



# Risks and Benefits: Chiropractic Treatment and the Danger of Stroke

By Brandon Thompson

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Chiropractic is the most widely-used alternative medical treatment in the United States, with between 6 and 9 percent of the U.S. population seeing a chiropractor on at least an annual basis. Chiropractic has been touted as a treatment for back and neck pain, headaches, repetitive strains, arthritis, generalized fatigue, vertigo, autism, infertility, pediatric acid reflux, irritable bowel syndrome, varicose veins, and just about any other condition one can imagine. Indeed the founder of chiropractic, Daniel Palmer, claimed that ninety-five percent of all human disease was caused by misalignment in the vertebra – called “subluxation” – that a chiropractor could cure by manually manipulating the spine.

The primary way chiropractors treat these “subluxations” is through spinal adjustment. Though techniques vary, in general terms an “adjustment” involves the use of force (either manual or through the use of specialized equipment) to correct the alignment, motion, or function of parts of the spine.

Like many types of health treatment, the spinal adjustments used by chiropractors have risks. These risks can be relatively benign, like increased soreness or muscular strains. The risks can also be quite serious, such as ruptured discs or nerve compression.

The most potentially catastrophic risk associated with chiropractic treatment, however, involves adjustment of a patient’s neck – also called a “high-velocity low amplitude manipulation.” For reasons explained below, this type of manipulation carries the risk that the patient will suffer a stroke, often with corresponding life-altering injuries.

There are two vertebral arteries, one on each side of the neck. Each runs upward through the “foramina” (or “openings”) in the cervical vertebrae. When the artery reaches C1 (the uppermost vertebra), it makes a sharp turn before continuing upward through the skull and into the brain. The two vertebral arteries then join to form the basilar artery (not seen on the diagram), which supplies vital blood to the brain.

Because of the way the vertebral artery travels through the spine, manipulation of the neck can pinch or stretch the vessel. This can cause an injury called a “dissection,” which is a tear in the lining of the vessel. The blood clots within the tear, and if part of the clot is dislodged it can travel up into the brain, blocking blood flow and causing a stroke.

There are essentially two ways, then, that experts have suggested chiropractic neck manipulation can cause stroke. The first is the manipulation itself tears the vessel and leads to stroke. The second is that the patient came into the chiropractor’s office with a dissection, and the manipulation dislodges a clot and causes the stroke.

Left alone, the majority of dissections will heal on their own with no adverse effects. If a patient has a dissection in one of the cervical arteries, however, a high-velocity manipulation of the neck could lead to a catastrophic outcome. Because of this, chiropractors are trained to recognize the symptoms that a patient may exhibit if he or she has a dissection. Those symptoms can include headache, dizziness, nausea and vomiting, double vision, eye twitching, or a host of other things. If a chiropractor suspects that a patient might have a dissection, she must send the patient for an immediate medical evaluation.

Most stroke-related chiropractic negligence claims involve a practitioner who should not have manipulated the patient’s neck. There is a general consensus in the scientific community that chiropractic manipulation can cause stroke, and so if objective signs of dissection were present and a neck manipulation was performed anyway, malpractice has likely occurred.

Though there is agreement over whether neck manipulation can cause stroke under certain circumstances, however, there is great debate over how significant the risk actually is. Some studies put the risk as high as one out of every few thousand manipulations. The American Chiropractic Association has claimed that the risk is on the order of 1 in 5.85 million. Because chiropractic groups insist the risk is virtually non-existent, many chiropractors do not warn their patients that neck manipulation carries a risk of stroke.

Most of us have either used chiropractic treatment or know someone who has. Performed properly, chiropractic can be beneficial for a number of different health-related problems. Performed improperly or under the wrong circumstances, however, manipulation of the neck can cause catastrophic and life-altering strokes. The risks of this treatment, weighed against the potential benefits, are something everyone who walks through the door of a chiropractor’s office should consider.

