

Editorials: *Controversies in Family Medicine*

Is Spinal Manipulation an Effective Treatment for Low Back Pain?

No: Evidence Shows No Clinically Significant Benefit Over Watchful Waiting

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Most adults experience low back pain at some point during their lives, making it one of the most common conditions encountered in primary care.^{1,2} The pain often improves greatly within one month, with more than 90 percent of patients no longer needing medical care within three months.³ The question is whether spinal manipulation, or any treatment, provides significant benefit given the benign natural history of low back pain.

Spinal manipulation involves the movement of joints along their anatomic range of motion in an attempt to improve and potentially prevent joint-related symptoms. The most consistent finding of several recent Cochrane reviews is that spinal manipulation may provide some statistically significant, but probably not clinically significant, differences in the short-term care of patients presenting with low back pain. Much of the evidence revealed low-quality studies, many of which had significant bias affecting the reliability and validity of the results. Of the higher-quality studies, one review of spinal manipulation for chronic low back pain found 26 randomized controlled trials (6,070 participants), but only nine of the studies were included because of concerns about bias.⁴ The review found no improvement in clinical end points compared with conventional therapies (e.g., exercise therapy, physiotherapy, standard medical care) other than a statistically significant, but likely clinically insignificant, improvement in pain relief (mean difference [MD] = -4.16; 95% confidence



This is one in a series of pro/con editorials discussing controversial issues in family medicine.

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interval [CI], -6.97 to -1.36) and functional status (standardized MD = -0.22; 95% CI, -0.36 to -0.07).⁴

Another review that included 12 studies (2,887 participants) showed that combined chiropractic interventions addressing acute and subacute low back pain slightly improved short- and medium-term pain and disability (standardized MD = -0.25; 95% CI, -0.46 to -0.04, and MD = -0.89; 95% CI, -1.60 to -0.18, respectively).⁵ There was no difference associated with long-term outcomes (MD = -0.46; 95% CI, -1.18 to 0.26).⁵ A larger meta-analysis included 39 randomized controlled trials assessing the effect of spinal manipulation on short- and long-term pain and function in patients with acute and chronic low back pain.⁶ Spinal manipulation was no better statistically or clinically than general care, analgesics, physical therapy, exercises, or back school, and it was superior only to sham therapy or therapies identified as ineffective or harmful (10-mm difference [95% CI, 2 to 17 mm] on a 100-mm visual analog scale).⁶

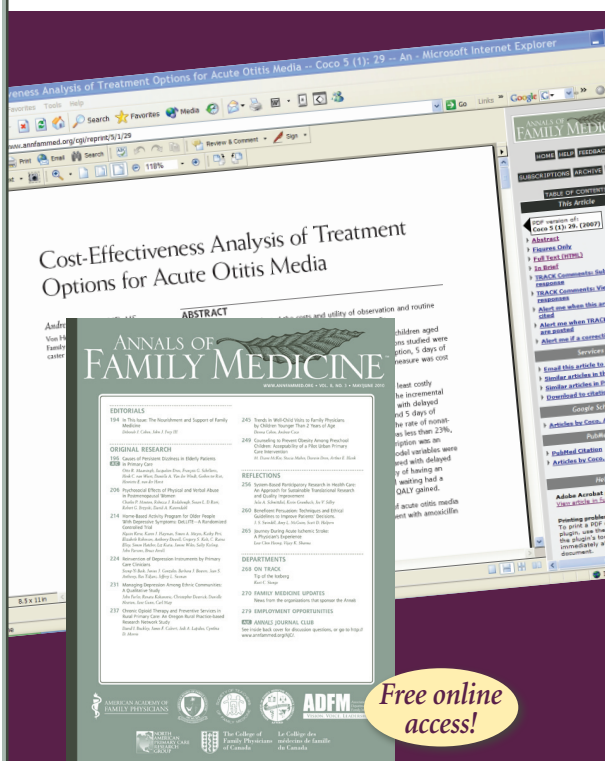
Patients in pain are unhappy, and they want relief. The evidence shows that taking acetaminophen or a nonsteroidal anti-inflammatory drug and resting as needed is as effective as spinal manipulation. However, patients attribute pain resolution to active treatment. Although a course of spinal manipulation, or physical therapy, may

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keep the patient happy (and occupied) while his or her pain spontaneously resolves, the improvement in pain and function is not based on large, quality studies. Whether improved patient satisfaction with spinal manipulation versus watchful waiting is worth the cost of the therapy depends on who pays and how the paying party values satisfaction. As controlling costs becomes more important, incentives make watchful waiting with nonsteroidal anti-inflammatory drugs or acetaminophen the preferred approach.

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EDITOR'S NOTE: In our Controversies in Family Medicine series, we normally have one "pro" side and one "con" side. In this issue, we have two "pro" editorials, for two reasons: (1) We happened to receive the editorial by Dr. Arnold, addressing the effectiveness of osteopathic manipulation, but not as part of this series. Because it focused so much on manipulation for back pain, we decided to add it to the other two editorials we had originally solicited on the topic of spinal manipulation. (2) We recently published an article on back pain that concluded that the evidence for the effectiveness of spinal manipulation was limited, and thus took somewhat of a "con" perspective. The article was published in the February 15, 2012, issue of *AFP* and is available at <http://www.aafp.org/afp/2012/0215/p343.html>. We now have two commentaries for each side of the issue, and invite readers to add their views by clicking the Comment button online, or via e-mail: afpcomment@aafp.org.