

The regional effect of spinal manipulation on the pressure pain threshold in asymptomatic subjects: a systematic literature review

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We have all examined patients who are experiencing so much pain that they can barely be touched. This type of sensitivity is relatively common with back pain. The patient's pressure pain threshold has become so low, that nearly any stimulus is perceived as painful. Conversely, increasing the threshold will result in a great ability to accept stimuli without pain.

In research, pressure pain threshold has been established as a reliable measurement of tenderness or pain. So how could this be influenced in clinical practice? This study showcases that spinal manipulation has a direct effect on regional pressure pain thresholds. This is likely due to a combination of mechanoreceptive input and changes in muscle tone post-manipulation.

Altering the regional pressure pain threshold is one key factor in reducing pain and improving quality of life for many of the patients we see in practice.

"Patients often report immediate improvement of pain after spinal manipulation. For example, 63% of 984 patients with low back pain reported immediate improvement in a multi-center study."

"Four of the five studies that measured the pressure pain threshold in the cervical spine had positive findings (with spinal manipulation)."

"A significant difference was noted between spinal manipulation vs sham, and between spinal manipulation and an inactive control."

"Spinal manipulation has an effect regionally on pressure pain thresholds in asymptomatic subjects."

Proposed Mechanism of Action for Spinal Manipulation
Mechanoreceptive input / Nociceptive pain gate
Decrease in regional muscle tension
Reduce pressure on nerve roots exiting the foraminal canals
Increase pressure pain threshold regionally
Reduce intra-discal pressure
Release synovial folds within the facet joints