, and vitamin B12. Fast twitch muscle needs 100 mgs. of pantothenic acid if there is a reoccurrence of the fast testing. You will see an almost courderoy ridging of the muscle in the fast stretch.

-High percentage of patients weaken on fast stretch or contraction and fixing the fascial flush or strain/counterstrain reverts it to the opposite. Fix by pressing the origin and insertion in the same direction. I.e. one end of the muscle is too loose. The other is too tight. GJG has not come up with a diagnosis for direction of GTO pressure. High incidence of origin pressure towards the center of the muscle and the insertion pressure away from the center.

-History from the patient will indicate that the injury occurred quickly, i.e. fast volley, fast golf swing, etc. Patients do not often sprain their ankles slowly.

-In the clinician of the month, Dan Duffy described a weakness of adrenal related muscles upon rapid opening/stretching of the TMJ; no other muscle will weaken in this pattern, only adrenal related muscles.

-Temporalis, internal and external pterygoid (attach to pterygoid processes of the masseter, and buccinator all attach to the cranial bones and the jaw muscles are capable of altering cranial sutural activity. Dentists are aware of the effect of the posterior temporalis on the TMJ.

-All GJG patients have a tympanogram examination performed. It is a measured amount of sound that enters the ear and activates the ear drum. The ear drum is on the trigeminal nerve for

its innervation. Alterations in the tympanogram can lead to finding TMJ dysfunctions. The tympanogram also measures the cubic millimeter space of the acoustic meatus and tube. There should be no more than 1.2 mm squared difference between the right and left. Often see a 1.2 and 1.7, this indicates that the external pterygoid has pulled the jaw forward away from the acoustic meatus opening the space; on the other side the posterior fibers of the temporalis pull the jaw back. Palpation of the external pterygoid produces pain on the contracted side when where the space is increased and pain on the opposite side posterior temporalis fibers have pulled the jaw back decreasing the space. You can also place the fifth digits in the acoustic meati and note that one is larger than the other, and upon opening/closing the jaw will sometimes produce pain.

-Often see a cranial involvement of an inspiration/expiration type, patient will weaken on expiration on the right and inspiration on the left very commonly. Bilateral inspiration or expiration also occur. Use tough muscles to overpower, i.e. quadriceps in order to diagnose this cranial involvement. In "success syndromes", only adrenal related muscles will weaken with the cranial respiratory challenge. This adrenal muscle weakness related to cranial faults does not respond to NL or adrenal substance except in very isolated cases.

-Doing bilateral inspiratory assist should alternate side, not both sides at the same time.

-This adrenal related muscle weakness upon cranial respiration has been found many times in patients who had previously been on adrenal support.

-Research ongoing into cranial faults: Holographic pattern in the skull. 2 types of cranial faults. 1. Cranial Subluxation. 2. Cranial sutures that act like condensers and may need a sutural relationship based on movement and not position. I.e. a subluxation vs. a fixation.

-Type 1 spinal joint fibers are thinly encapsulated globular corpuscles within the fibrous capsule of the joint, in the superficial layers are unmyelinated, static and dynamic mechanoreceptors, low threshold, slowly adapting.

-Type 2 are thickly encapsulated, singly in clusters of 2 or 4 in the fibrous capsules of the joint in the deeper layers and in the articular fat pads, myelinated, dynamic mechanoreceptors, low threshold, rapidly adapting.

-Type 1 are tonic reflexogenic with effects on neck, limb, jaw, eye muscles, (nystagmus can identify things), postural and kinesthetic sensation and have pain suppression.

-Type 2 are phasic, reflexogenic effects on neck, limb, jaw, and eye muscles, pain suppression.

-Both Type 1 and 2 have pain suppression. The percentage of population of mechanoreceptors is higher in the cervical spine than the rest of the spine. If they have tonic reflexogenic effects, they can effect the tendon jerk.

-Utilizing the Achilles tendon time, test for thyroid function, but because of the phasic and tonic reflexogenic effects, the patient is instructed to turn the head sharply to the right and left and if there is a change in the Achilles time you should look to the cervical spine (range of motion, Cervical Compaction, subluxations, fixations). If no change on the Achilles time, try tapping and doing slow and fast movement of the head to differentiate rapid vs. slow adapting receptors.

-Normal is 330 milliseconds on the Achilles tendon time. You will see a change of up to 30 msec greater or lesser in time, most commonly see an increase in time.

-1988 Research Manual: Discussion of checking ribs for pain. The rib has a tendency to pull away from the transverse process and vertebral body. Rib pain more often found in the weight bearing patient as opposed to a prone patient.

-Thoracic spinal pain, according to Wycke: the three endings within the vertebral column and the principle pathways by which the afferent fibers from these mechanoreceptors enter the re-

lated segments of the spinal cord. They have a physiological mechanism by which the thoracic spinal pain may be considered. Under normal circumstances, the whole receptor system of plexi and free terminals are inactive, unless stimulated mechanically or chemically with sufficient intensity to depolarize. When irritated, it is a pathological state, they produce pain and reflex alterations in the body which cause reflexive spasm of the segmentally related paravertebral musculature as well as alterations in cardiovascular, respiratory, and endocrine function. It is the combination of these physiological alterations occurring simultaneously in the body in the presence of pathological irritation of pain receptors that make up the totality of the patient's experience of pain.

-Somatic and cardiovascular reflex responses to brief mechanical stimulation of pain receptors in the capsule of the intervertebral apophyseal joint is contained in the 1988 Research Manual.

-You should correct the mechanical position of the rib, usually approximating the transverse process and rib. Challenge and check with respiration.

-Spondylogenic reflex from levator costalis brevis and longus is from C1 through T3. Correct the rib and then tap C1-T3 transverse and spinous processes for 60 seconds at one Hz. Takes out the pain in the rib area (may only show when the patient is weight bearing).

-Cervical spine joint neurology; twice as many Type 1 as Type 2, and four times as many mechanoreceptors in the cervical spine than the rest of the spine, it is very important to get zero defect in the cervical spine. I.e. checking Cervical Compaction, take out the rotation problems with lateral flexion and vice versa. If still pain over the occiput, check the occipital fibers (DeJarquette) with palpation. There is a spondylogenic relationship of the occiput with the sacrum. Sometimes tapping the sacrum on the side of pain (S1, 2, 3, 4) or L5 for C1 pain may help correct problems.

-After rib corrections, there is decreased pain and increased vital capacity.

-If jaw opening/stretching TMJ ligaments weakens the adrenal muscles, you'll also find the hyoid out of position, in the same "open" position. Push down on the hyoid, no change on Sartorius/gracilis normally. If the sartorius/gracilis weakens with downward pressure on the hyoid, it means that the hyoid is already dipping down in the front and is not in normal position. Attention to hyoid musculature is necessary. Useful in difficult TMJ patients or patients that have difficulty in maintaining stability after correction (along with folic acid to prevent recidivism). Glycine is the memory that maintains normal muscle balance and is unavailable in the absence of folic acid.

CRANIAL BREATH CESSATION TECHNIQUE

-Pressure stat model of cranial motion advanced by Upledger and others, there is more CSF production by the choroid plexus than is being absorbed by the arachnoid villi, therefore there is always a pressure of CSF.

-There is a widening of the cranium with inspiration along with a forward movement of the sacrum at the tip; narrowing of the cranium on expiration with the sacral tip moving posterior.

-Michigan State College of Osteopathic Medicine, Upledger: this movement occurs in 10-14 cycles per minute. Bones of the skull move like gills in fish, but actually cranial motion is divided into three phases; 6 per minute, 10-14 per minute, and 16-20 per minute.

-Visualize a football helmet being the bones of the skull, brain suspended by the dura represent the head within the skull with a dural "strap" that holds the helmet to the head.

-Tender points found on a patient's head while supine may indicate an excessive backward movement towards the table by the force of normal gravity pulling on the "straps" of dural tension. Non-presence of pain on the posterior skull while the patient is supine that appears painful on the posterior skull when prone validates the concept. Disappearance of the tender points after treatment also validates this concept.

-Periosteal cranial dura is firmly attached to the sutures and forms the outer cranial periosteum, i.e. two skull caps, internal skull dura and outer cranial periosteum. There is a rich, vascular, myelinated and unmyelinated, nerve fibers, and collagen that passes through the sutures. Cranial dura also attached at the foramen magnum and upper, anterior rim of the atlas. Cranial dura becomes the lining or endosteum of the vertebral canal. (The inside of the skull becomes the lining of the vertebral canal). The brain's dural membrane is firmly attached to the foramen magnum and as it enters the vertebral canal it is attached to the posterior aspect of C2 and C3. Dentate ligaments loosely secure the cord until the firm cord attachment at the anterior portion of S2, as well as the dural sleeves penetrating the sacral foramina. S2 dural attachment is tied to the filum terminale, non-neural attachment at the posterior first coccyx. Therefore spinal length variations and dural torque factors must be considered.

-Cranial tender points are temporarily abolished by a gait configuration in the supine position. i.e. check for reduction of cranial tender points with the right arm and left leg brought forward and vice versa. Usually right arm/left leg temporarily abolishes the points. Therefore removal of dural torque should be accomplished and would remove cranial dural tension.

-The cranial dura consists of two layers of inner meningeal and outer periosteal and are continuous to and including the foramen magnum. The cranial part is divided into falx cerebri, tentorium cerebelli and the falx cerebelli... the fourth and smallest is the diaphragma sellae. The spinal dura forms a loose sheath around the spinal cord and corresponds to the cranial meningeal layer of the dura. The periosteal dura of the cranium is now represented by the periosteum of the vertebra which lines the vertebral canal. The veins of the spinal dura correspond to the sinuses of the cranial dura. The spinal dura is fixed to the foramen magnum and the second and third cervical vertebrae. The periosteal cranial dura attaches to the superior rim of the atlas and explains why the atlas vertebra responds to the movement of a patient's heel (os calcis). The spinal dura attaches to the posterior longitudinal ligament by fibrous slips. The cavity of the dural tube ends at the second sacral vertebra. The filum terminale attaches to the posterior of the coccyx. The pia mater is a delicate connective tissue membrane and it carries the rich network of blood vessels throughout both brain and cord. It attaches to the nerve tissues where minute blood vessels penetrate the piagial mem-

brane. A concentration of fibers alongside the spinal pia mater forms the cruciate ligament. The pia mater attaches to the coccyx by the central ligament of the spinal cord."

-Applied Kinesiology Synopsis, David Walther, D.C.: "Motion of the skull bones has been objectively measured. The first study was made by Frymann. When she applied transducers to a subject's head, she found a rhythmic autonomous motion supporting Sutherland's original observation of 10-14 cycles per minute. Further motion studies have been done to eliminate effects of intervening tissue between the transducer probe and the skull. Michael and Ratzlaff attached force transducers to a screw eye placed in the parietal bone of anesthetized monkeys. A cyclic cranial bone displacement of 5-7 cycles per minute was observed that could not be attributed to either respiration or heart rate. With normal function there is predictable movement of the cranial bones. It continues throughout life, cycling 10-14 times per minute, and is called the "primary respiratory mechanism". The motion is separate from the heart or breathing rate; however, cranial motion is enhanced by thoracic respiration. Although this influence is always present, relaxed breathing and primary respiration do not always parallel. The history of a suture is that of a joint designed for motion. Pritchard et al. found five distinct layers of cells and fibers between the edges of the adjoining bones in human specimens. They concluded that '...history of the sutures suggests that it has two main functions, viz. that it is a site of active bone growth and that it is at the same time a firm bond of union between the neighboring bones, which nevertheless allows a little movement'. The first five layers making up the suture is bone. The cambial layer is the growth center that thins as growth ceases, and the capsular layer is light cartilage that provides protection. The middle aspect in the suture is a vascular layer similar to the synovial joint cavity. Finally, covering the suture is the uniting layer that is the homologue of the fibrous capsule. Uplegder et al. studied specimens taken from living adult skulls at the time of neurosurgical craniotomies. Along with connective tissue, the sutures were shown to have presence of viable myelinated and unmyelinated nerve fibers and nerve receptor endings. Bioholography is the application of hologram principles in nature. These principles have been demonstrated mathematically in vision, sound transmission, and in the somatosensory, somatomotor, and gustatory systems. E.H. Land, the polaroid developer, demonstrated that one area in the visual receptive field can create illusions in the perception of entirely different areas in the same receptive field, giving rise to color effects. This and other visual illusions are explained by the hologram. The interaction of the nervous system at two locations appears to function like a hologram. Von Bekesy studied the perception of pitch on the skin to relate to the function of hearing. There is much evidence to indicate that the holographic brain model is accurate. Dolgoff gives an excellent overview of support for the model. To keep the model in perspective he states, 'this analysis does not mean to imply that all brain and neural function can be reduced to holographic process, but that certain processes are most accurately describable by analogy to specific, well-understood, holographic-related processes.' An example of processing by two methods is in the auditory system, which functions both hologrammically and non-hologrammically.. The position of cranial bones in relation to each other can be observed on accurately positioned x-rays. Cranial nerve V angles over the petrous apex of the temporal bone. Gardner measured the height of the petrous apex by x-ray and found that trigeminal neuralgia occurred three times more often on the side of the high petrous apex than on the low side. Cranial distortion may change the dental occlusion by mandibular movement change or by disrelation of the cranial bones. Malocclusion is a common complaint following an automobile accident with whiplash dynamics to the neck and head. Many doctors fail to appreciate this because the patient often does not discuss it with orthopedically-inclined physicians. If the patient discusses that matter with a dentist who is not knowledgeable about cranial motion, the teeth may be equilibrated to match the distorted skull; this locks in the cranial faults and makes correction difficult or impossible without further dental attention. Baker found a 0.0276" increase in the distance between the second molars following cranial manipulation. It is important to understand all of the aspects that can be involved in dysfunction of the stomatognathic system. A patient may come to a chiropractor for a whiplash-type injury to the cervical

spine. This condition often relates with cranial faults that may in turn cause malocclusion. Correcting the cranial faults may correct the malocclusion; however, if the condition has been present for a considerable time the teeth may have changed position by the natural process of remodeling, thus locking in the cranial faults. In this case it may be necessary to consult a dentist for a bite plane and perhaps eventual equilibration of the teeth. The pelvis and sacrum are intricately involved in the cranial primary respiratory mechanism, and may require chiropractic correction to eliminate temporomandibular joint or occlusal problems. A short leg has been indicated as a cause of malocclusion. Strachan and Robinson, of the Chicago College of Osteopathy, were the first to observe a short leg's influence on malocclusion. Evaluating the pattern of masticatory muscles with electromyography, they removed a 3/8" heel lift from a standing subject's shoe and found an altered firing sequence of the muscles of mastication during chewing. When the lift was worn, the muscles showed the firing pattern of normal occlusion; with it removed, the firing was one of severe malocclusion. In applied kinesiology, an apparent short leg is quite often found to be a result of pelvic distortion. The leg usually balances with pelvic correction. In any event, their study reveals the importance of remote postural imbalance on the stomatognathic system. The stomatognathic system is very active in the dynamic motions of the body. During walking the sternocleidomastoid and upper trapezius muscles are alternately inhibited and facilitated, providing a rhythmic pull on cranial bones. Because of the rest of the body, improper gait and other dysfunction may be the perpetuating cause of recurrent cranial faults."

CRANIAL SUBLUXATIONS AND CRANIAL FIXATIONS

On difficult Melzack-Wall situations we suggested that you use therapy localization while the patient did breath holding. This was a useful procedure for finding a difficult Melzack-Wall situation if we were attempting to relieve pain and it didn't reveal itself in the usual fashion. Previously we also talked about the EID pattern, putting the "eyes into distortion", and the therapy localization under an EID basis. In the "Cranial Bowl" that Sutherland wrote, he cites the evidence that spinal fluid is basically an electrolyte. If you will think that the falx cerebri is basically a membrane dividing the brain into the left and right halves, and if you remember what we talked about when we spoke of Davis and Rawls' concept that the body is positive on the right and negative on the left on the anterior, the reverse being true on the posterior, if you can postulate that concept, then assume that breathing is the generator for the battery that is the brain. This will explain why some people can "leave their lights on all night" so to speak, and still have enough energy to "start their car in the morning", something like those Sears television commercials; and other people have to keep everything going just to stay alive. We have found that the electrolyte factor of the spinal fluid is an element in the maintenance and production of a better response to treatment, so we have approached it in this particular fashion. 90% of the venous blood leaves the cranium by way of the jugular foramen, which is really at the junction of two bones and is surrounded by dura. We developed the concept that there are two types of cranial faults. One is a subluxation which needs the inspiration assist or expiration assist or half a breath in or half a breath out of the universal cranial fault or the nasal sphenoid or the pineal mandibular spread, the techniques we have discussed in the past which have been based more or less on a sort of subluxation concept; the other is a fixation complex. We have discussed this before, but in "Osteopathic Medicine" for July 1978, John Upledger, D.O. and Ernest Retzlaff, Ph.D., both of the Department of Biomechanics of the College of Osteopathic Medicine of Michigan State University, and John Vredugol, Assistant Professor of the College of Human Ecology of Michigan State, state that: "Traditionally anatomists have taught that suture articulations of adult humans are fused and hence immoveable. Recent histological work done by us would contradict this view with specimens taken from living adult skulls at the time of neurosurgical craniotomy. Hence those tissues studied resemble more closely the in vivo

circumstances." By use modified staining technics, the authors have been able to demonstrate the presence of viable myelinated and unmyelinated nerve fibers, nerve receptor endings and potentially functioning vascular network and collagen elastic fiber complexes within the adult human cranial suture. To continue, they say the suture is now known to possess some neural structures necessary for nerve reflex activity.. Sensory input into the nervous system with motor activity can take place if it is apparent that a distortion of the functional relationships between the sutural osseous boundaries may produce abnormal neurogenic activity as well as abnormal sutural activity. In view of the aforementioned findings, it seems obvious that restoration of sutural mobility is desirable. Several mechanisms underlie sutural dysfunction. One which has been almost completely overlooked is hypertonus or contracture of the temporalis muscle, and other cranial and facial muscles. Here again, develop the concept that there are fixations and subluxations; and again develop a concept that the cranial bones with their sutures have a resemblance to an electrical situation of a condenser, or as it is known, a capacitor. Condensers are classified according to the materials used to insulate them. There are air conductors that have an air space between aluminum plates, as in radio sets; there are glass connectors that store charges of live voltage; there are mica condensers that have plates made of mica to insulate the conductors, which are used for high voltage; and there are electrolytic condensers that have two metal conductors in a liquid or moisture retaining material. Under an electrical charge the atoms and liquids form ions and help form an electrical charge. If you take the concept of a capacitor and relate it to too close an approximation or too far a separation of the cranial bones, and then transfer that to a spinal fluid concept of the spinal fluid being basically an electrolyte, and then transfer that to the concept of the right side being positive and the left side being negative, you can readily see that the sutures themselves may be approximated or may be separated by muscular activity, and thus alter the acupuncture meridian connector feedback activity. The concept being that the skull is like a capacitor or a condenser, the cerebrospinal fluid is an electrolyte or the "battery fluid" so to speak, and the breathing is basically the generator. In some people, if you have a "loose fan belt partially disconnecting the generator from the battery" eventually you use more current than the generator puts back in, and your "lights start to dim". The response to treatment, therefore, is minimal. Many people "jump start" their cranial primary motion (10-14 per minute) by costal voluntary respiration (16-20 per minute). When there is sufficient power, as there is many times in children, the response to treatment is sometimes very quick and amazing.

HOLOGRAMIC BREATH CESSATION-CRANIAL TECHNIQUE

1. Test sartorius-gracilis, should be strong in clear, if not, correct by 5 I.V.F. factors.
2. Test sartorius-gracilis against breath cessation, should be strong regardless of phase of breath cessation (inspiration or expiration).
3. Test sartorius-gracilis against breath cessation while two handed therapy localization of any and all cranial sutures. Weakness may occur at any or all cranial sutures while breath cessation of 10 to 15 seconds takes place. This tests primary cranial respiratory motion (10-14 per minute).
4. Treat cranial tender points by Jones strain/counterstrain technic as per chart diagram. These are cranial muscle indicators determined by trial and error.
5. Following tender point release by appropriate technic, retest against breath cessation and suture therapy localization. Should now exhibit strong sartorius-gracilis.
6. Therapy localize lambdoidal suture with one hand and therapy localize ipsilateral sacroiliac joint with the opposite hand. If as usual weakness appears on the ipsilateral hamstring, tap the lambdoidal suture and sacroiliac joint not necessarily in unison. Tap both sides of both areas at one Hertz or faster for 30-60 seconds. Re-evaluate.
7. Now test B and E points and treat by tap technique. Overall clinical response is greatly aided by

general sutural tapping at one Hertz or higher.

8. In difficult cases tender point eradication is aided by usual flexion inspiration for anterior points and extension expiration for posterior points, Supraorbital often requires the flexion technique. Sphenobasilar also often requires this extension technique.

9. Use only indicated muscles for this new but very rewarding approach. Visual, hearing, and mental acuity have benefitted from this simple approach.

10. B & E points spontaneously respond to this approach, if not treated as usual.

-Anterior points are usually found with the patient supine; posterior points usually found with the patient prone.

-I.e., posterior auricular-push up on the parietal and down on the mastoid trying to bend the bone so that the point is at the top of a V. SEE CHARTS.

-Most patients have pain patterns on one side of the head. GJG finds mostly right sided points.

-The tender points can be relieved by raising the left leg and right arm as if in a gait position. This does not fix it, but it indicates a cranial dural torque pattern.

-Get zero defect in the occiput and cervical spine.

-MEDICAL HYPOTHESIS, 1989, No. 28, pages 13-33, discusses prostaglandins (PG), brown fat, and weight loss. "In obesity, energy intake exceeds energy expenditure. The three components of energy expenditure are resting metabolism, physical activity, and thermogenesis. Increasing attention is being paid to the role of impaired energy expenditure in obesity. Evidence exists that impairment activity of the SNS (Sympathetic Nervous System) which stimulates thermogenic processes contributes to the etiology of obesity. In addition, insulin resistance, a well recognized metabolic consequence of obesity, appears to interfere with feeding related insulin-mediated increases in thermogenesis in brown adipose tissue (BAT). This thermogenic defect results in reduced energy buffering by BAT leading to deficient energy expenditure and increased efficiency in weight gain. A unique weight loss program, The Princeton Metabolic Diet program, is presented. The program stimulates metabolism by stimulating the SNS and correcting insulin resistance, thereby increasing the thermogenesis and BAT. Methods include alternating diet composition and caloric intake. They use nutritional metabolic stimulants and this type of non-toxic therapy directed at correcting biochemical defects will enhance metabolic mechanisms and induce weight loss". "Conclusion: Impairment in the activity of the SNS strongly contributes to the etiology of obesity. The SNS appears to regulate dietary thermogenesis which in turn appears to regulate energy balance. The composition of diet exerts a strong influence on SNS activity. The thermogenic response to carbohydrate (CHO) or to a meal has been shown to be blunted in obese individuals. Recently, this facultative component has been demonstrated to be partially due to insulin-mediated activity of the SNS. The two primary external factors which stimulate thermogenesis in BAT are diet and cold. People susceptible to obesity seem to have already decreased metabolic rates. This likely is due to two metabolic differences in thermogenesis arising because of a lower sympathetic tone and inability to raise metabolic rates in potentially thermogenic tissues. This is likely due to true metabolic differences in thermogenesis arising due to lowered sympathetic tone, there is an inability to raise the metabolic rate on potentially thermogenic tissues. Caloric restrictions suppresses SNS activity, which further reduces metabolic rates and sympathetically mediated thermogenesis. The effect of sympathetically released NE dependent upon insulin, corticosteroid, growth hormone, thyroid hormone, and melatonin secretion. Exercise is an essential part of any diet program. Exercises increase the metabolic rate by activating the SNS and increasing the BAT with sensitivity to NE restores the tissue's sensitivity to insulin, therefore exercise in the cold (15 degree drop in temperature in the exercise area) increased the capacity to achieve a lean muscle mass. A strong claim is made from a diet program which stimulates metabolisms, from manipulation of the diet composition. Cold induced thermogenesis, exercise, and nutritional metabolic stimulants. Such a diet is high in essential fatty acids and complex CHO, and alternates nutrient and caloric intake on a two day basis. Research indicates that a 30% difference in caloric rate will stimulate the metabolic

rate. Nutrient is alternated so that one day the diet contains 66% CHO, 15% protein, and 20% fat, and day 2 it contains 45% CHO, 25% protein, and 30% fat. The caloric intake may be taken in 3-6 feedings per day to stimulate thermogenesis. Day 1 includes aerobic exercise and day 2 includes weight resistant or isometric. Both day 1 and 2 include stretching routines and increased life style exercises, special foods like apedia tea, red hot peppers, plus nutritional supplementation, and application of the cold induced thermogenesis."

-Exercise is colder rooms or outside and the increase essential fatty acids, i.e. black currant seed oil, test against repetitive muscle testing weakness. Alternate CHO and protein days.

-Pain of the cranial tender points in the Cranial Breath Cessation Technique is temporarily negated with black currant seed oil which is an omega 6 oil. In some patients it is negated by linseed-B6 combination.

"BAT is one-tenth of 1% of all fat in the body. Carnitine (especially prevalent in red meats) plays an important role in thermogenesis and BAT. Adequate levels of carnitine are necessary for the transport of fatty acids into the mitochondria during dietary induced thermogenesis. Decreased carnitine equals decreased fatty acids into mitochondria to induce better oxidation. Carnitine can be synthesized in the body from the amino acid lysine and methionine. If you don't get a weight reduction, try a 100 mg. supplements of carnitine three times a day. People who avoid red meat will lose out on carnitine".

-Multiple muscle weakness, check for the need of omega 3 or 6 (linseed, black currant, primrose, fish oil).

"An athlete's use of B vitamins may increase 15-20 fold during a strenuous training bout because their role as enzymes in the oxidative process. A deficiency of B complex vitamins over a period of time may lead to a decrease in endurance capacity and loss of stamina. B6 is necessary for muscle building and riboflavin is an essential part of a number of energy producing systems. Trace mineral activators are also necessary." GJG recommends electron poisoning and melanocentric supplements if necessary.

"Short term changes in caloric intake and nutrient composition in diet have found to both stimulate the SNS and activate BAT. It is demonstrated that when caloric intake is restricted to 30% there is a reduction of weight and a short term overfeeding as well as short term underfeeding has been shown to stimulate metabolic activity of BAT in rabbits. Therefore alternating caloric and nutrient intake is a good idea. The basic diet consists of alternating caloric and nutrient intake on a 2 day basis. Most weight loss diets are 1500 calories for men and 1200 calories for women. Staying at a constant caloric level for over 2 days has a tendency to slow the metabolic rate. A plateau is reached and the dieter stops losing weight. To avoid the plateau effect and to actually stimulate the metabolic rate, the caloric intake should be alternated on a 24 hour basis. Research has indicated in animals that 30% difference in caloric intake will stimulate the metabolic rate. Applied to human males, 30% of the 1500 calories is rounded off to 500 calories. Alternating by 30%, keeping an average of 1500 calories diet, the dieter is allowed 1700 calories one day and 1200 the 2nd day, 1700 the third day, 1200 the fourth, etc. until the goal is reached. For women 30% of 1200 calories is rounded off to 400 calories. Keeping an average of 1200 calorie diet, a female dieter is allowed 1400 the first day, a 1000 the second day, 1400 the third, 1000 the fourth, etc. until the goal is reached. At the same time the nutrient intake is alternated. This has the same effect as altering the caloric intake, it stimulates the metabolic rate. On the high calorie day (men 1700, women 1400) 65% of calories are from CHO, 15% protein, and 20% fat. On the low calorie day 45% CHO, 25% protein, and 30% fat. Thus day 1 is high calorie, high CHO, low protein; day 2 is low calorie, low CHO, high protein. A combination of two diets, CHO and protein. Fat is important as it provides essential fatty acids that stimulate fat metabolism and also makes the diet palatable. The diet includes whole grains, wheat, rye, oats, barley, corn, brown rice, millet, buckwheat and products from them. Also soupd, salads, fresh fruits, nuts and seeds. Supply the essential fatty acids. Use dried peas, beans, and lentils; low fat dairy products, eggs, lean meats, poultry, and fish and shellfish. No white flour or sugar is to be eaten. Provides ample fiber and provides bulk to give a full feeling."

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-QUANTUM HEALING-Exploring the Frontiers of Mind-Body Medicine, Chopra, Bantam Books, 1988. Chopra is an endocrinologist in Boston. Explores new neurology and new frontiers in healing. Neurotransmitters and innate healing are described.

-Cervical spine mechanoreceptors only have Type 1 and 2, no Type 3, and there are 2 times as many Type 1 as 2. Also has Type 4 (nociceptors). Mechanoreceptors are 4:1-cervical spine to the rest of the spine. Look to the cervical spine for problems based on population of mechanoreceptors. Test active vs. passive range of motion in the cervical spine, and also thoracic and lumbar spine. Population of mechanoreceptors on front and back, right and left sides of the body should be the same.

-In the UK they utilize socialized medicine. To determine compensability in whiplash or job related injury cases, they have the patient stand on one foot and then the other and measure against a plumbline and calculate left and right angles, head, shoulder levels and deviation from the plumbline. We use the eyes closed while standing on one leg to test to determine the need for RNA. You have to remember where your ankle is even with your eyes closed.

-Have the patient stand on the left foot, they will usually sway about 2½ to 3 inches to the left. Then transfer the weight to the right leg. Check this using a posturometer and moving the line left and right to measure the distance of sway. Patient should deviate the same right and left, approximately 2½ inches, if the population of the mechanoreceptors is the same on the right and left sides. If there is a disturbance in function and or population, there will be a difference of up to 2-3 inches. Following proper correction (PLUS active vs. passive cervical range of motion, Dvorak and Dvorak) there is a difference in the deviation. Barry Wyke recommends this to determine disturbance of mechanoreceptor population.

-Look at the patient's posture laterally and have the patient close their eyes, most people will deviate ¼-½ inch forward and backward. Many deviate more backwards, but not more than ½ inch or else there is a difference in the anterior and posterior cervical, thoracic, lumbar, and sacral population of mechanoreceptors.

-Use this to document patient response to treatment (photographs or noting in patient file).

-GJG screens every patient with the PLUS technique and there seems to be a high correlation between a piriformis and a right or left lateral sway; most often needing the active vs. passive ROM correction, or Cranial Breath Cessation Technique.

-Slow or rapid contraction, or slow or rapid stretching of the piriformis often produces weakening which will respond to S/CS. (Piriformis is the exception to the S/CS rule that you use flexion and inspiration on anterior muscles and extension and expiration on posterior muscles). Use flexion and inspiration on the piriformis in the prone position. GJG does the S/CS in the standing position against the Hi-Lo table and performs the S/CS. This S/CS is slightly different than the usual S/CS. Put doctor's fingers in the middle third of the muscle, then push fingers in the direction of the origin or insertion. Hold for 10 seconds. If the weakness upon rapid or slow contraction or stretching is negated, correction is made. If there is still weakening, then go in the opposite direction. One way will strengthen. This helps to reduce dural torque and Dvorak and Dvorak patterns. The key to this is the definite postural sway.

-Modification of cranial tender points. Instead of TL with hands covering the face, TL with fingers over the infraorbital, supraorbital, nasal, and sphenoid with breath cessation. Rarely will they TL in the clear.

-Stress fibers in the cranium were first spoken of by Holland, an obstetrician, in 1922. Arbuckle discussed them in The Osteopathic Journal in April 1953 and further in her text "The Selected Writings of B' Arbuckle" and is available from The Academy of Applied Osteopathy.

-In difficult patients, GJG finds tender points all along the superciliary arch and are often

reproduced by tender points along the occiput, reminiscent of DeJarnette's occipital pain areas are relieved by pressure at the superciliary arch, pressing from back, whereas pain at the superciliary arch is relieved by pressure from back to front.

-Alter the the vector of pressure to relieve the pain of the cranial tender points.

-Dura mater stress fibers consists of white fibrous fibers and yellow elastic fibers. Horizontal groupings under the tentorium, sphenoidal group in the lateral wall of the cavernous sinus and the superior horizontal fibers of the falx on either side of the falx cerebri diverge somewhat from the metopic area to the lambda and margins of the superior part of the sagittal sulcus of the occiput. Vertical fibers of the tentorium cerebelli extend from the lateral half of the superior border of the petrous portion and from the margin of the groove on the inner surface of the mastoid angle of the parietal, and from the upper lip of the lateral half of the transverse groove of the occipital bone. These converge to the anterior fifth of the white line. The white line is the junction of the falx cerebri and tentorium cerebelli. There are posterior vertical fibers of the falx, a much smaller group but very strong, converging from the metopic area to the crista galli of the ethmoid, from this a very firm attachment to crista galli tripod. The fibers from the middle group of the tripod diverge posteriorly and interdigitate with the fibers from the transverse group. Transverse group traverses the posterior portion of the anterior fossa of the skull. Circular groups-vault circular groups consisting of three groups on either side of the vault. Anterior vault circular fibers and middle vault formed by the middle cerebral circle and the posterior vault fibers diverge from the metopic area widely and posterior to the superior ridge of the transverse group of the occiput. Squamosal group overlies the squamosal suture. There are cerebellar circular fibers and suspensory fibers of the petrous ridge. Spinal fibers consist of posterior and anterior groups extending from the base of the coccyx to the torcular mass and the dorsum of the sphenoid respectively. Superiorly each group ends in a tripod. The middle group of the fibers or the posterior spinal tripod continue with the middle division of the cerebellar tripod. The lateral group of each spinal tripod cross each other at the foramen magnum. The torcular mass is quite an extensive dense fibers about the confluens of the sinuses and from this mass diverge into four horizontal groups of fibers namely the inferior horizontal group of the underlayer of the tent. The metopic area extends for a variable distance along the frontal crest anterior and posterior to the metopic point.

-These internak fibers mold the skull from inside and the facial muscles adapt accordingly.

-Dura attaches to the upper three cervical vertebrae. If there is pain on one side of the neck in the upper three vertebrae, press the opposite side laterally with slight caudal or cephal direction until the palpatory pain is gone; hold for 20 seconds or until the pain is gone. Alternating atlas-left, axis right, third cervical left, and the same is true for fibers that could conceivably be disturbing the sacral area. Palpate parasacrally, remove pain with Dvorak and Dvorak, strain/counter-strain of the piriformis, and if there is still pain parasacrally, press opposite the pain, towards the pain and change vectors until the pain is reduced, hold 20-30 seconds. This will help to reduce pain.

-B & E cranial points correspond to the cranial tender points. If the B & E points still TL after correction of the cranial tender points, then perform the B & E Setpoint Technique. B & E and cranial tender points are related because the sensory innervation of the dura, tentorium cerebri, tentorium cerebelli, and falx is trigeminal. The same way the eyes adapt to the level of the head with varying success. The jaw joint induces dural fiber irritability which is the reason why some patients have tender points without any trauma.

-TMJ is the most important joint in the body. Ligament Interlink Technique (LIT) between the TMJ and other joints, i.e. the shoulder. Patient with shoulder problem TL's the shoulder and is negative, add TL to the jaw in the open or closed position, or move the shoulder into a certain position, gives a positive TL. Type 1 mechanoreceptors represent tonic position. Hold the shoulder in the position that either shows the positive TL two handed shoulder and TMJ; or negates

positive TL between the TMJ and shoulder.

-Schmitt has furthered the Type 1 mechanoreceptors.

-Test the pectoralis major sternal (PMS) as usual, for example. Then keep the same angle of testing, you take it down the entire range of testing. At a certain point during the radius of testing, the muscle weakens. Schmitt has found that TL of a B & E point usually on the ipsilateral side and often related to the muscle weakness, there would be a strengthening of the PMS in the radius of testing. Tapping the B & E point with the shoulder held in that position would restore strength. Can perform on any muscle.

-Also TL the spine of the direct nerve supply of that muscle (i.e. PMS and C6) and you may find a need to correct the segment with a respiratory range of motion. "Jump-start" the vertebral segment.

-Cranial bones move 10-14 times per minute independent of respiration. Many patients jump start their cranial respiration with costal respiration. The same is true in the spine.

-Identify the vertebra with TL that negates the muscle weakness in the particular radius. This vertebra is often negative to TL on its own, but positive TL and breath cessation. This is corrected by putting the vertebra through a range of motion with respiration. Move the spinous process down with inspiration and up with expiration. Occasionally the vertebra TL's in the clear and is neutralized by by inspiration or expiration; in this case, use the singular direction for correction, if inspiration negates push the spinous down on inspiration, if expiration negates, push spinous up on expiration.

-Muscle weakness in a certain radius is neutralized by 5 mg B12 and 5 mg stomach substance. Leaf discovered this relationship. B complex also helps.

-1988 Research Manual discussed baroreceptors (aortic sinus, glomus coccygeum, eustachian tube sinus, and carotis sinus). These are related to the Ragland effect (decreasing blood pressure when the patient stands), along with other physical signs of hypoadrenia.

-If patient with hypoadrenic symptoms and signs does not respond to adrenal supplement or choline, suggest checking against the melanocentric tyrosine or tryptophane.

-Leaf has observed that the sartorius is more indicative of cortical adrenal malfunction and the gracilis is more indicative of medullary malfunction. The cortex is like your wallet, funds for immediate use. The medulla is like your net worth.

-Source of adrenal hormones in phenylalanine, tyrosine, DOPA, dopamine, NE, E, folic acid, B12, B6, and C; these relate to cortical structures.

-Medullary areas relate to niacin, aldosterone which is an eventual precursor of progesterone. In the presence of A, C, E, folic acid produces testosterone. Also in the presence of E produces estrogen. Progesterone and aldosterone in the presence of pantothenic and folic acid produces cortisol.

-Weak gracilis that responds to adrenal NL and niacin. Also find anterior neck flexor weakness that responds to niacin 15 mg. and B6 10 mg. This helps to improve adrenal function. Thanks to Dave Leaf for this observation.

-Four arteries that supply the head, vertebral artery, carotid artery (external and internal, especially the internal). Circle of Willis made by the internal carotid artery anteriorly and the vertebral artery posteriorly.

-Temperature of the glabella measured to determine effects of B & E, cranial faults, etc. Venous blood leaves the head by way of the jugular foramen which is between the temporal and occipital bones. Vertebral arteries enter the foramen magnum and the carotid arteries enter the carotid canal.

-Dural sleeve surrounds the jugular foramen's contents (jugular vein, vagus, spinal acces-

sory; and glossopharyngeal).

-Testing cranial tender points, especially testing the sphenoid with TL and breath cessation, or palpatory pain; to show relationship between point and jugular dural sleeve impingement or cranial fault, pull the ipsilateral cartilaginous portion of the ear and you will note a decrease in the palpatory pain. These patients may have episodic headache, variations in heart rate (tachycardia or bradycardia).

-Patient that does not exercise, pulse should be 68-72. Often find these patients to be in the 60's. GJG takes a pulse monitor and puts it on the fifth digit. Performs the cranial tender point correction along with external pressure (pulling) the ear. Palpate as deeply as you can just anterior to the mastoid process and find a tender point (occipital line 1 or 2), this is as an index that the temporal bones have been pulled in by the stress fibers of the dura. Either of these will normalize the pulse rate. Also will decrease the glabellar temperature. Because the jugular foramen contains the spinal accessory nerve, this is useful in clonic tonic intermittent torticollis, vague digestive disturbances.

-Salter did experiments by fracturing a rabbit's leg and then allowed healing by 1. customary casting 2. intermittent motion i.e. treadmill and 3. continuous passive motion. Rate of healing was improved by continuous passive motion. Tested for eight years on rabbits. Also fractured cartilage (cartilage does not regenerate), but with continuous passive motion, there was evidence of cartilage healing.

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-Salter, an orthopedist, discovered that fractured bones heal more rapidly with constant passive motion. He uses movement every 10 seconds, 24 hours per day for the first three weeks of the fracture with the fracture immobilized only in a plastic air pressure splint (not fixing joint above and below as is standard in a cast).

-This led GJG to discover that there is sometimes not enough movement in vertebral segments. With breath cessation, many people jump start vertebral motion by costal respiration as opposed to rhythmic action of spinal fluid which is unrelated to normal costal breathing. Cranial primary rhythm is 10-14 times per minute, as low as 6 times per minute.

-Test for fixations in the usual manner via bilateral muscle weakness. Have the patient stop breathing for 10 seconds and you will find an increase in the number of fixations where they were negative before. Correct the fixations in the usual manner.

-Found, based on Salter's work, that there are extremity lesion diagnosis possible during 10 second respiratory cessation. TL the extremity (i.e. femur, tibia, humerus, etc.) will be negative. With respiratory cessation any muscle flexor or extensor will weaken which usually means that there is not sufficient internal/external rotation. Herring Bruer reflex causes the pelvis to drop in the front and the ASIS to spread. With normal respiration there is movement of the PSIS internally with inspiration and externally with expiration. During respiratory cessation, if there is any failure of normal movement of the extremity, it will show a positive TL. Move the long bone externally and internally slightly slower than normal respiration.

-Also check vertebral segments TL with respiration. If positive, correct by pushing down on the spinous process on inspiration, up on expiration.

-Royal Lee states that betaine is a neglected factor in foods. Betaine is a trimethyl glycine which is an essential derivative of a non-essential amino acid glycine. It forms with hydrochloride, betaine hydrochloride, which releases hydrochloride in solution in water. Betaine was considered inert.

-Merck Manual 1940's states that betaine was known to destroy tetanus toxin on contact. Betaine administration to anyone with an infective process seems to break down resistance and temporarily aggravate the symptoms of the infective disease.

-The reason betaine neutralizes tetanus toxin on contact is that it enhances antibody (Ab) formation. Betaine aggravates infections due to betaine destroying Ab that were hindering the development of the infective process.

-Lee states that wiping out the Ab is a good thing in many cases for new production of Ab takes place more promptly after this. Continuous use of betaine could possibly be an unwise procedure.

-In allergic patients there is a pathological sensitivity to certain proteins. The effect of betaine in wiping out Ab to beef, chicken, fish, etc. would be of great benefit. Some authorities believe that pernicious anemia, myasthenia gravis are cases where pathological Ab are destroying viral cells. Betaine has theoretical promise of benefit. It is pretty well established that the normal control of organ and tissue growth is maintained in part by the action of Ab to our own cells, but the right amount. It is clear that atrophy can result from excessive formation of any of these specific Ab, i.e. muscle cell, red blood cell.

-It is known that an excess of synthetic vitamin B is followed by liver degeneration and cirrhosis. This is due to a methionine deficiency which is aggravated by the increased demand by the

high concentration of vitamin B. Methionine is required for vitamin B to do its work. Its pla can be taken by betaine which is part of the natural vitamin B complex from wheat germ. Meth ionine does not have the effect of neutralizing Ab. One of the derivatives of betaine is gluta thione which is cystine, glycine, and glutamic acid is probably more potent tha betaine, appa rently inactivating Ab for its physiological use in the egg. The amount of glutathione in the egg of a hen determines how big the full grown chicken will be, for the number of cell divisions will be greater before hatching if more glutathione is present to hold down Ab production for a long- er period of time.

-Glutathione is a tri-peptide containing cystine, glycine, and glutamic acid. Because of its growth promoting nature, there have been many studies. Important in electron poisoning.

-Test patient against their allergan (beef, chicken, grain, etc.). Then give the patient a source of betaine-if it neutralizes the weakness, then supply betaine from beef tops. Borsch is a beet soup popular in certain countries of Eastern Europe and there is no translation for allergy in this area because it does not exist.

-Measure vitamin C in the urine by the Ames test (taken off of the market by the FDA). They claim that normal levels of vitamin C were showing up abnormal on the test; this really means that the body uses up the vitamin C in metabolizing the allergan. Lingual Ascorbic Acid Time (LAAT) will be normal at 10-20 seconds, but the urine will be absent of vitamin C; this re quires increased betaine, not a source of vitamin C.

-Histadine is one hydroxyl from histamine. Test histadine on tongue, if positive, try be taine and check for neutralization.

-Adrenal medulla correlates with sartorius weakness. Weakness of the gracilis is related to adrenal cortex and to check for niacin (niacinamide-B6). This is an intermediary in aldost- erone, progesterone, cholesterol interaction. Cholesterol in the presence of niacin and aldosterone yields progesterone. Progesterone then yields cortisol in the presence of pantothenic acid and folic acid. Progesterone in the presence of A, C, E, and folic acid yields testosterone and in the presence of E yields estrogen. Therefore cortical response is niacin dependant.

-Pupil dilation to light is common in adrenal insufficiency usually takes two weeks to respond to adrenal cortical substance, choline, etc. In the presence of niacin (ingestion of 50 mg of niacinamide and 10 mg B6) there is an immediate response of pupillary dilation to contraction in one or both eyes.

-Medulla dependent upon tyrosine and its precursor phenylalanine, along with B6, G, folic acid, and B12 for function.

-Cholesterol and tyrosine based hormones of the cortex and medulla need co-factors.

-Difficult patients may show the PLUS pattern only upon breath cessation.

-Chart for vitamin C and histamine levels in the blood was published in the 1988 Re- search Manual. When the histamine goes up, the vitamin C goes down. In allergy, histamine ex- cess must be metabolized by vitamin C. This is why the LAAT is normal, but there is no vitamin C in the urine. Again, not a vitamin C deficiency, but need for betaine.

-Betaine also helps against Ab to specific muscles. GJG finding it in clonic chronic tonic intermittent torticollis, Duchenne muscular dystrophy, or deep pain that does not respond to the usual methods.

-Recurring fixations in the clear or with breath cessation need wheat germ iol (octo- cosanol). Wheat germ oil produces lack of recidivism of fixations.

-Journal of Nutrition, 1954, Howe and Copeland said that one of the functions of vit- amin E was to promote and bring about the synthesis of acetylcholine from choline and acetate;

pantothenic acid is also involved. Deficiency of choline as well as vitamin E leads to the so-called muscular dystrophy. Rabbits given choline deficient diets develop MD between the 7th and 10th day. Symptoms were identical to dystrophy produced by the vitamin E deficient diets. When choline was added to the diet, all signs of muscle weakness subsided in four days. The kind of disorder produced by choline deficiency is most likely that seen in humans with MD. In human MD there is usually no sign of severe liver disease.

-Department of Animal Husbandry and Nutrition, Agricultural Experimental Station, Alabama Polytechnical Institute, Auburn, Alabama. Aided by grants from MD Associates of America and National Institute of Neurological Diseases in Buenos, US Public Health Services and was published with the approval of the director of the Alabama Agricultural Experimental Station. MD in man and animals is a disorder involving atrophy, degeneration, and ultimate loss of function of muscle cells. The striated musculature of the limb is usually affected first. In man this disorder occurs with moderate frequency and progresses slowly but invariably to a fatal outcome. In rabbits and other animals the dystrophy with clinical and biochemical pathology is almost identical to that occurring in man results with simple deprivation of vitamin E. However vitamin E therapy appears not to alter the course of the disease in humans, nor is any other effective therapy known. Possibly the dystrophies could result from a functional interruption in nerve impulse transmission due to a disorder in acetylcholine formation or utilization. Some years ago Torda and Wolf reported that vitamin E was the specific activator for the biological synthesis of acetylcholine from choline and acetate. Recent work has given the fact that co-enzyme A is necessary for the acetylation of choline. Co-enzyme A has a sulfhydryl grouping that must be in the reduced form before performing its function. Conceivably the fatty peroxide arising in the body of an animal deficient in vitamin E may oxidize co-enzyme A to the disulfide state, thus diminishing acetylcholine formation, lessening the effectiveness of nerve impulse transmissions whether to striated musculature itself or to the arteries supplying the blood to the muscles. An explanation is thus at hand for interpreting the dystrophy of vitamin E deficiency as an acetylcholine mediated mechanism. The pathogenesis of the dystrophies, then a nutritional deficiency of choline ought to result in MD since choline is the precursor of acetylcholine. In a like manner, deficiencies of any of the nutritional factors involved in co-enzyme A formation, fundamentally pantothenic acid, should also result in a muscular weakness or dystrophic paralysis.

-For acetylcholine production, you need factors that are present in wheat germ oil and calcium pantothenate.

-If the reproductive organs are removed in animals, they will gain weight and become fat. A normal bull will not gain weight even if overfed. There are other glands besides the thyroid that are important in weight control.

-Sex glands depend upon unrefined cereals for vitamins and other precursors of sex hormones. Niacin and aldosterone with co-factors produce progesterone, cortisol, testosterone and estrogen in the presence of vitamin E. Precursors of both male and female sex hormones are known definitely to exist in wheat germ oil. All sources of vitamin E are not the same, some are so refined as to lose all the E and not support the function of the sex glands.

-GJG believes people suffer from microcastration from eating processed white flour, bleached wheat flour.

-good sources of vitamin E include butter, wheat germ oil. Oleo contains none.

-American Dairy Association studied high school males and females after diets of butter and oleo. Pictures taken of the kids who ate oleo showed no difference between the boys and the girls from the back. The boys had wide hips and narrow shoulders, and the girls had narrower hips and wider shoulders reversing the usual pattern of sex characteristics; this is due to the bad fats from oleo.

-Wheat germ oil good for prevention of fixations, maintains action of the sympathetic nervous system, as well as glandular function to aid in maintenance of weight. Use 3-6 wheat germ oil capsules per day.

-Avoid cereal grains (non-processed are hard to get). Increase green leafy vegetables and natural fats.

-If lack of courage in a male add sesame oil and olive oil. Complex T is sesame oil, originally found in termites. This is why horses sometimes eat the wood of the barn in order to get at the termites if deficient in Complex T.

-Magnesium is needed as a co-factor in fat metabolism. Positive Chvostek's reflex is magnesium deficiency. Tapping the center of a line between the acoustic meatus and the corner of the mouth will often produce a facial grimace, this means magnesium and fatty acid deficiency.

-Jeffrey Balnd's Preventative Medicine Update for June 1989 brought into focus the anecdotal evidence of benefit of vitamin B12 injections which have been written into the literature for such symptoms as fatigue, neuropsychiatric problems, depression, muscle aches and pains with many patients reporting subjective improvement. Over the years there have been articles questioning the validity and cost effectiveness of the B12 injections.

-American Medical Association Journal, April 7, 1989. 1200 patients were given B12 injections without documented deficiency remarked a vast improvement in a wide variety of symptoms. Many were persuaded to get off the B12 injections and it was suggested that there may be a psychological or subjective factor in their dependency.

-This debate has been going on for years in the literature for at least 20 years. GJG opinion; in the last four-five years there have been reports on functional assays of B12 that have shown abnormal methylmalonic aciduria, homocystinuria in the absence of serum B12 deficiency. Several remarkable case studies of a sudden or gradual onset of neuropsychiatric problems, decreased IQ, intelligence scores abnormal, electroencephalographic patterns and neuromyopathies have been documented in peer reviewed journals and it's believed that a functional deficiency of B12 needed as a co-factor results in the inhibition of conversion of homocystine to methionine along with the accumulation of homocystine which may be deleterious to various organ systems. This functional B12 deficiency can be assayed by serum or urine homocystine and methylmalonic acid levels. Normal levels are minimal to non-existent. Several studies have shown that critical nutrients for the conversion of homocystine to methionine are B12, B6, folic acid, and betaine. With intramuscular injections of hydrocobalamin dramatic improvements of a multi-factorial, multidisciplinary healing center had produced documented responses in neurological problems and mental acuity with subsequent lowering of the homocystine and methylmalonic acid levels. Homocystinuria has an increased risk for cardiovascular disease, and were resistant to B12, folic acid, and especially B6. Betaine or betaine hydrochloride has been used successfully. Therapeutic dosages are 1000 micrograms of B12, 3-5 mgs. of folic acid, and 100-200 mgs. of B6, and 6 gms. betaine hydrochloride. This was by injection.

-Paul White of NutriWest made up some homocystine and homocysteine. If a patient had a B12 deficiency even with a normal serum B12, homocystine would weaken them. B12-folic acid with stomach principle neutralizes (5 mcg B12, 0.8 mcg folic acid, 200 mg stomach). This helps uncover B12 deficiency, and helps in psychological, neurophysiological, and neuromuscular problems. Hydroxycobalamin (injectable B12) taken orally, 5 drops three times a day. If there are absorption problems, check and correct NEHT.

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-GJG noticed an improvement in jaw opening recorded on the Metrecom, achieved by treating the NL point and tapping T4.

-Compare the sphenoid with a bird: the greater wings should be level with up-swept tips; the lateral borders of the wings form the temples at the side of the skull; the bird's beak is the anterior portion of the sphenoid which articulates with the frontal bone; the back end of the bird is where the basilar portion of the occiput meets the sphenoid and forms the sphenobasilar junction; the bird's legs and feet are the pterygoid processes to which the internal/external pterygoid muscles are attached. If there is a difference in tension between the pterygoid muscles, most often the external (lateral) pterygoid, there is a tendency for the sphenoid to be pulled down on the side of the tight pterygoid. This is usually the most painful side.

-The protruding eye is on the side of the high sphenoid. You can check this by having the patient elevate the chin while supine and look along the anterior body line to check the prominent, extruded eye; this is the sign of the high sphenoid.

-On the side opposite the extruded eye, the external pterygoid (sometimes the internal pterygoid) is usually tight. With the gloved hand palpate the tight pterygoid muscles in the pterygoid pocket; check upper, middle, and lower pterygoid pocket and determine most painful area. Have the patient then sit up; this sometimes changes the pterygoid pocket pain for better or worse, but most commonly the pain remains the same. Tap T4 30-40 times and recheck for decreased pain. IT IS RARELY NECESSARY TO DO STRAIN COUNTERSTRAIN TO REMOVE THE PAIN.

-The maxilla is "fitted on" to the external pterygoid processes, frontal, and nasal areas. The maxilla can become "skewed", i.e. anterior on one side, causing maxillozygomatic articulation disturbance. Palpate the maxillozygomatic suture and temporozygomatic suture. There is usually more tenderness on the low sphenoid side which is also the tight pterygoid side. This is an indication of dural tension. Dural tension may be found anywhere along the spine and also in the SOT heel tension side. Excessive heel tension side will have lateral talus pain, use this as an indicator of dural tension, as well as the need for adjustment. There may also be pain along the medial talar area associated with tarsal tunnel syndrome. Find the most painful zygomatic suture (maxillozygomatic, temporozygomatic, and infrequently the frontozygomatic) and then contact the ipsilateral hard palate, pressing towards the most painful zygomatic suture using 2-3 pounds of pressure. Recheck first for decreased pain at the suture, then at the talus. This is proof of the effects of dural tension. There does not appear to be any respiratory assistance needed in this technique. The sutures will TL.

-The zygomatic suture is also related to the ileocecal valve.

-DeJarnette has devised the occipital and trapezius fibers that correspond to the spine. In SOT, you hold the most painful vertebra that is indicated by the occipital or trapezius fibers (i.e. occipital 5 could be T7 or L3 or L4, the most painful vertebral level upon palpation is the one that is held) and vigorously treat the occipital fiber until it diminishes in pain (this is a painful procedure), and this decreases pain at the vertebral level.

-Cranial stress fibers represent yellow and white hyalin fibers of the dura. The anterior dura is supplied by the trigeminal, the posterior dura is supplied by the vagus and C1-C3. Dura are like small trampolines and should maintain tension.

-Pain on the right sphenoid requires pressure on the left sphenoid towards the right to remove the pain.

-The sphenoidal problem is diagnosed by breath cessation (10 seconds) induced weakness of the sartorius/gracilis.

-Tensile fibers crossing the tentorium have pulled the sphenoid in on the right, and pressure on the left produces slack and allows normal repositioning. You may have to tug on the ear to assist this.

-Analogy: a football helmet is held in place by proper tension of the straps so that a blow to the head does not disturb it.

-Aponeurosis of the sternocleidomastoid and trapezius form the occipital fibers. There are 14 primary golgi tendon organs in the aponeurosis of the SCM and trapezius. Seven golgi tendon organs are on either side of the occipital bone.

-The primary function of the occipital fiber is to counteract the distress of the dural membrane pulling from the occiput or within the cranium. I.e. there is pulling inside and the fiber on the outside counteracts the pull.

-Try to get zero defect from the inside out and the outside in.

-Where the occiput is attached by way of the dura and where the cranial dura is attached to C1-C3, palpate all areas for pain. I.e. the left C1 lamina is painful, press the right C1 lamina towards the left.

-Analogy: three legged stool with a seat. The painful area that is palpated is the seat. Press on one of the three legs in such a way as to relieve the pain in the seat.

-7 areas on the occiput have 7 corresponding areas at the supraorbital area (medial and lateral). Pain over the EOP (near occipital fiber 7) would require treatment over the similar area just adjacent to the nose on the supraorbital ridge, using pressure from anterior to posterior. Sometimes after correcting the posterior pain, the patient then has pain in the anterior region which would then require pressure from posterior to anterior.

-Must always clear the occiput; upper cervical fixations; and pelvic categories; and the patient must pass the PLUS test.

-Occipital 1 relates to C1, T1, T2, T9, and T10, occiput 1 is located most laterally on the occiput just medial to the mastoid.
Occipital 2 - C2, T3, T11, T12
Occipital 3 - C3, T4, T5, L1.
Occipital 4 - C4, T6, L2. Occipital 5 - C5, T7, L3 (very common).
Occipital 6 - C6, T8, L4. Occipital 7 - C7, T9, L5.

-1938 Edition of Dorland's Medical Dictionary, page 290.
Ciliospinal center-a center in the lower cervical and upper dorsal portion of the spinal cord associated with dilation of the pupil.

-Tapping of T1-4 will often show a pupillary constriction with accurate observation. Using a steady pressure at T2-4 costovertebral junction will produce pupillary dilation.

-Strabismus may show an overactive ciliospinal reflex on one side. This is important in maintaining aqueous and vitreous humor function, and in glaucoma.

-Fixations in the upper thoracic spine often show in glaucoma.

-1957, Yearbook of the Academy of Applied Osteopathy, Barstowe. Studied malignancy vs. non-malignancy patterns in patients in the thoracic region. Looked for degenerative changes, breaks in the physiological curve, quality of rib spacings, etc. in patients with malignancy and non-malignancy (epilepsy, diabetes, asymptomatic).

-GJG is saying that you need to treat the person that's got the problem rather than the problem that's got the person. Fix what you find.

- "Physiological Functions of the Lymphatic System", by Hymand, Cancer Chemotherapy Reports, Vol. 52, #1, Jan. 1968, Conference of Lymphography, Bethesda, MD, National Heart Institute's Public Health Service, studies done at the Department of Physiology, University of Southern California's School of Medicine. Function of the lymphatic system is divided into three relatively distinct areas. Production and distribution of lymphocytes, immunological functions, and return of excessive fluid and protein in the circulation, defense of the body from invading organisms. There is little controversy how the lymph nodes contribute to the control of spread of microorganisms. Many hypotheses have come forth on the immunological properties of lymph and only recently has data come forth. The observed immunological phenomenon can be explained if the lymphatic system is divided into two sections. Recent work indicates that the thymus gland and possibly other lymphoid tissue associated with the gastrointestinal tract constitute a central lymphatic system which apparently regulates and modifies the action of the remaining peripheral lymphoid tissue. In the absence of this central lymphoid tissue, the overall function either fails to develop or diminishes. For example, a thymectomized animal has deficient levels of circulating lymphocytes in the blood... whether this deficiency is due to central lymphoid tissue failure to produce lymphocytes is still unsettled. However there is growing evidence that some hormonal function was destroyed by ablation. It has also been reported that thymectomy reduces the animal's capacity to produce immunoglobulins and antibodies in response to challenge by antigens and it also changes the organisms response to grafting of animal tissue so that allergic grafts seem to be accepted more readily. The lymphatic system returns material from the fluids of the tissues in the serous cavities of the body to the circulation. Net transfer of fluid from the vascular to the extra-vascular compartment is relatively slow in resting tissues. Absence of adequate drainage mechanism ultimately results in a disabling edema. A transient edema may be caused by occluding some of the peripheral lymphatic trunks, but adequate collateral pathways quickly develop to cope with the load, however, if the lymphatics are fibrosed or systematically blocked at their distal ends, accumulation of fluid (lymphatic edema) quickly becomes manifest. During a single day as much as two liters of lymph may flow from the thoracic duct of a normal subject. The amount of protein moved through the lymphatic system is constant in a 24 hour period, about half of the total circulating plasma proteins moves through the thoracic duct. Any interference can result in a protein deficiency.

-It is very important to treat neurolymphatic reflexes and the thoracic duct. If you give thymus to a patient who has a muscle weak in the clear that strengthened to its own NL, the thymus will negate the weakness. It acts as though the NL was already treated.

-Check for a weak infraspinal very carefully (51%er, EID, BID, etc.). Correcting the infraspinal and supplementing thymus is important in improving the immune function, and even more importantly it helps the lymphatic system.

-The viscera has four times the requirement of drainage than the rest of the body.

-Lymphaticovenous taps exist and can be demonstrated in animals, but their functional importance has not yet been established. If significant amounts of lymph return to the circulation through these lymphaticovenous taps, then many of the concepts based on the assumption that lymph is returned to the bloodstream only through the

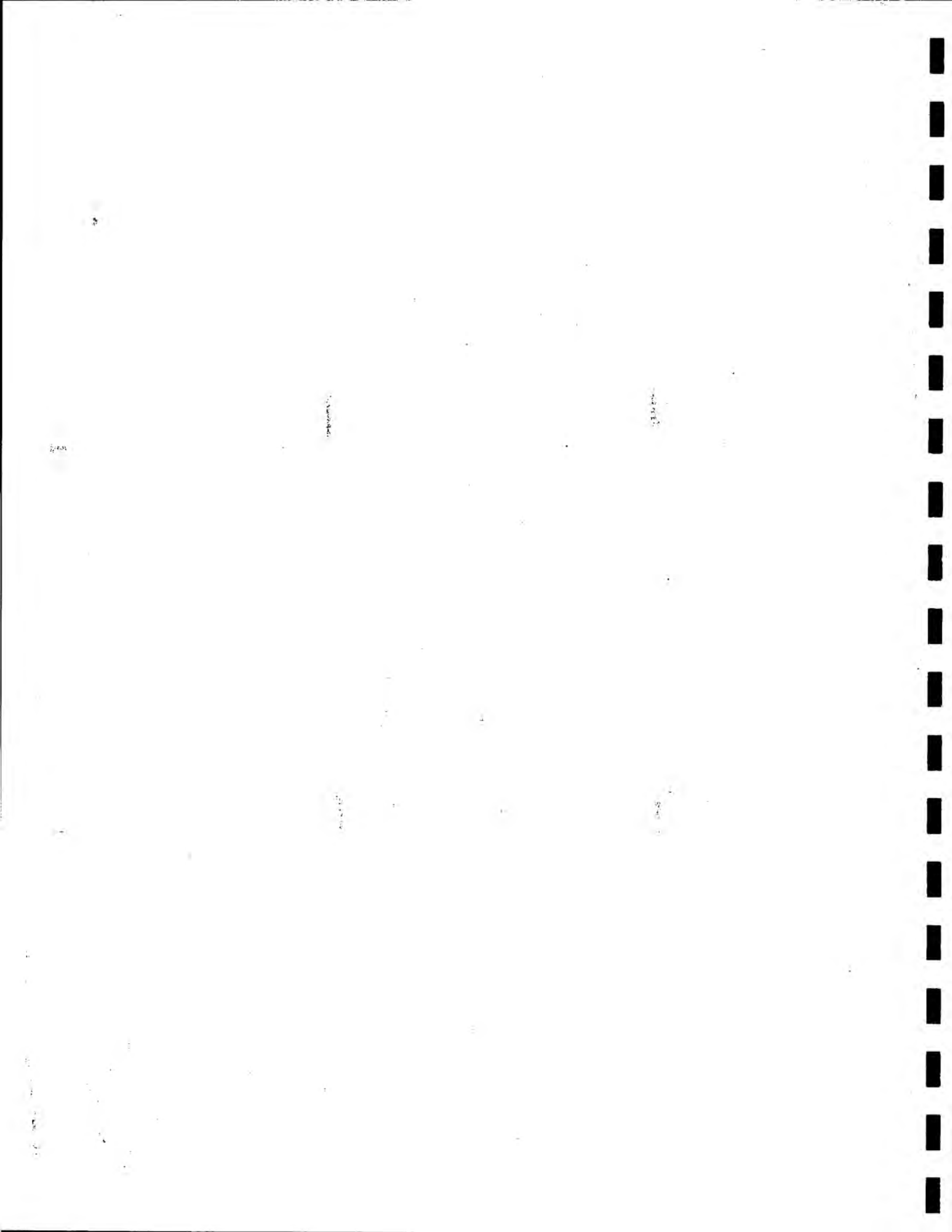
thoracic duct will have to be modified.

-If there is pain upon palpation in the abdomen (not pathology, i.e. an ulcer), find an area around the sternocostal region, intercostally, to manipulate. The upper abdomen is generally found on the upper thorax, and the lower abdomen on the lower thorax. Reduction in abdominal pain results from manipulation of the intercostal reflex and improvement of lymphatic drainage. Check the thymus gland in this case also.

-Scientific American, Nov. 1989. Article on mammalian choroid plexus; produces spinal fluid and acts as the kidney of the brain when bathing the cells of the brain in a chemically stable fluid. Although the choroid plexus is small, its role in nourishing and protecting the nervous system is great. Choroid plexus acts as a kidney for the brain by regulating concentrations of molecules in the spinal fluid and makes the blood-spinal fluid barrier a selective one. The choroid plexus is not just an excretory organ, it also manufactures cerebrospinal fluid (CSF) (contains the zinc dependent enzyme carbonic acid anhydrase) and provides the fluid with nutrients that are extracted from the blood. The choroid's behavior is different from cerebral capillaries which constitute the blood brain barrier and mediated diffusion of substances from the blood onto the interstitial fluid. The functional goals of the choroid plexus and the cerebral cap are about the same, to provide the brain with a stable, nourishing environment.

-The choroid plexus performs a number of functions basically to secrete CSF which provides the specialized chemically stable fluid environment, and also buoys up the brain, effectively reducing the brain weight by 30 fold. This buoyancy would protect the brain from abnormal movements of the head. The choroid epithelial cells manufacture up to 90% of the CSF. Smaller amounts made by different areas of the ventricles. Every gram of choroid epithelial tissue secretes fluid at approximately four-tenths millimeter per minute in adult human beings. That is sufficient to replace the total volume of CSF (150 mm) every 3-4 hours. As the new fluid continuously forms, the old CSF is displaced to the top of the brain where it drains into the venous blood through the membrane structures such as the arachnoid granulations. To make CSF, the choroid plexus like the salivary glands draws necessary nutrients and ions from blood plasma. A brisk flow of blood, 4-5 mm per minute per gram is necessary to maintain the CSF."

-JUGULAR DECOMPRESSION TECHNIQUE: You want to have good venous drainage out of the head. GJG measures the temperature of the head using liquid crystal thermography, comparing the right and left sides of the head. Perform jugular decompression by putting the doctor's fingers at the base of the occiput and letting the head fall backwards while you hold C1 in position and the occiput gently slides backwards; patient is supine. Hold this contact for 3-4 minutes. There will be changes in the liquid crystal thermography and also plethysmography placed on the jugular vein.



DR. GOODHEART'S RESEARCH TAPES

TAPE 116

-1-

-Alf Brieg: "In ventral flexion of the spinal cord (bending forward) the spinal column is elongated in a continuous tissue tract composing of and consisting of the hind brain, the medulla oblongata, cord, and associated cerebral and spinal nerves are pulled taut and undergoes a uniform elongation between its points of fixation and the mesencephalon and the lumbosacral ganglia. As a consequence of this lengthening there is reduction of the cross sectional area of the hind brain, cord and the nerves. In dorsal extension the canal is shortened, the tissue tract is compressed axially. It too is shortened and its cross section is thereby increased. In lateral flexion the tract is elongated on the convex aspect and shortened on its concave aspect. These changes in shape are due to the plastic deformation of the tissue and because only extremely small forces are involved the lateral anchorage of the tract, the dentate ligaments and the spinal and cerebral nerves, is sufficient to ensure the elongation and shortening. Not until before ventral flexion begins is an elastic tension set up in the tract and contracts to the slight elastic tension when the tract is compressed on dorsal extension from the erect position. The hind brain with the cerebral nerves and the posterior fossa and the cord and spinal nerves become slack and then can move in any direction as far as the ligaments and nerves which are now slight permit. This allows the cord to be drawn to one side during operations without risk."

-GJG has found through trial and error that the length of the spinal cord is not compatible with the length of the spinal column. The length of the spinal column is variable, there can be a lordosis or kyphosis of the lumbar spine, there can be (and usually is) a kyphosis of the thoracic spine. There can be relative changes in the curves such as a reduction of the lordosis and kyphosis. There is the well known loss of cervical lordosis in the case of a whiplash injury.

-The length of the spinal column from the tip of the coccyx to the base of the occiput between sitting and standing, and between lying and standing should not exceed more than 14 mm.

-Some patients are up to 45-50 mm difference in the length of the spinal column, therefore there is axial tension. The metrecom is utilized to help identify areas of dural tension.

-PATIENT WHO HAS A DIFFERENCE IN SPINAL COLUMN LENGTH BETWEEN SITTING AND STANDING OR LYING AND STANDING OF GREATER THAN 14 MM:

1. Check the leg length in the supine patient (usually even if the patient has been under chiropractic care).
2. Have the patient TL the sacroiliac joints as if to check for a Category 1 and 2 in the supine position. Also check for the new way to TL for a Category 3, TL the superior SI joint on one side and the inferior SI joint on the opposite side and vice versa. This should be negative to TL.
3. Have the patient raise their head into flexion (as if to look at their feet), head flexion with lateral flexion, head flexion with rotation, or rarely extension. One of these movements will frequently change the leg length, and produce positive TL over the sacroiliac joint which in step 2 was previously negative. The classic UMOMS signs

of a posterior ilium may become evident (pain at the upper groin, obturator, medial thigh on the short leg side). If it is a posterior ischium, there will be pain on the lateral thigh, lower groin, ischium on the long leg side. There is not always a shortening of one leg with the head flexed due to failure of the body to recover.

- "ADVERSE MECHANICAL TENSION IN THE CENTRAL NERVOUS SYSTEM, An Analysis of the Cause and Effect and Relief by Functional Neurosurgery", by Alf Brieg, Almquist and Wickstell International, Stockholm, Sweden, and also John Wiley and Sons, New York, London, Sydney, and Toronto. Brieg feels that adverse mechanical tension from the spine getting too long is the source of much of the neuromuscular degenerative diseases. He cuts wedges out of the thoracic spine in order to shorten it. "No specific study has been made of the mechanical influence of the spinal flexion on the blood vessels of the cord. From Allan's 1952 observation made during operations that the cord was paler in hyperflexion than in the erect position of the spine. Bedford, Bosenquate and Russell in 1932 deduced that there is a reduction in the blood supply to the cord in the extreme position. Two other researchers, Bartsky and Roche in 1949 stated that in some movements of the head, the vertebral artery is compressed in the transverse foramen by spondylotic changes in the uncovertebral joints, and this gives rise to the symptoms of migraine cervicale." If there is a tethering of the dura, extreme motions of flexion, lateral flexion, rotation and rarely extension, certain symptoms will show up.

- In terms of frequency of uncovering pelvic lesions with head flexion, CATEGORY 2 IS THE MOST FREQUENT, followed by Category 1 and Category 3 being much less frequent. Following correction of the pelvis there will no longer be positive TL over the SI joints with head flexion.

- The cranial periosteal dura enters the foramen magnum where it is firmly attached. It is also firmly attached and penetrates the sutures. It continues down and attaches to the upper and anterior portion of the atlas. The cranial dura then becomes the lining of the vertebral canal, the periosteum. It is attached to the second sacral segment and is tied down by the filum terminale (non-neural termination of the spinal cord), and attached to the posterior portion of the first coccygeal segment. The brain's dura is relatively closely adherent to the cranial dura. It also comes down through the foramen magnum where it is attached. Some authorities say there are slips of the brain's dura to the atlas, some authorities do not. There is unanimity of the attachment of the brain's dura to the odontoid process as well as the posterior portion of the axis and C3, then except by dentate ligaments and loose fibers to the posterior longitudinal ligament, the brain's dura (which then becomes the spine's dura) is again attached to the anterior portion of the second sacral segment and tied down by the filum terminale to the first posterior coccygeal segment. Wherever the spinal cord is attached, there is potential for restriction.

- Check a patient for an upper cervical fixation in the prone position or standing by checking bilateral gluteus maximus. If negative, have the patient flex their head (or flexion with rotation, flexion with lateral flexion, rarely extension), and recheck the bilateral gluteus maximus. It may now show positive bilateral weakness and indication for an upper cervical fixation.

- CJG recommends high velocity adjustment of the Category 2. There may be a respiratory component to the Category 2 which will show up with the head flexion.

-Patient's occupation, recreation, or the way they sleep all influence the relative sacral base angle. This is not necessarily Ferguson's angle of 38-42 degrees, rather the sacral angle that the patient should have. The angle can change throughout life due to injury, emotional or physical trauma.

-Hamstring weakness affected by respiration is a factor in sacral position. Usual way to evaluate this is to test the hamstring muscles bilaterally and then test them against inspiration and expiration. GJG finds a lot of his difficult patients do not weaken in this usual manner. He has found that if the patient inspires and then forces the inspiration, or expires and then forces the expiration, there is weakening of the hamstring, most commonly upon forced expiration.

-Recurring cranial or sacral faults may have a need for ZINC. DeJarnette states in his fiftieth anniversary edition of SOT that the spinal fluid has a pancreatic enzyme relationship in addition to the sacral and occipital movements (however he did not follow up on this). There is a high amount of carbonic acid anhydrase in the spinal fluid which acts as a potent electrolyte (like battery acid in a battery, it makes the battery a powerpack). 90% of the zinc in the body is found in carbonic acid anhydrase.

-If a patient weakens upon inspiration/expiration/~~tutted~~ inspiration/forced expiration, they need the appropriate treatment and supplementation with zinc. This is independent of gross zinc tally failures, e.g. patient may have a 2-3 (4 is normal), or even a 4 on the zinc tally, but perhaps the patient is failing to properly absorb it or make proper neurotransmitter utilization of the zinc.

-IF THE HAMSTRING WEAKENS UPON EXPIRATION (which is most common), place blocks under the anterior superior iliac spine of the prone patient and press the lower third of the sacrum forward for 4-5 deep inspirations. Then have the patient grasp the head of the table and pull themselves cephalad with approximately one pound of pressure and at the same time raise their head into extension (stretches the anterior portion of the spinal cord) while they perform deep inspiration.

-Rarely is there an INSPIRATION CHALLENGE, but if there is, place the blocks underneath the acetabular area and move the sacrum in an upward direction rotating at the level of the second sacral segment with expiration.

-This technique will accurately set up the appropriate sacral angle for the patient at that given time in their life. This maintains proper spinal fluid flow rate. It's as if you have an irrigation ditch with a rheostat on the pump, and the pump has been turned down. This is the foramen magnum and choroid plexus and their respiratory relationships. There should also be proper cervical motion due to the dural attachment at the upper three cervical segments. The dentate ligaments help to open or close down the dural port all the way down the spine. Second sacral segment tethers the cord and is exaggerated by motion.

-The heart places a zeta potential on red blood cells so that a 7 micron rbc can fit through a 3 micron capillary. Sometimes the rbc can't get through this small space. Prior to performing pre- and post-cordial tap technique, perform a range of motion, e.g. hip abduction. After correction by tapping on the chest in the pre- and post-cordial area there will be an increase in the hip abduction by 20-30%. This shows the patient that tapping the chest produces changes in their range of motion. GJG kept the patient's leg in the abducted

position and then tested some muscles on the opposite side of the body and found some weaknesses that were not present before. This shows that the lateral portion of the spinal cord was tethered. This is another way to find disturbances in the pelvis due to the tethering at S2.

-STRUCTURE DETERMINES FUNCTION.

-There are fewer dentate ligaments below T12, and the spinal cord is not as supported as in the lumbar spine.

-The simple chiropractic premise is to pay attention to the areas where the dura attaches, the foramen magnum, upper three cervical vertebrae, dentate ligaments, second sacral segment, and coccyx.

-There are factions within chiropractic that represent where the dura is attached, e.g. Logan basic, Gonstead (L5), those who adjust the entire spine (dentate ligaments), upper cervical adjusters only, and cranial adjusters.

-Upper cervical fixations will cause cranial faults to reappear regardless of the supplementation of zinc.

-1988 Research Manual, page 115, discusses the CVA TECHNIQUE. Patient supine, identify the paralyzed side. Ask the patient to flex and extend the paralyzed leg and arm and observe range of motion. Have the patient or operator turn the head towards the paralyzed side. Patient initiates a flexion movement of the paralyzed side. Patient or operator turns the head away from the paralyzed side. Patient initiates extension motion of the paralyzed side. Repeat head turn towards the paralyzed side and measure increased flexion range. Repeat head turn away from the paralyzed side and measure increased extension range. Add the CERVICAL COMPACTION TECHNIQUE.

-CVA and closed head injury patients have a great many weaknesses of the upper and lower extremities. CVA technique concept was developed by Barry Wyke based on labyrinthine and tonic neck reflexes. Many patients got muscle response, but gait did not improve coincidentally with the muscle response. GJG felt this was due to repeated use of the muscles. Repeated muscle testing that produces muscle weakening in multiple muscles is a need for UNSATURATED FATTY ACIDS (vitamin F, evening primrose oil, linum-B6, etc.). The fatty acids may require vitamin E as a co-factor; use Standard Process Cataplex E, 7 tablets a day (14 units per day).

-In addition to the CVA technique and cervical compaction technique, check for the need for unsaturated fatty acids and vitamin E. GJG finds better response with lower extremities than with upper extremities.

-"Acupuncture, A Comprehensive Text", John O'Conner-translator and editor, Eastland Press, P.O. Box 4910, Chicago, IL 60680, from the Shang Hai College of Traditional Medicine. Chapter entitled Paraplegia.

-GJG had decent results in CVA patients by correcting the five factors for muscle weaknesses. GJG then tested multiple muscle weakening upon repeated muscle testing on the paralyzed side that did not show on the non-paralyzed side. It did not seem reasonable that there would be half a fatty acid deficiency.

-A closed head injury patient of GJG had a weak right psoas in the clear that responded to NL and NV, but when she walked on the treadmill, there was still laborious gait with hyperextension of the knee. GJG then tested the psoas repeatedly which then weakened. The appropriate acupuncture point negated this weakness, which was GB27

(wah shu) and NCA6. NCA6 is a new point and is half the length of the inguinal ligament from its lateral end and about 0.5 lateral to the femoral artery. This particular patient's repeated testing weakness of the psoas muscle was negated by TLing GB27, but only with therapy localization with the "good" hand, the non-paralyzed side. The paralyzed hand would not show positive TL of GB27 negating the repeated muscle testing. This improved finger to nose test with eyes open and closed.

-The acupuncture points are treated by tapping 60 times at one hertz.

-Standard Process has produced ZYMEX WAFERS which are useful in immunity problems, digestive problems, colon pH problems, changing the flora of the bowel, maintenance of normal colon function. Check for a weak tensor facia lata in constipation, loose bowel, rectal irritation. Chewing of the zymex may produce immediate relief of the tonismus and cramping of diarrhea, where swallowing the zymex capsule is not as effective.

-Remember that chewing the appropriate substance will not only strengthen a weak muscle, but will also take the pain out of a painful NL. If there are four substances that strengthen a weak muscle, the one that takes out the pain in the NL is the one to supplement.

-Paul White of NutriWest has available dihomocystine for testing purposes to diagnose vitamin B12 and B6 deficiencies. If placing dihomocystine on the tongue will weaken a muscle, then check B12 and B6 on the tongue at the same time to check what neutralizes the weakness.

-Jeffrey Bland states that in the absence of classic macrocytic anemia signs, many people show relative increased levels of homocystine in both a homocystinemia (blood) and homocystinuria (urine).

-Going back to the head flexion technique that reveals a Category 2 (one handed TL of a sacroiliac joint produces muscle weakness only if the head is in flexion), by putting NutriWest's RNA/DNA compound on the tongue, it would neutralize the weakness. The Category 2 would then also reveal itself by TL in the clear without head flexion. The RNA/DNA helps the body to remember and helps the body remember to forget.

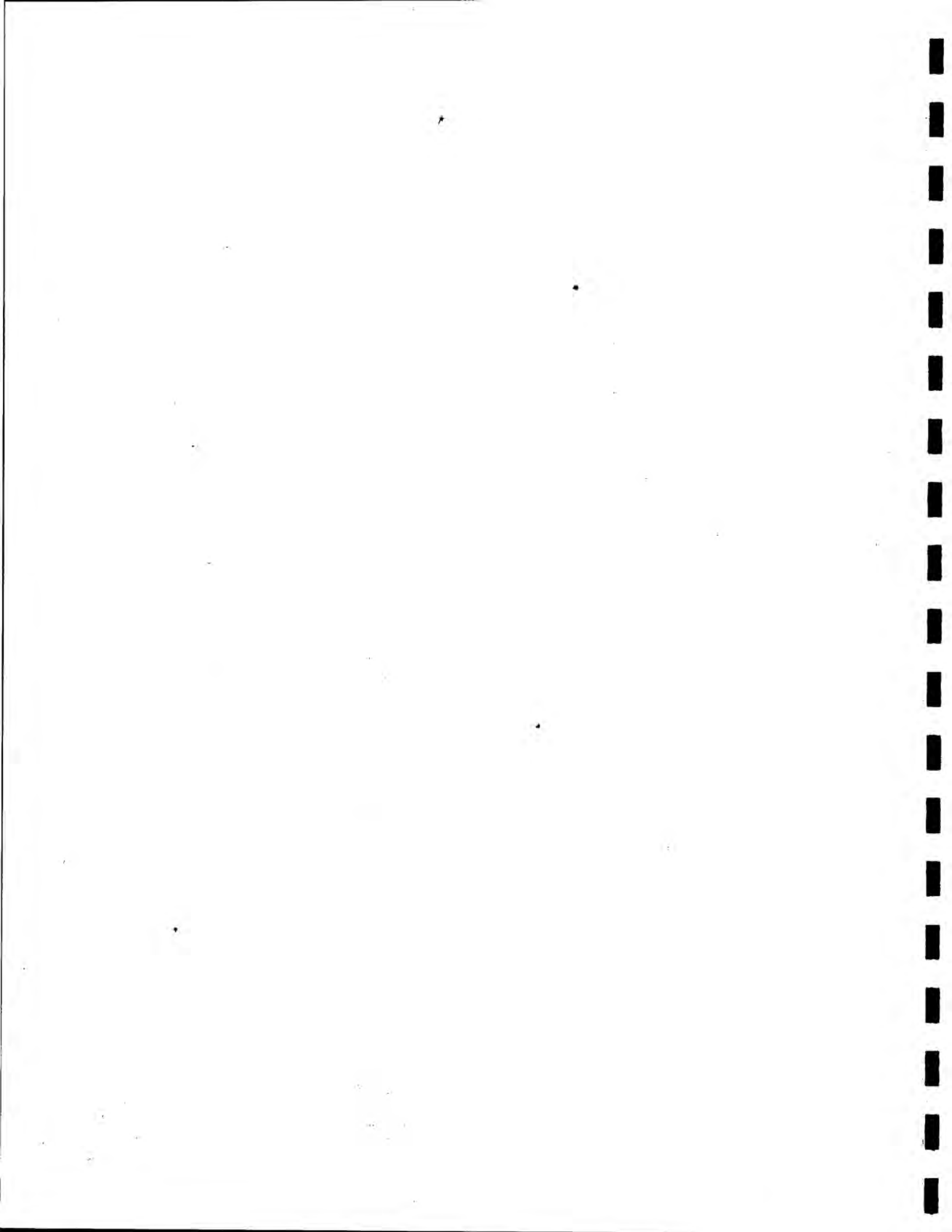
-RNA is already known for its ability to uncover suspected muscle weaknesses and aid in the one leg stand.

-If RNA makes them worse, then use homeopathic doses of RNA.

-May have to use 2-4 RNA tablets on the tongue before the one leg standing is improved.

-After making the appropriate structural correction, RNA helps the body to hold the correction. RNA helps you find it and fix it. Supplement the patient with RNA/DNA one to three per day to help maintain structural corrections.

-If you expect to find cranial tender points, but they are not tender, 185 milligrams of RNA on the tongue will help bring out the tenderness.



DR. GOODHEART'S RESEARCH TAPES

TAPE 117

-1-

HIDDEN SACRAL-ILIAC-FIFTH LUMBAR FIXATION COMPLEX

-The piriformis and iliacus have been tested in the usual fashion in the clear or as a 51%er and in the PiLUS technique. P=piriformis, i=iliacus on the right, L=latissimus on the left, U=upper trapezius on the left, and S=sternocleidomastoid on the right. When patient bends forward 35 degrees or backwards 20 degrees, the sacrum rotates on a perpendicular axis. Looking down, the sacrum rotates in a clockwise fashion, the fifth lumbar rotates counterclockwise, atlas rotates clockwise, and occiput counterclockwise. This is the basis for the PiLUS technique. Use PiLUS technique in the standing forward bending and standing backward bending, sitting forward bending, and sitting backward bending.

-GJG noticed while testing the piriformis with the patient standing that occasionally it would be weak in the clear. With the lower extremity in the piriformis testing position (hip and knee flexed at 90 degrees), this is basically the same position as taking a step forward. The piriformis and iliacus should normally weaken with the patient in a standing position if the patient is in a position of gait, i.e. right piriformis being tested, place the left arm forward, this will weaken the right piriformis. Same is true for the iliacus muscle. This will occur on both the right and left sides. This is referred to as the WALKING GAIT CONFIGURATION and the FORWARD LEG CONTRALATERAL FORWARD ARM WEIGHT BEARING PIRIFORMIS ILIACUS MUSCLE TEST RESPONSE. The piriformis and iliacus will weaken on the forward leg side when it is coupled with the opposite arm being placed in a forward position as to simulate gait. This is normal.

-WALKING AND LIMPING, by Inman et al. On the side of the forward leg the upper trapezius, splenius capitus, pectoralis sternal, clavicular, hamstrings, gluteus maximus, and gastrocnemius relax. On the forward arm the sternocleidomastoid, middle trapezius, rhomboid, psoas, rectus femoris, quadriceps, and anterior tibial relax.

-Illi states that when you take a step forward with the right leg, the ilium moves forward, fifth lumbar moves forward on the same side, and the sacrum moves backward on the forward leg side. Piriformis and iliacus act to release as the patient bends forward in the PiLUS technique, and in the Walking Gait Configuration they release when patient is placed in a gait configuration.

-When the patient fails the Walking Gait Configuration, it means that there is a sacral, iliac, or fifth lumbar fixation or subluxation. Can perform this test standing or supine. Correction of the subluxation/fixation will result in the patient passing the Walking Gait Configuration.

-Iliacus originates from the upper two thirds of the iliac fossa, the internal border of the iliac crest, anterior sacroiliac, lumbosacral, and iliolumbar ligaments, and the lateral upper portion of the ala of the sacrum and inserts with the psoas into the lesser trochanter of the femur. The piriformis originates on the anterior portion of the sacrum between and lateral to the anterior sacral foramina, capsule of the sacroiliac ligament, margin of the greater sciatic foramen and the sacrotuberous ligament, and inserts into the

superior border of the greater trochanter.

-Failure of the iliacus to release in gait gives sacral torsion unilaterally. If there is bilateral failure of the iliacus, it gives the extension phase of cranial sacral system with spinal fluid flow rates, therefore it is an inspiration assist on the sacrum. Both iliacus failures will then react by dural tension on the occiput to produce an inspiration assist on the occiput.

-When the piriformis fails in gait unilaterally, it also gives sacral torsion and by way of dural tension it is duplicated by the occiput, which means a unilateral inspiration assist. If bilateral piriformis failure, it gives the same extension phase of the cranial sacral system, inspiration assist. This is why it is necessary to do both sacral and cranial respiratory assist, especially if there is a sacral fault.

-Illi stated in 1951 after extensive cinereontogenography of gait, "In light of the movements of the sacrum as effected by normal sacroiliac effort, we find that if a step forward is made with the right leg the accompanying muscle effort and play will draw the right horned wing of the sacrum posterior and superior while concurrently the left horned wing is carried anterior and towards the inferior limit of the articulation. (As you take a step with the right leg, the left piriformis goes "on" and the right piriformis turns "off".) With the right leg extended forward and the sacrum on the right side position posteriorly and superiorly there is a correspondingly obliquely anterior and lateral rotation of the iliac wing and because of the iliolumbar ligament on that side, the right transverse process of the fifth lumbar is drawn forward forcing the vertebral body in a rotation to the left. On the left side as indicated above, the picture is diametrically the opposite". This movement forms the basis for the PILUS technique, a non-gait static sacral movement in flexion and extension and the Gait Iliacus Piriformis test response is a logical extension of what Illi said and his concept of kinetics.

-The Forward Leg-Contralateral Forward Arm Weight Bearing Piriformis-Iliacus Muscle Test Response: the piriformis and iliacus weaken on the forward leg, opposite forward arm. This is normal in vertical weight bearing.

-The Piriformis-Iliacus Sacral Response is accompanied by the navicular sustentacular descent, this is referred to as the primary trigger mechanism. The angular compression of the neurovascular bundles caused by the descent of the sustentacular shelf through internal rotation of the os calcis is a primary trigger mechanism. The angular compression of the neurovascular bundle is caused by the descent of the sustentacular shelf of the os calcis and the internal rotation of the os calcis as well as the navicular drop then tethers the neurovascular bundle coming down the posterior portion of the tibia. When this is tethered, therapy localizing a sacroiliac joint may have a negative response, but continued therapy localization to the SI joint along with the patient abducting the leg will be positive if there is a hidden iliac/Category 2 subluxation and requires proper manipulation. You can perform the same thing with the patient in a supine position by exaggerating the pronation of the foot. If on the side of the exaggerated pronation of the foot there is a tethering of the neurovascular bundle, the therapy localization of the sacroiliac joint will become positive as if there were a posterior ilium when in reality you have a sustentacular shelf descent of the os calcis with a navicular descent on the medial side as well, and both the navicular sag from the long arch descent and the external malleolar bulge are

diagnostic signs in a weight bearing gait position. Ox calcis rotary movement is universal, inward (medial), but when excessive gives marked ligamentous tension on inner side of ankle matched by the same amount of relaxation on the outer surface. The sustentacular shelf drop hooks the neurovascular bundle beneath it, navicular descent from long arch drop requires adjustment and supportive taping; orthotic support does not provide this vital treatment factor. Derotation of the os calcis is also required but no tape is need; an orthotic support can now serve a useful purpose. Often there is a balance problem in the foot associated with a weak posterior tibialis. Ligamentous tension on the inner side of the ankle is matched by the same amount of relaxation on the outer surface. All the major plantar neurovascular bundles with a single minor exception lie close to the inner border of the os calcis, two of them lying directly beneath and in contact with the lower border of the shelf-like sustentacular tali. With a weak posterior tibial, this allows further inward roll. The most constant feature is a strain/counterstrain need in the peroneous longus and brevis which then aggravates the inward roll of the foot due to the plantarflexion and eversion it produces. A maximum contraction of the peroneous invariably causes weakness to appear in a previously strong muscle. Treat by passive shortening and spindle trigger point release technique with respiratory assist.

-This is a chicken-egg, egg-chicken situation. The failure of the piriformis/iliacus with the navicular drop and rolling inward of the os calcis/sustentacular shelf descent produces a sacral fixation. Sacral fixation is indicated by both right and left weak neck extensors, lumbar fixation indication is bilaterally weak neck extensors, and iliac fixation indication is unilaterally weak neck extensor.

-Although weight bearing fixation diagnosis was the first, but awkward method, continued trials have yielded a new and easier method. You can show that a forward step on the left would reveal a left upper trapezius, right sternocleidomastoid, and a right latissimus dorsi would weaken. Taking a step backwards with the right leg is the same as taking a step forward on the left and should reveal the same weaknesses. This did not occur in all cases. Test a patient for the Walking Gait Configuration. With the diagnosis completed, i.e. patient failed on the left leg and right arm, then place the patient prone. Test the prone piriformis and prone iliacus, should be strong. Reverse block the patient, for example if the left leg and right arm failed, block prone right ilium and left shoulder. This should reproduce the Walking Gait Configuration in this prone test, the piriformis and iliacus should still fail exactly the same as when they are standing. Test for sacral, iliac, and fifth lumbar fixations and subluxations, and treat them as they are diagnosed. Then reevaluate the patient by performing the block pattern, should show a weak piriformis and iliacus while prone. You can assure yourself of correction by then standing the patient up and retesting the Walking Gait Configuration.

-There are new muscle meridian points as described on the last tape. There are walking gait meridian points for the peroneous longus brevis, and tertius-GB34 and GB39, new lower extremity 11 (NLE11); the posterior tibial-BL57, NLE10; the piriformis-GB27; the iliacus-new chest and abdomen 6 (NCA6). Have the patient therapy localize these points if the associated muscle shows weak in the clear or if the patient fails to weaken on piriformis and iliacus in the walking gait configuration, simply tap the meridian points for 60 seconds. Then reevaluate the walking gait configuration. Many times this stimulation

is all that is needed. Don't neglect the primary foot trigger points at the sustentacular shelf descent and the navicular sag.

-Nutrient of choice if the patient fails the walking gait configuration is e-poise, electron plus, or E.B.A.

-Diagnose and correct navicular sag, sustentacular descent, and medial ankle ligamentous tension. Tape and support as needed. Rule in or out the peroneous, posterior tibial, etc. and use appropriate nutritional support.

-Direct quotes from "Chiropractic Locomotion Spinal Statics" by Illi in 1952. "In an inferiorly displaced sacrum you will always find a flat foot on the other side" and "a sacroiliac lesion always results in a flat foot or vice versa". "As long as the muscular coordination stays the same as the one which presided over the moulding of the articulations (or nearly the same) the latter function with a maximum efficiency. If, for example, walk becomes altered, the muscular coordination of locomotion is changed too; and the sacroiliac articulations will be forced to take a new shape, which they cannot do in a natural way. The locomotion of a certain number of patients was measured with the dynamometers; these observations permitted us to draw the following conclusions: In most people, the forward step is more energetic and longer on the right side than on the left; the right sacroiliac articulation thus must have a wider range of movement. The right sacroiliac articulation is thus more movable than its fellow without enjoying better protection; on the contrary, it is more vulnerable, first because of its greater articular excursion and then because a right handed person unconsciously performs greater effort on that side (to carry, lift, pull, etc.). This is sufficient to explain the greater occurrence of right sacroiliac lesions. Here again there is a physiological limit of adaptation; and it cannot be overstepped without producing wearing of cartilage, eburnations, arthrosis, osteophytic lippings, reflex muscular contractions which eventually become infiltrated and permanent (contractures). At the same time, the sacroiliac ligaments shorten or lengthen to adapt to the sacroiliac shape (Wolff's Law) which explains partially the difficulties encountered in remobilizing the sacroiliac articulations. Normally, the sacroiliac mechanism (ilia, sacrum, L5, and ligaments) owing to a horizontal gyroscopic movement and the interarticular elevations and depressions, intercepts the minor locomotive defects and prevents them from being transmitted to the spine. When there is a fixation in that mechanism, the spine, besides its function of equilibrium, must intercept the anomalies of walk. Usually the movements of walk are intercepted and neutralized by the sacroiliac which has to keep the separate the functions of the various mechanisms, i.e. equilibrium to the spine, locomotion to the pelvis and legs and interception to the sacroiliac mechanism. As soon as the sacroiliac mechanism becomes fixed, the normal axis around which vertebral torsions are made is displaced. The dynamism of the legs which the sacroiliac mechanism does no longer intercept is transmitted to the spine and compels the normal longitudinal axis away from the normal place (D12). The new vicious axis is unstable, i.e. it changes place depending upon whether the spine is straight or bent (flexion through torsion). The stability of the displaced axis given by the difference between the labile displaced axis and the stable displaced axis. This is done by comparing the non-compensated torsions with the compensated torsions. The more constant the new axis (vicious, displaced axis) i.e. the less difference there is between the labile displaced axis and the stable displaced axis, the greater the reduction of sacroiliac motion. As

soon as the strain goes beyond the articular capacity of the spinal segments, the body weight is distributed over the vertebral articulations which normally take care of the mechanics of the segments without supporting weight. The result is painful inflammation of the joints, segment fixation, wearing of cartilage and ligamentous tension. The vertebral musculature is obliged to exert excessive and asymmetrical pull resulting in pains of different origin: articular pain due to excessive weight supported by the articulations, myalgia due to reflex muscle spasm, periosteal pain which appears at the insertion of muscles and tendons pulling on the periosteum, pain of proprioceptive origin felt as vague fatigue due to the fact that the person carries constantly excessive unilateral weight. To take a concrete example of what has just been said, let us assume that, following a unilateral type of work, a spine shows a certain muscular contractions which in turn bring on slight vertebral torsions. A portion of the spine becomes more or less fixed, in that position. These harmful torsions are shown on the statical balance as inequality of weight distribution. This will also be evidenced by marked wearing of the shoe on the overloaded spot. Many muscles of the lower extremities which were responsible for a coordinated walk will from now on be forced to contract tonically to maintain equilibrium of structures (recall that from a physiological standpoint, the body always attempts first to maintain equilibrium in relation to the vertical). Gait becomes altered; henceforth, the sacroiliac mechanism must perform compensatory locomotive movements incompatible with its particular shape. There are two possibilities depending upon the degree of locomotive incompatibility: 1. The sacroiliac mechanism compensates, thereby removing any further possibility of active or passive compensation. 2. The sacroiliac compensates up to its physiological limit and then transmits the unintercepted locomotion to the spine which cannot perform both jobs (interception and equilibrium without undergoing irreversible changes). The reciprocal compensation of all three mechanisms, i.e. spine (equilibration), pelvis (interception, neutralization, and locomotion), and lower extremities (locomotion) makes the diagnosis of sacroiliac lesion very difficult. When we speak of pelvic displacement, or of vertebral displacement, we mean that a segment of the pelvis (or a vertebra) is in a position of walk, while the pelvis (or the spine) is in a state of rest or that a segment of the pelvis (or a vertebra) is in a position of rest while the pelvis (or the spine) is in a position of walk. Any pelvic distortion causes an anomaly of the spine and the legs which in turn is transmitted back to the sacroiliac articulations. It is now easily understood how a sacroiliac lesion may not be evident from an anatomical point of view and that a displaced sacroiliac articulation may appear perfectly normal, if the vicious physiology of the sacroiliac movement has not yet resulted in pathological changes, e.g. osseous ankylosis, osteophytic lipping, etc. This explains why the diagnosis of a sacroiliac lesion is seldom made by a radiologist or an M.D. A sacroiliac lesion must be recognized by its effects. At first sight, and for the profane, they may seem to have no relation with the primary lesion and be independent in their pathogenesis. Let us take a typical case and follow its evolution: With a certain sacroiliac lesion, the equilibrium changes in such a way that the patient tends to fall forward and to the right. To maintain body equilibrium, the right foot hits the ground with more strength. This repeated with each step, eventually leads to a painful fallen medial longitudinal and transversal arch of the right foot. As there is pain, there is a

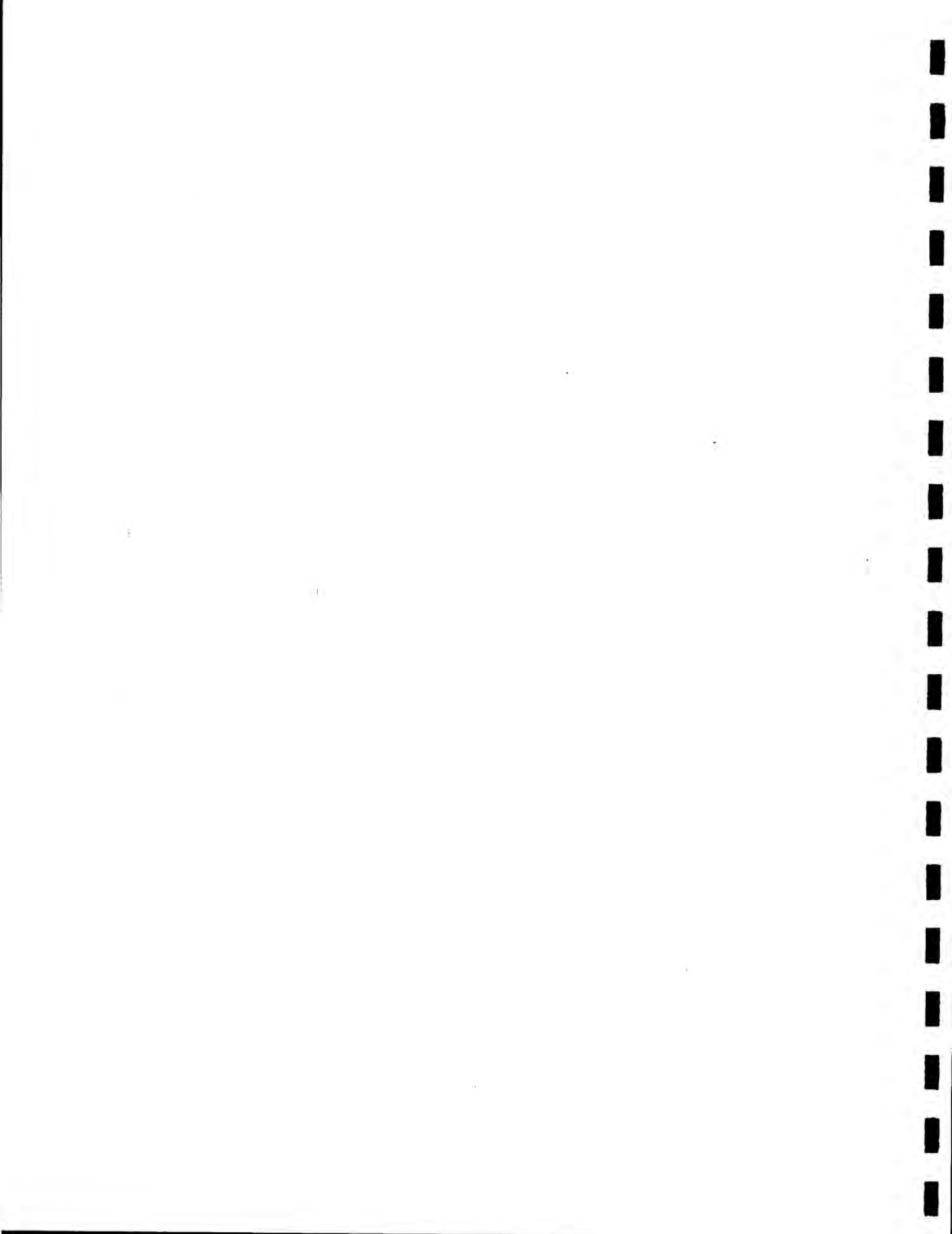
slight claudication to which the patient tries to hide by contorsions. The fixed sacroiliac mechanism can no longer intercept this locomotive anomaly which is transmitted to the spine. The statical and mechanical derangement of the spine, the muscular contractions and the articular strain produce aches and pains which migrate from one end of the spine to the other; this is the so-called "rheumatism". The M.D. may then prescribe a plantar support which will cause the pain to disappear temporarily. The inferiorly displaced sacrum is fixed in that position by muscular contraction and causes a flat foot on the other side (a sacroiliac lesion always results in a flat foot or vice versa). The back compensates this change by another torsion with new pains. Gradually the skeleton and the articulations wear and tear, following the vicious cycle which originated with the sacroiliac displacement. An ailment progressed to that point cannot be reduced merely by suppressing the primary lesion, because the latter has produced a multitude of irreversible pathological changes, ligamentous adaptation, fixed scoliosis, ankyloses, bony alterations, intervertebral disc degeneration, etc. To this, we must add the irreducible spasms of the postural muscles which try to maintain statics. Here is the vicious cycle; the more contractures, the more ligamentous damage, the more the antigravity muscles contract to maintain equilibrium. If the effect of gravity on the spine is reduced to a minimum, i.e. with bedrest, the efforts of the erectors of the spine are reduced and the weight of the spine, instead of being supported by the vertebral articulations is supported by the bed, allowing the articular inflammation to subside and the muscles to relax. It is in bedrest that we find the explanation for the results obtained by the usual methods (medical, surgical), results which may be acquired with or without the other therapeutic procedures. A great deal of the pain goes away; however, as soon as the upright position is resumed, the pains reappear because nothing has been changed in the etiology. Here to is the explanation for the post-operative relapses in the case of discal hernia. 'The equilibrium of compensations'. We just showed that an alteration of locomotion is extended to the spine and sacroiliac mechanism. The sacroiliac mechanism and the spine are mechanisms of compensation in relation to each other and to the head and upper and lower extremities. Thus, a dynamical defect (locomotion) will be compensated in the sacroiliac articulations and when the physiological limit of adaptation is reached, it will reflect on the spine".

-For those without a Hi-Lo table, you can test prone gait configurations for fixation-sublaxation diagnosis. When you do the weight bearing gait piriformis and iliacus testing, it is called GPI, literally Gait Piriformis Iliacus, is essential for primary diagnosis. Prone Walk Gait Configuration (WGC) is under investigation for confirmation of fixation-sublaxation diagnosis in GPI failures. Respiratory and nutritional factors are also under investigation.

-Walking Gait Configuration diagnosis completed, and if the patient failed the WGC, i.e. piriformis did not weaken with leg and opposite arm forward, then place the patient in the prone position. Test the piriformis and iliacus, if weak, correct via the five IVF factors. Piriformis and iliacus should be strong. Then reverse block the patient, i.e. if the left leg and right arm failed, block the prone patient under the right ilium and left shoulder. If the Walking Gait Configuration was in that failed pattern of left leg and right arm, the patient is now in that same position, only prone. The piriformis and iliacus should still fail to weaken in this position to

match the Walking Gait Configuration. Prone is an easier test position. While the patient is reverse blocked, test the neck extensors for fixation. Treat as diagnosed. Reevaluate for passage of Walking Gait Configuration. Check for muscle meridian points, subluxation of os calcis and navicular, taping of navicular, muscles of the leg, and nutrition as described above.

-With the patient prone, test the piriformis, should be strong. Have the patient place the same foot into marked pronation and the piriformis will weaken. Neurolymphatic activity to the adrenal reflex (one inch out and two inches up from the umbilicus) will neutralize this effect, which shows that it is stress related. You don't know what is primary, the sacroiliac or the foot, so you have to correct both of them. Pronation of the foot will also make a previously negative therapy localization to the sacroiliac joint positive as if there was a posterior ilium. The addition of a Foot Leveler is not going to make the correction. Os calcis rotation is universal, inward and medial, and when excessive, there is marked ligamentous tension on the inner side of the ankle which is matched by the same amount of relaxation on the outer surface. The sustentacular shelf drop hooks the neurovascular bundle beneath it and the navicular descent from the long arch requires adjustment and supportive taping and an orthotic support just does not supply this vital treatment factor. You should tape the navicular, but it is not necessary to tape the os calcis. You should be able to retest the patient in the Walking Gait Configuration and get a normal pattern when they are weight bearing or in the prone position. There should not be any reproduction of the weakness in the piriformis or positive therapy localization over the sacroiliac joint when the patient pronates their foot.



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-With the patient prone, test the piriformis, should be strong. Have the patient place the same foot into marked pronation and the piriformis will weaken. Neurolymphatic activity to the adrenal reflex (one inch out and two inches up from the umbilicus) will neutralize this effect, which shows that it is stress related. You don't know what is primary, the sacroiliac or the foot, so you have to correct both of them. Pronation of the foot will also make a previously negative therapy localization to the sacroiliac joint positive as if there was a posterior ilium. The addition of a Foot Leveler is not going to make the correction. Os calcis rotation is universal, inward and medial, and when excessive, there is marked ligamentous tension on the inner side of the ankle which is matched by the same amount of relaxation on the outer surface. The sustentacular shelf drop hooks the neurovascular bundle beneath it and the navicular descent from the long arch requires adjustment and supportive taping and an orthotic support just does not supply this vital treatment factor. You should tape the navicular, but it is not necessary to tape the os calcis. You should be able to retest the patient in the Walking Gait Configuration and get a normal pattern when they are weight bearing or in the prone position. There should not be any reproduction of the weakness in the piriformis or positive therapy localization over the sacroiliac joint when the patient pronates their foot.

CSF than in the plasma, CSF is not simply a protein-free filtrate of plasma. The functional unit of the choroid plexus is composed of a capillary enveloped in a layer of differentiated appendymal epithelium, the same thing that lines the spinal canal and the anterior of the spinal cord. In normal subjects, the rate of secretion of spinal fluid is about 0.3-0.4 milliliters a minute, which is about one-third the rate that urine is formed. The volume is hard to measure, but is estimated to be approximately 150 milliliters in normal adults. This means that the CSF is replaced 3-4 times per day. The major site of CSF formation are the choroid plexii which are present in all of the cerebral ventricles. This conclusion was deduced from the fact that fluid accumulates and enlarges the ventricles if the aqueduct of Sylvius is obstructed. Neurosurgeons have commented on seeing drops of fluid form on the surface of the choroid plexus.

-1989 Research Manual: The CSF is removed at villi and granulations along the large venous sinuses in the skull and at the cranial and spinal nerve root sheaths. Anesthetic gases and carbon dioxide diffuse very rapidly into the brain. As a consequence, the rate at which their concentrations come into equilibrium with the plasma is usually limited by the cerebral blood flow. Inert gases like xenon are used to measure cerebral blood flow. An interesting contrast is found between carbon dioxide and hydrogen ions and their effects on brain pH. Since the BBB permeability of carbon dioxide greatly exceeds that of hydrogen ions, the pH of the brain interstitial fluid will reflect the blood pCO₂ rather than the blood pH. Consequently, the patient may have a metabolic acidosis and compensatory respiratory alkalosis, the brain is therefore alkaline.

-1988 Research Manual, page 101: Consider the role of the innervation of the costovertebral and costotransverse joints. It is not often realized that these joints have any reflexology or that they have any neurological function. They have a very considerable function and a great deal of clinical importance, particularly in relation to the need for therapy of respiratory dysfunction. There is now evidence from Wycke's laboratory and Kurt Von Eller's laboratory in the Karolinska Institute in Stockholm that the afferent input from the mechanoreceptors in the capsules of the costotransverse vertebral joints have two very important functions. One is that those are the receptors that are principally responsible for respiratory sensation. One's conscious awareness of one's respiratory effort appears when they are omitted. In quiet breathing one has no conscious awareness of one's respiratory activity or one's respiratory movement. With augmented breathing, whether it is augmented as a result of increasing normal exercise, or whether it is augmented because of respiratory dysfunction with increased respiratory effort, for example as in asthma, then people are very much aware of their respiratory movement. This conscious awareness of the respiratory effort is dyspnea. There is very substantial evidence to show that this perceptual experience is derived primarily from the augmented discharges of the stressed receptors in the costovertebral and costotransverse joints when rib movements are augmented to a sufficient degree. These receptors do not fire at a high enough frequency to evoke perceptual awareness with the normal amplitude of rib excursion in quiet breathing. As a rib excursion increases the discharge frequency increases. This increased discharge evokes the perceptual experience of respiratory sensation of dyspnea.

-There is an auxiliary CSF pump and it is at the rib area, this greatly affects the eventual flow of spinal fluid.

-Steer, at the University of Western Ontario, put methylene blue dye into the spinal fluid of pigs. He sacrificed them sometime later and found that after 12 hours or more, the methylene blue had proceeded down the nerve roots to the very terminal digital nerve fibers in the toes of the feet of the pigs. There is an axoplasmic flow and the CSF does flow down the nerve.

-The cauda equina is the termination of the spinal cord. Spinal cord ends at T12 and L1.

-Dr. Erwin Cord has validated the facilitated spinal segment with its increased sympathetic activity. Cord is a leading proponent in the idea of trophic nerve function. Trophic denotes a nutritional function. According to his hypothesis, nerves are essential to the nutrition and consummate growth, development, health, and survival of the tissue it innervates. It is generally accepted that when a nerve is severed or interrupted its end organ shrivels up, this is the atrophy of disuse that results from the absence of neurotransmitter stimulation to that particular organ. According to Cord's trophic hypothesis another process is involved. The cell body of the nerve manufactures a nutritive protein macromolecule which is delivered by the axon to the end organ. Cord used radioactive tags of carbon 14 and phosphorous 32 as tracers to study the delivery system. He reported that the sensory end organs are also dependent upon the delivery of nutritive molecules from the cell bodies of their afferent sensory nerve cells. Therefore, the protein molecules move along the dendrite from the neuron towards the sensory end organ when the electrical wave of stimulation is moving in the opposite direction. Accordingly, the trophic function to a denervated organ must be restored in order to prevent dystrophy. Ranges of motion exercise alone won't do it. Cranial-sacral therapy which works from the inside out, and above downward, from the central cord to the periphery, does. It was Cord's idea that the flow of proteins along the nerve fibers is from the center to the periphery. There are many factors that interfere with that trophic function, a facilitated segment (subluxation/fixation) which effects protein production in the nerve cell body, mechanical tensions involving bones or abnormal myofascial tonus interfere with normal axonal transmission, emotional and nutritional problems which affect protein production and transport, and then viral infections such as herpes or polio, various blood acid-alkaline imbalances interfere with the normal physiological environment. This is a quote from Upledger's "Cranial Sacral Therapy II-Beyond the Dura".

-Upledger first described the 25 cycles per minute that he found in denervated muscle. Cord suggested that the change may be due to loss of the trophic function. Upledger has found that abnormality in many muscles and after successful treatment of palpable rhythm as resulted in synchrony with the cranial rhythm (10-12 times per minute), impartial as well as total denervation will cause the 25 cycle per minute cycle.

-The nerve delivers information and nutritive compounds.

-(The ICAK is underwriting a new muscle testing manual to supercede the valuable Kendall and Kendall, and to take the genius of Alan Beardall and use the ultrarefinements that he produced for doing very accurate muscle testing. GJG used to say about Alan that he would split infinitives that had already been split twice and split them 2 or 3 more times, due to his very precise and definitive approach to the muscular pattern. In all fairness, GJG must say that he did not always agree with Alan on some of the other elements that Alan produced which were part of the intuitive process. The intuitive

process is appropriate to everyone, but GJG doesn't feel that the intuitive process can necessarily be documented scientifically. The muscle testing process and devices that he developed far supercede the Kendall and Kendall. Beardall's tapes are available from Human Biodynamics, Inc. 11130 Southwest Barber Blvd., Suite 250, Portland, Oregon 97219, 503-296-5872. For example, in Clinical Kinesiology 2, Beardall describes a supine hamstring test instead of the standard prone test. GJG would not find any evidence of a weak hamstring in the prone position in the clear or against the 5 IVF factors, however sometimes testing the hamstring in the supine position would reveal the weakness in the clear or as a 51%er against the 5 IVF. Beardall had proposed a new NL for the hamstring which sometimes shows positive against the supine test, but does not show positive when performed by the Kendall and Kendall test. Testing the biceps femoris fibular division with the knee bent at 100 degrees, putting pressure on the ankle with the holding pressure at the knee testing the ability of the hamstring to contract that particular long head of the fibular division, the knee and leg are abducted about 10 degrees from the central line. The area that Beardall suggests as the NL reflex is at the sixth intercostal space just anterior to the midaxillary line, or the tenth intercostal space midaxillary line. GJG tested this "NL" point against the hamstring in different positions and what Beardall considered to be a NL reflex is probably a CSF reflex. This "NL" reflex always has a respiratory pattern which is associated with spinal fluid. Testing the biceps femoris in the supine position will often test positive to the "NL" at the sixth or tenth intercostal space midaxillary line, but when testing the patient in the prone position you will not get the same response. If the biceps femoris is weak in the clear and TL to the 10th ICS negates the weakness, or you have a 51%er (muscle strong in the clear that weakens upon TL to the "NL"), it is altered by respiratory activity, usually inspiration. If the patient shows positive in the supine position, place them on their side and test the biceps femoris on both sides. The lower leg will show the same as the supine position, but the upper leg will not show the same. Something flows downward to the table side along the intercostal space, but has to flow upwards to the upper side of the patient. Manipulation of the "NL" points will give a response, but it often needs reinforcement and is slow to respond in the patient. Once you've found the area by TL (i.e. 6th or 10th ICS mid axillary line) perform strain/counterstrain by placing the leg into extension for more posterior points, or flexion for more anterior points. Usually requires extension. If the area is below the area of T6-7, place your thigh underneath the patient's thigh and check for reduction in pain. If it is above the T6 area, try upper body extension. For extension points, the patient must breathe out and hold it out for 30-45 seconds during the strain/counterstrain maneuver. GJG doesn't think that these points are NL points, but rather there are auxiliary pumps that are in the intercostal areas, and the ribs are pump handles. You can palpate the sternocostal joints, around the intercostal spaces to the midaxillary line, costovertebral joints and around the ICS posteriorly. Note any tenderesses or check tender areas against TL. You can take the pain out by strain/counterstrain; if on the posterior do as described above. If on the anterior side, place the head in flexion, and possible lateral flexion, and use inspiration held for 3-45 seconds.

-Measure chest expansion, vital capacity, or a range of motion to monitor improvement following correction of ICS strain/counterstrain. Useful technique is cases of atrophy, cerebral vascular accidents.

(-Test for the pubococcygeus muscle is done with the patient prone, with the leg extended 23 degrees, abducted 30 degrees, the knee is grasped and pulled directly lateral, with counter pressure at the opposite knee. This is part of the primary cranial sacral respiratory mechanism, and this muscle is often found weak. CSF reflex is between T4-5 spinous processes and the ribs. GJG found that repeated manipulation and tapping in that area was needed; but strain/counterstrain in the T4-5 area with head brought back into extension would cause the pubococcygeus muscle to respond.)

-1989 Research Manual, page 17: "The dural arrangement and attachments protect and facilitate the smooth pressure-stat pumping of the CSF by the brain and spinal cord. This is accomplished by a rhythmic contraction and relaxation of the neuroglial (glial cells), particularly the astrocytes. The normal rhythm is thought to be 10-14 times per minute. This delicately controlled action is termed the cranial sacral spinal primary rhythmic mechanism. The dural attachments and the articular motion of the cranium, atlas, C2, and C3, and sacrum are of paramount importance to the brain and spinal cord's ability to move and replenish the CSF. This insures proper neuron firing. Disturbance in the articular function of the cranial bones, atlas, C2, C3, or the sacrum result in dural torque. There must be compensation for this malfunction or a neurologic deficit results. At any spinal level, torquing of the dura may result in; paravertebral muscle changes with motor unit changes, CSF pooling and efferent nerve impulse bombardment to the associated visceral or somatic structures. Compensation is achieved by a return of afferent impulses to the spine which ultimately results in alterations of the multifidus and rotatores muscles causing compensatory vertebral rotation and hopefully resultant relief of CSF pooling. Failure here results in pain, disease and pathology."

-Correlate the ICS strain/counterstrain with holographic subluxations. For example, in complete blockage of urine there is usually a holographic subluxation at L1 on the right. Assume that the CSF pumps in the ICS area is just above L1; palpate the ICS between T11-12, T10-11, etc., and use strain/counterstrain to remove any tenderness.

-Can also correlate with the spondylogenic reflex association with the levator costalis longus and brevis described at the beginning of the tape. For example, if there is a subluxation of C1, you would then check the ICS of T1 for ICS strain/counterstrain.

-Some of the ICS strain/counterstrain follow the Lovett law, others follow the spondylogenic reflex area.

-Sacroiliac correlates to the opposite sternocostal joint under the ligament interlink theory. Cervical and lumbar patterns will be further refined.

-Non-impulse based mechanisms and their relationship to axoplasmic flow, and this relationship to vertebrogenic or costovertebrogentic lesions and nerve degeneration. David McGee, D.C. published an article in Today's Chiropractic May-June 1983 on non-impulse based mechanisms. He cites the evidence from the Schwartz article on the transfer of substances in nerve cells in the Scientific American, April 1980.

-T.A. Tran, "Correlation of Axoplasmic Flow and the Understanding of Vertebral Subluxations"; Los Angeles College of Chiropractic, Alumni Report, pages 8-9, 1979. Normal function of tissues is dependent on both retrograde transport and orthograde (axonal) transport of materials elaborated by inclusions of neural perikarions. Interference with this transport system may elicit dysfunction of tissues and/or organs leading to pathological or diseased states. The orthograde transport of macromolecules is essential for the maintenance of basic synaptic function, but also for the adaptation of functional requirements.

-There is evidence that there may exist auxiliary pumps for CSF. The costovertebral joint, transversocostal joint have definite receptor activation in the mechanoreceptor population. It seems reasonable that the rib is the handle of the pump.

-Yearbook of the Academy of Applied Osteopathy, 1957, Myron Barstowe, D.O., "Thoracic Area and Cancer". Patients that showed malignancies showed inequality of rib spaces in the region of the T8 area; 644 left greater than right rib spacing; 155 right greater than left rib spacings. Patients who were either normal or had non-malignancy problems had 333 rib space inequalities in the T8 region left greater than right, and 68 right greater than left.

-Hoag, Cole, and Bradford, "Osteopathic Medicine", McGraw and Hill, Page 403: Rib lesions, "The diagnosis is usually made on the basis of physical and palpatory findings and the pain elicited in the thoracic paravertebral region. Palpation reveals the resistance in this region which may extend for 2-3 thoracic segments. The involved rib is usually restricted in its active or passive motion. Pressure here increases the pain, as does movement of the body. The pain is sharp, stabbing. Sometimes the intercostal nerves are involved, the symptoms are those of intercostal neuralgia. In severe cases the functional disturbance can be quite debilitating. The treatment of choice is manipulative therapy to produce normal motions in the articulation along with etc., etc." This has been noted by many people, not just GJG.

DR. GOODHEART'S RESEARCH MANUALS

TAPE 119

-1-

HIDDEN SACROILIAC FIFTH LUMBAR WALKING GAIT

-Hidden Sacroiliac-Fifth Lumbar Walking Gait should be checked following treatment to be sure that the patient is not going to "walk themselves back into their problem".

-Test this by having the patient standing against the Hi-Lo table, test the piriformis and iliacus bilaterally, should be strong. When the patient simulates taking a step forward, i.e. right leg and left arm forward, the piriformis and iliacus should weaken on the side of the forward leg; this is NORMAL. The weakness should remain while the patient is in a gait position, regardless of phase of respiration held.

-Failure of the piriformis/iliacus to weaken usually indicates a sacral fixation. Determine the sacral fixation by having the patient in the gait position, i.e. right leg forward to test the piriformis/iliacus and the left arm forward does not weaken the piriformis/iliacus, TL the sacrum with the right hand, and weakening of the piriformis/iliacus indicates the sacral fixation. Can correlate this with the weak splenius capitis.

-With an anterior sacral fixation, have the patient lie on the posterior side; contact the top shoulder; place your thumb on the sacral ala on the posterior side; place the patient's leg in a "lumbar roll" position, with the top leg bent and the foot hooked in the bottom popliteal fossa; face the patient's back; sharply thrust backwards (towards you) on the shoulder; this will disengage the sacrum from its anterior positioning. To adjust a posterior sacral fixation, have the patient side-lying with the posterior side up, and place the head piece up so that the patient's head does not put a torque upwards on the sacrum (through the dura); stand between the patient's legs, patient's thigh parallel to the floor and have the patient resist against your thigh (stabilizes the side-lying position); adjust the posterior side of the sacrum straight anteriorly.

-Retest the Walking Gait to see if the piriformis/iliacus now turns off normally when the patient is in the gait position.

CSF RIB PUMP TECHNIQUE

-There is passage of spinal fluid along spinal nerves and out to the peripheral nerves. This was documented by Stear, Canadian Medical Association Journal January 13, 1968, Vol. 98, No. 2.

-The ribs are auxilliary pumps for spinal fluid.

-Therapy localization of the sternocostal junction and costovertebral junction will neutralize weaknesses.

-For example, test the three heads of the triceps, the long, short, and medial heads. One of the three heads may be weak. If you didn't have a chart of the sternocostal points and know what points are related to the triceps, you could assay all the sternocostal points by therapy localization and find the point that neutralized the weakness.

-Find weak triceps very commonly in chiropractors, golfers, tennis players who you would imagine to have strong triceps.

-The triceps are related to the intercostal space of 2 sternocostal and costovertebral, and 10 costocartilaginous space.

-Weak muscle may strengthen to its rib intercostal point, or it may be a 51%, a strong muscle weakens to therapy localization of its rib point.

-Palpate the interspace for pain, then place the patient's head into flexion to remove the pain. Have the patient hold inspiration for 30 seconds. Retest the muscle for strength, or negative for 51%er. If it is still positive, go to the posterior point, palpate the point for pain, place the patient's head into extension to remove the pain, and hold expiration for 30 seconds. The muscle should then be strong, and no 51%er.

-This takes care of the impeller pump in the front and the expeller pump in the back.

-Alan Beardall first described these points as neurolymphatic points. If the points are stimulated as a neurolymphatic, the results are very short lived, however, if the points are treated as a strain/counterstrain.

-You can use the muscle tests based on Kendall and Kendall, or the specific muscle tests of Beardall.

-Quadriceps: T1,4,6,7,8. In testing the quadriceps against the NEHT (Neuropeptidal Enteric Holographic Technique), the neurolymphatic usually corrects the malabsorption. In some patients with small intestine malabsorption, Chronn's disease, the rib pump may be off and the rate flow of spinal fluid is below the maintenance level due to the failure of the ribs to move through the right articulations. Therapy localization will strengthen the quadriceps. Treat as above.

-Success with atrophies, dystrophies, CVA, neuropathies, spinal cord injuries.

-In CVA patients, there is often spastic/tight wrist flexors with the hand held in a flexed contracture. The wrist extensors are weak and often respond to interspace 4, 7, 8, 10, put those points that therapy localize into flexion strain/counterstrain. Recheck for strengthening of the wrist extensors, if not strong or still a 51%er, do the posterior strain/counterstrain at T4,7,8,10.

-If there is recidivism, use folic acid.

-Quote from the Canadian Journal: "Concomitantly with the introduction of the blue powder into the subarachnoid space, a portion of the sciatic nerve approximately 5 centimeters in length was freed from its anatomical surroundings, and the freed portion cut at its distal end. By means of suction the free nerve was drawn into the polyethylene tubing, about 25 centimeters in length, with an internal diameter large enough to accommodate a 2.5 segment of the nerve. This portion of the tubing was inserted between the muscles and held in place by sutures. The remaining portion of the tubing was lead to the animal's body surface and held in place by taping. The free end was left open. To prevent the flow of interstitial spinal fluid into the

proximal end of the tubing, vein fittings and plastic glue/adhesives were found to be the most effective as judged by the collection of any of the cells from the free end of the tubing. At the time of the introduction of the particles into the subarachnoid space, the sciatic nerve was ligated 5 centimeters above the knee joint. A week later a section of the nerve extending from the vertebral canal five centimeters below the ligature was removed for examination. After surgical exposure under pentobarbital anaesthesia, suspension was introduced into the substernal space through the polyethylene tube. Autopsy performed 4 days later. To investigate the possibility of the localization of particles in the nerve and muscle might result from vascular spread, a suspension of the blue powder in physiological saline was introduced into the jugular vein in two pigs and one sheep. Tissues in these animals were processed in a manner similar to those described. The results showed an examination of air dried longitudinal sections, frozen cross sections, and stained longitudinal cross sections of the nerves revealed blue particles present from the vertebral exit to the muscles and integument. They were detected in the sciatic plexus and its branches, the vertebral thoracic nerves, branches of the brachial plexus. In some instances the concentration of particles in the proximal trunks of the sciatic and thoracic branches were large enough to be seen on gross examination. Most distally, the particles could only be detected microscopically. Particles were uniformly found outside axons and tended to form aggregates of varying and surprisingly large sizes. The presence of pigment in muscle tissue was observed in specimens preserved in formaldehyde, and best visualized if the specimens had previously been bleached with hydrogen peroxide. When the specimens were allowed to dry, the distinction between the whitened muscle fibers and the blue pigment was outstanding. After intravenous injection of the powder into the jugular veins, a massive infiltration of the lung tissue was found but no particles were found in the liver, kidney, or spleen, nor could they be found in the nerve trunks that were examined. On the basis of the data and the use of electron microscopy, they suggest that the whole of the peripheral nervous system should be envisioned as being surrounded by a membrane similar in structure to and continuous with the pia and arachnoid mater. They suggest a multi-layered membrane covering the entire peripheral nervous system including the sensory and motor end organs. The interpretation of the findings presented in this paper would be in agreement with those of Lapapa and Boron, if it is accepted that the pia mater and arachnoid do not fuse, and a patent channel is present for the flow of cerebrospinal fluid which in the evidence of our investigation that carry the particles to the nerve endings. The implication of these experiments are that normal substances inherent in spinal fluid and in addition possible toxins and viruses are conveyed by the flow of cerebrospinal fluid. When the number of nerves leaving the central nervous system and spinal cord are considered, the flow of fluid necessary to carry the powder peripherally to the extent, exhibited and indicated by our findings suggest a considerable range of fluid from the subarachnoid space."

LANDAU REACTION, STARTLE REACTION, AND TRAUMA REACTION

-Landau reflex was discovered by Landau who won a nobel prize for this work. If you look at 3-4 month old babies, they start to extend their heads, and if you pick them up by the abdomen while they are prone, instead of curling around your arms, they extend backwards, so that the head goes back and the lumbar spine lordoses.

-The Landau reaction from head to toe involves the following movements: opening eyes, jaw and face, pulling backwards of the neck, pulling downward of the shoulders, extending elbows, opening hands, lifting chest, lengthening abdominal muscles, relaxing diaphragm and freeing breathing, relaxing anal and urethral sphincters in the perineum, contracting gluteus maximus muscles to extend the thighs, contraction of the gluteus medius muscles to rotate thighs outward (feet are ducklike), abduction of thighs, contraction of thigh extensors to straighten knee to hyperextension, extension and pronation of feet. The sensory feedback of all these movements constitutes the subjective feeling of the Landau reflex: effort.

-Putting the patient into the Landau reflex by lordosing the cervical and lumbar spine, turn feet out, straighten the knees and elbows, lifting the chest can help to uncover problems in the patient that did not therapy localize in the clear. Common to uncover sacral, sacroiliac, lumbosacral, C1,2,3, occiput problems this way.

-GJG noticed that some patients that he rolled would stand up and almost fall backwards.

-Another reflex is the startle reaction. Seen for instance if you place a person in a room and they hear a loud noise. It involves the following movements: closing eyes, tensing jaw and face, pulling forward of neck, lifting of shoulders, flexing elbows, clenching fists, flattening chest, tightening abdominal muscle, contracting diaphragm muscle and holding breath, contracting the perineum (including sphincters of the anus and urethra), contracting gluteus minimus muscles to rotate thighs inward (feet are pigeon-toed), adduction of thighs, contraction of hamstrings to flex knees, flexing and supination of feet (each foot lifts and inverts, tilting up arch). The sensory feedback of all these movements constitutes the subjective feeling of the startle reflex: fear.

-The startle reflex also uncovers problems, especially related to dural torque, that is not therapy localizing in the clear, but putting the patient into the startle reaction will uncover the problem.

-Another reaction is the trauma reaction. This is basically BID-body into distortion. This is lateralization, i.e. patient that is off to the right or left like an S-curve. This usually represents trauma of some kind.

-Startle reaction is what you would typically associate with "grandpa getting old".

-A characteristic of a patient that shows the CSF Rib Pump Technique may be a reversal of the normal respiratory sinus arrhythmia. Ordinarily when you take a deep breath, the heart rate increases about 35%. Upon expiration, the heart rate decreases 35%. This is discussed in Guyton. In many patients, this normal arrhythmia is not present or it is reversed in that the heart rate slows down with inspiration and speeds up with expiration, or only one phase is present that speeds up with either inspiration or expiration and does not slow down, and vice versa. Phonocardiographic measurement or monitoring of the pulse during normal breathing, then exaggerated inspiration and expiration will reveal alterations in the normal arrhythmia.

-This indicates subscapularis (heart) fault. Check against the CSF Rib Pump with therapy localization against ribs 1,2,6,10 and treat as described under CSF Rib Pump. Also check sartorius (adrenal) 8 rib, and pyramidalis.

-After correction of a problem that is uncovered by the startle, Landau, or trauma reflex, recheck the respiratory sinus arrhythmia for normalization to increase with inspiration and decrease with expiration. This will also affect the blood pressure from supine to sitting to standing.

-There are factors that affect renin release. A decreased blood pressure when changing from the supine to the erect position, salt depletion, beta-adrenergic agents, and prostoglandins all have a tendency to stimulate the release of renin. Increased blood pressure, change from erect to supine posture, salt loading, beta-adrenergic antagonists, calcium blockers, prostoglandin inhibitors, potassium, vasopressin, and angiotensin II will inhibit renin.

-THE ROLE OF NUTRITION IN HEALTH AND DISEASE, Cornatzer, Charles C. Thomas, Publisher. In the section on zinc: "Angiotensin II converting enzyme, peptidopeptide hydrolase is a very important in the juguloglomerular cells of the afferent arteries of the kidney have volume receptors and secrete renin. Decreased arterial pressure and renal blood flow resulting from decreased extracellular fluid volume increases renin secretion into the serum. Renin levels in the serum is elevated in individuals with essential hypertension. During WWII and the bombing of Britain, a guy would be trapped for 3-4 days when his house fell on him. They would find a large plank across his back, but upon x-ray, there were no fractures. 3 weeks later he would have hypertension. If the interference with the circulation of the kidney is enough and the blood pressure dropped below 70, the kidney develops its own circulation adjuncts and aids, and actually starts to produce this renin pattern. Renin is an enzyme which hydrolyzes the alpha globulin angiotensin from liver cells and the serum to produce angiotensin I which is a decapeptide. This decapeptide is composed of a number of amino acids free of the dietary essential amino acids, isoleucine, phenylalanine, and leucine are present. Angiotensin I converting enzyme of plasma, lung, and other tissues hydrolyzes angiotensin I. It removes two amino acids, histidine and leucine to produce angiotensin II (vasopressor). Angiotensin II is a zinc metalloenzyme and is the most powerful pressor agent. Angiotensin II raises the blood pressure and causes the adrenal cortex to secrete aldosterone. Angiotensin II is not present in normal serum. The zinc metalloenzyme angiotensin I peptidyl dipeptide hydrolase is found in serum, numerous tissue vascular beds and endothelial cells lining the pulmonary vasculature. The enzymatic activity is responsive to nutritional zinc deficiency. Angiotensin I also inactivates the vasodilator bradykinin, a non-peptide. Bradykinin contains two molecules of phenylalanine, a dietary essential amino acid. Copper deficiency increases the plasma levels of angiotensin I converting enzyme activity in man."

-Deficiency of zinc produces too much angiotensin II which causes hypertension, alopecia, disturbances of smell and taste. Blood pressure increases when going from the erect to supine position. These patients often have a reverse of the normal sinus arrhythmia. The zinc deficiency may not show up on the zinc tally, so use other methods of determining need for zinc like cranial technique, right pectoralis minor. Right pectoralis minor test: test the pectoralis sternal, then have the patient flex their neck, this causes weakening of the pectoralis sternal when the pectoralis minor is involved. See if a source of zinc neutralizes the weakness. Zinc-Liver Chelate works well (Standard Process Labs).

FUNCTIONAL HALLUX LIMITUS

-"Functional Hallux Limitus and its Relationship To Gait Efficiency", Howard Dananberg, D.P.M., Journal of the American Podiatric Medical Association, Volume 76, No. 11, November 1986. "Functional hallux limitus can be defined as the functional inability of the proximal phalanx of the hallux to extend on the first metatarsal head. During non-weight bearing examination full range of motion can be present in the first metatarsophalangeal joint. The inability of the hallux to extend on the first metatarsal is present only during the stance phase of gait."

-Test the large toe flexors and extensors, 90% of patients have a weakness of the large toe extensors. When testing the extensor, stabilize the foot so that there is no recruitment of the foot extensors.

-Example: a wheelbarrow full of cement that hits a 2x4, the wheelbarrow stops moving but the cement keeps going forward. Patients with functional hallux limitus have the same thing happening due to the great toe extensor weakness. Correct the weakness through the CSF Rib Pump technique, use 5th intercostal space for strain/counterstrain.

-The sign of this problem is a forward pigeon walk, the upper part of the body moving more forward than it should.

-Dananberg put electrodiagram leads in the bottom of the foot and measured the time that the foot is on each of the seven leads, with one more lead placed indiscriminately.

-This is a very common problem occurring in a high percentage of patients. Find in patients whose athletic performance has gone off. Correction with strain/counterstrain at the 5th intercostal space.

DR. GOODHEART'S RESEARCH TAPES

TAPE 120

-1-

-The nutrition of the nervous system is dependent upon spinal fluid flow. J.C. Stear, M.D. and F.D. Horney, D.V.M. at the University of Western Ontario withdrew the spinal fluid from pigs and mixed it with a blue latex powder, then replaced the spinal fluid mixture back into the spinal cord. The pigs were sacrificed at a later time. They found that after 12 hours or more the blue latex particles had proceeded down the nerve roots to the very terminal digital nerve fibers in the toes and feet of the pigs and other animals that were tested. This indicates that there is an axoplasmic flow of cerebrospinal fluid down the nerves. Evidence for Passage of Cerebrospinal Fluid Along Spinal Nerves, Stear and Horney, Canadian Medical Association Journal, Volume 98, #2, January 13, 1968.

-The implications of these experiments is that normal substances inherent in CSF, in addition, possibly toxins and viruses, are conveyed by the flow of CSF. When the number of nerves leaving the CNS and the spinal cord are considered, the flow of fluid necessary to carry the powder peripherally to the extent indicated by the findings suggests a considerable drainage of fluid from the subarachnoid space.

-To test the possibility that CSF flows along nerves, CSF and blue latex powder was introduced into the lumbar subarachnoid space of pigs and sheep. Nerves and other tissues were examined 4-21 days later. Particles were found in the brachial and lumbosacral plexii and their branches, the thoracic nerves, in the muscles supplied by these nerves, and in the integument. Results of these and other related experiments and the observations that the introduction of particles into the jugular vein reveal them only in the lung lead to the conclusion that there is a flow of CSF peripherally along the nerves."

-THE FABRIC OF THE MIND, Richard Berglan, neurosurgeon, Penguin Books. Pioneered research that neurons act as conduits for producing and transporting informational molecules.

-The emerging science of neuroendocrinology, as in the brain-pituitary link, is dependent upon hormones flowing within the nerve cells, the axonal flow. This was done by Hinsey, Wasylenki, Harris.

-Nordenstrom, the Swedish radiologist and researcher at the Karolinska Institute in Stockholm, Sweden, Biologically Closed Electric Circuits, Sweden Nordic Medical Publications, observed that "direct measurements of resistivity of blood vessel walls in dogs showed that the large blood vessels function as relatively insulating and electrically conducting cables. Blood flowing in vessels with electrically insulated walls constitute a conducting path in the conducting part in the plasma and an unconducting part in the blood cells. The blood vessels function as insulated electrical cables. Their contents of blood plasma conduct effectively inside of the relatively insulating vessel walls to join or link with the interstitial tissue fluid over the blood capillaries. Differences of electric potential, no matter if created normally or pathologically or artificially will create electrical fields throughout the body."

-The previously mentioned axonal flow suggests that hormones were sent by the brain to the peripheral organs through nerve fibers. It has been assumed for many years that the axonal flow was always down

(away from the brain). Within the last ten years it has become increasingly evident that hormones move up nerve fibers from body to brain. Many different experimental techniques noted that hormones injected into the eye was carried back to the brain, tracers injected into the tongue were carried back to the brain stem, and most remarkably, substances injected into the thigh muscles may be carried into the spinal cord. The best and most studied molecule among all the research materials was the nerve growth factor (made in the salivary glands).

-It is well understood that a downward brain-body communication link takes place in the autonomic nervous system which can then modulate the activity of lymphoid tissue (Bullock, 1985). In addition, however, an upward communication link from the body to the brain takes place via informational molecules produced in white blood cells that modulate the brain (Pert and Ruff, Weber and Reckenhouse, 1985). The differential between plasma and red cells that Nordenstrom talks about shows that the plasma is the conducting part and the red cells are the non-conducting part. The erythrocytes are therefore like a moveable matrix within the vessels which acts as a structural matrix. The walls of the vessels represent electrical resistivity at least 200-300% higher than the conducting blood vessel plasma and the surrounding interstitial tissues.

-Repeated testing of a muscle that causes weakness indicates the need for fatty acids, iron, or calcium pantothenate depending upon aerobic or anaerobic testing. If the repeated testing in the muscle does not respond to iron, pantothenic acid, fatty acids, or neurolymphatic activity, that this is the indication to use the BCEC Vascular Technique (Biological Closed Electric Circuit). This is a two-handed technique, one hand over a major blood vessel, i.e. iliac vessel in the groin, and the other hand over the peripheral point, i.e. the dorsalis pedis or posterior tibial, held for 60 seconds completely restored the muscle strength upon repeated testing. A longer holding of the vascular points may be needed for chronic, long standing diseases like post-polio syndrome. Useful in post-polio and stroke patients. This appears to be the cross-link between the lymphatic system in that performing the BCEC Vascular Technique resolves a lot of the receptor faults.

-There is both orthograde neuronal transport and retrograde neuronal transport (up and down the nerve). The combination of the Rib Pump Technique and the BCEC Vascular Technique aids in the maintenance of the orthograde and retrograde transport in the axons.

-Journal of Immunology, Vol. 135, No. 2, August 1989, Pert, Ruff, Weber, and Hercenum, spoke of neuropeptides and their receptors, the psychosomatic network. "A major conceptual shift in neuroscience has been wrought by the realization that brain function is modulated by numerous chemicals in addition to classical neurotransmitters. Many of these informational substances are neuropeptides originally studied as hormones, gut peptides, or growth factors. We now realize that their signal specificity resides in receptors distinct classes of recognition molecules rather than the close juxtaposition occurring at the synaptic pattern. Additionally, neuropeptide receptors occur on mobile cells of the immune system. Monocytes can chemotax to numerous neuropeptides mediated by distinct neural receptors found in the brain. Clearly the conceptual division between the sciences of immunology, endocrinology, psychology neuroscience is a historical artifact. The existence of a communicating network of neuropeptides and their receptors provide a link among the cellular

defense and repair mechanisms, glands, and brain. Roth and his colleagues have emphasized that neuropeptides and their receptors are highly conserved in their evolution. Opiate peptides such as endorphins, enkephalins, and insulin have been identified in unicellular organisms. Thus, neuropeptides have been a stable feature mediating intracellular communication throughout evolution in higher animals. There are unique anatomical situations to connect them as chemical mediators of the emotions. Assuming that their function as well as their structure is conserved in evolution, then even the most primitive organisms must utilize neuropeptides to bias behaviour towards those with the greatest survival value. The functional integration of the body cells through networks of neuropeptides and their receptors would be expected to be crucial to the health of the organism as a whole."

-Neuropeptides and their receptors thus join the brain, glands, and immune system in a network of communication between the brain and the body. The CSF flow mediated by the Rib Pump Technique and the BCEC Vascular Technique allows only the traditional connectionistic understanding of the nervous system that obviously allows also free axonal flow up and down the axon-neural complex, but the viscerosomatic aspect of chiropractic is thus further integrated and emphasized allowing the practice of chiropractic to fit the philosophy of chiropractic.

-This new concept of receptor activity has its own principle rule, the principle receptor specificity (Pert 1985, Schmitt 1984 and 1986). Pert: "The functions modified by informational substances reside in receptor activated cells rather than the information substances themselves. The dorsal horn of the spinal cord where neurons transmitting information from glands, skin, and peripheral organs often make their first synaptic connection with the central nervous system and it is enriched with virtually all of the neural peptide receptors. Another area rich in neuropeptide receptors is the periaqueduct gray region of the brain stem and a variety of other neurotransmitters like neurotensin, bombasin, bradykinin, vasoactive intestinal peptides, cholecystokinin, calcitonin, and substance P all have receptors throughout this brain area. The entire gastrointestinal tract is lined with neuropeptide containing cells and their receptors which share specificity with receptors in the brain. The human testis is a rich source of RNA for the opiate precursor melocortin, as is the pituitary gland. The site of neuropeptide storage in the brain lacks physical juxtaposition with the receptors, thus the classical closely juxtaposed synapse of the neurotransmitter acetylcholine and the receptor in skeletal muscle is not typical at all of the neuropeptides.

-The BCEC Vascular Technique uses a two handed contact over the arteries, i.e. iliac and dorsalis pedis, brachial and radial. GJG does not feel that this is polarity. A single hand contact does not perform that technique, but rather a two-handed contact. GJG feels that the BCEC Vascular Technique puts an internal or external range of motion into the limb that previously wasn't moving properly. The diagnosis is repeated muscle testing that produces muscle weakness that does not respond to the nutrients or NL. Hold the two artery contacts for 60 seconds. The muscle should now test strong with repeated muscle testing, and if there was any pain associated with testing the muscle, there is usually a reduction of the pain.

-Nordenstrom found that an electrical shock given to a patient caused a reduction in the corona of a breast tumor.

-Body is divided into compartments: head/neck, thoracic, abdominal, legs. There is enough blood to supply three of the four compartments. For example, after eating, the blood supply is in the abdomen for digestion and if you were to swim, the legs would cramp due to deficient blood supply.

-GJG describes taking blood pressure on the same patient several times and when the patient felt better, they attributed it to the taking of the blood pressure, thinking it was a treatment. Normally a patient should be able to tolerate 180 mm Hg with a blood pressure cuff around the calf; GJG had a patient who stated that his shoulder pain was improved while having the blood pressure cuff around his calf. This was puzzling to GJG. GJG noted that there was no strengthening or weakening of muscles following use of a blood pressure cuff.

-For example, you find a pectoralis major sternal (PMS) weak. Place a blood pressure cuff on the leg on the same side as the PMS weakness, pump the BP cuff to 140 mm Hg and keep the pressure for 45 seconds. This will negate the weakness of the PMS. You must test the muscle within one minute; longer than one minute and the response is no longer there. The muscle test is the object beam of a hologram and the blood pressure cuff test is the reference beam and imprints on the nervous system; the CSF flow rate will increase.

-For muscle weaknesses above the diaphragm the blood pressure cuff is placed on the same side leg and hold the systolic pressure at 140 for 45 seconds. For muscle weaknesses below the diaphragm place the BP cuff on the same side arm. Each muscle must be tested separately after pumping up the BP cuff, you cannot pump the BP cuff and test all the muscles. GJG feels that there is an augmentation of CSF flow along that particular nerve you are testing via the muscle test.

-GJG found that testing the right extensor hallucis for example would respond to the CSF Rib Pump Technique (TL ribs 5 and 6) and the muscle would also strengthen with the BP cuff placed on the right arm and held for 45 seconds at 140 mm Hg. In this case, the BP cuff treatment would overrule the CSF Rib Pump Technique. But, then testing the left extensor hallucis was weak and was not influenced by the BP cuff on the right side. Performing the Rib Pump Technique for the left extensor corrected it. There is an increase in spinal fluid pump reactions by either rib pump or by the BP cuff technique. They are both appropriate and not mutually exclusive.

-This is a way to regulate the flow of blood in the different compartments of the body. This blood flow has been disturbed in many patients and causes problems in the compartment that is affected. For example, if the head compartment is affected, there may be difficult vertigo or visual faults; thoracic compartment would affect heart and lung; abdomen compartment would affect digestion, etc.; and leg compartment would affect mobility, etc.

-American Journal of Physiology, Vol. 217, No. 2, August 1969, DIFFERENTIAL REGULATION OF BLOOD FLOW TO RED AND WHITE MUSCLE IN SLEEP AND DEFENSE BEHAVIOR. They used rubidium, an isotope which would be picked up by a scanner. Rubidium, like potassium, will rapidly distribute itself in the intracellular compartment of the tissue with the exception of the central nervous system, and remains at a constant concentration for up to 2 minutes. Using a geiger counter, they found where the rubidium flowed. The flow through the red and white fibers

was equal. When an electrode was placed into the hypothalamus of the animal and the animal allowed to recover from the surgery, they now had a way to activate the fright, fight or flee system, and only performed these tests during rapid eye movement (REM) sleep. The heart and eye muscles are the most red, and the accessory muscles of respiration and the diaphragm are the most white. They found that during REM sleep the circulation through the red and white muscles was equal. When they stimulated the hypothalamic receptor to induce the fright, fight or flee mechanism, even though in REM sleep, there was a 280% increase through the white muscle fibers and only a 20% increase in the red muscle fibers. There is a definite difference in the circulation to individual muscles producing a big imbalance in the red and white muscle fibers circulation. "The distribution of blood flow to representative red and white limb, respiratory and extraocular muscles and myocardium was measured in chronically prepared, unanesthetized cats in the rapid eye movement phase of sleep, and in the defense reaction elicited by hypothalamic stimulation. The fraction of the cardiac output (fractional flow) to the different muscles was measured by the isotope dilution method using rubidium as the indicator. In REM sleep, the fractional flow distributed to red and extraocular muscles fell to 30% of the control values without changes in the fractional flow to either white respiratory muscles or the myocardium. In the defense reaction the fractional flow to the white and respiratory muscle and myocardium increased 280% over the control without changes in the fractional flow to the red muscles indicating a disproportionate rise in white muscle flow in this behavior. These findings indicate that the vessels of red and white limb muscles are separately engaged in different behavior and suggest a separate mechanism regulating blood flow to each type of muscle."

-When the normal regulation of the flow of blood in the compartments of the body is interfered with, chronic illness takes place.

-The nutritional component for the Blood Pressure Cuff Technique is the electron poisoning complex based on James Persing Isaacs theory: Electron-Plus (NutriWest), E-Poise (Standard Process Labs), or EBA (NutriDyn). Availability of electrons is essential for mitochondrial activity. Mitochondrial activity disparity is evident in the red/white muscle problems. May also be a need for choline in these patients.

-Coenzyme Q (CoQ) (quinones): CoQ10 (ubiquinone) is formed from breakdown of food and metabolism through the liver. CoQ10 material is not contained in all foods, but the body can manipulate other materials in order to make the CoQ10 in the liver. This was a source of conjecture in some scientists as to why the liver system for CoQ10 splicing was not foolproof. This function deteriorates with age. As we age, we can utilize the CoQ10 from food, but are unable to manufacture it from other forms of CoQ10. The aging organism needs more CoQ10 and this produces the deficiency of CoQ10. The electron poisoning materials augment the CoQ10.

-All preganglionic and some postganglionic fibers require choline. When the stress response is present, there is an increased demand for choline. 1984 Research Manual describes the chemical nature of the transmitter at the neural junctions outside of the CNS at the neuromuscular junction, release of acetylcholine by motor neuron terminals stimulate the endplate membranes of the muscle fibers. Acetylcholine is released at all autonomic ganglia by the preganglionic neurons and is the transmitter at all parasympathetic cholinergic and some sympathetic adrenergic nerve junctions. For the

rest of the sympathetic junctions the transmitter is noradrenalin. Therefore all preganglionic neurons are both adrenergic and cholinergic systems require acetylcholine and all postganglionic neurons are the cholinergic system require choline. Even some of the postganglionic adrenergic neurons use acetylcholine. The body is prejudiced towards the eat and get fat side of the nervous system, three times as much choline as adrenalin is necessary. Although a lack of acetylcholine can affect the preganglionic function of the adrenergic system, thereby stimulating the fight or flee, slim and trim, can't gain weight side of the picture. Most people have trouble losing weight and are lazy rather than energetic.

-1990-1991 Research Manual page 81: Adrenal Challenge Technique: The sartorius/gracilis/posterior tibial are all strong in the clear and not a 51%er. Inducing pain (pinching) causes selective weakening of the adrenal related muscles only. (See this reaction often in the success syndrome/TL to sacroiliac joints weakens only adrenal related muscles.) Pinching induced weakness is negated by TL to adrenal NL. Test pituitary tissue on the tongue: if it negates the weakness from the pain induced adrenal muscle weakness, the problem is in the pituitary and you need to check the set points; if there is no effect on the weak muscle, check adrenal nutrients; if pituitary tissue weakens a previously strong adrenal muscle, the problem is diminished adrenals, check adrenal nutrients. Adrenal nutrients to check: Drenamin, Whole Adrenal, ascorbic acid, pantothenic acid, choline, alkaline ash minerals. When adrenal patients weaken on adrenal tissue, they require choline. Walter Schmitt contribution.

-MIRACLE NUTRIENT COENZYME Q10, Bantam Book. Reviews the concepts of CoQ10, pages 23-25.

-If treating muscles in the usual fashion fails, you can check for the Rib Pump Technique, the BCEC Vascular Technique, and the Blood Pressure Cuff Technique, especially your more difficult patients.

-William Maykel, D.C. has had an article about applied kinesiology published in a prestigious law journal.

-THE SCIENCE TIMES from the New York Times on the key signaling material that many cells use, nitrous oxide. Blood vessels, macrophages, and the tripeptide glutathione can produce nitrous oxide. Snyder: "Nitrous oxide acts as a neurotransmitter passing messages between the brain cells, but it is unlike any neurotransmitter ever found before. All of the others are stored within little bags within the cells and released when needed. Nitrous oxide in contrast is created only when needed. In addition, Snyder found that nerve cells sometimes release clouds of nitrous oxide that they use to kill other nerve cells, but the cells making nitrous oxide themselves mysteriously are protected from the noxious gas. Cells treated with methylarginine did not release the noxious gas that kills other cells, so there may be a basis for the use of arginine in difficult stroke patients. For a decade, investigators have known that the real damage from strokes occurs after the initial event. When the blood vessel that supplies the brain is blocked, the initial blockage starts as a small group of cells which quickly died, then nerve cells in the surrounding area ten times the size of the original cell death begin to react. They release glutamic acid, a chemical that stimulates other cells to unleash a cloud of nitric oxide. The nitric oxide then kills all of the cells in that area, except for those cells treated with N-methylarginine, a chemical that stops the cells from making the nitrous oxide and prevented those cells from killing their neighbor.