

Cherkin DC, Eisenberg, D et al. Randomized Trial Comparing Traditional Chinese Medical Acupuncture, Therapeutic Massage, and Self-care Education for Chronic Low Back Pain. Arch Intern Med 2001; 161:1081-88.

Design: Randomized clinical trial

Population/sample size/setting:

- 262 patients (152 women, 110 men, mean age 45) treated for chronic low back pain at a large HMO in Seattle
- Inclusion criteria were simple: individuals age 20 to 70 who had visited a primary care physician in the HMO for low back pain were contacted by mail 6 weeks after such visits; if back pain persisted with an intensity of at least 4 on a scale from 0 to 10, they were eligible
- Exclusion criteria were sciatica, acupuncture or massage for back pain within the past year, back care from a specialist or CAM provider, clotting disorders, pacemakers, systemic disease, pregnancy, litigation or compensation claims for back pain, lumbar surgery in past 3 years, or recent vertebral fracture

Main outcome measures:

- Randomized to massage (n=78), acupuncture (n=94), or self-care (n=90)
- Massage and acupuncture were scheduled up to 10 visits over 10 weeks
- Self-care group received educational materials: one book and two videotapes on self-management of back pain and demonstrating exercises
- Massage technique was choice of practitioner, but meridian therapies (acupressure and shiatsu) were prohibited, as were energy techniques (such as Reiki and therapeutic touch) that involve no physical contact
- Acupuncture technique was also choice of practitioner, but massage techniques (acupressure) and herbs were prohibited; cupping, electrical stimulation, moxibustion, and infrared heat were allowed
- Most common massage techniques were Swedish, movement reeducation, and deep tissue; 59% also included "body awareness" techniques to help clients become more aware of kinesthetic inputs and early warning signs of injury
- Acupuncture techniques included infrared, cupping, and electrostimulation; moxibustion was not reported, and about half of the acupuncturists recommended exercise such as stretching, walking, and swimming
- Principal outcomes were symptom bothersomeness scale and Roland Disability Scale at baseline, 4 weeks, 10 weeks, and 1 year
- At 10 weeks, massage group had less severe symptoms than the self-care group and less dysfunction than either the self-care or acupuncture groups
 - o At 10 weeks, more than a week of restricted activity was reported by 5% of massage group, but by 19% of acupuncture and self-care groups
 - o Spending 1 or more days in bed was reported by 3% of massage group, 13% of acupuncture, and 12% of self-care groups
- At 1 year, massage and acupuncture outcomes were similar to those at 10 weeks, but the self-care group improved enough to be superior to acupuncture (not by a statistically significant amount)

- No serious adverse effects were reported in any intervention group
- Back care visits, medication use, and costs of HMO outpatient back care services were about 40% lower in the massage group than in other groups; due to large variation, these differences were not statistically significant

Authors' conclusions:

- Massage is an effective short-term treatment for chronic low back pain, with benefits that last for at least 1 year
- Self-care had little early effect, but was about as effective as massage at 1 year
- Doubts are raised about the effectiveness of traditional Chinese acupuncture; however, restriction to a single form of acupuncture, and exclusion of herbs and oriental massage, may account for some of this lack of effect

Comments:

- Randomization and outcome assessment control major biases and threats to internal validity
- The response to acupuncture appears to be less favorable in other studies in which it was compared to a sham procedure; this may be due to the fact that the procedures were not standardized, incorporating some extraneous factors that were not part of the studies comparing true with sham acupuncture
- Alternatively, the patient population was not recruited with a likelihood of attracting those with an interest in receiving acupuncture; if anticipation of benefit from acupuncture is related to its actual benefit, the selection of patients for acupuncture would be related to their interest in receiving it
- Massage was accompanied by "body awareness" instruction; in contrast to "exercise," this may reduce exacerbations of back pain

Assessment: Adequate for evidence that massage may be beneficial in low back pain of more than 6 weeks duration