Osteopathic Tx Eases Low Back Pain

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- Note that this randomized, controlled trial demonstrated superiority of osteopathic manual treatment versus sham treatment in patients with chronic low back pain.
- Be aware that the sham procedure used significantly less force than typical OMT -- subjects were thus potentially aware of the treatment they were receiving.

Osteopathic manual therapy (OMT) was effective in alleviating chronic low back pain to a clinically significant degree, a randomized study showed.

After six sessions of either true or sham osteopathic treatments over 8 weeks, more patients receiving the actual osteopathic therapy had moderate 30% or more improvements in their symptoms (response ratio 1.38, 95% CI 1.16 to 1.64, *P*<0.001), according to John Licciardone, DO, of the Osteopathic Research Center in Fort Worth, Texas, and colleagues.
Patients given OMT also were more likely to experience substantial 50% or greater improvements (RR 1.41, 95% CI 1.13 to 1.76, *P*=0.002), the researchers reported in the March/April *Annals of Family Medicine.*
Whether spinal manipulative therapies are useful in the relief of low back pain has been controversial, with some guidelines having suggested it as an option but a Cochrane review finding no significant benefit (*Spine* 2011; 36: E825-E846).
Data also have been lacking with regard to the efficacy of ultrasound therapy for back pain, so Licciardone and colleagues enrolled 455 patients with low back pain of at least 3 months' duration to test the effects of the two different approaches to pain relief.

Participants were randomized to receive OMT plus ultrasound, OMT plus sham ultrasound, sham OMT plus ultrasound, or sham OMT plus sham ultrasound.

OMT included various manipulations including thrusts, stretching, kneading, and isometric muscle activation, while sham osteopathic therapy focused more on simple hand contact, range of motion efforts, and used little force.

The ultrasound therapy was delivered at an intensity of 1.2 W/cm^2, while the sham ultrasound was given at a subtherapeutic setting of 0.1 W/cm^2.
Back pain was rated at baseline and week 12 on a 100-point visual analog scale, and other unrelated forms of back pain therapy were permitted throughout. A safety officer assessed causality of serious adverse events in relation to study interventions.

Participants' median age was 41, and more than 60% were women.

Median baseline score for low back pain was 44.

Median changes on the visual analog scale for osteopathic manual therapy and sham osteopathic treatment were −18 mm and −9 mm, respectively (*P*=0.002).
The treatment effects seen for OMT met the criteria for medium effect size established by the Cochrane group.

No differences were seen between the ultrasound and sham ultrasound groups for either moderate or substantial improvements.

No benefits for either type of treatment were seen on secondary outcomes of disability and general health scores, and no interaction was seen between the ultrasound and osteopathic treatments.

Patients receiving OMT were more likely than sham controls to report a high degree of satisfaction with the treatment (*P*<0.001), and fewer needed prescription medications for the pain during the 3-month study period, with a use ratio of 0.66 (95% CI 0.43 to 1, *P*=0.048).
One patient developed back spasticity after osteopathic treatment, which may have been linked to osteopathic manipulation, and was a contraindication to further treatment.

A total of 2% of patients experienced serious adverse events, none of which were linked with the treatments.

"In conclusion, the [osteopathic manual treatment] patients achieved moderate to substantial improvements in low back pain, which met or exceeded the Cochrane Back Review Group criterion for a medium effect size," the researchers wrote.

"Thus, low back pain reductions with [osteopathic manual] treatment were statistically significant and clinically relevant," they added.

Limitations included the self-report of disability and additional treatments and the possibility of some degree of unblinding.

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The authors reported no conflicts of interest.

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Licciardone J, et al "Osteopathic manual treatment and ultrasound therapy for chronic low back pain: a randomized controlled trial" *Ann Fam Med* 2013; 11: 122-129.