

Improved Immune System Function

This is one of the most exciting areas of chiropractic. More and more research is pointing to an immune system enhancement effect of the spinal adjustment.

The effects of chiropractic on the immune system a review of the literature. Allen JM, Chiropractic Journal of Australia, 1993; 23:132-135. This review of the literature gives a summary of recent research implying a connection between chiropractic adjustments and immunocompetence. The literature suggests that the nervous system plays a role in the modulation of the immune response and that chiropractic adjustments influence T and B lymphocyte numbers, natural killer cell numbers, antibody levels, phagocytic activity and plasma endorphin levels. The few studies attempting to measure the effect of chiropractic or manipulative treatment on the immune response are reviewed. The anatomical and physiological connections between the immune system and the nervous system suggest that the nervous system plays a role in the modulation of the immune response.

A comparative study of the health status of children raised under the health care models of chiropractic and allopathic medicine. Van Breda, Wendy M. and Juan M. Journal of Chiropractic Research Summer 1989. Children under chiropractic had less use of medications, including antibiotics.

An overview of neuroimmunomodulation and a possible correlation with musculoskeletal system function. Fidelibus G. JMPT, 124, 1989 Receptors for neuromodulators and neurohormones have been identified on human T-lymphocytes, it is believed that the immune system can communicate with the nervous system using neuromodulators and neurohormones secreted by lymphocytes.

Enhanced phagocytic cell respiratory burst induced by spinal manipulation potential role of substance P. Brennan PC, Kokjohn DC, Kaltinger CL et al. JMPT Vol. 14 No 7 Sept 1991 p 399-408. An interesting property of phagocytic cells (polymorphonuclear neutrophils or PMNs and monocytes in this study) is put to use in this study, that is, they emit light during phagocytosis (called "respiratory burst"). Using 67 male and 32 female volunteers, blood was taken 15 minutes before and after subjects who had a sham manipulation, thoracic spine manipulation or soft tissue manipulation. More light was emitted from monocytes and PMNs after spinal manipulation than from those who had the sham or soft tissue work. Substance P (SP) is a neurotransmitter released from the dorsal root ganglion and its plasma level was elevated after the manipulation. SP appears to be able to prime phagocytes for enhanced respiratory burst. From the discussion "Thus the data provide evidence in man that spinal manipulation elicits viscerosomatic responses; specifically, our study shows that manipulation affects cells involved in inflammatory and immune responses, at least over the short term."

Enhanced neutrophil respiratory burst as a biological marker for manipulation forces duration of the effect and association with substance P and tumor necrosis factor. Brennan PC, Triano JJ, McGregor M et al. JMPT Vol. 15 no. 2 Feb. 1992. P. 83-89. This paper builds upon the one above. Using blood collected from 27 male and 19 females after a manipulation of the thoracic spine, the plasma levels of substance P (SP) and respiratory burst response of PMNs was found to be higher 15 minutes after manipulation than from blood collected 15 minutes before and 30 and 45 minutes after manipulation. In addition to priming PMNs for enhanced respiratory burst (RB), SP also stimulates production of mononuclear cell tumor necrosis factor (TNF). Mononuclear cells are also primed for enhanced endotoxin-stimulated TNF production after manipulation. From the discussion "The data presented confirm and extend our previous reports that a high-velocity, low-amplitude thrust to the thoracic spine primes PMN for an enhanced respiratory burst in response to a particulate challenge. Spinal manipulation also primes mononuclear cells for enhanced endotoxin stimulated TNF production...this has not been previously reported....thus these data further support the motion that spinal manipulation elicits viscerosomatic responses...."

This paper has the weaknesses of the one above i.e. If it's chiropractic research, where's the subluxation? How does the vertebral subluxation complex relate to this? Are chiropractors merely manipulating spines or specifically adjusting subluxations and how does their "thoracic manipulation" fit into this?

Immunologic correlates of reduced spinal mobility preliminary observations in a dog model. Brennan PC, Kokjohn K, Triano JJ et al. In Proceeding of the 1991 International Conference on Spinal Manipulation, FCER; 118-121. The posterior facet joints of 4 beagles was surgically fused at L1/L2 and L2/L3 by injecting a sealant. T11/12 and T12/13 joints were fused on two of the beagles. 4 beagles were used as controls. The respiratory burst (RB) of the polymorphonuclear neutrophils (PMN) were depressed in the dogs who underwent the surgical fusion in contrast to the 4 dogs who had a sham surgical fusion. The results of this study suggest that spinal joint fixation results in immunosuppression. Note An earlier animal experiment by DeBoer and McKnight (Surgical model of a chronic subluxation in rabbits. DeBoer KF and McKnight ME JMPT 11366-372) created severe spinal distortions in rabbits. This experiment tried to do the opposite by creating a lessening of motion, a surgical fusion. These experiments are testing one component of the vertebral subluxation complex, kinesio pathology. Clinically chiropractors have found that both hypomobility and hypermobility are related to the vertebral subluxation complex.

The effects of specific upper cervical adjustments on the CD4 counts of HIV positive patients. Selano JL, Hightower BC, Pfleger B, et al. Chiropractic Research Journal. 1994;332-39. Five patients were adjusted and five were controls. After 6 months, in the control group the CD4 levels declined by 7.96% while the adjusted group experienced a 48% increase. This indicates that correction of upper cervical subluxation would improve immunocompetence.

Chiropractic care in adult spina bifida a case report. Thomas RJ, Wilkinson RR. Chiropractic Technique, 1990;2191-193. 31-year-old female with spina bifida T11-L2 presented with multiple symptoms such as muscle spasms, poor bladder control, recurrent bladder infection, swollen cervical lymph nodes, and possible immunosuppression. Chiropractic adjustments consisted of Logan Basic and other minimal force techniques. After 5 years of chiropractic care the bladder has been infection free for a period of more than a year; bladder control has improved and leg spasms have decreased in frequency and severity. Menstrual cramping has been reduced. Based on the case history of recurrent infection, the author hypothesized that one effect of vertebral subluxation complex was immunosuppression which was relieved by chiropractic adjustments.