

# OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Michiel Rorick

## What Is Evidence-Based Care?

*A growing revolution in health care is a shift away from approaches that are not validated by research. Instead, scientists are urging health-care professionals to practice “evidence-based care,” or EBC. This approach involves using care plans that are backed by scientific research.*

*Dr. Rorick has always been an advocate of EBC. To this end, this chiropractic office remains up-to-date with research, and takes part in yearly continuing education programs.*

*While most people are aware that scientific research supports the use of chiropractic for conditions related to muscles and bones (musculoskeletal conditions such as neck pain, headache and back pain), many individuals are not aware of research revealing that, because they influence nervous system activity, chiropractic adjustments may prevent a plethora of other conditions. These conditions range from high blood pressure to childhood ear infections to depression.*



### Research Shows Chiropractic Influences the Nervous System

Dr. Rorick wants patients to be aware of a growing body of research documenting that chiropractic adjustments directly influence nervous system activity.

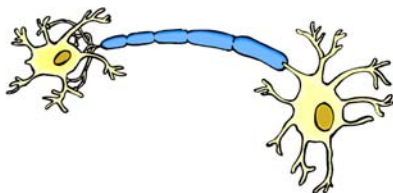
The first such experiment, conducted in 2000, enrolled 40 adults with low-back pain. The group was nearly equally divided between males and females.

Of the 40 subjects, 20 underwent chiropractic care. The remaining 20 patients received either no treatment or

“pseudo” chiropractic care. Those receiving the pseudo care, who did not receive an adjustment, followed the same pre-procedure steps as those who did (*J Manipulative Physiol Ther* 2000;23(9)).

Before and after receiving chiropractic adjustments or the pseudo variety, subjects were asked to perform a

movement that produced maximal contraction in their low-back muscles. During this maneuver, researchers monitored low-back muscle activity using a machine called a surface electromyograph. As part of this procedure, electrodes are attached to the skin above the muscles surrounding the spine (erector spinae muscles). The electrodes transmit electrical impulses produced by the muscles to a computer that monitors muscle activity.



The Nerve Cell

### *How Can I Find Out More About Chiropractic Wellness Research?*

If you are interested in research documenting the benefits of chiropractic, you have come to the right place! Dr. Rorick is committed to providing patients with the latest cutting-edge research in chiropractic wellness and related fields, such as nutrition, stress-reduction, environmental influences on health, exercise and how one's attitude affects well-being.

To this end, each week Dr. Rorick presents a new, hot-off-the-presses *Optimal Health University*® topic. This office is focused on teaching our patients and community about this vital health information, which will jump-start them on the road to wellness. To find out more about this revolutionary approach to patient education, or to suggest future *Optimal Health University*® topics, please call our office today!

**Dr. Michiel Rorick, Houston Health & Wellness Centers (281) 496-3355  
2550 Gray Falls, #120, Houston, TX 77077 [www.hhandw.net](http://www.hhandw.net)**

Any changes in muscular activity would be facilitated by spinal nerves, indicating that chiropractic adjustments influence nerve flow.



Overall, electromyographic results revealed a 21 percent increase in spinal muscle strength among subjects in the chiropractic group, compared with 5.8 percent in subjects who underwent pseudo chiropractic care and a 3.9 percent increase in subjects who went without treatment.

“While chiropractors have always witnessed the benefits of chiropractic care in their patients, research like this is now beginning to prove that chiropractic adjustments impact the nervous system,” explained Dr. Christopher Colloca, one of the study’s authors. “We are excited about the results of our research because it is the first time that anyone has measured how spinal nerves change during chiropractic adjustment in humans.”

“This research represents the first of several studies to better understand just how chiropractic adjustments change nerves and subsequently help patients feel better, move better and experience better health naturally. Our research team, consisting of scientists and clinicians in the fields of biome-

chanics, orthopaedic surgery and chiropractic, is testimony to the gaining popularity and respect of chiropractic care.”

In another just-published analysis, researchers used technology called transcranial magnetic stimulation (TMS) to induce changes in nervous system activity known as “motor-evoked potentials” (MEPs). By monitoring this process in 72 volunteers while they received chiropractic care, the scientists determined that chiropractic adjustments alter the effects of corticospinal excitability on motoneuron activity of the nerves that supply the paraspinal muscles around the spine (*J Manipulative Physiol Ther* 2008;31:258-70).

A previous study, using similar technology, showed that chiropractic adjustments to the spine influence nerves going to structures far away from the spine as well. Specifically, it found that adjustments to the spine influence the activity of nerves supplying the calf muscles (*J Manipulative Physiol Ther* 2002;25:1-9).

### Research Shows Chiropractic Adjustments Improve Overall Health

Scientific research indicates that chiropractic care improves the immune response, which may lead to superior health overall. Researchers speculate that this phenomenon is regulated by the nervous system’s response to chiropractic adjustments.

One particular study looked at the effect of chiropractic adjustments on specific white blood cells associated with immune function. Known as polymorphonuclear neutrophils (PMN) and monocytes, these disease-busters help the body destroy unhealthy cells. The study revealed that “...polymorphonuclear neutrophils (PMN) and monocytes were enhanced in adults that had been adjusted by chiropractors.” (*J Manipulative Physiol Ther* 1991;7:399-400.)

### Research Shows Chiropractic May Benefit Structures Away From the Spine

By creating optimal nervous system flow, researchers speculate chiropractic adjustments may influence structures in the body far away from the spine, such as organs. In this way, chiropractic care may prevent a wide array of conditions. The following is a condensed list of conditions that scientific studies over the past two decades indicate may benefit from chiropractic care:

- ✓ Infertility
- ✓ High blood pressure
- ✓ Multiple Sclerosis
- ✓ Chest pain
- ✓ Lung problems
- ✓ Colic
- ✓ Cognitive impairments
- ✓ Hearing problems
- ✓ Restless Legs Syndrome
- ✓ Asthma



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