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## Needle in a Pain-Stack: Acupuncture for Chronic Low Back Pain

### CLINICAL QUESTION

**Does acupuncture improve pain for patients with chronic low back pain?**

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### BOTTOM LINE

**The benefit of acupuncture for chronic low back pain is unclear. At best, one in 6 patients will get meaningful pain relief ( $\geq 30\%$  reduction in pain) over control. The benefit is reduced to one in 20 when compared to sham acupuncture and disappears when studies of higher quality or longer duration are considered.**

### EVIDENCE

- Results statistically significant unless indicated.
- Focusing on recent systematic reviews (from 2016-2021), acupuncture versus control:
  - Systematic review<sup>1</sup> [8 randomized control trials (RCT): 4618 patients], reporting proportion of patients attaining meaningful pain reduction (generally  $\geq 30\%$  reduction in pain):
    - 54% acupuncture versus 35% control, number needed to treat (NNT) 6 over 4-24 weeks.

- Benefit over control reduced when sham acupuncture procedures (5 RCTs, 1676 patients) used for control: 62% versus 57% control, NNT=20.
  - No difference between groups when analyzing studies of longer duration ( $\geq 12$  weeks, 2 RCTs, 3615 patients), lower risk of bias (4 RCTs, 1457 patients) or larger sample sizes ( $\geq 150$  participants, 4 RCTs, 4311 patients).
- Systematic review<sup>2</sup> reporting change on 0-100 pain scale (lower is better), with baseline pain 66:
  - Intermediate to long-term pain (at 120-365 days): Sham patients improved to 42 and acupuncture to 38, with acupuncture 4 better.
  - Short-term pain (at 8-90 days): Acupuncture 10 points better than sham.
- Four other recent systematic reviews:
  - Two found similar scale changes.<sup>3,4</sup>
  - Two used standard mean difference which is difficult to interpret clinically.<sup>5,6</sup>
- Adverse events not statistically different from sham.<sup>1,2</sup>
- Limitations: Many systematic reviews on acupuncture include mixed acute/chronic back pain; multiple sites of pain reported together, and variable comparator arms.

## CONTEXT

- RCTs of acupuncture include differing interventions as the control: Education, waitlist, sham acupuncture, or placebo-TENS, etc. More credible sham controls may improve the success of blinding.<sup>7</sup> The placebo/control effect is greater with sham control, resulting in less benefit for the acupuncture intervention compared to control.
- PEER simplified decision aid<sup>8</sup> and pain calculator<sup>9</sup> can assist with patient-informed decision-making for the management of chronic low back pain.

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