

# In chronic low back pain, low level laser therapy combined with exercise is more beneficial than exercise alone in the long term: a randomised trial



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**Source:** Australian Journal of Physiotherapy 52: 155–160

## Abstract

**Question:** Is low level laser therapy an effective adjuvant intervention for chronic low back pain? Randomised trial with concealed allocation, blinded assessors and intention-to-treat analysis. **Participants:** Sixty-one patients who had low back pain for at least 12 weeks. **Intervention:** One group received laser therapy alone, one received laser therapy and exercise, and the third group received placebo laser therapy and exercise. Laser therapy was performed twice a week for 6 weeks.

Outcomes were pain severity measured using a 10-cm visual analogue scale, lumbar range of motion measured by the Schober Test and maximum active flexion, extension and lateral flexion, and disability measured with the Oswestry Disability Index on admission to the study, after 6 weeks of intervention, and after another 6 weeks of no intervention.

There was no greater effect of laser therapy compared with exercise for any outcome, at either 6 or 12 weeks. There was also no greater effect of laser therapy plus exercise compared with exercise for any outcome at 6 weeks. However, in the laser therapy plus exercise group pain had reduced by 1.8 cm (95% CI 0.1 to 3.3,  $p = 0.03$ ), lumbar range of movement increased by 0.9 cm (95% CI 0.2 to 1.8,  $p < 0.01$ ) on the Schober Test and by 15 deg (95% CI 5 to 25,  $p < 0.01$ ) of active flexion, and disability reduced by 9.4 points (95% CI 2.7 to 16.0,  $p = 0.03$ ) more than in the exercise group at 12 weeks.

## Conclusion

In chronic low back pain, low level laser therapy combined with exercise is more beneficial than exercise alone in the long term.

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