

ADDITIONAL ANJC RESPONSE TO THE NEW YORK TIMES ARTICLE

The Association of New Jersey Chiropractors (ANJC) has recently reviewed the article “Is It Safe To Get Your Neck Manipulated by a Chiropractor?” by Dana Smith in the March 12, 2023 Well column of the New York Times. While we applaud the author’s efforts to present a balanced view on the safety of cervical spinal manipulation as performed by doctors of chiropractic, we have concerns about her article as it contains points of misinformation and misinterpretation. We have listed them as follows:

1. The term “chiropractic manipulation” is a misnomer. Chiropractors perform cervical spinal manipulation (cSMT), but it is a procedure that is not exclusive to the chiropractic profession. Singling out cSMT applied by chiropractors as risky appears somewhat prejudicial. Secondly, there various forms of cSMT used by chiropractors, not just high velocity low amplitude techniques. It is confusing to the public to lump all these forms of cSMT together as “chiropractic manipulation.”^{1 2}
2. The focus of the article is on an extremely rare association of vertebral artery dissection (VAD) with cSMT. VAD is a rare and unpredictable event, occurring spontaneously or resulting from a combination of risk factors thought to involve a patient’s physical predisposition (e.g., connective tissue disorder) and extrinsic stimuli (e.g., mechanical trauma). Your article omitted a very important fact in this association: there is currently no strong biomechanical evidence to establish the claim cSMT causes VAD.^{3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21} In place of the evidence, you quoted the opinions on causation from 2 neurosurgeons who may recognize an association, but assign an erroneous cause.^{22 23 24}

Biological studies consistently show that normal movements and ranges of motion of the cervical have more VA strain than is found with cSMT. In cases of close temporal association, the risk from cervical SMT is now theorized from the movement, not the manipulation. VAD should be considered a random and unpredictable complication of any neck movement, including cSMT. The riskiest movement is end range rotation, especially coupled with extension. This can happen in a myriad of ways in common daily life that can be overlooked, especially in a 30-day look back period (as was used in one of studies cited).^{25 26} Good cSMT techniques avoid the extremes of both of those motions.

3. The current research perspectives are that these cases involve an already existing VAD in process, producing head and neck pain, when the patient presents to a DC's office (or medical facility, emergency room, etc.).^{27 28 29 30 31 32 33 34}

4. Your article did not include some of the latest studies showing the safety of cSMT. Some of the more recent studies have found the following:
 - The largest case-control study in 2015, consisting of 39 million people, to investigate the association between chiropractic manipulation and vertebral artery stroke found, “ no significant association between exposure to chiropractic care and the risk of vertebral artery stroke. ”³⁵
 - A paper published in 2016 by neurosurgeons from Penn State Hershey Medical Center, and Johns Hopkins University who studied in depth and published a paper on the association of cSMT and cervical artery dissection stated, “There is no convincing evidence to support a causal link, and unfounded belief in causation may have dire consequences.”³⁶
 - A 2017 study found no association between chiropractic visits and stroke in those 45 years of age or older. The incidence rate was the same with both PCP and chiropractic visits. The only association in patients under 45 was seeking treatment for head and/or neck pain.³⁷
 - A 2022 study found that Medicare beneficiaries aged 65 and older who received cSMT manipulation had no greater the risk of cervical artery dissection than the control groups.³⁸
 - A 2023 retrospective analysis of a large sample size of over 960,000 SMT sessions for 54,846 patients, with detailed patient information, revealed no cases of stroke.³⁹
5. It is totally erroneous to associate the trauma of auto accidents (MVA) with the forces of cervical spine manipulation MVA forces are significantly more. Furthermore, MVA trauma produces demonstrable strain on the VA, whereas cSMT does not.⁴⁰
6. The controversial association between cSMT and VAD stroke apparently originated with medical providers who observed it in individual patients. These clinicians believe they are acting in their patients’ best interests by calling attention to this issue. The professionals quoted in the article used their individual patient encounters and conjecture (including Dr. Grunch’s quote from a Tik Tok video that was used as a reliable source) instead of the evidence in assigning causation. Currently, evidence from both population studies of large groups of patients and biological investigations cannot determine that cSMT causes stroke. The evidence is also lacking that there is absolutely no association as well.
7. What was omitted from the article is the fact that the chiropractic community is well aware of the association of cSMT and VAD. Professional associations like the ANJC, and chiropractic colleges consistently provide ongoing continuing

education on the safety and prevention of any potential adverse effects from cSMT, as well as identifying patients who may have conditions that are contraindicated to receiving cSMT. Individual doctors of chiropractic as a whole are acutely concerned with providing the safest treatments possible, as none wish to contribute to harming the patients under their care. Projects like SafetyNET and the chiropractic patient incident reporting and learning system (CPiRLS) are continuing to promote a patient safety culture and active surveillance of care in chiropractor's offices. ^{41 42 43 44}

8. The article concludes that cSMT should be avoided if it's performed by a chiropractor. The first line therapy recommendation of 6 weeks of over-the-counter pain medications is inconsistent with the goal of patient safety. Non-steroidal anti-inflammatory drugs (NSAIDs) have been shown to be responsible for 30% of hospital admissions for adverse drug reactions, mainly due to bleeding, heart attack, stroke, and renal damage. ^{45 46} This is a significantly greater risk of harm than from any cSMT. CSMT has been shown to produce a greater benefit than medication or home exercise for patients with acute and subacute neck pain. ⁴⁷
9. Aside from the exaggerated claims of some media ⁴⁸, chiropractors have an impressive safety record, equal to any health care profession. This is confirmed by our profession's low malpractice rates.

The safety and/or effectiveness of any cSMT technique are variable, and in large part based on the practitioner performing it. Rather than rejecting a very safe and effective procedure as is recommended in the article, it perhaps would have been more valuable to provide your readers with suggestions on finding a chiropractor who practices in a way that would be a good fit for them.

¹ Wenban AB. Inappropriate use of the title 'chiropractor' and term 'chiropractic manipulation' in the peer-reviewed biomedical literature. *Chiropr Osteopat*. 2006 Aug 22;14:16. doi: 10.1186/1746-1340-14-16. PMID: 16925822; PMCID: PMC1570468.

² Wenban A. Misuse of the terms chiropractic and chiropractor. *J Neurol Neurosurg Psychiatry*. 2004 May;75(5):794; author reply 794. PMID: 15090590; PMCID: PMC1763582.

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- ⁸ Gorrell, L. et al (2022) Vertebral arteries do not experience tensile force during manual cervical spine manipulation applied to human cadavers, *Journal of Manual & Manipulative Therapy*, DOI: 10.1080/10669817.2022.2148048
- ⁹ Moser N, Mior S, Noseworthy M, et al Effect of cervical manipulation on vertebral artery and cerebral haemodynamics in patients with chronic neck pain: a crossover randomised controlled trial *BMJ Open* 2019;9:e025219. doi: 10.1136/bmjopen-2018-025219
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