

CHIROPRACTIC & HEALTH: A Natural Connection

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© Dr. James L. Chestnut M.Sc, D.C., C.C.W.P.

Chiropractic Adjustments Stimulate Brain to Release Pain Relieving Neuropeptides/Hormones

QUOTE BOARD

“Spinal manipulation (SM) is a common treatment approach for pain reduction in low back and neck disorders.”

“Several studies in asymptomatic subjects have shown that SM techniques induce changes in physiological reflexes, increase neuromuscular excitability, and modify sensitivity.”

“The aim of this study was to evaluate the effects of cervical and thoracic SM on the plasmatic concentration of biochemical markers (neurotensin, orexin A, oxytocin, and cortisol). This study represents a preliminary step in advancing the understanding of the underlying mechanisms of SM treatment and its effects.”

“Taken together, the results of this study show that cervical and thoracic manipulation resulted in an increase in neurotensin, oxytocin, and plasmatic cortisol concentration in asymptomatic individuals. These neuropeptides are related to the modulation of nociception and stress-induced analgesia. These findings suggest that descending inhibitory pathway mechanisms may be involved in the physiological effects that follow SM.”

CLINICAL IMPORTANCE

Key Concepts:

Chiropractic adjustments, via their effects on the nerve pathways between the spine and the brain, stimulate the areas of the brain for sensori-motor integration and motor control/strength/coordination. However, chiropractic adjustments also stimulate the areas of the brain that regulate the release of pain modulating hormones/neuropeptides.

“Several studies currently support the idea that the analgesic effect of manual therapy is mediated by central mechanisms of pain modulation through the modulation of neuropeptide production.”

Take-Home Points

The body-mind connection is just as important, if not more important, than the mind-body connection and the motion and position receptors (proprioceptors) in muscles, joints, tendons, and ligaments, as well as the inflammation, stiffness, and tenderness receptors (nociceptors) play a very significant role not just in neuromusculoskeletal health but in overall health and quality of life.

Without proper motion it is not possible to resolve inflammation, tenderness, stiffness or pain in joints, muscles, ligaments, and tendons.

Proper joint motion is the single most important determinant of healthy, pain-free, joint and muscle function. The health of the entire neuromusculoskeletal system, and the healthy function of the associated brain areas, is all dependent upon proper joint motion.

Chiropractors are the world's leading experts in detecting and correcting areas of improper joint motion and restoring the proper nerve messages between body and brain. Chiropractic adjustments are the most evidence-based intervention for restoring joint motion and this is why chiropractic is so effective.

Plaza-Manzano, G. et al. (2014) Changes in Biochemical Markers of Pain Perception and Stress Response After Spinal Manipulation. Journal of Orthopaedic and Sports Physical Therapy 44(4); 231-239