

■ Spinal nerve roots far more sensitive than previously thought

Research is proving that the spinal nerves are much more susceptible to mechanical pressure, such as that caused by the Vertebral Subluxation Complex, than was previously thought.

Previous research held that it took pressure between 130-1000 millimeters of mercury to affect peripheral nerves to the point where the amount of information transmitted by the nerves is significantly reduced. Researcher Seth Sharpless at the University of Colorado found that spinal nerve roots (where the nerves exit the spine) only took 8-10mm of pressure, about the weight of a dime, to reduce nerve transmission.

The *Journal of Manipulative and Physiological Therapeutics* reports in a study by B.L. Rydevik that 5-10mm of pressure can interfere with the nutrition of a nerve, starving it of necessary nutrients.

M. Hause in *Spine* reports that pain is not necessarily present with nerve interference. "Nerve Root Compression can exist without pain. Mechanical changes lead to circulatory changes. There may be disturbed cerebro-spinal fluid flow."

E.J. Wall reports in the *Journal of Bone and Joint Surgery* that stretching a nerve as little as 6% can decrease the strength of the nerve impulse by as much as 70%.

Research continues to prove that compression and stretching of a nerve root reduces the amount of impulse that travels across that nerve as well as interfere with the nerve's blood supply causing it to swell. ▲

■ Herniated lumbar discs in pregnant women may be on the increase

The *Archives of Physical Medicine and Rehabilitation* reported in a 1995 study that the rates of herniated discs in pregnant women may well be on the rise.

The rise is likely related to the fact that the number of women over 30 having babies for the first time has doubled in the last 20 years.

This study underscores the necessity of Chiropractic care at an early age to maintain spinal integrity and prevent problems from developing later on in life that result from a lack of proper function. ▲

■ Spinal fusion: no research done to support its use

The March/April 1996 issue of the *ICA (International Chiropractic Association) Review* brings us an article from *The British Medical Journal* in 1996 which reports that more than 20,000 lumbar spinal fusions are performed each year in the United States despite the fact that there has never been a randomized, controlled study of spinal fusion compared with non-surgical treatment.

Not only are the number of spinal surgeries directly related to the number of surgeons in an area, they are, in fact, contraindicated in many cases. *Spine* in 1994 reports “A recent study of people seeking compensation for a work induced injury showed that the back pain and lifestyle deteriorated after spinal fusion.” *Spine* reported in 1993 that “In a survey of 600 surgical cases, 21.2% of patients had serious complications such as nerve root damage.”

In short, the *British Medical Journal* author, J. Wilson-MacDonald concludes that “The case for spinal fusion for back pain has not been proved. Excellent results have been obtained with non-surgical treatments, and adequate resources have not been fully applied to assess these methods.” Well spoken, indeed. ▲



Chiropractic helps patients with lumbar disk herniation

The *British Journal of Bone and Joint Surgery* in the 1997 Supplement III reports that a **single chiropractic adjustment** caused immediate significant changes in the patient's reflexes in patients with disk herniation that was limited to one side of the spine.

The study was done at the Hadassah University in Jerusalem. The authors reported that “It may be concluded that spinal [adjustments] may promote relief from [abnormal nerve function] by the offending disk herniation.”

By way of suggestion, ask your chiropractor about the **long-term** health effects of reconstructive and wellness chiropractic care. ▲



Back surgery patients unsatisfied long-term

The November 15, 1999 *Spine* reports that patients who have had surgery on their lumbar (low back) spine with unsatisfactory long term results continue to have problems and in some cases need to have the surgery a second time.

109 patients who had herniated discs treated with discectomy were tracked from 7 to 20 years afterward. 36% of the long term patients had unsatisfactory results during the follow-up period. More than 25% of the patients continue to experience leg and/or back pain and 7.3% of them needed to have the surgery re-done.

This in in sharp contrast to a study published in the October, 1995 *New England Journal of Medicine* which found patients are much more satisfied with the care given them by their chiropractor than those who went to medical doctors .

42% of those patients who went to a chiropractor for low back pain rated their care as “excellent” while only 27% of those who went to a medical doctor for the same problem rated their care as high.

■ Subluxation In One Area Of Spine Affects Other Areas

The April 12, 2004 issue of the Journal of Vertebral Subluxation Research highlights a literature review that discusses the different concepts and mechanisms involved that explain why a vertebral subluxation in one area of the spine can cause problems to show up in other areas.

Chiropractors have long held the belief that problems in one part of the spine can refer to other parts because the various parts of the spine seem to work together. In 1981, the journal Applied Kinesiology says “The spine appears to function with a specific harmonious movement as the individual walks, runs, and otherwise performs daily activities.”

So, for researchers, the question becomes “How can we test this?” A study in the journal Manual Medicine: Diagnostics in 1990 shows how. At specific areas of the spine, researchers injected a strong salt solution into the muscles, ligaments and joints or simply scratched the periosteum (covering of the bone) with a needle. In every case “referred pain was elicited” at the levels corresponding to the area that was irritated. In other words, the area that was injured referred pain to its functional partner in the spine in every case.

Commentary: How does this relate to every day experiences of chiropractic patients? It’s simple. Occasionally patients will experience pain in one area of their spine and their chiropractor will work on another area, perhaps not even touching the area that hurts. Many times the areas that hurt are not where the problem is. Your chiropractor is a specialist in finding and correcting the problem. If the problem (cause) is taken care of, the pain (effect) generally takes care of itself.



Loss Of Normal Neck Curve Increases Risk Of Neck Pain

A study in the March/April 2005 issue of the Journal of Manipulative and Physiological Therapeutics finds that the more a person loses the normal, forward curve in the neck, the more likely they are to suffer from neck pain and related problems.

In the study, researchers examined 277 random records of patients from an Australian chiropractic college clinic. The patients' x-ray films were measured for the amount of neck curve and how far forward their head was misaligned over the normal balance point. The films were then correlated with their symptomatic complaints at the time they began chiropractic care. After the data from the x-rays and files were collected, they were sorted by age, sex, and the amount of curve and forward head shift that were measured.

The researchers found that patients with a straight or reversed curve in the neck were 18 times more likely to experience neck pain and related problems.

They also found that the more a patient's head had shifted forward, the more likely they would experience neck pain and related problems.

Patients whose neck curves were within the normal range experienced statistically insignificant amounts of neck pain and were considered clinically normal. The patients' age or sex played no part in the outcome of the study.

Commentary: Past medical researchers have shown that a small number of people with reversed, misaligned neck curves experienced no pain or related symptoms. Unfortunately, this lead them to conclude that loss of the normal, forward neck curve was a normal variant that should not be considered a problem.

Along with other chiropractic research, this study shows that just because a small percentage of people with loss of normal curve don't have symptoms, we should not assume this is no big deal. Anytime the spine becomes misaligned, wide-ranging functional problems can and do develop. Your chiropractor's goal is to restore proper alignment and help you maintain the highest level of function possible.

■ Spinal Whiplash Injury Decreases Physical, Mental Function

A Canadian study reported in the September 2005 issue of the *Annals of Rheumatic Diseases* finds that spinal whiplash injuries suffered by people involved in automobile accidents lead to lower physical and mental functioning in as little as one month.

The investigators collected data on 7,462 people within one month of their accident: Patient demographics, collision-related factors, health histories previous to the accident and what kind and severity of symptoms were collected and examined. 45% of the patients involved agreed to fill out and follow up on the SF-36, a general health questionnaire.

Most of the people experienced a wide range of symptomatic malfunction after the initial injury including neck pain, low back pain, fatigue, dizziness, headache, spinal pain, nausea and jaw pain. One month after injury, the patients filling out the SF-36 form showed low physical and mental function.

According to the authors, the study was designed to describe, using a large population, “the clinical spectrum of initial symptom expression and health related measures of Whiplash Associated Disorders (WAD).”

They go on to say that as a result of their study, WAD “is best appreciated as a syndrome extending well beyond what can be labeled as a neck injury.”

Commentary: Chiropractors are certainly not surprised that spinal injury can result in body malfunction. We are surprised that the authors go on to conclude that “More research is needed for a better understanding of the underlying mechanisms involved so that treatment can be directed at the broad spectrum of the [symptoms] rather than focusing on finding a focal neck injury.”

While some may consider that this suggestion reflects an appropriate approach to health care, we feel it represents a fundamental fault in logic that seems to permeate modern medical health care on many levels. A localized injury of the spinal structures in the neck produces a myriad of symptoms and physical and mental malfunction. Rather than focus on the cause of the problem and repairing the damage to the spine (as occurs in chiropractic care), the authors suggest that we should ignore the cause and instead concentrate on treating the symptoms? With this kind of illogical thought process, if the authors sat on a tack, they would take pain medication rather than pull out the tack.