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EVIDENCE-BASED GUIDELINES FOR THE CHIROPRACTIC TREATMENT OF ADULTS WITH NECK PAIN

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ABSTRACT

Objective: The purpose of this study was to develop evidence-based treatment recommendations for the treatment of nonspecific (mechanical) neck pain in adults.

Methods: Systematic literature searches of controlled clinical trials published through December 2011 relevant to chiropractic practice were conducted using the databases MEDLINE, EMBASE, EMCARE, Index to Chiropractic Literature, and the Cochrane Library. The number, quality, and consistency of findings were considered to assign an overall strength of evidence (strong, moderate, weak, or conflicting) and to formulate treatment recommendations.

Results: Forty-one randomized controlled trials meeting the inclusion criteria and scoring a low risk of bias were used to develop 11 treatment recommendations. Strong recommendations were made for the treatment of chronic neck pain with manipulation, manual therapy, and exercise in combination with other modalities. Strong recommendations were also made for the treatment of chronic neck pain with stretching, strengthening, and endurance exercises alone. Moderate recommendations were made for the treatment of acute neck pain with manipulation and mobilization in combination with other modalities. Moderate recommendations were made for the treatment of chronic neck pain with mobilization as well as massage in combination with other therapies. A weak recommendation was made for the treatment of acute neck pain with exercise alone and the treatment of chronic neck pain with manipulation alone. Thoracic manipulation and trigger point therapy could not be recommended for the treatment of acute neck pain. Transcutaneous nerve stimulation, thoracic manipulation, laser, and traction could not be recommended for the treatment of chronic neck pain.

Conclusions: Interventions commonly used in chiropractic care improve outcomes for the treatment of acute and chronic neck pain. Increased benefit has been shown in several instances where a multimodal approach to neck pain has been used. (*J Manipulative Physiol Ther* 2014;37:42-63)

Key Indexing Terms: *Chiropractic; Practice Guideline; Therapy; Therapeutics; Review; Evidence-Based Practice*

The annual prevalence of nonspecific neck pain is estimated to range between 30% and 50%.¹ Persistent or recurrent neck pain continues to be reported by 50% to 85% of patients 1 to 5 years after initial onset.² Its course is usually episodic, and complete recovery is uncommon for most patients.³ Twenty-seven percent of

patients seeking chiropractic treatment report neck or cervical problems.⁴ Thus, treatment of neck pain is an integral part of chiropractic practice.

Treatment modalities typically used by doctors of chiropractic (DCs) to care for patients with neck pain include spinal manipulation, mobilization, device-assisted spinal

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Table 1. *Strength of evidence and recommendations*

Evidence	Strength of recommendation
Consistent findings among ≥ 2 low-risk-of-bias controlled trials with no limiting factors	Strong
Consistent findings among ≥ 2 low-risk-of-bias controlled trials with minor limiting factors	Moderate
or	
1 low-risk-of-bias controlled trial with no limiting factors	
1 low-risk-of-bias controlled trial with limiting factors	Weak
Unresolvable differences between the findings of 2 or more low-risk-of-bias controlled trials	Inconsistent

manipulation, education about modifiable lifestyle factors, physical therapy modalities, heat/ice, massage, soft tissue therapies such as trigger point therapy, and strengthening and stretching exercises. There is a growing expectation for DCs and other health professionals to adopt and use research-based knowledge, taking sufficient account of the quality of available research evidence to inform clinical practice. As a result, the purpose of the Canadian Chiropractic Association and the Federation Clinical Practice Guidelines Project is to develop evidence-based treatment guidelines. The clinical practice guideline (CPG) experience began in Canada with a consensus conference in April of 1993 that culminated with the publication of “Clinical Guidelines for Chiropractic Practice in Canada”⁵ in 1994. Since then, the chiropractic profession in Canada has published 3 additional guidelines⁶⁻⁸ that are intended to provide practitioners with the most current evidence for the treatment for patients in light of the clinician’s experience and the patient’s preferences.

The original Neck Pain Guideline⁶ published in 2005 relied on studies that were drawn from the literature in a search conducted up to October 2004. The treatment recommendations developed at that time were supported largely by the expert opinion of the Guidelines Development Committee (GDC) in the absence of a solid, high-quality research base. Therefore, an update to the earlier neck pain guidelines that reflects evidence extracted from the published scientific literature about effective chiropractic treatment(s) for adult patients with nonspecific neck pain was needed. The purposes of this study were to develop evidence-based treatment recommendations for the treatment of nonspecific (mechanical) neck pain in adults and to present recommendations synthesized from this evidence and strength rating of each recommendation.

METHODS

This study addresses chiropractic treatments for which there is evidence. There may be other treatments for which there is no evidence and for which this study cannot make recommendations. Therefore, this CPG does not provide a

comprehensive overview of all chiropractic treatment that may be rendered to patients, only those for which there is evidence.

The procedures identified the high-quality (low risk of bias) studies that investigated the benefits of commonly used chiropractic modalities for the treatment for adults with nonspecific neck pain as determined by validated clinical outcome measures compared with placebo or other interventions. Neck pain resulting from whiplash or serious pathology was not included. For the purposes of this guideline, chiropractic treatment of neck pain includes any of the techniques or procedures commonly used by DCs, but excludes acupuncture, surgical procedures, invasive analgesic procedures, injections, psychological interventions, or medications (either prescription or over-the-counter).

The methods used in the development of recommendations for this guideline have been described in detail elsewhere.⁹ The GDC has adopted systematic processes for literature searching, screening, review, analysis, and interpretation, which are consistent with the criteria proposed by the “Appraisal of Guidelines Research and Evaluation” collaboration (<http://www.agreecollaboration.org>). This guideline is a supportive tool for practitioners and for their patients and is not intended as a standard of care. The intent of this guideline is to link clinical practice to the best available published evidence and is only one component of an evidence-based approach to patient care, which should include clinical judgment and patient values.

Data Sources and Searches

A systematic search of the literature was conducted. The search strategy was developed by the GDC in conjunction with an experienced medical research librarian in MEDLINE by exploring MeSH terms related to chiropractic and specific interventions (see [Appendix A](#)). The databases searched included the following: MEDLINE, EMBASE, EMCARE, Index to Chiropractic Literature, and the Cochrane Library. Searches included articles published in English or with English abstracts. The search strategy was limited to adults (≥ 18 years). A study population was considered to be adult when drawn from a “workplace.” The search spanned the period January 2004 to December 2011. Reference lists provided in systematic reviews (SRs) were also reviewed to avoid missing relevant articles. Some of the treatment modalities included in this guideline are not exclusive to DCs but include those that may also be delivered by other health care professionals.

Evidence Selection Criteria

Search results were screened electronically, and a multistage screening was conducted (see [Appendix B](#): level 1 (title and abstract), duplicate citations were removed, and remaining articles were retrieved as electronic and/or hard copies for detailed analysis; level 2 (full-text methodology and relevance);

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