

FULL TEXT LINKS



Randomized Controlled Trial [Am J Sports Med.](#) 2008 May;36(5):881-7.

doi: 10.1177/0363546507312165. Epub 2008 Feb 13.

Effects of low-level laser therapy and eccentric exercises in the treatment of recreational athletes with chronic achilles tendinopathy

[Apostolos Stergioulas](#)¹, [Marianna Stergioula](#), [Reidar Aarskog](#), [Rodrigo A B Lopes-Martins](#),
[Jan M Bjordal](#)

Affiliations

PMID: 18272794 DOI: [10.1177/0363546507312165](#)

Abstract

Background: Eccentric exercises (EEs) are recommended for the treatment of Achilles tendinopathy, but the clinical effect from EE has a slow onset.

Hypothesis: The addition of low-level laser therapy (LLLT) to EE may cause more rapid clinical improvement.

Study design: Randomized controlled trial; Level of evidence, 1.

Methods: A total of 52 recreational athletes with chronic Achilles tendinopathy symptoms were randomized to groups receiving either EE + LLLT or EE + placebo LLLT over 8 weeks in a blinded manner. Low-level laser therapy ($\lambda = 820$ nm) was administered in 12 sessions by irradiating 6 points along the Achilles tendon with a power density of 60 mW/cm² and a total dose of 5.4 J per session.

Results: The results of the intention-to-treat analysis for the primary outcome, pain intensity during physical activity on the 100-mm visual analog scale, were significantly lower in the LLLT group than in the placebo LLLT group, with 53.6 mm versus 71.5 mm ($P = .0003$) at 4 weeks, 37.3 mm versus 62.8 mm ($P = .0002$) at 8 weeks, and 33.0 mm versus 53.0 mm ($P = .007$) at 12 weeks after randomization. Secondary outcomes of morning stiffness, active dorsiflexion, palpation tenderness, and crepitation showed the same pattern in favor of the LLLT group.

Conclusion: Low-level laser therapy, with the parameters used in this study, accelerates clinical recovery from chronic Achilles tendinopathy when added to an EE regimen. For the LLLT group, the results at 4 weeks were similar to the placebo LLLT group results after 12 weeks.

Related information

[MedGen](#)

LinkOut - more resources

Full Text Sources

[Atypon](#)

[Ovid Technologies, Inc.](#)

Medical

[MedlinePlus Health Information](#)