

Chiropractic Treatment and Patient Safety

Chiropractic is widely recognized as one of the safest, drug-free, non-invasive therapies available for the treatment of headache, and neck and back pain. It has an excellent safety record. However, no health treatment is completely free of potential adverse effects. Even common over-the-counter medicines carry a risk.

Most patients experience immediate relief following an adjustment, however, some may experience temporary pain, stiffness or slight swelling. Some patients may also experience temporary dizziness, local numbness, or radiating pain. Fortunately, adverse effects associated with spinal adjustment are typically minor and short-lived.

Safety of Neck Adjustment: The Most Recent Research

Neck adjustment is a precise procedure, generally applied by hand, to the joints of the neck. Neck adjustment works to improve joint mobility in the neck restoring range of motion and reducing muscle spasm, thereby relieving pressure and tension. Patients typically notice a reduction of pain, soreness, stiffness and improved mobility.

Neck adjustment, particularly of the top two vertebrae of the spine, has on rare occasions been associated with stroke and stroke-like symptoms. While estimates vary, a range of one to two events per million neck adjustments is generally considered to be a conservative risk ratio by the research community.¹ This is considerably lower than the risk of serious adverse events associated with many common health treatments such as long-term use of non-prescription pain relievers or birth control pills.

An extensive commentary on chiropractic care, published in the February 2002 issue of the *Annals of Internal Medicine*, which is the journal of the American College of Physicians, reviewed more than 160 reports and studies on chiropractic. It states the following with regard to the safety of neck adjustment: *"The apparent rarity of these accidental events has made it difficult to assess the magnitude of the complication risk. No serious complication has been noted in more than 73 controlled clinical trials or in any prospectively evaluated case series to date."*²

A Canadian study, published in 2001 in the medical journal *Stroke*, also concluded that stroke associated with neck adjustment is so rare that it is difficult to calculate an accurate risk ratio.³ The study was conducted by the Institute for Clinical Evaluative Sciences and the authors have stated: *"The evidence to date indicates that the risk associated with chiropractic manipulation of the neck is both small and inaccurately estimated. The estimated level of risk is smaller than that associated with many commonly used diagnostic tests or prescription drugs."*

The most recent research into the association between neck adjustment and stroke are biomechanical studies to assess what strain, if any, neck adjustment may place on the vertebral arteries. The preliminary findings of this ongoing work indicate that neck adjustment is done well within the normal range of motion and that neck adjustment is "very unlikely to mechanically disrupt the VA [vertebral artery]."⁴

There are many risk factors for stroke including blood clotting problems, hypertension, smoking, high cholesterol, birth control pills, heart problems and trauma such as blows to the head from car accidents or sports injuries. A patient's health history and activities have to be examined very carefully in order to determine the most probable cause of a stroke.

Informed consent

Prior to starting treatment, all health professionals are required by law to obtain informed consent to treatment from their patients. Health consumers must receive adequate and accurate information to assist them in evaluating their health care choices, and in balancing the relative risks of treatment options with the benefits. The chiropractic profession takes this responsibility seriously and has been a leader in obtaining informed consent.

Ongoing research

Chiropractic researchers are involved in studying the benefits and risks of spinal adjustment in the treatment of neck and back pain through clinical trials, literature reviews and publishing papers reviewing the risks and complications of neck adjustment. For example, the *Bone and Joint Decade Task Force on Neck Pain and Its Associated Disorders* is an international, multi-disciplinary, multi-centre study in which the Canadian chiropractic profession is a partner. One of the Task Force studies is focused specifically on the safety of neck adjustment. This is one example of the ongoing research that will ensure that care is provided as effectively and safely as possible.

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¹ It is of note that Dr. John Norris, lead investigator of an unpublished Canadian Stroke Consortium study (SPONTADS) into the relationship between neck adjustment and stroke has retracted the risk ratios publicized through the media.

² Meeker WC, Haldeman S. Chiropractic: A Profession at the Crossroads of Mainstream and Alternative Medicine. *Annals of Internal Medicine*. February 5, 2002, Vol. 136, No. 3.

³ Rothwell DM, Bondy SJ, Williams JL. Chiropractic Manipulation and Stroke: A Population-Based Case-Control Study. *Stroke*, May 2001.

⁴ Herzog W, Symons BP, Leonard T. Internal forces sustained by the vertebral artery during spinal manipulative therapy. *Journal of Manipulative Physiology and Therapeutics*. Oct. 25 2002 (8): 504-10