

# COMMENTARY ON THE COCHRANE REVIEW OF MASSAGE FOR NECK PAIN

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## ABSTRACT OF THE COCHRANE REVIEW

**Background:** This review is part of a series of reviews of treatments for mechanical neck disorders. Mechanical neck disorders are common, disabling, and costly. Massage is a commonly used modality for the treatment of neck pain. This is the first Cochrane review focused solely on the evidence regarding massage as a treatment for neck pain.

**Objectives:** The primary aim of this review was to assess the effects of massage on pain, function, disability, patient satisfaction, and global perceived effects in adults with neck pain. The secondary aims were to document costs of care and adverse effects of treatment.

**Search Strategy:** Cochrane Central, MEDLINE, EMBASE, MANTIS, CINAHL, and

ICL databases were electronically searched, without language restriction, from their various dates of inception until September 2004.

**Selection Criteria:** Two reviewers independently identified citations and selected studies of massage that assigned study participants to treatment using randomized or quasi-randomized methods. Eligible trials included persons with mechanical neck disorders, with or without associated headache and/or radicular pain, who received massage alone or in combination with other treatments and for whom there were measures of pain, disability, global measures of effect and/or patient satisfaction with treatment. Comparisons of massage with placebo, no treatment controls, active treatment controls, and other packages of care were included.

**Data Collection and Analysis:** Two reviewers independently abstracted the data onto standardized forms and provided a standardized assessment of study quality. Primary authors were contacted as needed to provide additional information on primary outcomes. Using a random-effects model, the relative risk and standardized mean difference were calculated.

**Main Results:** Nineteen trials met the inclusion criteria. However, the overall methodological quality was low, with 12 of 19 assessed as low-quality studies. Trials could not be statistically pooled because of heterogeneity in treatment and control groups. Therefore, a levels-of-evidence approach was used to synthesize results. Assessment of the clinical applicability of the trials showed that although the participant characteristics were well reported, neither the descriptions of the massage intervention nor the credentials or experience of the massage professionals were well reported. Six trials examined massage as a stand-alone treatment. The results were inconsistent. Of the 14 trials that used massage as part of a multimodal intervention, none were designed so that the relative

contribution of massage could be ascertained. Therefore, the role of massage in multimodal treatments remains unclear.

**Conclusions:** No recommendations for practice can be made at this time because the effectiveness of massage for neck pain remains uncertain. Pilot studies are needed to characterize massage treatment (frequency, duration, number of sessions, and massage technique) and establish the optimal treatment to be used in subsequent larger trials that examine the effect of massage as either a stand-alone treatment or part of a multimodal intervention. For multimodal interventions, factorial designs are needed to determine the relative contribution of massage. Future reports of trials should improve reporting of the concealment of allocation, blinding of outcome assessor, adverse events, and massage characteristics. Standards of reporting for massage interventions, similar to CONSORT, are needed. Both short- and long-term follow-up are needed.

## CRITIQUE OF COCHRANE REVIEW

Neck pain is one of the most common reasons for which persons use massage,<sup>1</sup> and massage is one of the most common complementary and alternative medicine (CAM) treatments for neck pain.<sup>2</sup> This is precisely the type of situation where knowing the effectiveness of the treatment, in this case, therapeutic massage, is especially critical. However, this well-done review,<sup>3</sup> which actually found 19 studies purporting to evaluate massage for mechanical neck disorders and which followed the rigorous reporting procedures of the Cochrane Back Review Group, concluded that "no recommendations could be made because the evidence remains uncertain." What happened? As is commonly true in systematic reviews of CAM treatments for musculoskeletal pain, the difficulty lies primarily with the poor quality of the primary studies. These typically

suffer from small sample sizes, heterogeneous populations, noncomparable outcome measures, poorly described treatments with critical details lacking about the rationale for the treatment, and comparisons to a plethora of different control or treatment groups. In addition, many trials lacked adequate randomization, blinded assessors of outcome, and other standard features of good study design.

In addition, for both back and neck pain, questions remain about whether “nonspecific” (also known as “mechanical”) pain is actually a variety of conditions that would benefit from being studied separately. Unfortunately, no one has yet figured out the “right” way to sort out such hypothetical subgroups, if they in fact actually exist. Unfortunately, none of the studies included in the review were similar enough that they could be combined, even if the primary studies were well done, which was in itself quite rare.

When considering the treatment—massage—the picture is even more complex because it can be used by multiple professionals: physical therapists (physiotherapists) may use it as part of a multimodality treatment package in which massage might be given as a small part of a longer treatment session; chiropractors might use it to prepare the tissues for manipulation; and massage therapists might use it as a stand-alone treatment or as the centerpiece of a course of treatments that includes self-care recommendations. Which of these treatments actually constitutes “massage”? In this systematic review, anything described as massage was included, even self-massage and regardless of the amount of time spent performing massage as part of the treatment. In fact, 14 of the studies included massage as part of a multimodality package of care, whereas only six studies looked at massage as a stand-alone treatment. Both groups were problematic, as the authors noted. None of the combination treatments was designed to allow the effects of massage per se to be evaluated. One wonders why such studies were actually included in this review, as

they give the impression that more studies were available that evaluated massage than was actually the case. Moreover, when information was available regarding the type of provider in these studies, a physical therapist (physiotherapist) had actually administered the treatment, which might not give useful information on the value of treatments from massage therapists, who practice in a different context.

When considering massage as a CAM treatment, however, the stand-alone treatments are most relevant. Only six trials examined massage in this context. Among those, two involved only one session and a third studied self-administered massage, whereas one each focused on persons with headache of cervicogenic origin, on Chinese massage, and on Swedish massage. Single session treatments and self-treatment are unlikely to shed light on the value of massage as a CAM treatment for neck pain, thus further reducing the number of useful trials. Chinese massage is not routinely used for the treatment of neck pain in the United States. Nilsson et al<sup>4</sup> included only patients with cervicogenic headaches and measured headache-associated outcomes, so that study’s applicability to neck pain patients is unknown. The study of Irnich et al<sup>5</sup> compared Swedish massage performed by physiotherapists to sham laser acupuncture and to real needle acupuncture. Nearly half of the study participants had previously been treated with massage for their neck pain, presumably unsuccessfully, so the relevance of even this study is unclear regarding the benefits of massage as a CAM therapy.

In light of the weaknesses of the primary studies, the major value of the review is for stimulating new research by informing potential researchers what needs to be done to improve the quality of trials evaluating massage for neck pain. Although some of the recommendations are applicable for all trials of neck pain—no matter the therapy, the massage-focused recommendations are unique and make an important contribution for the study of massage in general. Research on massage for neck

pain stands at the point where acupuncture research did perhaps a decade ago—poor quality, small trials that test interventions that rarely reflect actual practice.<sup>6,7</sup> In addition, because massage is provided in many different contexts, it is critical to nail down the issue of adequate dose (eg, number of treatments per week and length of each treatment session) and type of massage. Only by overcoming these weaknesses will systematic reviews of this topic be able to make more definitive statements about the potential value of massage as a treatment. At that time, such reviews will actually be useful to patients and clinicians.

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