Generalized joint hypermobility is more common in chronic fatigue syndrome than in healthy control subjects.

Jo Nijs, PhD, MSc, Annemie Aerts, PT, Kenny De Meirleir, PhD, MD

Objectives: This study aimed at (1) comparing the prevalence of generalized hypermobility in patients with chronic fatigue syndrome (CFS) and healthy volunteers, (2) examining the clinical importance of generalized hypermobility in patients with CFS, and (3) examining whether knee proprioception is associated with hypermobility in patients with CFS.

Methods: Sixty-eight patients with CFS filled out two self-reported measures (for the assessment of symptom severity and disability), were questioned about muscle and joint pain, and were screened for generalized hypermobility. Afterward, the patients performed a knee repositioning test (assessment of knee proprioception), and it was examined whether or not they fulfilled the criteria for benign joint hypermobility syndrome (BJHS). Sixty-nine age- and sex-matched healthy volunteers were screened for generalized joint hypermobility and performed the same knee repositioning test.

Results: Compared with the healthy volunteers (4.3%, 3/68), significantly more patients with CFS (20.6%, 14/69) fulfilled the criteria for generalized joint hypermobility (Fisher exact test, P < .004). No associations were found between generalized joint hypermobility and the self-reported measures (including pain severity) or knee proprioception (Spearman correlation analysis). Knee proprioception was similar in both groups (Mann-Whitney U = 1961, z = 1.745, P = .81). Forty patients with CFS (58.8%) fulfilled the criteria for BJHS. The odds ratios and 95% confidence intervals for achieving a successful outcome at each of the follow-up periods all approximated a value of 1, suggesting no improvement in the odds of successful outcome among patients in which an audible pop occurred.
Conclusions: The results of this pragmatic study suggest that a perceived audible pop may not relate to improved outcomes from high-velocity thrust manipulation for patients with nonradicular low back pain at either an immediate or longer-term follow-up.

Chiropractic manipulation affects the difference between arterial systolic blood pressures on the left and right in normotensive subjects.

Karen R. Dimmick, BSc (Hons) (Chiro); Martin F. Young, BSc (Hons), DC, FCC; David Newell, PhD

Objective: The purpose of this study is to determine whether chiropractic manipulation is associated with any measurable changes in the difference between the arterial blood pressures on the left and right before and after treatment in normotensive subjects.

Methods: A nonrandomized, matched pair, controlled clinical trial, with the treatment (manipulation) group and control (resting) group matched for age and sex, was performed in chiropractic student clinics in London, UK. The treatment group consisted of 35 new patients presenting to a single student chiropractor between the start of April 2003 and the end of August 2003. The control group consisted of 35 nonpatients matched for sex and age. The intervention was chiropractic manipulation. Preintervention and postintervention systolic and diastolic blood pressures were recorded in both arms through the use of a digital oscillometric sphygmomanometer.

Results: A significant difference was found between the pre- and posttreatment blood pressure differences for systolic pressures (P = .01), but no significant difference was found in either set of control data or the treatment diastolic values. A significant difference was also found between the treatment and control group’s preintervention systolic differences (P = .002), but not between the groups at any other time.

Conclusion: Chiropractic treatment appears to have an effect on the difference in systolic blood pressure between the arms, which is not shown in the control group or the diastolic treatment group values. This may be attributable to a difference between the two groups’ preintervention systolic values; however, there was no significant difference between the two groups after intervention.

Idiopathic neuralgic amyotrophy: an illustrative case report.

George D.W. Rix, DC, Edward H. Rothman, DC, Aidan W.D. Robinson, MSc(Chiro)
**Objective:** To describe the case of a patient diagnosed with neuralgic amyotrophy (NA) illustrating pertinent aspects of differential diagnosis, the use of clinical neurophysiological procedures to aid in establishing the diagnosis, and issues of management.

**Clinical Features:** A 39-year-old male soldier presented with a rapid onset of marked loss of left shoulder movement. This started acutely early one morning as a sharp, severe lower neck pain progressing over the following two weeks to a less severe dull ache in the left shoulder and arm. Pain was rapidly replaced with weakness. Physical examination and electrodiagnostic investigation helped establish a diagnosis of NA.

**Intervention and Outcome:** The patient was reassured that this is normally a self-limiting condition. Range of motion exercises progressing to a strengthening program was prescribed. He was progressing well; however, we lost contact because of his commitments in the armed service.

**Conclusion:** When a patient presents with shoulder and arm pain of neurogenic origin, NA should be a consideration. Differentiating NA from radiculopathy is especially important in making management decisions. With a careful history and physical examination, the diagnosis may be made without the need for ancillary investigations. Neuralgic amyotrophy is a self-limiting condition requiring reassurance and monitoring.

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**The influence of two different types of foot orthoses on first metatarsophalangeal joint kinematics during gait in a single subject.**

*Thomas C. Michaud, DC, Deborah A. Nawoczenski, PT, PhD*

**Objective:** To quantify the effect of two distinct foot orthotic designs on *in vivo* multisegment foot and leg motion; in particular, the first metatarsal and first metatarsophalangeal (MTP) joint during gait.

**Methods:** A 23-year-old man had an excessively pronated foot structure as measured during a clinical orthopedic examination. The Optotrak Motion Analysis System was used to collect three-dimensional position and orientation data from four modeled rigid body segments (hallux, first metatarsal, calcaneus, and tibia) during the stance phase of walking. The subject walked at a self-selected comfortable walking speed, and a minimum of five trials were collected under three different test conditions: no orthosis, semirigid orthosis with a varus post, and a semirigid orthosis with a varus post and a large medial flange. Data were normalized to the stance period, and descriptive statistics were calculated for dependent variables.
Results: Both orthotic interventions equally modified first MTP joint motion when compared with the no orthotic condition. First MTP joint dorsiflexion was decreased (>2SD) with the orthosis during terminal stance phase. This decrease was associated with a concomitant increase in first metatarsal plantar flexion.

Conclusion: A custom-made semirigid orthosis posted medially and made from a neutral-position off-weight-bearing plaster cast can alter motion in the forefoot during the propulsive period by increasing first metatarsal plantar flexion and decreasing excessive first MTP joint dorsiflexion.

Chiropractic and rehabilitative management of a patient with progressive lumbar disk injury, spondylolisthesis, and spondyloptosis.

Simon G. Excoffon, DC, Harry Wallace, DC

Objective: To describe the chiropractic treatment for a patient with low back pain accompanied by sensory and motor deficits of his left leg and magnetic resonance imaging-documented lumbar spinal cord and nerve root impingement.

Clinical Features: A 57-year-old man experienced low back pain that radiated into his left leg and subsequently produced both sensory and motor deficits of the left thigh and quadriceps, followed by a similar weakness and accompanying paresthesia of the lower left leg. Onsets were sudden and occurred during sleep, after prolonged sitting or during long periods of driving. Diagnostic studies revealed a slight impingement at the L5-S1 level due to anterior displacement of the L5 vertebra and a mild protrusion of the L4 disk.

Intervention and Outcomes: Treatment consisted of chiropractic spinal manipulation, physical therapy modalities, and rehabilitative exercises. Outcome measurements in his case indicated that his rehabilitation was appropriate.

Conclusion: There is an abundance of published reports describing treatment of disk injury, low back pain, and spondylolisthesis with a variety of manipulative methods. However, this appears to be the first case reported in indexed literature of a progressive multilevel lumbar disk injury with concomitant spondylolisthesis and spondyloptosis.