

CHIROPRACTIC & HEALTH

A Natural Connection

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Study Shows Spinal Manipulation Reverses Brain Changes Associated with Chronic LBP: Massive Benefits for Pain and Disability from 5 Weeks of Regular Spinal Manipulation!

Didehedar et al. (2020) The effect of spinal manipulation on brain neurometabolites in chronic nonspecific low back pain patients: a randomized clinical trial. Irish Journal of Medical Science. 189:543-550

QUOTE BOARD:

"5 weeks after the treatment, the NRS [10-point Pain Scale] and ODI [50 point Disability Index] of the treatment group were reduced by 3.6 and 16 units, respectively, while there was no difference in the sham group."

These are MASSIVE clinical improvements! The minimal clinically important differences for pain and disability (which NO drug or surgery achieves) are 1 and 5 units, respectively. 5 weeks of 3x/wk SMT care achieved 3.6 units of decreased pain and 16 units of decreased disability, respectively!

"In the treatment group, NAA [N-acetyl aspartate] metabolite significantly increased in the thalamus, ACC [anterior cingulate cortex], and SSC [somatosensory cortex] and Cho [choline] metabolite in thalamus and SSC regions 5 weeks after the treatment compared with the baseline measures. Furthermore, in the treatment group, Glx [glutamate and glutamine] metabolite in thalamus significantly increased following the treatment compared with the baseline measures. The metabolites of the brain in the sham group did not undergo a significant change before and 5 weeks after the treatment."

Conclusion: "In the patient with low back pain, spinal manipulation affects the central nervous system and changes the brain metabolites. Consequently, pain and functional disability are reduced."

Key Concepts:

"In chronic pain, neurophysiologic and brain metabolite changes are an indication of neuroplasticity in CNS. Additionally, chronic pain is the result of increased irritability of CNS involved in pain or sensitization."

Chronic segmental spinal restriction and inflammation leads to chronic increased input of pain signals into the pain and negative emotion areas of the brain and to chronic decreased input of joint, muscle, tendon, and ligament receptor input into the sensory-motor areas of the brain. This leads to chronic increases in pain and to chronic decreases in motor function leading to increases in functional disability.

Key Take Home Points:

This study shows, once again, that when a proper dose of thrust chiropractic spinal manipulation/adjustment care is provided, that there is indisputable evidence that chiropractic SMT care is clinically effective - in fact HIGHLY effective - eliciting more benefit in terms of pain and functional disability reduction than ANY OTHER INTERVENTION.

Further, *this study also provides some further insight into the dysfunctional brain changes involved in chronic pain, and how chiropractic adjustment/manipulation reverses this dysfunction.*