

# Princeton Chiropractic Wellness Center

(609) 683-3996

## **Is Chiropractic Safe?**

Written by Ari Cohn DC

In recent years, with the rise in utilization of chiropractic care, there has been a subsequent increase on the topic of adverse reactions to chiropractic adjustments (manipulations) in the literature. (1-11) These papers falsely inflate numbers of adverse reactions, by including clearly inappropriate data, to seemingly dissuade the public from seeking chiropractic care. (1,2,8,9,11) There are multiple studies published that imply that a chiropractic adjustment (manipulation) can cause a stroke, more commonly referred to as a cerebrovascular accident (CVA). (1,2,8,9,11,12) In many of these studies the people who have been responsible for performing the chiropractic adjustment (manipulation) were not chiropractors and in some cases were not even health care professionals. (1,2,8,9,11,12) The people included in the literature, that are referred to as “chiropractors” and are responsible for performing chiropractic adjustments (manipulations), are from a vast range of professions including MD’s, DO’s, physical therapists, kung fu instructors, barbers, masseurs, and people who are able to “crack” their own necks. (1,2,12) This range of professionals and non-professionals obviously represents only non-chiropractors that have not received training to administer chiropractic adjustments. (11)

In the literature, chiropractic adjustments (manipulations) are included as a possible cause of CVAs, which on deeper inspection of the literature does not seem to be consistent. Chiropractic adjustments (manipulations) have been correlated to CVAs by authors first reviewing the temporal relationship between the two events, and then assessing if the relationship was a coincidence or cause and effect. (11,13) In many of these cases, although the adjustment (manipulation) was suggested to have caused a CVA, the temporal relationship between the two events would not even be considered a coincidence, by a reasonable person, due to a large gap of time between the adjustment and the onset of symptoms. (11,13) Even when the onset of symptoms is in close proximity to the adjustment there is not necessarily a causal relationship. (11,13,14) It is a classic fallacy to mistake a temporal contiguity of two events for cause and effect between the two events. (15) This type of speculation becomes dangerous when reporting CVA statistics and their possible causes when one considers the commonality of CVA’s. CVAs are the 3<sup>rd</sup> leading cause of death in the United States, accounting for 160,000 deaths each year. (16) With this many incidences, CVAs could realistically be temporally correlated to almost any event. (11) Comparison of the general population of the United States and the population of people who receive any type of spinal manipulation show that people who do not receive some form of spinal manipulation are actually at a greater risk of having a CVA. The current population of the US is approximately 268,396,000 with 160,000 deaths attributed to CVAs annually; the percentage of people that die from CVAs in the general population is approximately 0.0596%. (16,17) The total number of people receiving any type of spinal manipulation,

including chiropractic adjustments, is approximately 29,523,560 people, representing 11% of the population receiving approximately 250,000,000 spinal manipulations per year. (2,6,7,11-13,16-22) Averaging 15 separate literature review studies, written between 1963 to 1999, it is shown that 1 in 7,825,477 adjustments (manipulations) can be correlated to either a nonfatal or fatal CVA representing approximately 32 incidents per year. (2,6,7,11,12,16- 22) Overall, approximately 41% of people that experience a CVA, independent of cause, have some type of permanent damage and another 18% do not survive the incident. (7,13) Every year there are approximately 5.76 deaths that are attributed to all types of spinal manipulation, represented by a death rate of 0.0000023% of those people that are receiving spinal manipulation, while 0.0596% of the general population die from CVAs each year. (11,16,17) This places the general population at a 25,913 times greater risk than people receiving any type of spinal manipulation. (11,16,17) Since 1925 there have been between 115-177 cases published in the literature correlating CVAs to chiropractic adjustments (manipulations); if all of these cases took place during a one year period, the risk would still be 99.3 times greater for the general population. (12,13,22,23)

The idea that chiropractors cause carotid artery strokes by adjusting (manipulating) the neck has been thoroughly ruled out in the literature. (20) The criteria used to draw this conclusion for carotid artery CVAs has now been shown to be true in the vertebral arteries. (7,20,24-28) Studies of the carotid arteries show that blood flow is not changed in various neck positions or during an adjustment (manipulation). (20) Recently, it has been shown that there is no change in blood flow in the vertebral arteries with flexion, extension, rotation or even an adjustment (manipulation). (7,24-28) Unchanged blood flow during various neck positions and adjustments (manipulation) was the criteria used to rule out the possibility of a carotid artery CVA being caused by adjustments (manipulations). (20) This has also been shown to be true for the vertebral arteries. (7,24-29)

In reality, the risk of a person having a CVA caused by a chiropractic adjustment (manipulation), is literally thousands of times less than that of a person in the general population having a CVA if in fact this risk exists at all. A person has a greater chance of a serious injury occurring during an 8-mile drive than of having an adverse reaction to chiropractic care. (12) To further illuminate this point, the same person also has a 39 times greater chance of getting hit by a bolt of lightning, odds of roughly 1 in 200,000, than having an adverse reaction to a chiropractic adjustment (manipulation). (11,12) Statistics help show that chiropractic care is safe and that it may in fact help prevent the occurrence of CVAs. (11)

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