Excerpted from the 1/03 - 4/03 Newsletter

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Chiropractic Research Roundup Table of Contents | Go Top

(Note: Unless otherwise stated, the research discussed in this "Roundup" is reviewed in our textbook, Somatovisceral Aspects of Chiropractic: An Evidence-Based Approach.}

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"Step out of the car, please. Walk a straight line. Look straight ahead, and touch your finger to your nose." Challenges such as these are often posed by a police officer to a suspected drunk driver. These tests are based on sound neurology. The cerebellum—a portion of the brain essential for balance and coordinated movement—is exquisitely sensitive to certain toxins. One of these toxins is alcohol. When the cerebellum is intoxicated, it makes mistakes, throwing off balance and coordination.

It is important to realize that even the sober cerebellum makes mistakes. The computer programmer's phrase, "garbage in, garbage out" applies equally well to the biological "computers" in your brain. If distorted information is inputted into the cerebellum, the output will be distorted as well.

Your tendons, muscles and ligaments are equipped with motion and position sensors. The signals generated by these sensors constitute a vital portion of the information input to the cerebellum. If this information becomes distorted due to misalignment or restriction of spinal segments (subluxation), the cerebellum will make mistakes. These mistakes are more subtle than the obvious, staggering problems

caused by alcohol intoxication, so more subtle tests are required to bring them out.

One of these tests is relatively easy to do on your own. Stretch your arms out to your sides, so that they are parallel to the ground. Now slowly touch the tip of your left little finger to the tip of your nose. Then do the same thing with your right little finger. Most people can do this with little trouble. Next, make the test more subtle by closing your eyes. Repeat the finger-to-nose sequence. If you miss the tip of your nose with your eyes closed, your cerebellum is probably receiving distorted signals from the position and motion sensors in your arms, hands and fingers. This signal distortion is often due to subluxation in the neck or upper back.
Even if you are pain free, it is wise to get a chiropractic check-up if you fail the finger-to-nose test two days in a row. No one has ever been arrested for driving while subluxated, but that doesn't make "D.W.S." a good idea!

Biological Markers Table of Contents | Go Top

Certain biological changes are typical of the aging process. Many of these changes can be readily measured, and are known as "biological markers of aging."

Reaction time tends to slow over the years; therefore, this is a biological marker of aging. Two studies have demonstrated improved reaction time of the course of chiropractic care. In effect, these patients experienced a reversal of one measure of "biological age," even though their "calendar age" remained the same.

Other research studies have indicated that blood pressure tends to go down, visual acuity tends to improve, and immune response tends to improve under chiropractic care. All of these changes represent improvement in biological markers of aging. Drs. Masarsky and Todres have published clinical research indicating that lung volumes—another set of biological markers of aging—tend to improve under chiropractic care.

A summary of this material was recently presented by Dr. Masarsky before a joint chiropractic-medical audience at the 2002 conference of the American Academy of Anti-Aging Medicine.

Between Light and Darkness Table of Contents | Go Top

In 1990, an interdisciplinary team reported the case of a 75-year-old man who hit his head during a fall. Within hours of his head trauma, the man became blind, and remained blind for six months.

The patient's eye doctor referred him to a doctor of chiropractic. After three adjustments to the upper neck, the patient was able to distinguish between light and darkness. After eleven adjustments over three months, he could distinguish colors. At the time the paper was published, the patient was able to read again.

While this case is quite unusual, it is not uncommon for more subtle visual problems to improve under chiropractic care. An Australian researcher has noted that peripheral vision sometimes improves after chiropractic adjustments. Chiropractors in the U.S. have reported that normal vision (as measured on a standard eye chart) often becomes even better under chiropractic care.

The mechanism for this phenomenon is not yet known for sure. We do know that the blood vessels to the retina and the visual portion of the brain are controlled by spinal nerves from the neck and upper back. If these nerves are disturbed by spinal misalignment or restriction (subluxation), circulation to the retina or the visual portion of the brain may be disturbed as well.

{It is hoped that this information will assist you in making wise health care decisions and informed referrals. Please pass these articles along to a co-worker, friend or family member.}

Spinal Stress Relief Table of Contents | Go Top

Would your business, club, or other group be interested in having one or both of our doctors present a practical, learning-by-doing workshop on relieving spinal stress? This 45-minute workshop focuses on protecting the neck and upper back, and is ideal for people who work at desks or computer terminals. Versions of this course have been presented for Planning Research Corporation, Sprint, Bally's Health Spa, the National Vaccine Information Center, and several other groups.

These stress relief techniques are particularly relevant to singers and public speakers, due to the importance of the neck and upper back in proper breath control. It should also prove useful for people who need to protect their neck while enjoying visually intensive hobbies such as sewing, knitting, quilting or crocheting. Competitors in sports emphasizing steady aim, such as archery and target shooting, will find this brief workshop rich in useful information.

We can conduct the workshop at our office for small groups, or we can come to you. Ask one of the doctors for further details.

Chiropractic Principles: Table of Contents | Go Top

There Seems No Design
Consider the following lines by James Hackett from his book Haiku Poetry:

"Up close at the place
where spider's leg lays his line
there seems no design"

If you examine a small part of something, the larger whole —in this case, the intricate web of the spider—will totally escape you. Errors of all sorts can be caused by too much attention on small detail while failing to appreciate over-all patterns, as in the old folk saying, "missing the forest for the tree."

The attempt to understand nature through the analysis of its smallest constituent parts is sometimes called "reductionism." While this approach has proven very powerful in some fields of science, it often creates havoc in health care.

For instance, if a patient complained of ankle problems, the reasonable first step would be a physical exam of the ankle. Unfortunately, if the physical examination proves uninformative, the next step is of an x-ray of the ankle, an MRI of the ankle, and further examination steps of increasing complexity, expense and risk. This would make sense if ankle symptoms always meant that there is an ankle problem. However, we cannot always assume that the location of a symptom is the location of its cause.

To take an extreme and unfortunate example, Christopher Reeve could not use his ankle at all immediately after his horseback riding accident. Yet, an x-ray and even an MRI of the ankle probably would have looked normal. That's because there was nothing the matter with the matter in his ankle. The problem was in the blocked information flow, not only to and from the ankle, but to and from everything below the neck—the real location of the cause of Reeve's problem.

Patients are sometimes puzzled when we perform an adjustment distant from the location of the symptom. For instance, we may adjust the neck, even though the symptom was pain in the low back. The reason for this is that the chiropractor does not undertake a reductionistic analysis of the "back matter" just because the symptom is there. We base our approach on what may be described as "neurological holism." According to this approach, back pain represents a probable disturbance in information flow to or from the back, and this disturbance may exist anywhere from the back to the brain itself. Often, we find that an error in joint alignment or motion (subluxation) is the culprit. Correcting subluxations through the chiropractic adjustment often succeeds when throwing more and more technology at the site of the symptom fails.

Curves and Curvatures Table of Contents | Go Top

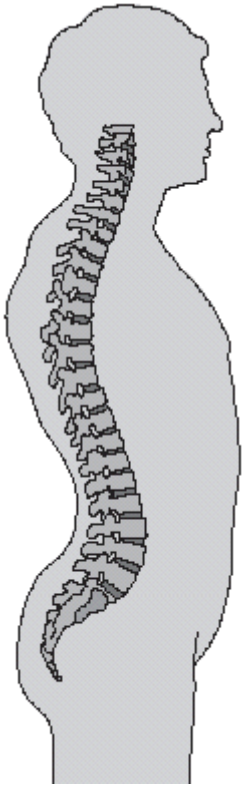
Even a normal spine isn't straight. If it were, it wouldn't work correctly to protect our nervous systems and keep us sitting and standing erect. The properly developed human spinal column has three anterior-posterior (front-to-back) curves that develop in childhood. Problems can appear when these necessary curves develop too much or too little, or when side-to-side curvatures, known as scoliosis, develop.

Curves

During infancy, as a baby lifts his/her head during crawling, the normal curve begins to develop in the neck. This curve, seen from the side, bows forward, and is known as a "lordosis."

The other curves come in as a child learns to sit and stand independently. During this period of development, a second lordosis forms in the low back, and a backward curve ("kyphosis") forms in the thoracic spine (upper back). These curves serve as shock absorbers and

give the spinal cord, an extension of the brain, room to move while being protected.



Can one of these curves cause a problem? Yes, a curve can be exaggerated (hyper-) or decreased (hypo-), in which case it will force your musculature to work overtime to maintain good working posture and/or cause your nervous system to have to work through a constant barrage of inappropriate signals.

Bad posture, auto accidents and other forms of trauma can contribute to exaggerated or decreased spinal curves. The good news is that correcting misalignments or restrictions (subluxations) in the spine through chiropractic care can contribute to the restoration of the normal curves, if care begins early enough.

When distortions in the spinal curves are the result of fractures related to severe trauma, osteoporosis or some other disease process, the changes may be permanent. Even then, regular chiropractic care can help avoid worsening of the situation by giving your spinal joints as much normal movement and as little nerve interference as possible.

Curvatures

What, then, is a scoliosis? A scoliosis is an abnormal side-to-side curvature of the spine. We still have a lot to learn about why they develop, but we do know that they appear most often in girls, at puberty, and that they often run in families.

Why are they a problem? The curvatures alter bone formation, putting undue pressure on spinal nerves. Muscles can foreshorten (like calf muscles in a leg that has worn only high heels for 20 years!) so that they actually help hold the curvature in place. Scoliosis development usually stops after a few years. Until then, and throughout life, appropriate chiropractic care can keep the vertebrae moving and help reduce the stress on spinal nerves, thus improving neurological function.

Not every curvature is a permanent curvature. Muscle imbalance related to subluxation can aggravate scoliosis. In the worst cases, pressure on internal organs is increased. Timely chiropractic adjustments can help in many cases.