

## Effects of Class IV Laser Therapy on Fibromyalgia Impact and Function in Women with Fibromyalgia

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**Objectives:** This study evaluated the effects of Class IV laser therapy on pain, Fibromyalgia (FM) impact, and physical function in women diagnosed with FM.

**Design:** The study was a double-blind, randomized control trial.

**Setting:** Testing was completed at the university and Rheumatologist office and treatment was completed at a chiropractic clinic.

**Participants:** Thirty-eight (38) women ( $52 \pm 11$  years; mean  $\pm$  standard deviation) with FM were randomly assigned to one of two treatment groups, laser heat therapy (LHT;  $n = 20$ ) or sham heat therapy (SHT;  $n = 18$ ).

**Intervention:** Both groups received treatment twice a week for 4 weeks. Treatment consisted of application of LHT or SHT over seven tender points located across the neck, shoulders, and back. Treatment was blinded to women and was administered by a chiropractic physician for 7 minutes.

**Outcome Measures:** Participants were evaluated before and after treatment for number and sensitivity of tender points, completed the FM Impact Questionnaire (FIQ) and the pain question of the FIQ, and were measured for function using the continuous scale physical functional performance (CS-PFP) test. Data were evaluated using repeated-measures analysis of variance with significance accepted at  $p \leq 0.05$ .

**Results:** There were significant interactions for pain measured by the FIQ (LHT:  $7.1 \pm 2.3$  to  $6.2 \pm 2.1$  units; SHT:  $5.8 \pm 1.3$  to  $6.1 \pm 1.4$  units) and for upper body flexibility measured by the CS-PFP (LHT:  $71 \pm 17$  to  $78 \pm 12$  units; SHT:  $77 \pm 12$  to  $77 \pm 11$  units) with the LHT improving significantly compared to SHT. There was a time effect for the measure of FM impact measured by the FIQ, indicating that FM impact significantly improved from pre- to post-treatment in LHT ( $63 \pm 20$  to  $57 \pm 18$  units), while no change was observed in the SHT ( $57 \pm 11$  to  $55 \pm 12$  units).

**Conclusions:** This study provides evidence that LHT may be a beneficial modality for women with FM in order to improve pain and upper body range of motion, ultimately reducing the impact of FM.

