

Insufficient data on clinical effects of low level laser therapy for low-back pain

Clinical question	Is low level laser therapy (LLLT) effective in patients with non-specific low-back pain?
Bottom line	LLLT, when compared to a sham treatment, may be beneficial for pain relief and reducing disability in patients with sub-acute or chronic non-specific low-back pain, although treatment effects are small. However, when LLLT is added to exercise and compared to exercise therapy, either with or without sham treatments, there appears to be little or no difference between the groups in pain and disability. Therefore, LLLT should not be substituted for other beneficial interventions, such as exercise and intensive multidisciplinary pain treatment programmes, which are supported by strong evidence.
Caveat	Based on the heterogeneity of the populations, interventions and comparison groups, the small sample sizes and the small clinical effect sizes, there are insufficient data to draw firm conclusions on the clinical effects of LLLT for low-back pain. The review was unable to determine optimal dose, application techniques or length of treatment with the available evidence. All included studies were small, with sample sizes ranging from 20 to 80.
Context	LLLT is used by some physiotherapists to treat low-back pain. LLLT is a non-invasive light source treatment that generates a single wavelength of light. It emits no heat, sound, or vibration. It is also called photobiology or biostimulation. LLLT is believed to affect the function of connective tissue cells (fibroblasts), accelerate connective tissue repair and act as an anti-inflammatory agent. Lasers with different wavelengths, varying from 632 to 904 nm, are used in the treatment of musculoskeletal disorders.
Cochrane Systematic Review	Yousefi-Nooraie R et al. Low level laser therapy for non-specific low-back pain. Cochrane Reviews 2008, Issue 1. Art. No.: CD005107.DOI:10.1002/14651858.CD005107.pub4. This review contains 7 studies involving 547 participants.
Pearls No. 82, August 2008, written by Brian R McAvoy	

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