

Chiropractic and the Risk of Stroke

In an attempt to discredit chiropractic and discourage people from seeking care from doctors of chiropractic, some proponents of allopathic medicine continue to disseminate misleading information about a possible link between cervical adjustments and strokes.

It is the position of The World Chiropractic Alliance that such misinformation is a deliberate and unethical scare tactic which does not stand up to critical analysis. Even if we restrict our investigation to cervical adjustments -- which have been the focus of many of the media and medical attacks -- the only reasonable conclusion which can be drawn is that chiropractic adjustments do not post any significant risk of stroke and are remarkably safe.

A stroke occurs when a blood clot blocks a blood vessel or artery, or when a blood vessel breaks, interrupting blood flow to an area of the brain. The lack of blood causes brain cells to die. There are nearly 750,000 first ever or recurrent strokes each year in the U.S. and more than 150,000 deaths are directly related to strokes.

To link these strokes to chiropractic is absurd, however, since numerous published scientific and medical studies indicate that the incidence of a cerebrovascular accident (CVA) or stroke is estimated at between 1 to 3 incidents per million adjustments.

One study covered a period of 28 years, while another involved reviewing about 110 million chiropractic visits. The results of all these studies show conclusively that the risk of stroke from a chiropractic adjustment is so small as to be statistically insignificant. It has been estimated that it is even less than that of "beauty parlor stroke syndrome" -- a rare occurrence triggered when a customer leans her head back on a sink to get her hair washed.

In reality, even the 1-3 incidents per million adjustments figures may be too high, since it is erroneous to equate correlation with cause. That is, if a person suffers a stroke after receiving a chiropractic adjustment, it is not necessarily proof that the adjustment caused the stroke. In an article entitled "Adjustments, Strokes, and Errors in Medicine" (*The Chiropractic Journal*, July 2000), Christopher Kent, D.C., explained, "The fact that a temporal relationship exists between two events does not mean that one caused the other."

In addition, medical researchers frequently misunderstand the critical differences between specific chiropractic adjustments and cervical manipulation. Doctors of chiropractic are highly trained in the use of the adjustment, which is the specific application of force to facilitate the body's correction of nerve interference. Manipulation is the forceful passive movement of a joint beyond its active limit of motion. Since it doesn't imply the use of precision, specificity or the correction of nerve interference, it is not synonymous with chiropractic adjustment.

Finally, many of the cases cited by medical researchers as being "chiropractic treatments" were actually spinal manipulations rendered by non-chiropractic practitioners. According a research report in the *Journal of Manipulative and Physiological Therapeutics*, "manipulations" administered by a Kung Fu practitioner, GPs, osteopaths, physiotherapists, a wife, a blind masseur, and an Indian barber had been incorrectly attributed to chiropractors.

The report explained that, "The words chiropractic and chiropractor have been incorrectly used in numerous publications dealing with SMT injury by medical authors, respected medical journals and medical organizations. In many cases, this is not accidental; the authors had access to original reports that identified the practitioner involved as a non-chiropractor. The true incidence of such reporting cannot be determined. Such reporting adversely affects the reader's opinion of chiropractic and chiropractors." (Terrett AGJ: Misuse of the literature by medical authors in discussing spinal manipulative therapy injury. *JMPT* 1995;18:203.)

Despite their apparent desire to malign chiropractic and link adjustments with the risk of stroke, even medical researchers have had to admit that chiropractic care carries far less of a stroke risk than medical treatment. "Indeed, most interventions by allopathic physicians have a higher complication rate than chiropractic interventions," said Philip Lee, M.D., a co-investigator of a research survey presented at the American Heart Association's 19th International Joint Conference on Stroke and Cerebral Circulation.

Based on the scientific evidence readily available today, it is clear that chiropractic adjustments pose no significant risk of strokes and are far safer in this regard than most medical treatments. The World Chiropractic Alliance calls upon the medical establishment to provide factual data to the public and restrain from using scare tactics in a blatant attempt to continue its long-standing history of opposition to chiropractic and other disciplines which threaten its monopoly on the health care system.

A review of studies involving chiropractic adjustments and stroke

The Council on Chiropractic Practice concluded, "The panel found no competent evidence that specific chiropractic adjustments cause strokes." ("Vertebral Subluxation in Chiropractic Practice. Council on Chiropractic Practice Clinical Practice Guideline No. 1." 1998.)

According to the National Institute of Neurological Disorders and Stroke, the estimated incidence of strokes in children under 14 years of age is 2.52 per 100,000 per year. Roach ES, deVeber G, Riela AR, Wiznitzer M: Recognition and treatment of stroke in children.

A study in the Journal of Vertebral Subluxation Research estimates the risk of neurological and/or vertebrobasilar complications in pediatric chiropractic to be approximately 1 in 250 million. Pistolesse RA: Risk assessment of neurological and/or vertebrobasilar complications in the pediatric chiropractic patient. Journal of Vertebral Subluxation Research 1998;2(2):77-85.

The RAND corporation estimated that the risk of stroke from chiropractic adjustments was "one in a million." ("The appropriateness of manipulation and mobilization of the cervical spine. Santa Monica, CA: RAND Corporation 1996: xiv. (6).)

Over a ten-year period, Danish researchers found only five cases of "irreversible CVA after chiropractic treatment." Based on this, they estimated a risk of one stroke per 1,320,000 neck adjustments. ("Safety in chiropractic practice. Part I: The occurrence of cerebrovascular accidents after manipulation to the neck in Denmark from 1978-1988," Journal of Manipulative and Physiological Therapeutics, 1996; 19: 371-7.)

Based on a survey of 64 California neurologists, Albers, M.D., estimated the stroke-chiropractic correlation to be "one in every 500,000 manipulations." Co-investigator Philip Lee, M.D. noted, "Indeed, most interventions by allopathic physicians have a higher complication rate than chiropractic interventions." ("Neurologic complications following chiropractic manipulation: A survey of California neurologists," Neurology 1995; 45: 1213-5.)

The author of a Canadian study found 13 documented CVAs related to chiropractic care in Canada, and no deaths, over a five-year period. Since some 50 million cervical adjustments were given by Canadian chiropractors during that time period, he concluded that a reasonable estimate of risk was one serious neurological complications per 3 million neck adjustments. ("A report on the occurrence of cervical cerebral vascular accidents in chiropractic practice." Journal of the Canadian Chiropractic Association, 1993; 37 (2): 104-6.

Researchers in Holland concluded that the overall rate of complications from chiropractic adjustments was one in 518,886. ("Complications in Manual Medicine: A Review of the Literature," Journal of Manual Medicine, 1991; 6: 89-92.)

No strokes or any other significant complications were found during an examination of 168,000 cervical adjustments during a 28-year period. ("Chiropractic therapy: diagnosis and treatment," Aspen Publishers, 1990: 61.)

A review of more than a half-million treatments over a nine-year period at the Canadian Memorial Chiropractic College outpatient clinic found no incidents of strokes or serious incident. ("Vertebral Artery syndrome," published in the book "Upper cervical syndrome: chiropractic diagnosis and treatment.," Baltimore: Williams and Wilkins, 1988: 195-222.)

A survey which included 203 Swiss practitioners and an estimated 1.5 million cervical manipulations, found a rate of one serious complication per 400,000 cervical manipulations, without any reported deaths. ("How dangerous is manipulation to the cervical spine?" Manual Medicine 1985; 2: 1-4.)

Not a single case of vertebral artery stroke or serious injury was found during a study which involved approximately 5 million cervical manipulations from 1965 to 1980 at The National College of Chiropractic Clinic in Chicago. ("Complications arising from manipulation of the cervical spine," Journal of Manipulative and Physiological Therapeutics 1980; 3: 213-19.)

