

**Annals of Internal Medicine**

www.annals.org

Ann Intern Med  
January 3, 2012  
vol. 156 no. 1 Part 1 1–10

**Original Research**

# Spinal Manipulation, Medication, or Home Exercise With Advice for Acute and Subacute Neck Pain

## A Randomized Trial

Gert Bronfort, DC, PhD; Roni Evans, DC, MS; Alfred V. Anderson, DC, MD; Kenneth H. Svendsen, MS; Yiscah Bracha, MS; and Richard H. Grimm, MD, MPH, PhD

+ Author Affiliations

**Abstract**

**Background:** Mechanical neck pain is a common condition that affects an estimated 70% of persons at some point in their lives. Little research exists to guide the choice of therapy for acute and subacute neck pain.

**Objective:** To determine the relative efficacy of spinal manipulation therapy (SMT), medication, and home exercise with advice (HEA) for acute and subacute neck pain in both the short and long term.

**Design:** Randomized, controlled trial. (ClinicalTrials.gov registration number: [NCT00029770](#))

**Setting:** 1 university research center and 1 pain management clinic in Minnesota.

**Participants:** 272 persons aged 18 to 65 years who had nonspecific neck pain for 2 to 12 weeks.

**Intervention:** 12 weeks of SMT, medication, or HEA.

**Measurements:** The primary outcome was participant-rated pain, measured at 2, 4, 8, 12, 26, and 52 weeks after randomization. Secondary measures were self-reported disability, global improvement, medication use, satisfaction, general health status (Short Form-36 Health Survey physical and mental health scales), and adverse events. Blinded evaluation of neck motion was performed at 4 and 12 weeks.

**Results:** For pain, SMT had a statistically significant advantage over medication after 8, 12, 26, and 52 weeks ( $P \leq 0.010$ ), and HEA was superior to medication at 26 weeks ( $P = 0.02$ ). No important differences in pain were found between SMT and HEA at any time point. Results for most of the secondary outcomes were similar to those of the primary outcome.

**Limitations:** Participants and providers could not be blinded. No specific criteria for defining clinically important group differences were prespecified or available from the literature.

**Conclusion:** For participants with acute and subacute neck pain, SMT was more effective than medication in both the short and long term. However, a few instructional sessions of HEA resulted in similar outcomes at most time points.

**Primary Funding Source:** National Center for Complementary and Alternative Medicine, National Institutes of Health.

---

## Related articles

### Editorial:

#### **Pain in the Neck: Many (Marginally Different) Treatment Choices**

Bruce F. Walker and Simon D. French

Ann Intern Med January 3, 2012 156:52–53;

[Excerpt](#) [Full Text](#) [Full Text \(PDF\)](#)

## Comments on This Article

### **Uncritical interpretation of flawed study**

Edzard Ernst

Ann Intern Med published online January 5, 2012

[Full Text](#)

## Summary for Patients

### **Summaries for Patients:**

#### **Is Spinal Manipulation an Effective Treatment for Neck Pain?**

Ann Intern Med January 3, 2012 156:l–30;

[Excerpt](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplement](#)

---

## Articles citing this article

### **Pain in the Neck: Many (Marginally Different) Treatment Choices**

ANN INTERN MED January 3, 2012 156:52–53

[Full Text](#) [Full Text \(PDF\)](#)