

Purpose: Reviews of the effects of chiropractic manipulative therapy on head and neck conditions are equivocal. The spine is a kinematic chain subject to reflexive muscle responses induced by the stimulation of muscle and joint afferents. The purpose is to determine if an orthopedic blocking procedure may be a useful adjunctive treatment for cervical spine dysfunction.

Methods: Following written informed consent, 22 participants with a measured leg length inequality of 5 mm or more were sequentially assigned into treatment and control groups. Treatment consisted of a 2-minute procedure using orthopedic blocks (padded wedges with a 45 degree incline), which were placed bilaterally under the ilia as determined by leg length assessment. Isometric strength measurements took place in two sessions with a day of rest between. The treatment group received therapy at the second session immediate to post isometric measures. Results: Outcome measures were the pre and post measurements of cervical isometric extension strength in pounds. T-tests showed no statistically significant difference between groups in isometric extension strength prior to treatment. One-way ANOVA demonstrated a significant difference between groups following treatment.  $F(1, 21) = 7.174$ ;  $p = .014$ . The treatment group demonstrated an average increase of 6.35 (818) lbs in extensor strength. Conclusions: The current study showed a statistically significant change in cervical isometric extensor strength following SIJ manipulation. Orthopedic blocking may be a useful adjunctive treatment for cervical spine dysfunction.

Comment: In AK clinical practice, the use of SOT methods of spinal manipulation – based on AK MMT diagnostic findings – consistently improves muscle strength on the MMT.