



## Chiropractic and the Immune System

Today researchers know there is a critical link between the nervous system and the immune system.

In 1974, physiologist Dr. Korr proposed that "spinal lesions" (similar to the vertebral subluxation complex) are associated with exaggerated sympathetic (a division of the nerve system) activity.

Korr IM: "Andrew Taylor Still memorial lecture: Research and Practice - a century later." J Am Osteopathy Assoc 1974 73:362.

Sympathetic activity has been shown to release immune regulatory cells into the blood circulation, which alters immune function. This was reported by Drs. Murray, Irwin, and Reardon. The authors stated:

"Growing evidence suggests that immune function is regulated in part by the sympathetic nervous system. Sympathetic nerve endings densely innervate lymphoid tissue such as the spleen, lymph nodes and the thymus, and lymphoid cells have beta 2 adrenergic receptors."

Basically what they were saying is that the nervous system has a direct effect on the immune system due to the nerve supply to the important immune system organs.

Murray DR, Irwin M, Reardon CA, et al. "Sympathetic and immune interactions during dynamic exercise. Mediation via a beta 2 - adrenergic-dependent mechanism." Circulation 1992 86(1): 203

One of the most important studies showing the positive effect chiropractic care can have on the immune system and general health was performed by Ronald Pero, Ph.D., chief of cancer prevention research at New York's Preventive Medicine Institute and professor of medicine at New York University. Dr. Pero measured the immune systems of people under chiropractic care as compared to those in the general population and those with cancer and other serious diseases. In his initial three-year study of 107 individuals who had been under chiropractic care for five years or more, the chiropractic patients were found to have a 200% greater immune competence than people who had not received chiropractic care, and 400% greater immune competence than people with cancer and other serious diseases. The immune system superiority of those under chiropractic care did not diminish with age. Dr. Pero stated:

"When applied in a clinical framework, I have never seen a group other than this chiropractic group to experience a 200% increase over the normal patients. This is why it is so dramatically important. We have never seen such a positive improvement in a group..." Pero R. "Medical Researcher Excited By CBSRF Project Results." The Chiropractic Journal, August 1989; 32.

The chiropractic immunology connection was strengthened in 1991 when Patricia Brennan, Ph.D. and other researchers conducted a study that found improved immune response following chiropractic treatment. Specifically, the study demonstrated the "phagocytic respiratory burst of polymorphonuclear neutrophils (PMN) and monocytes were enhanced in adults that had been adjusted by chiropractors." In other words, the cells

that act like "Pac-Man" eating and destroying bad cells are enhanced through chiropractic care. Brennan P, Graham M, Triano J, Hondras M. "Enhanced phagocytic cell respiratory bursts induced by spinal manipulation: Potential Role of Substance P." J Manip Physiol Ther 1991; (14)7:399-400.

Another important study was performed at the Sid E. Williams Research Center of Life Chiropractic University. The researchers took a group of HIV positive patients and adjusted them over a six-month period. What they found was that the "patients that were adjusted had an increase of forty-eight percent (48%) in the CD4 cells (an important immune system component)." These measurements were taken at the patients' independent medical center, where they were under medical supervision for the condition. The control group (the patients that were not adjusted) did not demonstrate this dramatic increase in immune function, but actually experienced a 7.96% decrease in CD4 cell counts over the same period.

When we read the results of that study we were shocked that we hadn't heard about it earlier, that it didn't make the headline news or was on the front page of every newspaper. Those are very impressive results with important implications!

Selano JL, Hightower BC, Pflieger B, Feeley-Collins K, Grostic JD. "The Effects of Specific Upper Cervical Adjustments on the CD4 Counts of HIV Positive Patients." The Chiro Research Journal; 3(1); 1994.

A paper published in 1987 found a connection between the nervous system and the immune system through endocrine channels. Dr. Felton and his team of researchers reported that "the neurotransmitter norepinephrine is present in sympathetic nerve fibers that innervate lymphoid organs and act on the spleen." The authors proposed that norepinephrine in lymphoid organs plays a significant role in the regulation of the immune system. They stated:

"Stressful conditions lead to altered measures of immune function, and altered susceptibility to a variety of diseases. Many stimuli, which primarily act on the central nervous system, can profoundly alter immune responses. The two routes available to the central nervous system are neuroendocrine channels and autonomic nerve channels."

Thus the immune system can be affected by the nerve system through the connections with the endocrine and the autonomic nervous system.

Felton DL, Felton SY, Belonged DL, et al. "Noradrenergic sympathetic neural interactions with the immune system: structure and function." Immunol Rev. 1987 Dec;100:225-60