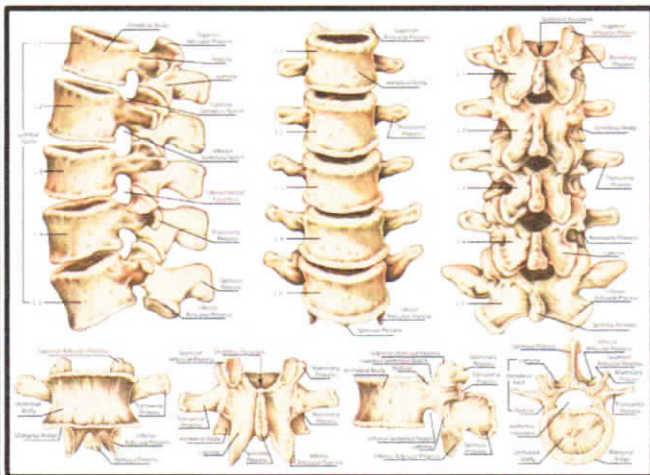


Interprofessional Spine Care Report

Non-Opioid Pain Management Efficacy of Spinal Manipulation

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Deciding how best to manage spine pain is an important part of clinical practice, particularly in family medicine. The decision making process must include the individual presentation of the patient, past medical history, orthopedic and neurologic examination, a complete biomechanical assessment all while choosing interventions that provide the most benefit while avoiding harm. **A recent study [2017] published in the journal Neuroscience helped to continue the positive research trend on the pain management effects of spinal manipulation.**

The authors stated, "Back pain is highly prevalent, leading to significant economical and societal costs. The diagnosis and treatment of chronic back pain remains challenging. However, acute episodes of back pain can be addressed successfully by a number of interventions, including spinal manipulation (SM)." [page 220]

This is important since there is a misconception in clinical practice that spine pain interventions should focus on cure as opposed to management. Perhaps we should consider spine pain to be similar to most other internal medicine disorders [diabetes, hypertension] which are managed using the least invasive and most cost effective interventions.

The paper reports "**This is the first study that provides evidence for SM-induced inhibition of temporal summation of back pain.** This extends results from previous studies showing that the relief of back pain by SM partly relies, at least in part, on specific hypoalgesic or antinociceptive processes within the spinal cord" [pg 224]

The authors outlined three possible mechanisms of action:

- 1: A decrease in pain sensation due to the inhibition of dorsal horn neuronal activity
- 2: Activation of descending pathways from the brain and brain stem
- 3: Decreased nociception and pain perception in non-specific cerebral regions

"These results indicate that SM produces specific inhibitory effects on temporal summation of back pain, consistent with the involvement of a spinal anti-nociceptive mechanism in clinical pain relief by SM." [pg 228]

When it comes to the diagnosis and management of spine pain, spinal manipulation by a provider who is trained in patient selection and appropriate techniques is proving to be an important part of patient care.

Reference:

1. Randall, C., Gagnon-Normandin, V., Tessier, J., Bois, S., Rustamov, N., O'Shaughnessy, J., ... & Piché, M. (2017). The mechanism of back pain relief by spinal manipulation relies on decreased temporal summation of pain. *Neuroscience*, 349, 220-228.