

Alternative Medicine Treatments for Back Pain: Which Work?

Cherkin DC, Eisenberg D, Sherman KJ, et al. Randomized trial comparing traditional Chinese medical acupuncture, therapeutic massage, and self-care education for chronic low back pain. Arch Intern Med 2001;161:1081-8.

Study Overview

Objective. To compare the effects of 3 nonpharmacologic interventions on clinical and utilization outcomes of patients with chronic low back pain.

Design. Randomized clinical trial. Analysis was by intention to treat. Interviewers collecting outcome data were blinded to study allocation.

Setting and participants. The study was conducted within a large staff-model HMO in the United States. Using an administrative database, 3996 patients who saw their primary care physician for a complaint of low back pain were identified and sent letters and consent forms for the study. 693 (17%) responded, and the first 262 with confirmed eligibility were randomized. Most patients were white, well educated, and employed; mean age of patients was about 45 years. Few had undergone surgery or had been hospitalized for their back pain. However, almost two thirds reported experiencing pain for over a year, with pain occurring on more than half of the days in the previous 6 months. Two thirds of patients also took pain medication, but few used narcotic analgesics. About 1 in 5 had lost 1 day of work in the previous month, and 2 in 5 had restricted their activity in the previous month because of low back pain.

Intervention. Interested licensed acupuncturists and massage therapists were chosen from the HMO's complementary and alternative medicine practitioner network. Acupuncturists had to use traditional Chinese medical acupuncture, which could include needling, electric stimulation, manual manipulation of needles, indirect moxibustion, cupping, infrared heat, and exercise prescription. They were not to use massage (including acupressure), herbs, or other forms of acupuncture (eg, Japanese meridian therapy). Massage therapists used treatments such as Swedish deep-tissue massage and neuromuscular massage as well as trigger and pressure-point techniques. They were not to use "energy techniques," such as Reiki and therapeutic touch, that did not involve physical contact. Meridian therapies (eg, acupressure and shiatsu) and certain specialized techniques (eg, craniosacral and Rolfing)

also were not permitted. Researchers, their consultants, and practitioners developed protocols for the study interventions, which consisted of up to 10 visits during a 10-week period. A third group of patients received self-care materials in the mail, including a book and 2 videotapes on self-management of back pain (40 min) and exercises for back pain (25 min). All patients had regular access to standard care throughout the study.

Main outcome measures. The primary outcome measures focused on symptoms and disability. Both were assessed with computer-assisted telephone interviews using a single, validated question regarding the "bothersomeness" of symptoms (1-to-10 scale) and the Roland Disability Scale (0-to-23 scale), respectively. Secondary outcomes included other measures of disability, utilization, and costs as well as satisfaction with care and summary physical and mental health outcomes scores on the SF-12.

Main results. About 95% of participants used the intervention to which they were assigned (although only 73% watched the videos). Follow-up was well over 90% in all groups. Massage and acupuncture patients had a mean of about 8 visits lasting about 1 hour each. 10% of massage patients versus 18% of acupuncture and 21% of self-care patients made HMO visits for back pain during the study period ($P = 0.16$). At 10 weeks, the massage group reported less severe symptom and disability scores than the acupuncture and self-care groups (for symptoms, 3.6 versus 4.0 and 4.6 [adjusted P not significant and $P = 0.01$]; for disability, 6.3 versus 7.9 and 8.8 [adjusted $P = 0.01$ and $P < 0.001$]). At 1 year, differences between the massage and acupuncture groups remained stable, while the self-care group improved and was not significantly different from the massage group. 50% of massage patients, 37% of acupuncture patients, and 13% of self-care patients were very satisfied with their care at 10 weeks (adjusted $P < 0.001$). At 1 year, these differences were no longer significant.

Conclusion. Massage seems to confer some benefits to patients with chronic low back pain, whereas traditional Chinese medical acupuncture was relatively ineffective.

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Commentary

This otherwise excellent study had 1 practical flaw: the lack of a “usual care” group to compare what were essentially 3 “active” interventions. It is likely that most patients seeing traditional allopathic medical practitioners are not offered any of these options, although some may get referrals to see physical therapists. Nonetheless, these findings are important. Results were modest, although Cherkin and colleagues noted that differences in adjusted disability scores at 10 weeks were 3.0 (massage versus self-care) and 2.4 (massage versus acupuncture). (The results shown in Table 2 of the article appear to be unadjusted.) Based on previous studies, the minimum clinically significant difference was determined to be 2.5. Likewise, “bothersomeness” scores differed by 1.7 points between massage and acupuncture groups at

1 year; this is slightly greater than the 1.5-point difference considered to be clinically significant.

Applications for Clinical Practice

This study suggests that massage may be a useful treatment for patients with low back pain. Notably, differences from baseline to 1-year follow-up improved substantially in all groups. More research is needed to determine whether massage or the self-care materials substantially improve outcomes compared with the traditional “take 2 ibuprofen and call me in 3 months” approach. In the meantime, patients may be informed that massage may be beneficial and does not seem to have any substantial adverse effects. Definitive evidence that any intervention substantially alters the natural course of chronic low back pain has yet to be found.

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