

Based on the encouraging results of this preliminary study, more research on maintenance Spinal Manipulation Therapy for chronic low back pain is warranted. If future clinical trials are confirmatory, doctors of chiropractic can use this knowledge to assist in decision-making regarding the frequency and duration of SMT.

# Does Maintenance Spinal Manipulation Therapy Offer Additional Benefits for Patients with Chronic Low Back Pain?

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## Introduction

Spinal manipulation therapy (SMT) is effective for short-term pain relief and disability reduction in patients with acute and chronic low back pain, and is recommended as a reasonable approach for this disorder.<sup>1,2</sup> While short-term improvement in pain and disability is advantageous for patients, chronic low back pain should be managed by treatment approaches that clearly demonstrate long-term effectiveness. Unfortunately, little is known about the long-term effectiveness of many interventions commonly administered for chronic low back pain, including SMT. Furthermore, the effects of extended periods

of maintenance SMT after the initial phase of care has not been studied in detail. A recent study by Senna and Machaly<sup>3</sup> offers new insights about these issues and is described below.

## Purpose

The purpose of this study was to assess the effectiveness of maintenance SMT for the management of chronic, non-specific low back pain.<sup>3</sup>

## Methods

**Study Design:** Randomized controlled trial.

**Participants:** Patients ( $n = 93$ ) with chronic, non-specific low back pain were recruited from outpatient healthcare centers and were enrolled in this study.

**Interventions:** The participants were randomly assigned to receive one of three interventions:

**Group 1 - SMT-sham ( $n = 40$ ):** Participants in this group received 12 sessions of sham SMT over one month, but no intervention during the subsequent nine months.

**Group 2 - SMT-initial ( $n = 27$ ):** Participants in this group received 12 sessions of SMT over one month, but no intervention

vention during the subsequent nine months.

**Group 3 - SMT-initial+sustained (n = 26):** Participants in this group received 12 sessions of SMT over one month, followed by one SMT session every two weeks for an additional nine months.

The SMT for groups 2 and 3 consisted of high-velocity, low amplitude procedures applied to the lumbo-sacral spine, while the sham SMT for group 1 consisted of light manual forces applied to the lumbo-sacral spine. All SMT was administered by medical doctors. Participants in all groups were advised to perform a home exercise program for the duration of the study that consisted of pelvic tilt flexibility exercises. Compliance to this exercise program was not reported.

**Outcome Measures:** Self-reported pain (visual analog scale), disability (Oswestry Disability Questionnaire), and quality of life (Short Form 36) were assessed at baseline, and at 1 month, 4 months, 7 months, and 10 months follow-up.

## Results

Sixty participants (20 from each group) completed the study at 10 months, which indicates that 35 percent of subjects dropped out. After the initial one-month intervention period, modest improvements in pain,

disability, and quality of life were noted in the SMT-initial and SMT-initial+sustained groups. At 10 months follow-up, pain, disability and quality of life continued to improve in the SMT-initial+sustained group, while early improvements in pain, disability and quality of life were lost and virtually returned to baseline values in the SMT-initial group. No improvements in pain, disability and quality of life were noted at one month or 10 months in the SMT-sham group.

## Discussion

The results of this study suggest that continuing SMT at a reduced frequency of one treatment every two weeks for nine months after an initial one-month course of care is effective in maintaining improvements in self-reported pain, disability and quality of life in patients with chronic low back pain at 10 months follow-up. These results are potentially promising for patients seeking care from doctors of chiropractic and appear to support the notion of maintenance SMT for long-term benefits. The results should be interpreted with caution, however, since there are a few important limitations with this study. First, the study had a small sample size and a high drop-out rate, which makes it prone to bias. Moreover, the two groups that were compared to the SMT-initial+sustained

group did not receive any intervention during the nine-month follow-up period. Finally, considering that a specific form of SMT was administered by a specific provider (medical doctor) in this study, it is unclear if the results are generalizable to other forms of SMT administered by doctors of chiropractic.

## Conclusions

Maintenance SMT for nine months following an initial one-month treatment period was shown to be effective in improving long-term pain, disability and quality of life in a small sample of patients with chronic, non-specific low back pain. Based on the encouraging results of this preliminary study, more research on maintenance SMT for chronic low back pain is warranted. If future clinical trials are confirmatory, doctors of chiropractic can use this knowledge to assist in decision-making regarding the frequency and duration of SMT. ◀FCA

### References

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