

Safety of Spinal Manipulative Therapy/Chiropractic Care

The 2007 clinical practice guidelines on low back pain (LBP) from the American College of Physicians and the American Pain Society found that serious adverse events related to spinal manipulative therapy (SMT) for LBP are apparently rare but that the data on adverse events were poorly reported in the literature.¹

A 2008 population-based, case-control and case-crossover study found no evidence of increased risk of vertebralbasilar artery (VBA) stroke related to chiropractic care, compared to primary medical care.² This comprehensive study, published in *Spine*, involved evaluation of nine years of medical records in the Canadian province of Ontario (covering 100 million patient years).

Characterization of risk for adverse events related to SMT and comparison to adverse events from medications used for the same conditions:

- Serious adverse events 5-6 per 100,000 cervical spine manipulations.
- Serious adverse events no more than 1 per million patient visits for lumbar spine manipulation.³
- In the trials included in a 2010 systematic review, the relative risk (RR) for high velocity manipulation causing minor/moderate adverse events was significantly less than the RR of the comparison medication (usually NSAIDs).⁴
- Risk of death from NSAIDs for osteoarthritis has been estimated to be 100–400 times the risk of death from cervical manipulation.^{4,5}

Concerning adverse events related to chiropractic care/SMT for children, 2 systematic reviews, one covering databases from inception through 2004⁶ and the other 2004-2010,⁷ found 9 severe adverse events and 20 indirect adverse events (effects due to delayed diagnosis or inappropriate use of SMT for certain conditions).^{6,7}

In summary, adverse events from spinal manipulation occur rarely, and the safety profile of SMT compares favorably to that of medications used for similar musculoskeletal conditions.

References

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