Randomised controlled trials on the efficacy of spinal manipulation therapy in the treatment of low back pain
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CRD summary
This study reviewed trials published between 1998 and 2002 that had examined the effectiveness of spinal manipulation therapy for low back pain. The authors concluded that evidence of effectiveness remains unconvincing, and that the relevant studies had methodological flaws. The methodological limitations of this review and lack of study details mean that the authors' conclusions should be interpreted with caution.

Authors' objectives
To review randomised controlled trials (RCTs) from 1998 to 2002 that address the efficacy of spinal manipulation therapy (SMT) for low back pain (LBP).

Searching
MEDLINE, CINAHL, EMBASE and AMED were searched for papers published in English between 1998 and 2002; the search terms were reported. The reference lists of relevant articles were also screened.

Study selection
RCTs or reviews that considered the effectiveness of LBP treatment using SMT as at least one treatment were eligible for inclusion. Study participants had to suffer from mechanical LBP (i.e. no pathology or neurological involvement).

Of the studies included, two used chiropractic manipulation and one used osteopathic manipulation. A range of follow-up periods and number of treatments given were used.

The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The authors discussed the methodological quality of the included trials. The criteria assessed were sample size, use of placebo, assessor blinding, type of cointervention, type of treatment and treatment environment.

The authors did not state how the validity assessment was performed.

Data extraction
Study results were extracted only as being positive or negative (i.e. no significant differences). The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

Methods of synthesis
The results were pooled in a narrative synthesis, and differences between the studies were discussed.

Results of the review
Three RCTs (n=799) were included in the review.

The study sample sizes ranged from 155 to 323 participants. All three studies used non-standardised treatment techniques. Only one trial used a blinded assessor.

None of the studies reported any significant long-term differences in treatment effectiveness for SMT, although one study found a significant difference during the acute stage of treatment (<4 weeks).

Cost information
One study reported that over a 2-year period the cost of SMT was as follows: chiropractic, $429; physical therapy, $437; educational booklet, $153.

Authors' conclusions
The efficacy of manipulation for the treatment of acute or chronic LBP remains unconvincing, and the relevant studies had methodological flaws.

CRD commentary
The review addressed a clear question and was supported by appropriate inclusion criteria. Although several databases were searched, the inclusion of only English language papers, and the absence of searches for unpublished research, might have resulted in the exclusion of some relevant studies. In addition, the methods used to select the studies were not reported, so it is difficult to comment on the risk of bias and error being introduced into this process. The authors assessed the quality of the included studies, although this was not comprehensive (e.g. presence of power calculations and losses to follow-up were not assessed). Details of neither the individual study results nor the outcomes used were reported, making interpretation of the review results difficult. In summary, methodological limitations and a lack of study details mean that the authors' conclusions should be interpreted with caution.

Implications of the review for practice and research
Practice: The authors stated that it would be difficult to advocate the use of SMT over other therapies in the chronic stages of LBP, owing to the absence of strong evidence of a long-term effect.

Research: The authors stated that ongoing and high-quality research should be conducted before any conclusion is drawn about the short- or long-term value of SMT in the treatment of LBP. Research is also needed to assess the effectiveness of multiple interventions being used together.

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Other publications of related interest

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on
the reliability of the review and the conclusions drawn.