



[Clin Rehabil.](#) 2020 Jul 8;269215520941059. doi: 10.1177/0269215520941059. Online ahead of print.

# Efficacy of high-intensity laser therapy on arthropathy of the hands in patients with systemic lupus erythematosus: a double-blinded, randomized controlled trial

Nabil Mahmoud Abdel-Aal <sup>1</sup>, Khadra Mohamed Ali <sup>2</sup>, Hadaya Mosaad Eladl <sup>2</sup>

Affiliations

PMID: 32638614 DOI: [10.1177/0269215520941059](#)

## Abstract

**Objective:** To determine the efficacy of high-intensity laser therapy (HILT) on arthropathy of the hands in patients with systemic lupus erythematosus.

**Design:** A double-blinded randomized, controlled study.

**Setting:** Outpatient setting.

**Participants:** Fifty patients, 30-50-years-old, suffering from arthropathy of the hands were randomly assigned either into the experimental group, received HILT plus the routine physical therapy program or the control group, received sham HILT plus the same routine physical therapy program.

**Intervention:** All treatment interventions were applied at a frequency of three sessions per week for eight weeks.

**Outcome measures:** Handgrip strength, joints swelling counts, joints tenderness counts, visual analog scale (VAS) were measured before and after eight-weeks of interventions.

**Results:** There were statistically significant differences in handgrip strength, joint swelling count, joint tenderness count and VAS in favor of the study group ( $P < 0.05$ ). After eight-weeks of intervention, the mean (SD) for handgrip strength, joint swelling counts, joint tenderness count, and pain score was  $28.34 \pm 8.3$  kg,  $4.4 \pm 2.18$ ,  $5 \pm 2.1$ , and  $35.6 \pm 13.87$  mm in the study group, and  $22.96 \pm 8.76$  kg,  $7.36 \pm 2.14$ ,  $9.08 \pm 1.63$ , and  $58.8 \pm 10.54$  mm in the control group, respectively. The MD (95%CI) for handgrip strength, joint swelling counts, joint tenderness count, and pain score was  $5.38(0.53,10.23)$  kg,  $-2.96(-4.19, -1.73)$ ,  $-4.08(-5.15, -3.01)$ , and  $-23.2(-30.2, -16.2)$  mm between groups, respectively.

**Conclusions:** Adding HILT to the routine physical therapy program might be more effective than routine physical therapy program alone in improving handgrip strength, decreasing joint swelling counts, joint tenderness counts, and pain in patients with arthropathy of the hands.

**Keywords:** High-intensity laser; arthropathy of the hands; handgrip strength; joint swelling and tenderness; pain.

## Related information

[MedGen](#)

## LinkOut – more resources

Full Text Sources

[Atypon](#)