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Lifetime History of Work-Related Neck Injury and Future Neck Pain

Paul Nolet, DC, MS, MPH, et al.

Objective: The purpose of this study was to investigate the association between a lifetime history of a work-related neck injury and the development of troublesome [neck pain](#) in the general population.

Methods: We formed a cohort of randomly sampled Saskatchewan adults with no or mild neck pain in September 1995. At baseline, participants were asked if they had ever injured their neck at work. Six and 12 months later, participants were asked if they had troublesome neck pain, defined as grades II to IV on the Chronic Pain Grade Questionnaire. Multivariable Cox regression was used to estimate the association between a lifetime history of work-related neck injury and the onset of troublesome neck pain while controlling for age and sex.

Results: Our cohort included 866 individuals at risk for developing troublesome neck pain. Of those, 73.8% (639/866) were followed up at six months, and 63.0% (546/866) at one year. We found a positive association between a history of a work-related neck injury and the onset of troublesome neck pain (age- and sex-adjusted hazard rate ratio [HRR], 2.4; 95% confidence interval, 1.3-4.7).

Conclusion: Our analysis suggests that a lifetime history of work-related neck injury is associated with an increased risk of troublesome neck pain. Occupational neck injuries can lead to recurrent episodes of neck pain.

Usual Source of Care for Adults With and Without Back Pain

Monica Smith, DC, PhD

Objectives: The purpose of this study was to explore the extent to which individuals with [back pain](#) or other health conditions and individuals with no health problems report having a usual source of care (USC) for their health care needs.

Methods: This study evaluated longitudinal Medical Expenditures Panel Survey data (data pooled for survey calendar years 2000-2006). Comparisons were made between adult Medical Expenditures Panel Survey respondents identified as having a back pain condition (n = 10 194) compared with those without back pain but with other health condition (n = 45 541) and those with no back pain and no other condition (n = 5497).

Results: Compared with individuals with no health problems, those with back pain were almost eight times more likely (odds ratio, 7.8; $P < .001$) to report having a USC, and those with other health problems besides back pain were five times more likely (odds ratio, 5.4; $P < .001$). For those with a USC, individuals with back pain and those with other problems but not back pain were both approximately one-and-a-half times more likely than those without any health problems to report a specific provider type as their USC ($P < .001$).

Conclusion: Study findings suggest that relatively healthy adults without back pain are less likely to have a USC than those with back pain or other health problems.

Postural Alignment in Young Adults Based on Photographs of Three Views

Elizabeth Ferreira, PhD, et al.

Objective: Postural assessment through photography is a simple method that allows the acquisition of quantitative values to define the alignment of body segments. The purpose of this study was to quantitatively assess the postural alignment of several body segments in standing through anterior, posterior, and lateral views.

Methods: In this cross-sectional study, 122 subjects were initially evaluated. Seven subjects were excluded from the study after cluster analysis. The final sample had 115 subjects, 75% women with a mean age of 26 +/- 7 years. Photographs were taken from anterior, posterior, and lateral views after placement of markers on specific anatomical points. Photographs were analyzed using free postural analysis software / software of postural analysis (PAS/SAPO). Quantitative values for postural analysis variables were ascertained for head, upper and lower limbs, and trunk, along with the frequency of inclinations to the left and to the right.

Results: Regarding the head, 88% of the sample presented some inclination, 67% of which was to the right. There was a predominance of right inclination of the shoulder and pelvis in 68% and 43% of study subjects, respectively. Lower limbs presented mean alignment of 178* in the anterior view, and the trunk showed predominant right inclination in 66% of participants.

Conclusion: Small asymmetries were observed in anterior and posterior views. This study suggests that there is no symmetry in postural alignment and that small asymmetries represent the normative standard for posture in standing.

Familiarity With and Advocacy of the *Healthy People 2010* Goals

Robert Leach, DC, MS, CHES, et al.

Objective: The purpose of this study was to determine the familiarity with and stated advocacy of

Healthy People 2010 objectives by member doctors of the Mississippi Chiropractic Association.

Methods: Peer experts established face validity of a questionnaire regarding the Leading Health Indicators. This survey was distributed to 157 Mississippi Chiropractic Association members in 2009 during a conference and a follow-up by postal mail.

Results: Most doctors of chiropractic in the sample (n = 68, or 43% response) consider themselves wellness-oriented health care providers. Forty-two percent had read, 29% had not read, and another 29% were unsure whether they had read the *Healthy People 2010* national objectives. Almost half (44%) strongly or somewhat agreed that their office practice reflects support for the *Healthy People 2010* objective. In contrast, 27% disagree and 29% were unsure if their practice reflects the *Healthy People 2010* objectives. There were differences between support and practice behaviors for some of the objectives. Chiropractors who have read the objectives tend to be more supportive of the national goals. Doctors of chiropractic in this sample are supportive of most Leading Health Indicators, and the majority reports that they incorporate these public health goals into their practices.

Conclusion: Familiarity with reading the *Healthy People 2010* objectives seems to be related to reported practice behaviors. There is a need to improve the percentage of practicing doctors of chiropractic who are familiar with *Healthy People* objectives. Future health education initiatives may assist doctors of chiropractic in further incorporating public health objectives into their practice behaviors and improving quality health care.

Chiropractic Management of Postsurgical Lumbar Spine Pain

Ralph Kruse, DC, et al.

Objective: Although chiropractic manipulation is commonly used for low back pain, applying this procedure to the patient with postlumbar spine surgery has not been adequately studied. The purpose of this retrospective chart review is to report on the results of chiropractic management (including Cox flexion distraction technique) of patients with postsurgical lumbar spine pain to determine the change in reported pain based on surgical type.

Methods: Ten years of patient files from one chiropractic practice were electronically screened for lumbar spine surgery occurring before presenting for chiropractic care. Of the 58 patients with a postsurgical diagnosis, 32 files contained all pertinent components for this study including treatment with Cox flexion distraction manipulation (in addition to adjunct procedures) for at least two weeks and pretreatment and posttreatment pain measures using the Numeric Pain Scale (NPS) that ranged from 0 (no pain) to 10 (worst pain imaginable).

Results: A change was observed in the mean pretreatment and posttreatment NPS pain scores of 6.4 to 2.3, a reduction of 4.1 of 10. The mean number of treatments was 14, with a range of six to 31. When stratified by surgical type, the mean change in pain was most remarkable in patients who underwent a surgery that combined lumbar discectomy, fusion, and/or laminectomy, with an average NPS pain reduction of 5.7 of 10. No adverse events were reported for any of these postsurgical patients.

Conclusions: The results of this study showed improvement for patients with low back pain subsequent to lumbar spine surgery who were managed with chiropractic care.

SMT for Elderly Patients With Chronic Obstructive Pulmonary Disease

Paul Dougherty, DC, et al.

Objective: The objective of this case series is to report the results of spinal manipulative therapy (SMT) for people with chronic obstructive pulmonary disease (COPD) who were older than 65 years.

Methods: The study design was a prospective case series. Six patients of a long-term care center who were older than 65 years and having COPD underwent a course of 12 SMT sessions over a four-week period. Each SMT session consisted of manually applied spinal manipulation and instrument-assisted spinal manipulation delivered by a doctor of chiropractic. Lung function measurements were recorded at baseline and at two and four weeks. The occurrence and type of any adverse events (AEs) related to SMT were recorded at each SMT session.

Results: One male and five female patients took part in the study. The average age was 79.1 years (range, 68-89 years). There was a clinically significant increase in forced expiratory volume in the first second after SMT in four of the six patients at two weeks. This was sustained in only one patient at four weeks. No clinically significant changes were observed for forced vital capacity at two or four weeks. One hundred forty-four manually applied spinal manipulations and 72 instrument-assisted spinal manipulations were administered during the intervention period. No major or moderate AEs were reported. Only minor AEs were reported after 29% of the intervention sessions, with 1 AE being reported for each patient. All AEs resolved within 48 hours.

Conclusions: This case series offers preliminary evidence that SMT may have the potential to benefit lung function in patients with COPD who are older than 65 years.

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