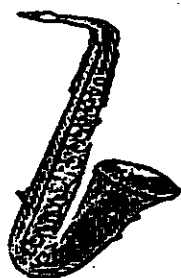
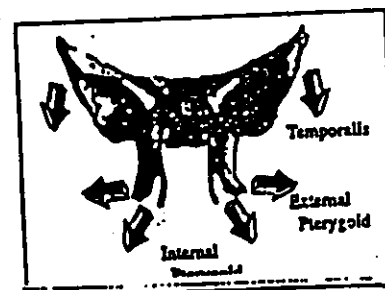
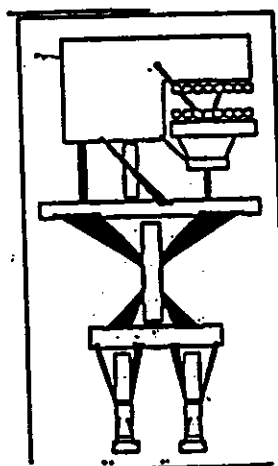


INTERNATIONAL COLLEGE OF APPLIED  
KINESIOLOGY  
1999 ANNUAL MEETING  
JUNE 17-20, 1999



DURAL TORQUE AND MUSCLE LINKAGE  
TECHNIQUE



GEORGE J. GOODHEART, D.C., D.L.B.A.K.  
RESEARCH DIRECTOR, ICAK

## DURAL TORQUE AND MUSCLE LINKAGE

George J. Goodheart, D.C.

The broader aspects of dural torque was discussed in the AK Sports Symposium, in Los Angeles in February 1999. Copies of this presentation have been mailed to all ICAK members, and can be reviewed at your leisure. The present presentation is a continuity presentation of newly discovered muscle linkage patterns. These muscle linkage patterns were found by analysis of passive range of motion (ROM) faults found in horizontal, sitting and vertical positions. Some ROM problems exist only in the supine position, some problems persist in the sitting position, some problems exist only in the vertical weight bearing mode. Diagnosis is simple and quick, correction is equally simple, quick and easily applied by the motivated practitioner without disturbing previous treatment protocols. The diagnostic value system so discovered is a widespread but hidden myofascial gelosis pattern found at any age. Previously undiagnosed cranial fault interference with cerebral spinal fluid flow is postulated as a primary aspect or cause of muscle linkage faults. These muscle linkage faults are easily found, easily and quickly treated, and respond to simple measures of AK structural correction, manual tapping or percussion, and appropriate nutrition. A key diagnostic factor especially in cranial and sacral faults is the presence of pain on firm pressure along the lambdoidal suture, and in sphenobasilar faults pain along the sphenoidal sutures and the body of the sphenoid, as well as frontal bone and maxillary arch pain. Sacral faults, in this regard, present themselves with pain on deep palpation of the left and right SI joints, as well as at the sacral coccygeal angle. Naturally, specific correction of category and sacral problems have already been accomplished, but deep palpation pain still persists. The muscle linkages will be described and demonstrated. Methods of correction and diagnosis will be demonstrated. The unique pattern of deltoid weakness, both on the right and the left will be shown, and their influence on trapezius suboccipital muscles will be shown and demonstrated. The obvious influence of the pterygoid muscles of the jaw, as well as other jaw muscles will be shown to have an influence on sphenobasilar problems, as well as the obvious disturbance in the TMJ itself. These sets of disturbances have been so obscure as to have escaped recognition, but are the common underlying cause of many difficult problem patients. Simple exercises will be demonstrated that allow continuity for correction maintenance.

## INTRODUCTION

G. J. GOODHEART, D.C., D.I.B.A.K.

The following quotes are from " A Muscular Imbalance Approach to Cranial Faults" by my good friend and colleague, David Leaf, D.C., D.I.B.A.K. . He parallels my own views which have been held vis-a-vis cranial, TMJ and head and neck muscles dating from research tape #3 and AK Research manual 1972. These observations from David Leaf's fine paper, ICAK Vol 1, 1997-98 annual meeting proceedings.

### "ABSTRACT

The teaching of cranial faults has been an integral part of AK courses since 1969. From the beginning, the cause of most cranial faults has been credited to alterations in cerebrospinal fluid production and other basically osteopathic concepts. I propose that imbalances in the major muscles of the skull are the cause of most cranial faults encountered in our offices.

### INTRODUCTION

The concept of the head and neck being a closed kinematic chain needs reevaluation. A chronic dropping of the arch can lead to overcontraction of the pterygoid muscles on the same side. Pelvic imbalances can easily be shown to relate to pterygoid hypertonicity. The body is a closed kinematic chain and correction of cranial faults requires an evaluation of the total structure for the cause of the muscular imbalances effecting the cranium. Likewise, imbalances in the TMJ can be related to shoulder and gait imbalances."

As mentioned earlier, cranial faults are corrected by AK methods, and we will show an even better correction than previously available by recently developed technic based not only on muscle action, and diagnosis, but fascial action and diagnosis based on the newly discovered "pincer palpation" technic. The "pincer palpation", a diagnostic technic of Dr. Janet Travell, form the basis for the new technic for fascial involvement and augments cranial fault diagnosis and correction by integrating muscle and fascia.

The following material is the continuation from David Leaf's article:

### "DISCUSSION

In general, the major muscles that are involved in this creation of cranial bone rotation, flexion and or extension are the upper

trapezius, sternocleidomastoideus, masseter, temporalis, internal and external pterygoids and the muscles of the tongue.

I feel that the major forces acting on the skull are the actions of swallowing, chewing, breathing and the proper inhibition and facilitation of the sternocleidomastoideus and the upper trapezius that occurs while walking.

Each major cranial fault that is dealt with can be created by imbalances in these muscles. The examination of the patient can be done by testing for the muscular imbalance or by testing for the cranial fault and then correlating the findings. It has amazed me that many feel that the one time correction or freeing of the locked position of the cranial bone in the office will permanently correct the cranial imbalance. While this does change many parameters including reduction in pain, increase in strength in related weak muscles, changes in vision, hearing sensitivity and range of motion, the symptoms generally return over a period of hours or days depending upon the underlying muscular imbalance that is at the root of the problem.

With the exception of direct trauma to the skull, most cranial faults will be found related to imbalances in these muscles.

Correction of the cranial faults requires adequate correction of the underlying muscular imbalances. This can require correction of structural imbalances ranging from the ankle/navicular area to the pelvis to upper cervical imbalances.

Any imbalance that would cause contraction of the muscles of mastication from improper occlusion to allergic responses can initiate a cranial fault.

The problem is to diagnose which cranial fault is present. Find the related muscular imbalance and then find out what is causing the muscular imbalance. The causative factor can vary from ankle pronation, gait imbalances, shoulder strains, postural problems, poor habits, allergic-sensitive reactions, dental imbalances or stress. The patient must be involved in this detective work to unearth the causative factors."

A newly discovered fifth mastication muscle - the sphenomandibularis muscle- was previously thought to be a part of

the temporalis muscle. This muscle information came from the University of Maryland Dental School, by Hack et al. They also discovered a tissue bridge connecting the dura of the spinal cord and the rectus capitis posterior muscle(RCPM).

## "SPHENO-BASILAR FAULTS

The major muscle attaching to the posterior of the skull is the Upper Trapezius. Imbalances in the relative strength of the upper trapezius will effect head balance and due to the leverage applied to the occipital bone cause it to torque at the sphenobasilar junction in the case of unilateral imbalance or to be held abnormally in flexion or extension. General causes of weakness of the upper trapezius can include the normal five factor imbalances and structural inhibition patterns due to underlying causes like a short leg, pelvic subluxation, plantar muscle hypertonicity, etc. The upper trapezius may be hypertonic due to a weakness of a related muscle like the latissimus dorsi or a shoulder problem. The upper trapezius may also fail to inhibit in the gait pattern requiring correction.

The muscles that attach to the sphenoid include the Temporalis at the greater wing and the Internal and External Pterygoids. Unilateral contraction of these muscles will cause a tilting of the sphenoid as evidenced by an alteration in the height of the eye in the socket. The familiar recessed eye will be open on the side of the hypertonicity of the pterygoids or more rarely the temporalis. It is my opinion that it is the release of this hypertonicity that results in the normalization of the relative height of the eye in the socket not the forces applied to the pterygoid plates or the hamulus. If the muscle imbalance is not corrected, the overcontraction of the muscle will pull the sphenoid down on that side recreating the imbalance in the eyes. The causes of overcontraction of these muscles can include subluxation of the navicular, innominate or the atlas, spondylogenic subluxations at any level of the spine, premature contact of any tooth, alterations in normal mastication, poor habits, or a strain-counterstrain imbalance of the muscle. Adequate correction of the cause of the muscular imbalance coupled with the regular correction of the cranial fault, with patient monitoring to determine the potential cause of reoccurrence of the fault leads to complete resolution of the problem." Pincer palpation diagnosis is critical. GJG

## CRANIAL SACRAL FASCIAL RELATIONSHIP

"The approach to the subject of applied anatomy and physiology of the fasciae can be made from two view points; one views the fascia in a limited descriptive anatomic sense. The other considers fascia as a dynamic system of the body and includes all disciplines which can add to our knowledge of the role of this tissue in health and disease.

In the former, the descriptive anatomy, all physicians are familiar with the fascial planes envelopes, reflections and spaces found in the body. The continuity of the sheaths which unite and at the same time separate adjacent organs from each other, can be traced in any given region from organ to organ and from one area to another. For example, the investing fascia of the scaleni muscles is continuous with the fascias of adjacent muscles and cervical viscera and is intimately associated with the sheaths of the cervical nerves forming the cervical and thoracic plexi. The important relations of this fascia to the pleural membranes and with the mediastinal visceral fascias is well known.

Most importantly, and also familiar are the reflections and the continuity of the abdominal fascias; their important relationships as avenues for the nerves and blood and lymph vessels; and physiological imbalances and pathological affects resultant upon derangement of these associations. Examples of these fascial abnormalities are observed in Glenard's disease with its effect on visceral tone and function, on blood supply and drainage and on respiration as noted in Goodheart Research Manual(1982 Edition, pages 93-95). Strangulation and obstructions in the intestinal tract resulting from abnormalities associated with the ligament of Treitz, adhesions or with the superior mesenteric artery are also common knowledge. Quoting from "The Ileo-cecal Valve Syndrome" by Goodheart - "The mesentery which supports the ileo-cecal valve contributes more to the support of the chiropractic physician and his family than it does to the patient's poor viscera. In other words, the stretching of the mesentery by a variety of causes, overeating at

holidays, overwork producing gravity fatigue, emotional upsets disturbing vagus and lower dorsal sympathetic balance, to name a few, causes more pain in more places than can readily be imagined." (Collected Book of Published Articles and Reprints, Goodheart , 1992)

When we consider fascia in its broad sense, as a morphologic and dynamic system of the body, we must include not only the gross sheaths and reflections around and between organs, but also that vast amount of tissue which surrounds every living cell of the body, and that fluid which fills joint cavities serous spaces. The prevalence and enormity of this fascial tissue can only be appreciated if we consider that the normal contour of the body will be maintained by the connective tissue after all other tissues have been removed. As a natural corollary, it would appear that any tissue with this intimate relationship to the body parenchyma must, of necessity, retain a general state of physiological adaptation. It must be capable of maintaining a degree of plasticity commensurate with continually fluctuating metabolic conditions. In this sense, the general plasticity of connective tissue fascia proper presents an ideal environment for the growth and functioning of other more specialized tissues."

This is excerpted from "Fasciae - Applied Anatomy and Physiology". George E. Snyder, B.S., M.S., PhD. A A. O. Yearbook, 1956, pages 65-71.

As we have said above, there must a degree of plasticity commensurate with continually functioning metabolic conditions. The beginning of a myofascial gelosis, or a generalized thickening in the fascia, can come from the beginning of the lymph vessels surrounding the fascial connective cells. "Due to abnormalities of organ position, pressure, trauma, infections, congestion, inflammation and so forth, the lymph may fail to find the small vessels to lead it eventually to the thoracic duct. Because of this obstruction some of the lymph under backward pressure oozes through the surrounding membranes and tissues and mesentery, and flows over these structures. Much of the displaced lymph finds it way back into the lymph channels through the process of osmosis without forming

myofascial gelosis or minute adhesions. Certain type of cells are held in the lymphatic channels much longer than others. For example, proteins pass through lymph walls with great difficulties, while chlorides pass very readily." In the case of the proteins; fibrinogen, globulin, and albumin, the fibrinogen seems to be most involved in the myofascial gelosis activity. The fibrinogen becomes deposited as a cellular structure in the displaced lymph and a almost fibrous myofascial gelosis may occur. Reflex activity from mesenteric tissues can affect muscular patterns in the cranial sacral area, as well the general body structure. "Pincer palpation", along with testing of abdominal muscles over the designated areas in the accompanying charts of the ascending, transverse and sigmoid colon yields interesting information and on percussion of the designated areas, remarkable changes in muscle function, and range of motion. This will be demonstrated.

Some of the material above, in quotes, is excerpted from "The Science of Manipulative Surgery" by Stephen L. Fielder, BA, ND, MD, Ph.D., and W. H. Pyott, LLB., D.C., ND. Carr Printing Company, Bountiful, Utah 1953.

The charts of the PATHOLOGY AND REFLEX AREAS OF THE LARGE BOWEL are from "The Science of Manipulative Surgery", page 127, and a later adaptation by Alan Beardall, DC, DIBAK. A later copy of the Fielder Pyott chart appeared in "SOFT TISSUE MANIPULATION" by Leon Chaitto, ND, DO, Thorsons, 1980, page 188.

The numbered muscle designations of the colon chart represent my good friend, the late Dr. Alan Beardall's contribution. The technic described herein, represents my own contribution to the utilization of this information in modern A.K. practice.

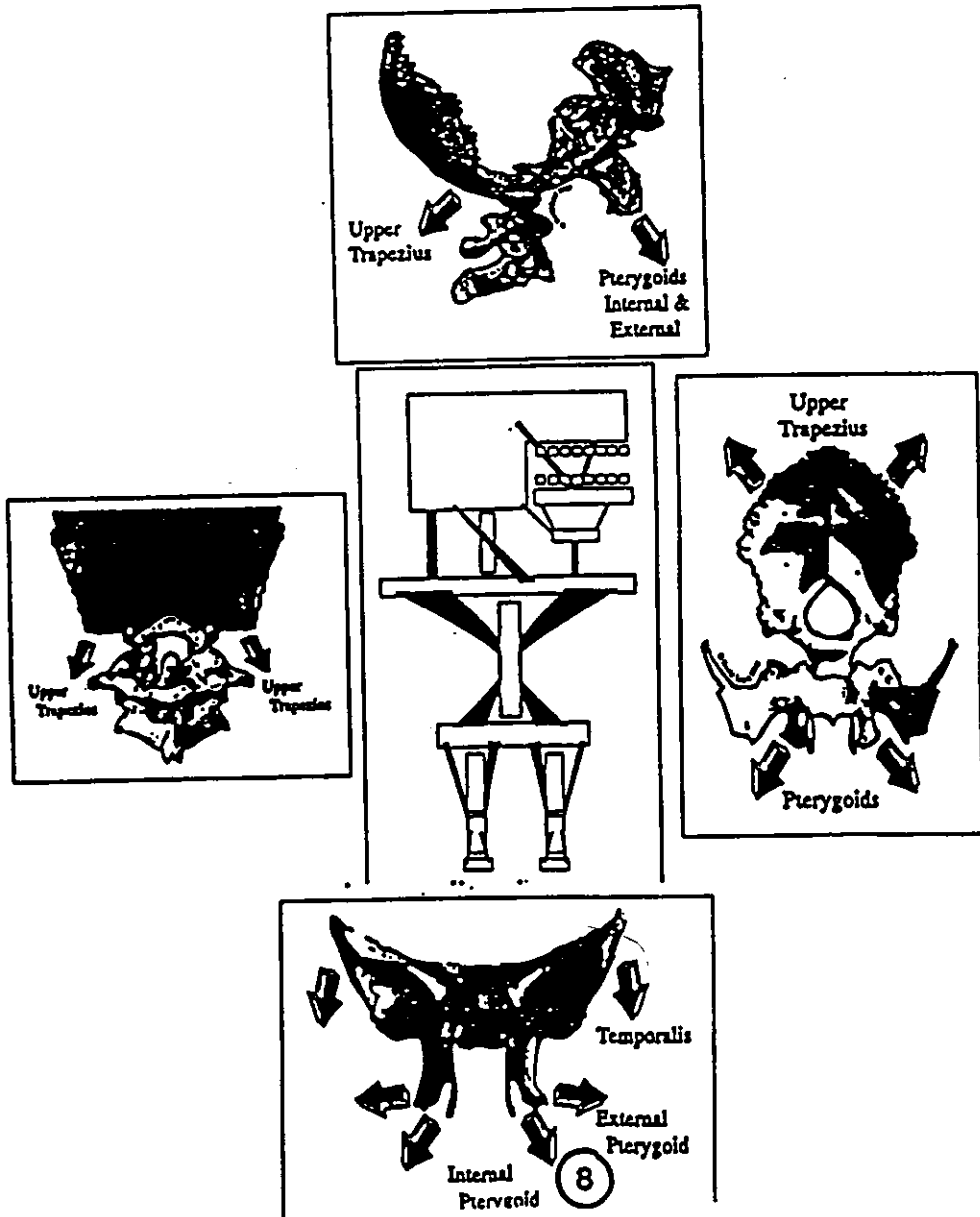
George J. Goodheart, D.C., DIBAK



"CONCLUSION

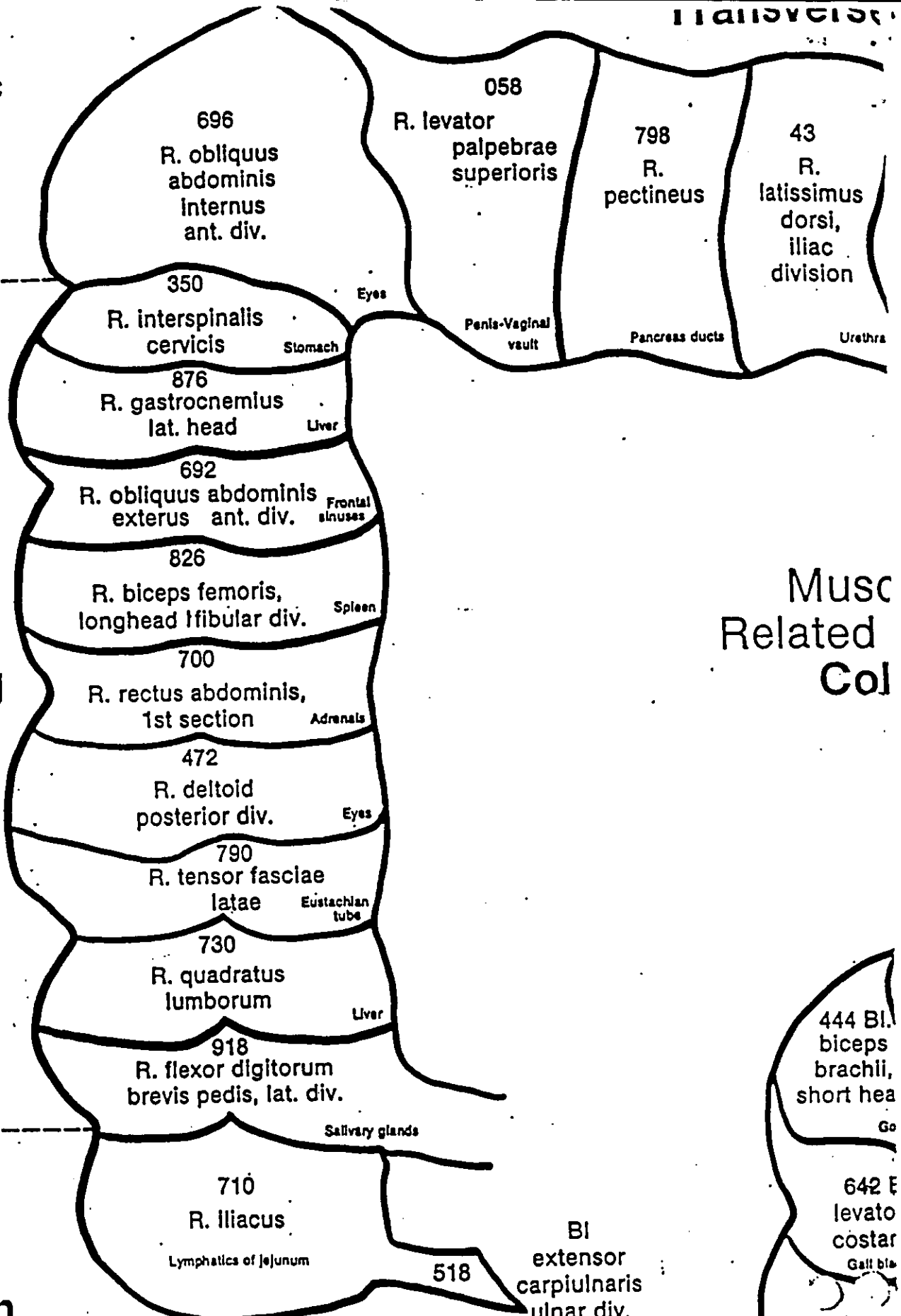
This paper is presented as an attempt to expand the conceptual concepts of the underlying causes of most cranial faults. This approach in teaching has had great acceptance in classes that have been taught with dentists and medical doctors. It has allowed an increase in the interdisciplinary referrals between professions for patients with cranial/TMJ problems."

Clinical experience endorses the new pincer palpation technic, and subsequent treatment by hand percussion, or percussor machine of the involved myofascial gelosis patterns. Hither to previously unobserved mesenteric fascial involvement via myofascial gelosis acitivity has yielded new and clinically significant functional ability to the muscles involved in cranial fault lesions, and appropriate treatment permits immediate and long time correction. GJG



Hepatic Flexure

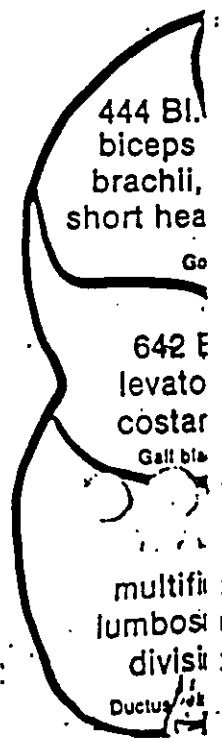
Transverse



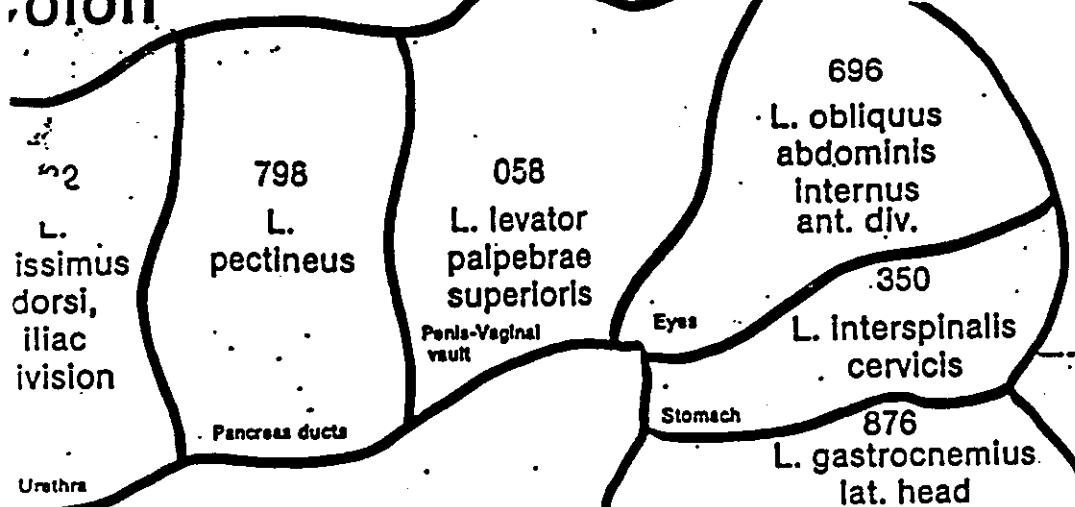
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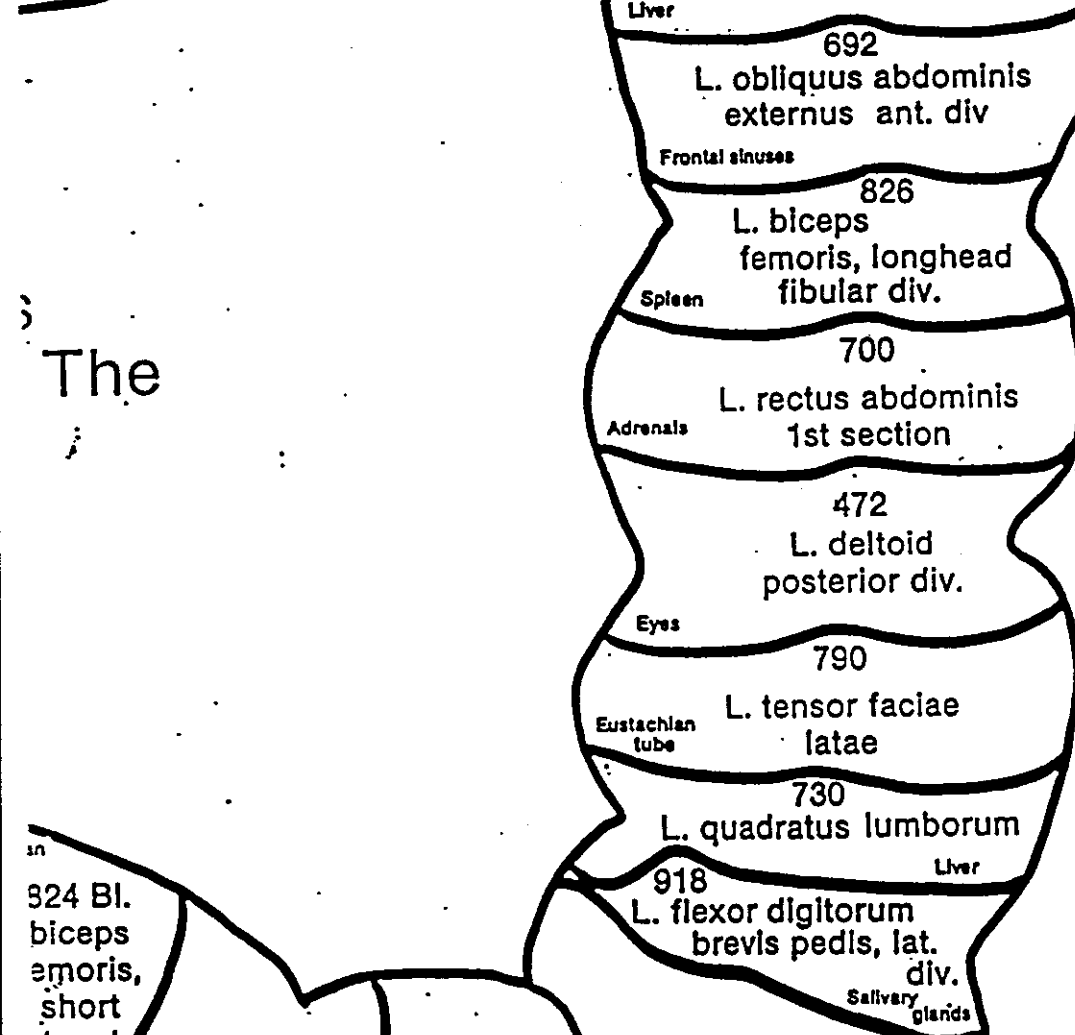
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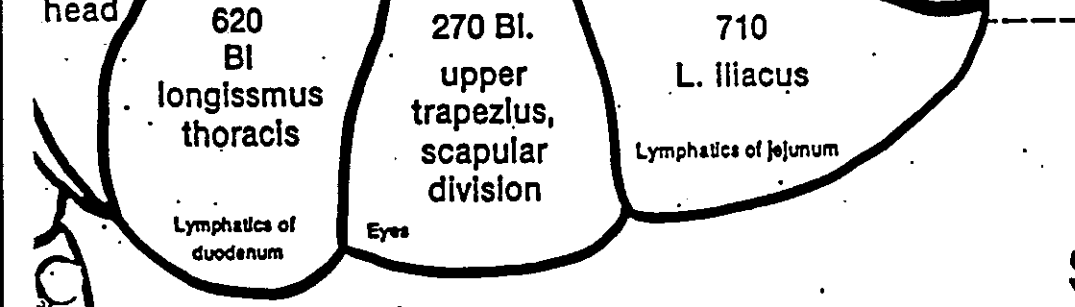
# Splenic Flexure



# Descending Colon

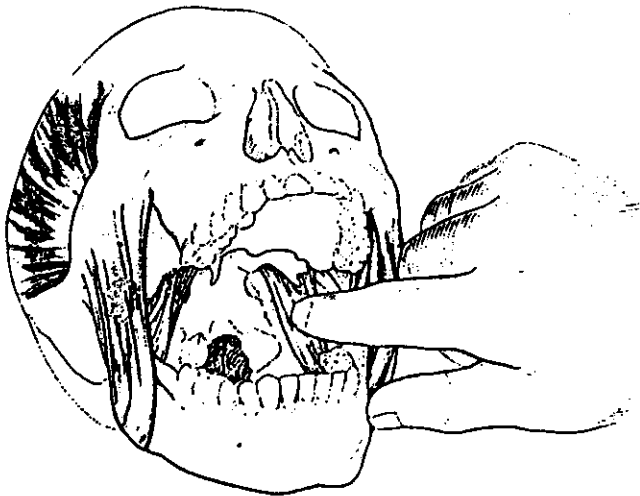


# Sigmoid

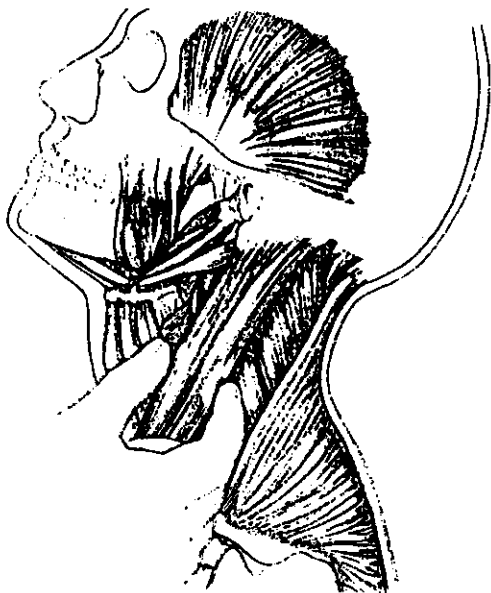




Palpation of the lateral pterygoid by asking the patient to deviate to the direction where the palpation is to be performed to allow insertion of the index finger in the area of the neck of the condyle and capsular ligament where the muscle is inserted may express the dysfunction of this muscle.



Palpation of the medial pterygoid either intra-orally as we see in the illustration or extra-orally at the angle of the mandible where this muscle is inserted may express the dysfunction of this muscle.



The other muscles around the neck knowing their anatomical outlines such as the sternocleidomastoid are palpated and the possible dysfunction of these muscles may be expressed.

## OCCLUSION and FUNCTION

Peter A. Neff, D.D.S.

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**MYOFASCIAL GELOSIS; A "STAND ALONE" CLINICAL ENTITY  
THAT MAY ACCOMPANY SUBLUXATIVE, FIXATIVE AND  
OTHER MUSCULO-SKELETAL FAULTS.**

**GEORGE J. GOODHEART, D.C., DIBAK**

The monumental work of my friend, Janet Travell, M.D., is well known. Reference to her published text, films and tapes, are available through education and publication venues. This material on myofascial gelosis is a further AK development of her original and most recent publication, and represents further therapeutic utilization of some her observations.

Previous AK manuals have delineated the "fascial flush" technic with folic acid and B12 for a "spray and stretch" type of muscle trigger point activity. The subsequent use of a hand held ice cup moving contact on the skin followed her discontinuation of the spray technic(ecological reasons). Previous AK manuals describe the strain and counterstrain technic of Lawrence Jones, D.O., and the muscle weakening following muscle contraction associated with this technic. Experience with the Robert Fulford, D.O. method of treatment using the percussion technic with the muscle under stretch shows the benefit of this technic in decreasing pain and increased ROM.

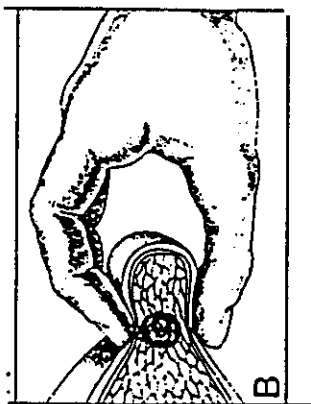
The following discussion represents a new concept of the fascial involvement and the identification of an AK method of diagnosis of a "stand alone" clinical entity in "myofascial gelosis." Previously we have identified a Travell type of myofascial "trigger point" by the response of the muscle involved to a rapid stretch, and subsequent testing for weakness, this still holds true. The new use of the "pincer palpation" of the muscle belly, Travell described in her "Myofascial Pain and Dysfunction Trigger Point Manual", Williams and Wilkins, 1991, chapter 3, page 99 (See illustration 3.6), represents a valuable AK breakthrough.

The remarkable muscle test weakness of a previously strong or previously treated muscle is astonishing even to the most experienced Applied Kinesiologist. Moderate pressure between the thumb and index finger applied to the muscle belly with a relatively gentle touch produces, when used diagnostically, remarkable weakness of the involved muscle. The pressure to the belly of the muscle may be applied gently during testing or immediately preceding testing in the usual fashion. This is a new use of the "pincer palpation" and has immediate clinical application and

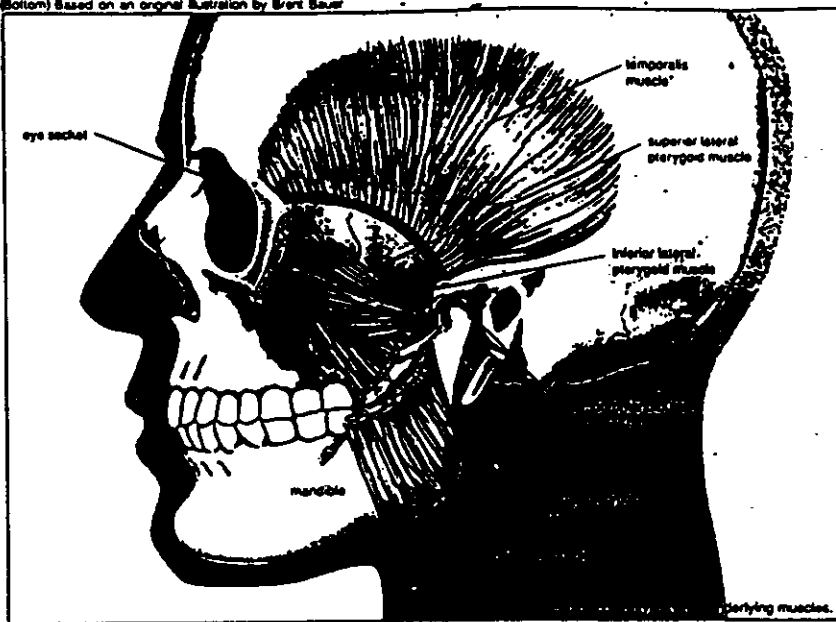
subsequent identification for nutritional support of the involved muscle. It has not been previously described, but is now recognized as a common "stand alone" clinical entity, or an identifiable clinical entity accompanying both vertebral and joint fixations, and subluxations, and other musculo-skeletal faults.

The following material is an updated resume of the original material presented first at the Orlando Regional ICAK meeting, and is now an integral part of the new 1997-98 AK Research Manual, recently published. The recent discovery of a fascial connective tissue bridge between the R.C.P.M. muscle and the PAO membrane spinal dura complex, ("Anatomic Relation Between the Rectus Capitis Posterior Minor Muscle and the Dura Mater", University of Maryland Dental School, Hack et al ) and subsequent further discovery of fascial connective tissue bridging has profound therapeutic implications in this most important area of the spine.

The nutritional support for a myofascial gelosis continues to be folic acid and B12, along with occasional use of glycine. The clinically identifiable "stand alone" myofascial gelosis pattern diagnosed by the so called "pincer " palpation or pressure seems at this stage of development to also require a form of wheat germ oil source of E, or the use of a source of octocosanol, an analog of the source of E that some people require. Further research may show a fatty acid requirement along with other nutrient sources described by Rudin in the 1994-94 Yearbook of Nutritional Medicine.



(Bottom) Based on an original illustration by Brent Bauer



(Right) Until 1996 anatomists were aware of just four chewing muscles: the temporalis, masseter, lateral pterygoid, and medial pterygoid. (Below) A newly discovered fifth mastication muscle—the sphenomandibular muscle—was previously thought to be a part of the temporalis muscle.

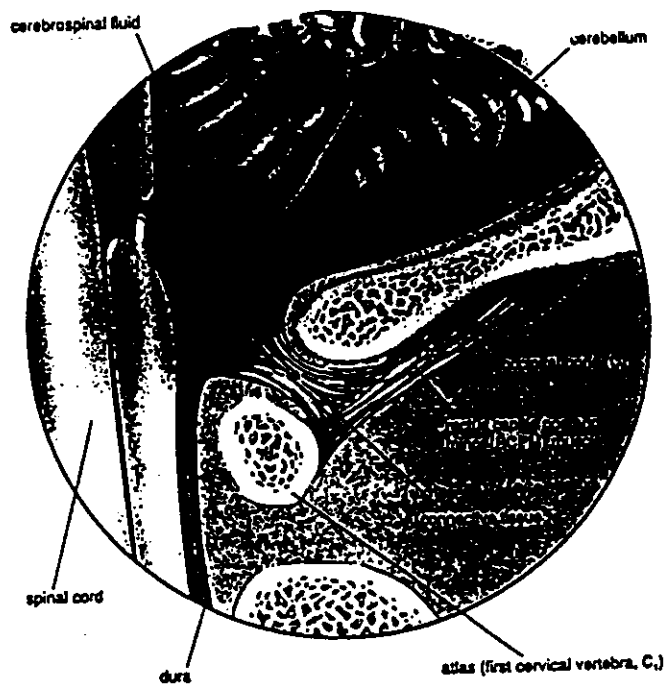
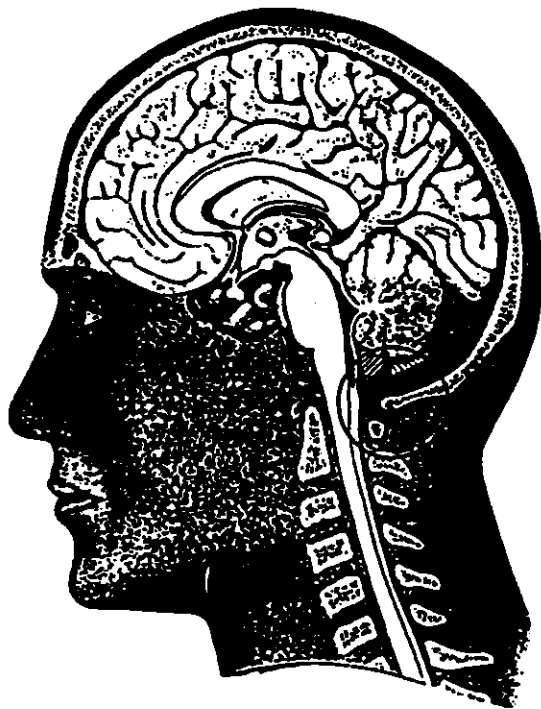
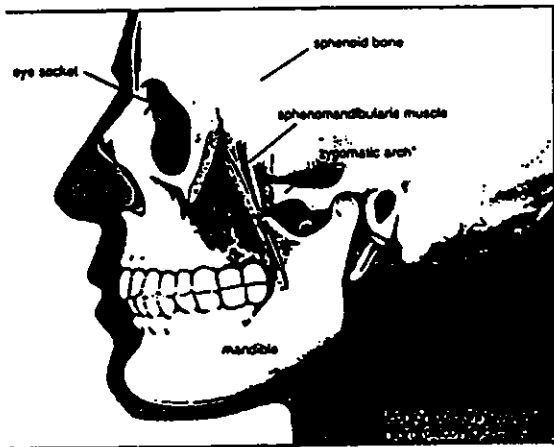


Illustration revealing a newly discovered tissue bridge (a) connecting the dura, the membranous covering of the brain and spinal cord (b), to the rectus capitis posterior minor (RCPM) muscle (c) at the base of the skull between the atlas (C<sub>1</sub>) (d) and occipital bone (C<sub>0</sub>) (e). (Above) Cadaver specimen showing the same structures.

DEFINITIONS COURTESY OF MYOFASCIAL PAIN AND DYSFUNCTION ,  
 THE TRIGGER POINT MANUALS  
 JANET G. TRAVELL, M.D. & DAVID G. SIMONS, M.D.

The work of Janet Travell, M.D., the senior author of the above manuals forms the basis for our observations on the Applied Kinesiology use of the myofascial gelosis term. Dr. Janet Travell, a good and loyal friend, who has recently passed away said as her observation of the concepts of Applied Kinesiology at the 25th annual Rowe Smith Memorial lecture in San Antonio, Texas, where we were on the program together, "I see, Dr. Goodheart, what you have done. I see Applied Kinesiology is a new method of diagnosis." Her statement was true, and is true, and continues to be true. The diagnostic value, therefore requires specific and precise definitions.

**"Myofascial Syndrome;** Pain and/or autonomic phenomena referred from active myofascial trigger points with associated dysfunction. The specific muscle or muscle group that causes the symptoms should be identified.

**Myofascial Trigger Point;** A hyperirritable spot, usually within a taut band of skeletal muscle or in the muscle's fascia, that is painful on compression and that can give rise to characteristic referred pain, tenderness, and autonomic phenomena. A myofascial trigger point is to be distinguished from cutaneous, ligamentous, periosteal and nonmuscular fascial trigger points, Types include active, latent, primary, associated, satellite and secondary.

**Myofascitis;** Pain, tenderness, other referred phenomena, and the dysfunction attributed to myofascial trigger points.

**Myogelosis;** Circumscribed firmness and tenderness to palpation in a muscle or muscles. The name is derived from the concept that the regions of circumscribed firmness were due to localized gelling of muscle proteins. Focal tenderness and palpable taut muscle fibers are also characteristic of myofascial trigger points. Most patients diagnosed as having myogelosis also would be diagnosed as having myofascial trigger points.

**Myotatic Unit;** A group of agonist and antagonist muscles, which function together as a unit because they share common spinal-reflex responses. The agonist muscles may act in series, or in parallel."



"The first author has, on many occasions, inactivated quadratus lumborum myofascial gelosis by striking the area of tenderness with a percussion hammer, using approximately the same force ordinarily used in testing a tendon jerk. Eight to ten taps are administered to each tender area at the rate of no more than one per second. It is important that the patient is positioned so that the muscle is relaxed, but has no slack. This can be done with the patient seated, and leaning sideways away from the muscle to be stretched, while the body weight is supported on an armrest so that the muscle is not contracting against gravity. This apparently simple technique can be remarkably effective.

Postisometric relaxation with reflex augmentation is especially effective for this muscle. The procedure, described and illustrated by Lewitt, has the patient stand with feet apart, bending sideways away from the muscle to be released. The patient looks up with the eyes only, and takes in a full slow breath. During inhalation, the quadratus lumborum automatically contracts, slightly raising the trunk. Then while breathing out slowly and looking down, the patient concentrates on relaxing the tight muscles in the waist area as the pull of gravity increases the degree of side bending by gently taking up the slack."

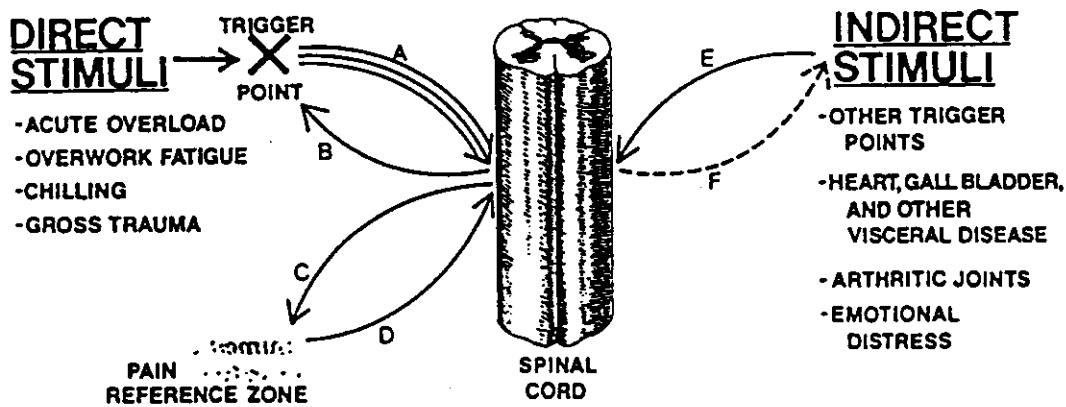


Figure 2.1. The apparent relation of the trigger point (X) to factors that clinically can activate it and to its pain reference zone. The triple arrows (A) from the trigger point to the spinal cord represent the multiplicity of effects originating at the trigger point. The arrow returning to the trigger point (B) completes a feedback loop that is evidenced by the self-sustaining nature of many trigger points. The long arrow (C) to the pain reference zone represents the appearance of referred pain in neurologically distant sites that may be several segments removed from the trigger point. Arrow D indicates the influence on the trigger point of the vapocoolant-stretch procedure applied to the reference zone. Arrow E signifies the activating effect of indirect stimuli on the trigger point; dashed arrow F denotes effects of TPs on visceral function (After Travell,<sup>260</sup> Fig. 1).

## MYOFASCIAL GELOSIS PERCUSSION TECHNIC

Dr. Robert Fulford, a D.O. of great reputation, developed the use of a percussive device to assist in structural correction. Dr. Janet Travell spoke of percussion at one Hz (1 tap per second) as an excellent method to normalize the apparent quadratus lumborum trigger point abnormalities. As always, diagnosis of a problem's cause is more important than palliatory temporary relief of the problem by physiotherapy means. Diagnosis of myofascial gelosis is based on the indisputable fact that stretching a muscle should not weaken it; failure of a muscle to fit this parameter requires "fascial flushing" of a Rolfing type of technic, or better still, momentary use of the Foredom Percussor popularized by Dr. Robert Fulford. This quickly and efficiently reverses and with appropriate strain and counterstrain technic of the opposite muscle by percussive use, as well, permanently balances the primary muscles response. Diaphragm exercises also help to maintain response.

As noted in previous research manual discussion, Folic Acid and B12 are used to augment and maintain this response. Before and after R.O.M. changes are readily observable and maintained. Myofascial gelosis as mentioned before can be diagnosed readily and treated quickly. A ligamentous bony joint myofascial gelosis of a localized type escapes the muscle stretching diagnosis, but is readily identified by gentle, careful investigation of the involved joint's R.O.M. Gently "feel" for "restrictive barriers" that do not allow a normal R.O.M. When barrier "limit switch" patterns are overridden R.O.M. seems normal, but when carefully observed with gentle R.O.M. it is readily diagnosed. These barrier patterns respond remarkably to momentary percussion of the involved joint for 30 seconds or more. The "art" of the diagnosis is the gently feeling or sensing for the slight restriction or "bind" or "barrier" when R.O.M. is carefully evaluated.

A sensing or "feeling" hand is placed opposite to the area of percussion, the rate of percussion is allowed to be felt by the "listening" hand on the opposite bony ligament muscle complex and then, reduce the rate of percussion, or reduce the firmness of contact until you can barely NOT feel the percussive frequency. Maintain the percussive technic for 30 to 60 seconds, revalue the R.O.M. The R.O.M. should greatly increase and this effect shall maintain.

Skill in percussive technic comes gradually and some may require "hands on" instruction in difficult cases. Achilles' tendon problems, for example, require not only local attention but many times restricted R.O.M. requires both fibular and tibial proximal joint attention before the "distal" tendon will allow full R.O.M. in many cases.

As mentioned above (viz a viz diagnosis of myofascial gelosis) the presence of a barrier or resistance to normal but gentle R.O.M. assessment is very useful. It's presence can be detected and appropriate percussive technic used, or barring that, tapping, or fascial flush technic, but the percussive technic is quick and less arduous. This is especially true in the occipito-atlanto P.A.O. membrane area. This is discussed in the section on Revised Resume of P.A.T Technic to Include Myofascial Gelosis Procedures, in this manual. Material on the PAO membrane and it's fascial relationship to the upper cervical segments are also discussed.

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## THE ROLE OF THE THIRD LUMBAR

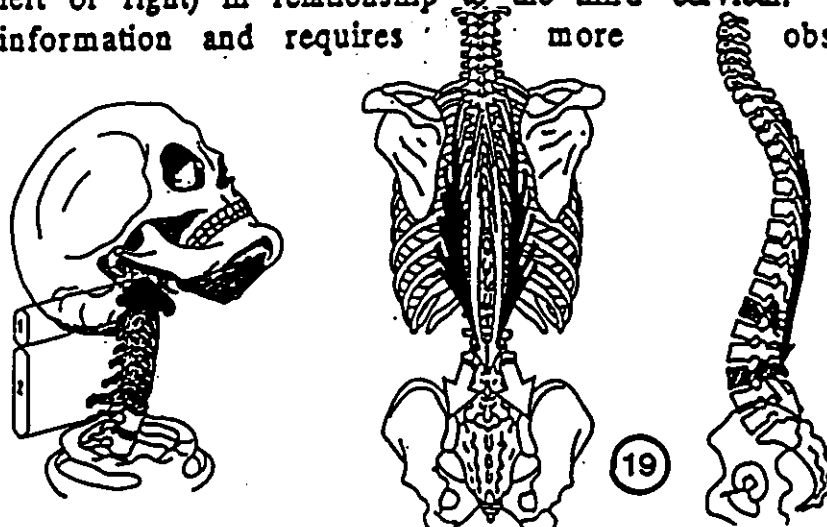
The significance of L3 is just beginning to be appreciated. This vertebra has a better-developed vertebral arch which acts as a relay station for, on the one hand, the ilio-lumbar fibres of the latissimus as they insert into the transverse process of L3 and, on the other, the ascending fibres of the spinalis whose lowest point of origin is the spinous process of L3, and L3 is pulled posteriorly by muscles arising from the sacrum and ilium and can serve as origin for the thoracic muscles. It is essential in the mechanics of the vertebral column at rest, it coincides with the apex of the lumbar curvature and its superior and inferior surfaces are parallel and horizontal. It is the first truly mobile lumbar vertebra as L4 and L5, strongly bound to the ilium and sacrum, represent more a static than a dynamic bridge between sacrum and vertebral column. Percussion technique here, evoked by weakness of the double gluteus max on TL gives a very fine posture stabilizing effect.

There seems to be a comparable pattern with the third cervical in that frequently there are no signs of an upper cervical fixation (double weak gluteus max) that accompany therapy localization of the third lumbar. Yet, there is a high frequency pattern of a variable lumbar fixation, or iliac fixation, or of a sacral fixation all involved in various phases of neck extensor weakness. Momentary percussion technique to the third cervical seems to abolish all of these signs, and patient symptomatic patterns are helped almost immediately. The well known Lovett "reactor pattern" may be a factor here, but it is my impression that there is a common myofascial gelosis pattern (Travell term) that has not been observed before. L. A. Kapandji, the source of the general information on the third lumbar, also divides the cervical column as a whole into the superior, or sub-occipital segment including the occiput, the first cervical, or atlas, and the second cervical, or axis. The inferior segment stretches from the inferior surface of the axis, the second cervical, to the superior surface of T1. The joints of the inferior segments have only two types of movement, flexion and extension, and lateral flexion and extension. The atlas and the axis differ from each other and from all of the remaining vertebrae.

H.L. Fryette, D.O. mentioned that he "learned from sheer accident and desperation that when the upper cervical group are in lesion the key to the whole combination may be the axis on the third." He is quoted here again "innumerable times I have encountered a combination

which has been described as immovable, but by adjusting the second on the third first, I have had the whole combination unlock and literally fall into place whether acute or chronic."

The evidence is mounting that there is a new type or class of upper cervical fixation. Previous evidence of occipital fixation-bilateral psoas and primary upper cervical fixation-double weak gluteus max, lower cervical fixation-bilateral popliteous - all of these have stood the test of time. The evidence of a fixation between axis and third cervical continues to mount and seems to be distinct from an anterior third cervical on axis type of fixation we have previously encountered. This type either has a gluteus max in the clear, or its appearance on therapy localization to the third lumbar. The weak double gluteus max responds to TL of the third lumbar, or to the third cervical. Correction of the myofascial gelosis pattern at the third lumbar seems to correct the cervical fixation pattern at the third cervical, or continued need for a routine upper cervical fixation correction. Yet, the preponderance of axis on the third cervical incidence seems to stand out on our recent new patient numbers. Our observations seem to parallel those of Freyette. Cervical subluxations seem to be at a low level of incidence, but the axis on third cervical pattern has an extremely high incidence. Our experience of adjusting anterior upper cervical patterns of upper cervical fixations has always shown a high incidence, but the accidental observation of the effect of third lumbar percussion has shown a new pattern. This pattern of variable muscle weakness of the extensor muscles of the neck seems to yield to third cervical percussion or to adjusting C3 on C2 while holding a firm contact of C2-C1 and occiput. This has yielded excellent therapeutic results, as well as the usual improvement in ROM and so forth. The accompanying anatomical patterns from Kapandji, well illustrate this division of occiput, C1 and C2, and C3 thru T1. A point of general information is the observation that axis challenging, as well x-ray evidence, seems to show a high frequency of an isolated lateral axis (left or right) in relationship to the third cervical. This is preliminary information and requires more observation,



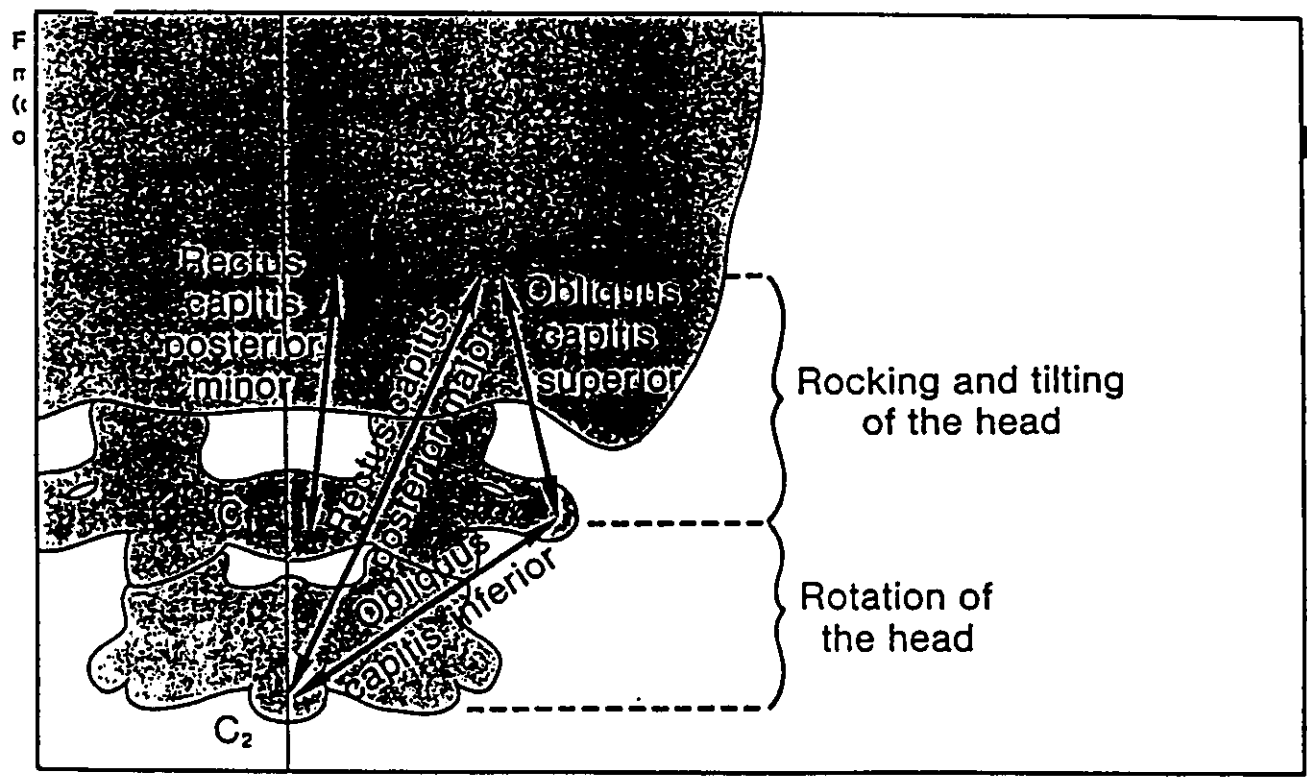
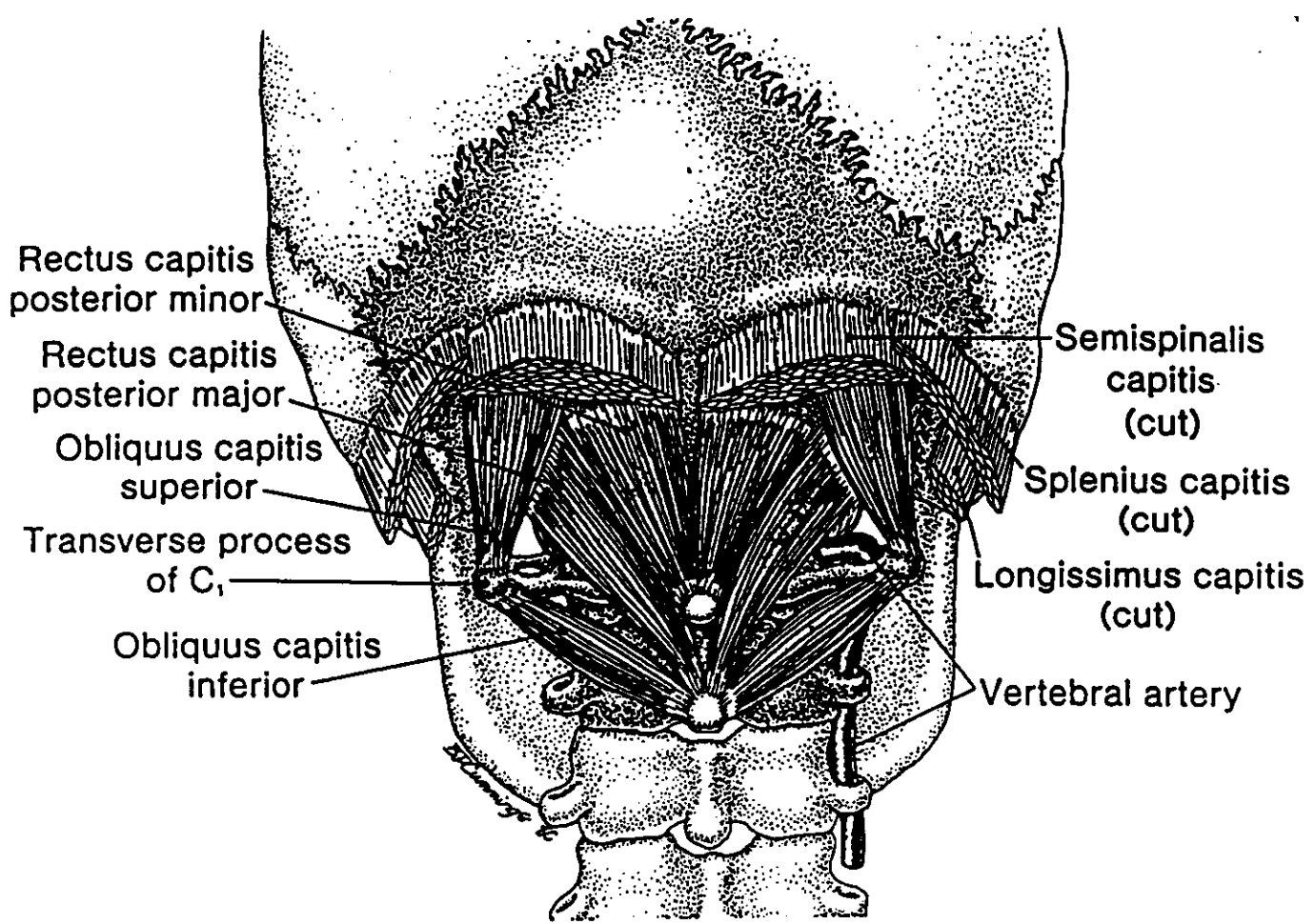


Figure 17.3. Graphic summary of the actions of the right suboccipital muscles.

## MYOFASCIAL GELOSIS RESEARCH ADDENDUM

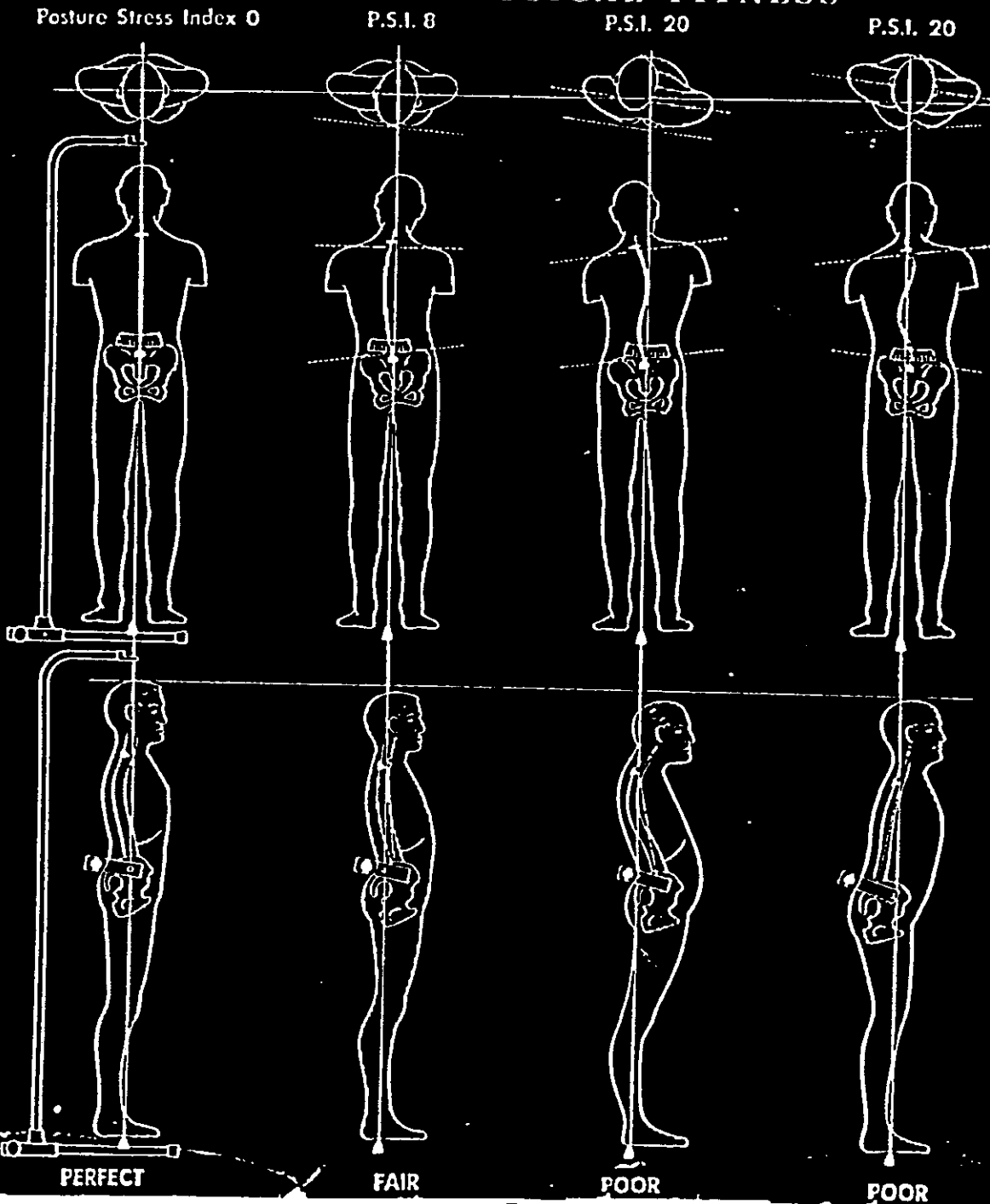
A unique feature of the "pincer palpation", or muscle belly pressure technic, is the startling muscle weakness it evokes on its application. This weakness feature is also doubly unique in that the "pincer palpation", or muscle belly pressure, elicits muscle weakness in a remote muscle similar to the effect of Therapy Localization. In other words, application of the finger "pincer palpation" pressure in a muscle that is not easily tested, such as the masseter, or the rectus capitis posticus minor, or any of the other sub-occipital muscles, or hyoid or jaw related muscles, show the same response in a distant or remote muscle. This weakness seems to be ipsilateral, i.e. the distant, or remote muscle weakness seems to be consistently on the same side of the body (supine or prone) on which "pincer palpation" was produced. We routinely test the same muscle following muscle belly pressure when that particular muscle is tested in the usual fashion. At this date no exception to this unilateral rule has appeared, yet as you know, exceptions seem to prove the rule. This "pincer palpation" pressure naturally was thought to be related to the previously observed directional digital pressure on the spindle cell of the muscle involved, this does not seem to be the case. It is independent of skin receptor stimulation, or "pinch or scratch" neurological investigation. This is a rewarding and therapeutic application of pressure response to the spindle cell area of the muscle involved, and is an essential part of the diagnosis of the "stand alone" clinical entity of myofascial gelosis. As you can imagine, it has important dental application, as well as other speciality applications, i.e. ocular or facial involvement. Another interesting application is the investigation of "pincer palpation" of the anterior, superior, and posterior auriculares. We have found from past experience that the auricular proprioceptive technique (New Developments in Dural Concepts, page 31, 1990, G. J. Goodheart) is a valuable part of the so called vestibular balancing "automatic pilot" of the body, and naturally, are related to the facet joints of the cervical column as noted by Wycke, and Bergstrom of the Karilinska Institute. The use of auriculares posticus, for example, for it's reaction to "pincer palpation" and the subsequent response by "tugging" the helix of the ear (R. J. Watkins, D. C., December 1992, D.C.E. "Proprioceptive Postural Reflex Technics), is useful and valuable, as you would expect in upper cervical problems. it also responds to percussion as advocated in the myofascial gelosis activity and this percussion technic is both therapuetic and diagnostic in encoded memory problems. The auricular areas in certain chronic or

difficult patients will therapy localize, and when untreated, cause a return of previously treated musculo skeletal problems. Their affect on posture, especially lateral posture, can be demonastrated readily.

# PERFECT POSTURE

*Paves the way to*

## HEALTH AND PHYSICAL FITNESS





## A BIOELECTRIC R. O. BECKER POSTURAL ANALOGY

R. O. Becker, M.D., author of The Body Electric, and his most recent book Cross Currents, is a leader in the field of biological electricity and regeneration. He is an orthopedic surgeon and professor at UNY and LSU Medical centers. His use of micro-currents has revolutionized fracture healing in trauma centers and military installations. This macro-current analogy is used for its familiarity and not the actual voltage. These are my own concepts, based on my own experience over a considerable period of time.<sup>1</sup> The long bones, the pelvis, the vertebral column and the skull carry by "ANALOGY" 220 volts. Again, by analogy, the long bones carry 220 volts, but the joints above and below the femur, for example carry 110 volts. The analogy continues with the concept there must be a current transformer to convert the 220 to 110 at the distal (lower) end of the femur. Then to continue the analogy, the ensuing 110 in the knee joint muscles, tendons and ligaments, must then have there 110 upgraded to 220 by a transformer in the proximal end of the tibia fibula, and so it continues down to the ankle and then to the foot structure. To continue the analogy, the 110 in the joints of the muscles tendons and ligaments is then transformed to 12 1/2 volts for the skin and subcutaneous tissues to carry the acupuncture meridian systems which by way of analogy carries the automatic computerization for distribution of that micro-current for supply and demand and inventory control, such as the bar chart on a supermarket product, carries both price, inventory control for re-ordering and price specials with data, date and so forth.

Percussion of the elbow and knee joints seen by the obvious examples that you and I have seen or will see, validate the primary concepts of this analogy. The vertebral facets carry the 220, the discs, muscles, tendons, and ligaments carry the 110, while the skin continues the 12 1/2 volts, for example.

The tendino-muscular meridians discussed in the AK Manual 1994-95 use as you know, not only a date significant time of injury, but also depend on their diagnosis and subsequent treatment on the HO points at the knee and elbow for their diagnosis, and then the subsequent treatment depend on only four points along with an associated point at C1. The remarkable significance of an increased range of motion at the knee joints, and elbow joints accomplished by both supine, sitting and standing percussion of the areas seems to yield a therapeutic response quickly, in other non related areas, as

<sup>1</sup> *Inner Bridges* Fritz Frederick Smith, M.D.

well, which is both gratifying to the operator, as well as the subject in this therapeutic endeavor.

## APPLIED KINESIOLOGY

### The Tendino-Muscular Meridians

BL February	SP August
GB January	LU November
ST March	LI September
SI May	HC October
TH June	KI July
CO April	HT December

### HO Points (Diagnostic)

BL 54	SP 9
GB 34	LU 5
ST 35	LI 8
SI 8	HC 3
TH 10	KI 10
CO 11	HT 3

### Treatment Points (Convergence)

LU	Co
P GB22	TW GB13
H	SI
ST	SP
GB ST3	LIV CV3
BL	KI

Associated point all meridians C-1 — Thumb T.L. follows HO-treatment point therapy. Challenge - adjust.

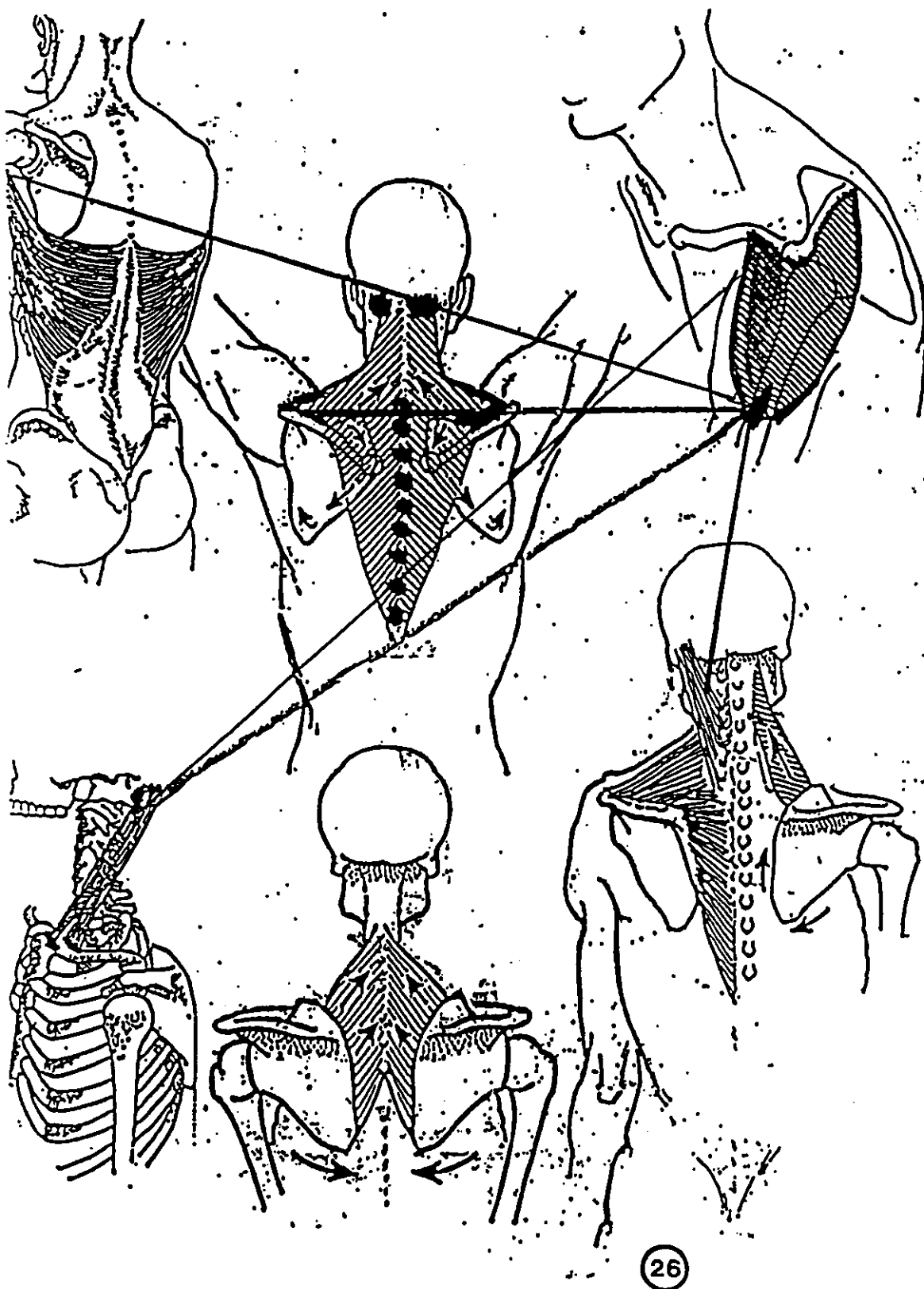
These points are discussed in the text *The Secondary Vessels Of Acupuncture* by Royston Low, Dr. Ac., N.D., D.O., M.B.N.O.A., F.B.Ac.A., published by Thorsons Publishers Limited, New York, Chapter 7, pages 77-105.

## FURTHER ADDENDUM

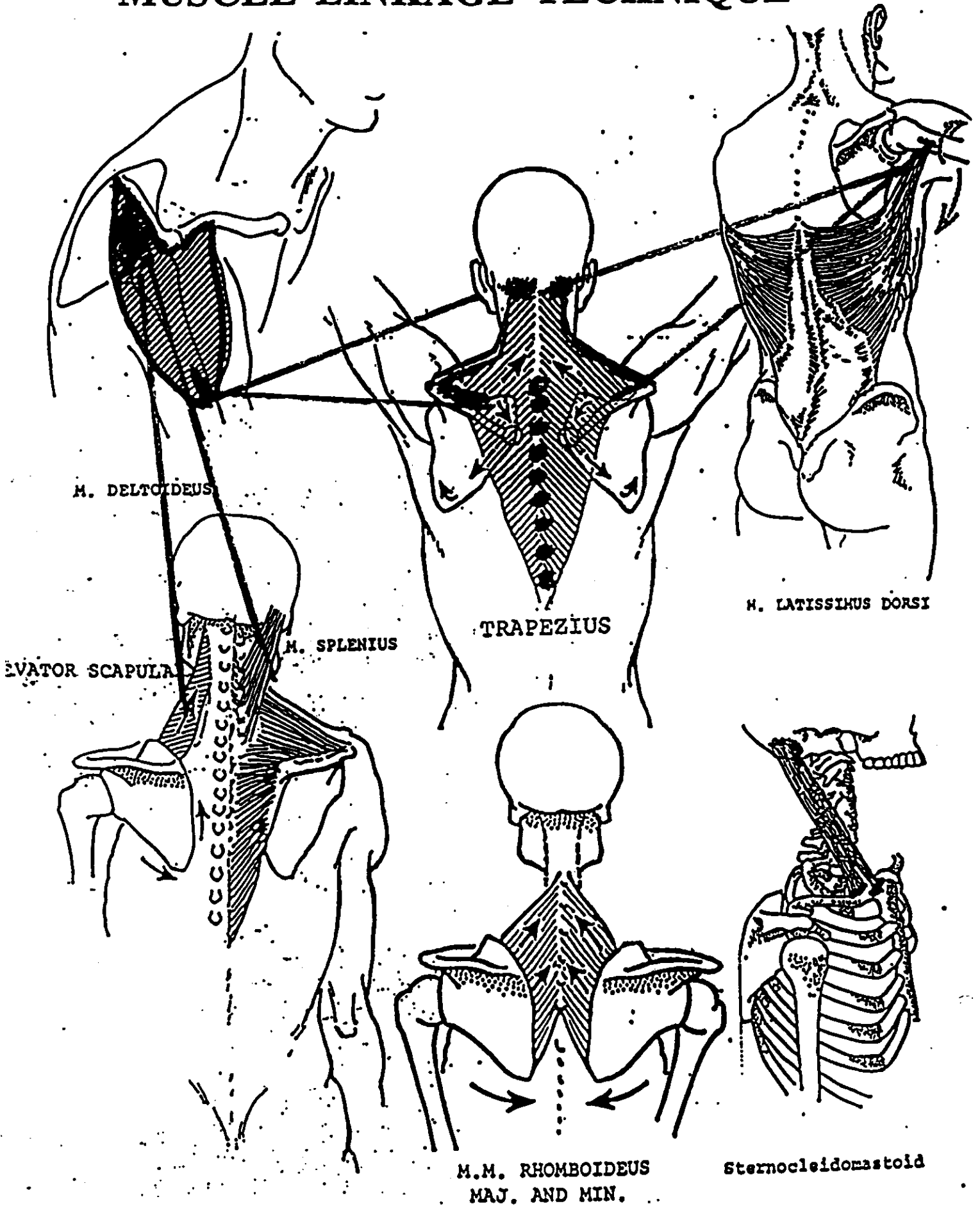
In general, the major muscles that are involved in this creation of cranial bone rotation, flexion and or extension are the upper trapezius, sternocleidomastoideus, masseter, temporalis, internal and external pterygoids and the muscles of the tongue. The preceding muscles mentioned are from the David Leaf article. The following material represents the Muscle Linkage Technique and its explanation. Consistent passive ROM observations on many patients in supine, sitting and standing postures have led to this development. As you will see, the deltoid muscle is highlighted first, followed by the trapezius, and followed by the latissimus dorsi, and then the levator scapula, the splenius, rhomboideus major and minor, and the sternocleidomastoideus. Micro-avulsion of the deltoid insertion is primary in this postural pattern which will be demonstrated. This micro-avulsion can be diagnosed by the usual methods and experience has shown it is also accompanied by a fault to the right posterior deltoid which can be diagnosed by the new pincer palpation technique. This then alters upper trapezius patterns, or levator scapula patterns, or latissimus dorsi patterns, all of which are common in this situation starting with the right middle deltoid. This then, by muscle linkage, disturbs the suboccipital triangle with subsequent cranial faults of the occiput in sphenobasilar problems. On the left middle deltoid insertion there will be a similar micro-avulsion which can be palpated, but the left deltoid rarely shows any weakness to stretch or maximum contraction. Yet, pincer palpation of middle deltoid and anterior deltoid yields remarkable weakness of these muscles, on testing, which then influences the clavicular relationship to the sternocleidomastoid, and naturally, clavicular relationships to the sternum and the mastoid process. This then affects both greater and lesser wings of the sphenoid, observable palpatory pain and tension, bilaterally. All of these muscle linkage problems respond to percussion technique following diagnosis by pincer palpation or by previous diagnosis standards. This technique will be demonstrated and adds further to the fine material my good friend, and colleague, Dr. David Leaf has produced in his article, "A Muscular Imbalance Approach to Cranial Faults." Most dural torque patients also show in the supine position on passive ROM a marked difference between the right and left knee. Test also in sit and stand modes. Unless patient's history indicates right knee trauma the predominant pattern in a high percentage of patients, 90%, there is a reduced ROM

of the left knee. Treat by usual methods and by percussion of left proximal fibula tibial joint. This situation usually accompanies the deltoid pattern noted above.

## MUSCLE LINKAGE TECHNIQUE



# MUSCLE LINKAGE TECHNIQUE



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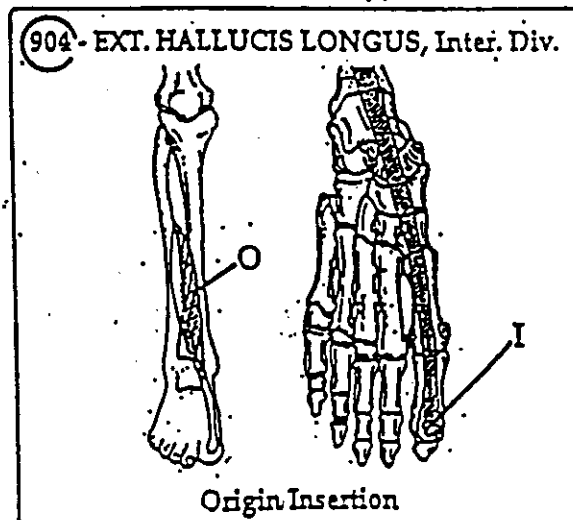
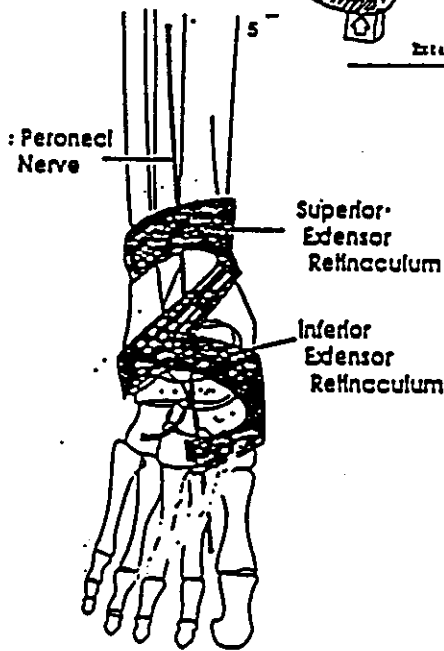
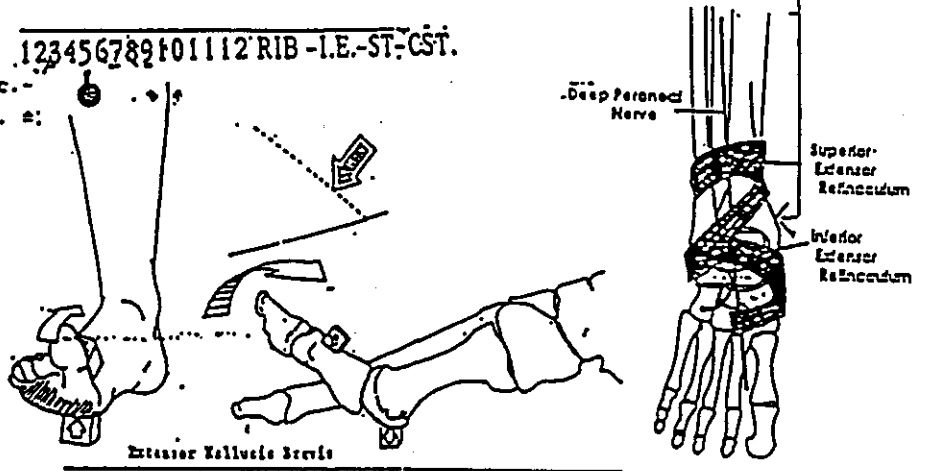
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# **FLOW CHART HALLUX LIMITUS GAIT PATTERN AND POSTURAL COMPLEX**

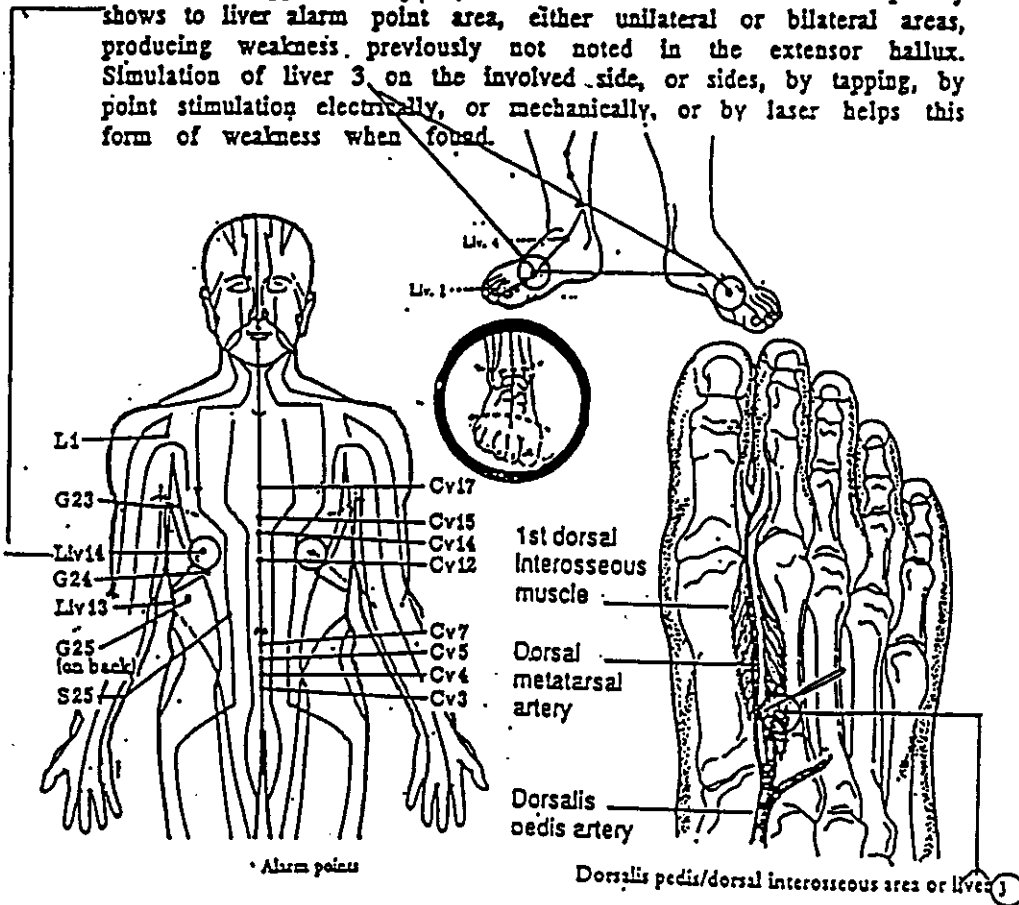
1. OBSERVE POSTURE AT REST AND IN MOTION.
2. TEST EXTENSOR HALLUX AND EXTENSOR DIGITORUM MUSCLES.
3. IF MUSCLES WEAK USE APPROPRIATE O. AND I. -S.I.V.F. FACTORS AND R.M.A.P.I. AND TREATMENT PROTOCOL.
4. IF MUSCLES STRONG TEST WEIGHT BEARING AND OBSERVE FOR LIMITED R.O.M.
5. IF R.O.M. LIMITED, TEST ALL ABOVE RESPONSES TO WALKING BACKWARD FOR 60 SECONDS TO CONFIRM GAIT CAUSE.
6. RESUME MOMENTARY FORWARD WALKING FOR 60 SECONDS FOR MUSCLE WEAKNESS AND R.O.M. LIMITATION TO RETURN.
7. TEST FOR RESPONSE TO O. AND I. - T.L. TO ALARM POINT (LIVER-14) OBSERVE RESPONSE - T.L. TO (LIVER-3) ON DORSUM OF FOOT. OBSERVE RESPONSE.
8. TEST MUSCLES AGAINST COMPRESSION MANUALLY OF TIBIA AND FIBULA AND IF RESPONSIVE USE HIGH VELOCITY COMPRESSION ADJUSTMENT FOR PROPER APPROXIMATION OF ANKLE JOINT. ADJUST TALUS. TAPE AS PER INSTRUCTION, LEAVE IN SITU FOR ONE WEEK.
9. SUPPORT METATARSALS 2-3-4-5 WITH TEMPORARY TRIANGULAR FOOT PAD. IF NECESSARY ADD TO ORTHOTIC LOWER SURFACE.
10. CORRECT NUCHAL SACRAL FAULT, PELVIC AND FEMORAL HEAD FAULTS AS PER INSTRUCTIONS.
11. CLEAR ILIO-LUMBAR AND SACRAL-LUMBAR LIGAMENT PROBLEMS AS PER INSTRUCTION - EX-61 (D.LEAF CHART).
12. T.L. SAGGITAL SUTURE, IF POSITIVE FOR EXTENSOR HALLUX WEAKNESS RETURN, USE S.S.T. (SAGGITAL SUTURE SPREAD AND TAP), RETEST.

A frequent cause of large toe extensor weakness, primary and secondary, with subsequent R.O.M. changes, and limitations, is a spreading of the tibia and fibula at the malleoli. This spreading of the tibia and fibula analogous to a carpal tunnel, compromises the anterior retinaculum and the interosseous membrane. The entrapment neuropathy causes interference by pressure of the deep peroneal nerve. A frequent finding is an anterior talus on the involved side. This should be challenged and adjusted. The micro-spread of the tibia and fibula requires high velocity compression technique to the lower malleoli, and subsequent taping with an adhesive semi-stretchable fabric tape to be left in situ for at least one week. This type of tape (J & J Elasticon) dries very rapidly following bath or shower and does not cause adhesive dermatitis.

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A component of this extensor hallux weakness is altered activity of Liver 3, the meridian therapy area discussed by the author, Felix Mann, which he discusses in his 1993 manual, "REINVENTING ACUPUNCTURE". In this manual, he discusses the incidence of acupuncture "areas", as opposed to acupuncture "points" and the far reaching effects of stimulating this very important area (area as opposed to point). Extensor hallux weakness frequently shows to liver alarm point area, either unilateral or bilateral areas, producing weakness, previously not noted in the extensor hallux. Stimulation of liver 3 on the involved side, or sides, by tapping, by point stimulation electrically, or mechanically, or by laser helps this form of weakness when found.





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DAILY SUPPLEMENTAL EXERCISES

These exercises were developed to maintain and augment the vital force within. Done daily, these exercises will assure that the beneficial effects brought about by your treatments are maintained. Though these exercises are straightforward and simple, they have a profound effect. Doing these daily and properly will help assure you of better health and increased vitality.

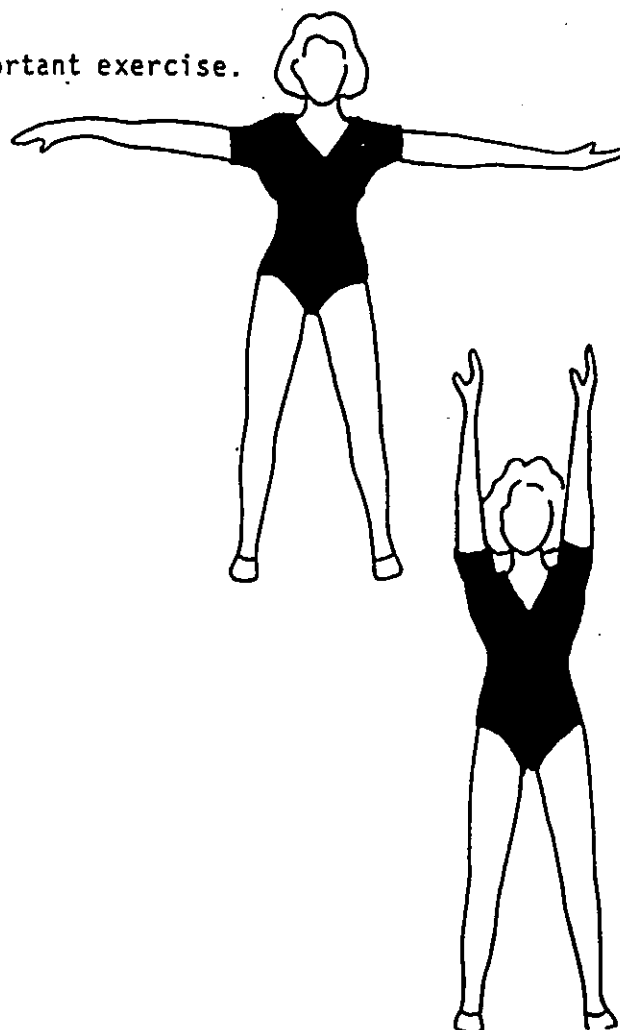
1. Breathing: Sitting up straight and comfortably, place the tongue just above the two front teeth on the ridge of the roof of the palate. Close mouth and inhale through your nostrils, fully expanding your lungs and hold for the count of seven. Exhale through the mouth, at your own rate, keeping the tongue touching the palate.

Do this for 7 breaths twice a day.

\* This is considered the most important exercise.

2. Arm Raising from Standing:

- Stand with your feet shoulder width apart, with arms extended out to the sides shoulder height.
- Left palm should face upward and the right palm should face downward.
- Hold this position for long as possible, breathing full deep breaths. The ideal length of time is 5 - 10 minutes.
- At the end of the exercise, keeping the arms straight, slowly raise them up and out to the sides of the body and above the head, not letting the arms come forward. Then lower the arms.



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3. Hip Twist:

Lie on your back with your arms stretched out to your side at shoulder height with the left palm facing up and the right palm facing down.

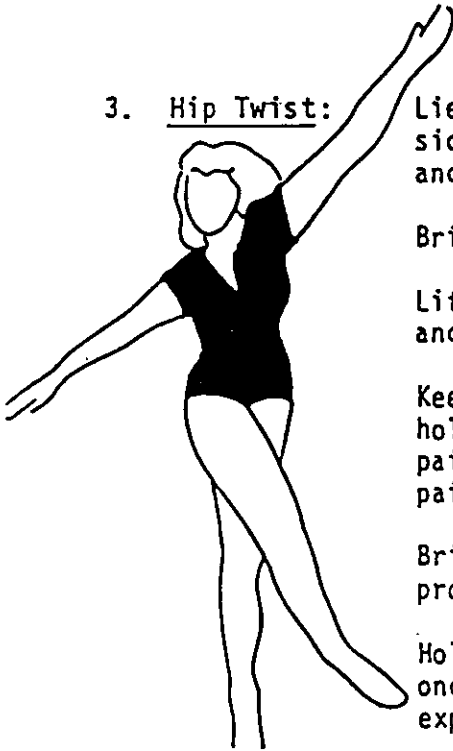
Bring the feet together with knees straight.

Lift the left leg off the floor, keeping the leg straight and roll the left hip and left leg over the right leg.

Keep both shoulders on the floor and breath fully while holding the position for up to 5 minutes or until you feel pain. Do until you are able to hold for 5 minutes without pain.

Bring the leg back to it's original position and do the same procedure for the right leg.

Hold the position for 5 minutes or until pain, on each side once a day. Ideally the exercise should be done without experiencing pain.



4. Spinal Stretch:

Sit in an upright chair so that your thighs are parallel with the floor and the lower part of the leg is perpendicular to the floor.

Bending over, place your elbows on the inside of your knees.

Turn your palms away from each other and tuck your fingers under each arch of the foot while placing your thumb over the top of the foot. Let your spine fully stretch in this position.

Breath slowly and fully for up to 5 minutes. Do one time a day.

