**Article Full Title**

No Sufficient Evidence for an Immediate Hypoalgesic Effect of Spinal Manual Therapy on Pressure Pain Thresholds in Asymptomatic and Chronic Pain Populations: A Systematic Review and Meta-Analysis

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**Paper Abstract**

Spinal manual therapy (SMT) is often used to treat patients with spinal disorders; however, the underlying mechanisms of SMT are not fully understood. This systematic review and meta-analysis investigates the effect of SMT compared to sham treatment or no intervention on local or remote (segmental or nonsegmental) pressure pain thresholds (PPT) in patients with chronic musculoskeletal conditions and people who are pain free.

**NIH Risk of Bias Tool**

Quality Assessment of Systematic Reviews and Meta-Analyses

**Is the review based on a focused question that is adequately formulated and described?**

Yes

**Were eligibility criteria for included and excluded studies predefined and specified?**

Yes

**Did the literature search strategy use a comprehensive, systematic approach?**

Yes

**Were titles, abstracts, and full-text articles dually and independently reviewed for inclusion and exclusion to minimize bias?**

Yes

**Was the quality of each included study rated independently by two or more reviewers using a standard method to appraise its internal validity?**

Yes

**Were the included studies listed along with important characteristics and results of each study?**

**Was publication bias assessed?**

Yes

**Was heterogeneity assessed? (This question applies only to meta-analyses.)**

Yes

**Key Finding #1**

The study found that spinal manual therapy provided no immediate hypoalgesic effect on pressure pain thresholds in participants with chronic pain disorders or those who were pain free.

**Key Finding #2**

It should be noted that the studies selected for this systematic review and meta-analysis had varying control groups. Some control groups received no treatment, while others received sham treatments.

**Please provide your summary of the paper**

This paper found no significant or meaningful difference between spinal manual therapy and control treatments (no treatment or sham treatments) on patients with either chronic pain disorders or those who were pain free. As stated above, it is important to note the the varying control treatments among the different studies reviewed, as this could influence the overall results of this paper. The immediate hypoalgesic effects studied were measured using pain pressure thresholds.

**Please provide your clinical interpretation of this paper. Include how this study may impact clinical practice and how the results can be implemented.**

I found this systematic review and meta-analysis very interesting as it did not find significant immediate hypoalgesic effects of spinal manual therapy. It led me to think about the purpose behind using spinal manual therapy on patients, and whether the treatment was primarily used for pain relief or for other benefits. I think this is something important to think about and keep in mind when working with patients, especially those with chronic pain disorders. I believe there is value in more studies being conducted to further investigate the immediate hypoalgesic effects of spinal manual therapy.