

Safety of Spinal Manipulative Therapy/Chiropractic Care

This page only includes articles published in the last 5 years.

Cervical spine manipulation and stroke

- A 2015 systematic review stated: “We found no evidence for a causal link between chiropractic care and CAD [cervical artery dissection]. This is a significant finding because belief in a causal link is not uncommon, and such a belief may have significant adverse effects such as numerous episodes of litigation.”¹
- A 2015 case-control study found no significant association between the risk of vertebrobasilar artery (VBA) stroke and exposure to chiropractic care. The authors conclude, “manipulation is an unlikely cause of VBA stroke. The positive association between PCP visits and VBA stroke is most likely due to patient decisions to seek care for the symptoms (headache and neck pain) of arterial dissection.”²
- A 2014 review found no epidemiologic studies demonstrating an association between cervical manipulation and internal carotid artery (ICA) dissection.³
- A 2015 study showed that “maximal ICA strains imparted by cervical spinal manipulative treatments were well within the normal ROM”, and did not cause strains in excess of those experienced with normal everyday movements of the neck.⁴
- The results of a 2014 preliminary study suggest that vertebral artery (VA) strains during global head and neck movements, including spinal manipulation, were considerably smaller than published VA failure strains.⁵
- A 2014 biomechanical study found no significant changes in blood flow in the vertebral arteries of healthy young adult males after cervical spine manipulations.⁶
- A 2014 statement from the American Heart Association suggests that patients should be informed of the risk of cervical arterial dissection prior to undergoing manipulation of the cervical spine.⁷

Serious Adverse Events and Spinal Manipulative Therapy of the Low Back Region

A 2015 systematic review evaluating the incidence of serious adverse events following lumbopelvic spinal manipulative therapy found only anecdotal cases, which does not allow for causal inferences between SMT and the events identified, which included cauda equina and disc herniation. Similar risk of adverse events occurs with exercise as compared to manual therapy and a lower risk when manual therapy is compared to drug therapy.⁸

Intracranial Hypotension

A 2014 systematic review stated: “To date, the evidence that CSMT is not a cause of IH is inconclusive. Further research is required before making any conclusions that CSMT is a cause of IH. Chiropractors and other health practitioners should be vigilant in

recording established risk factors for IH in all cases. It is possible that the published cases of CSMT and IH may have missed important confounding risk factors (e.g. a new headache, or minor neck trauma in young or middle-aged adults).⁹

Spinal Manipulation during Pregnancy and Postpartum

A 2012 systematic review stated: “There are only a few reported cases of adverse events following spinal manipulation during pregnancy and the postpartum period identified in the literature. While improved reporting of such events is required in the future, it may be that such injuries are relatively rare.”¹⁰

Chiropractic Care/SMT for Children

- A 2015 systematic review stated, “Published cases of serious adverse events in infants and children receiving chiropractic, osteopathic, physiotherapy, or manual medical therapy are rare...no deaths associated with chiropractic care were found in the literature to date. Because underlying preexisting pathology was associated in a majority of reported cases, performing a thorough history and examination to exclude anatomical or neurologic anomalies before applying any manual therapy may further reduce adverse events across all manual therapy professions.”¹¹

Chiropractic Care for Older Adults

- A 2015 cohort study found that “among Medicare beneficiaries aged 66 to 99 years with an office visit risk for a neuromusculoskeletal problem, risk of injury to the head, neck, or trunk within 7 days was 76% lower among subjects with a chiropractic office visit than among those who saw a primary care physician.”¹²
- Another 2015 cohort study found that “among Medicare B beneficiaries aged 66 to 99 years with neck pain, incidence of vertebrobasilar stroke was extremely low. Small differences in risk between patients who saw a chiropractor and those who saw a primary care physician are probably not clinically significant.”¹³

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