

Low Level Laser Therapy for Tendinopathy. Evidence of A Dose–Response Pattern

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Abstract

To investigate whether low-level laser therapy (LLLT) can reduce pain from tendinopathy, we performed a review of randomized placebo-controlled trials with LLLT for tendinopathy. The literature search for trials using LLLT published after 1980 was conducted on Medline, Embase, and the Cochrane Library, together with a hand-search of physiotherapy journals in English and Scandinavian languages. Validity assessment of each trial was done according to predefined criteria for location-specific dosage and irradiation of the skin directly overlying the affected tendon. The literature search identified 78 randomized controlled trials with LLLT, of which 20 included tendinopathy. Seven trials were excluded for not meeting validity criteria on treatment procedure or trial design. Twelve of the remaining 13 trials investigated the effect of LLLT for patients with subacute and chronic tendinopathy, and provided a pooled mean effect of 21% [95% confidence interval (CI) 5.9–36.1]. If results from only the nine trials adhering to assumed optimal treatment parameters were included, the mean effect over placebo increased to 32% (95% CI: 23.0–41.0). LLLT can reduce pain in subacute and chronic tendinopathy if a valid treatment procedure and location-specific dose is used.