

**LOW LEVEL LASER THERAPY AS A NON-
INVASIVE APPROACH FOR BODY CONTOURING:
A RANDOMIZED, CONTROLLED STUDY**

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Background: Transmission electron microscopic images have demonstrated the formation of an aperture or transitory pore in adipocyte cell membranes followed by the collapse of adipose panicles subsequent to laser irradiation of 635 nm. The objective of this institutional review board study was evaluate the application of a 635 nm and 17.5 mW exit power per multiple diode laser for the non-invasive reduction in circumference measurements in inches of the waist, hips, and bilateral thighs.

Study: Sixty-seven volunteers between 18 to 65 years with a Body Mass Index between 25 kg/m² and 30 kg/m² and who satisfied the set inclusion criteria participated in a double-blind, randomized, placebo-controlled, multi-site clinical trial. Participants were randomly assigned to receive low-level laser treatments (LipoLaser, manufactured by Erchonia Medical Inc.) or a matching placebo three times per week for two weeks.

Results: Compared with baseline, the total combined circumference measurements for test subjects were significantly lower at all three subsequent evaluation points: -2.06 inches at week 1 ($p < 0.01$), -3.52 inches at week 2 ($p < 0.01$), and -3.21 inches at 2 weeks post procedure ($p < 0.01$). Compared with baseline, participants of the test group demonstrated an overall reduction in circumference measurements at the week 2 evaluation point of -0.98 inches across the waist ($p < 0.0001$), -1.05 inches for the hip ($p < 0.01$), -0.85 inches for the right thigh ($p < 0.01$), and -0.65 inches for left thigh ($p < 0.01$).

Compared with baseline, the changes in total circumference measurements between groups were statistically significant at all three subsequent evaluation points: -1.794 inches at week 1 ($p < 0.0005$), -2.838 inches at week 2 ($p < 0.0001$), and -2.593 inches at 2 weeks post-procedure ($p < 0.0001$).

Conclusion: These data suggest that low-level laser therapy can reduce overall circumference (in inches) of the waist, hip, and bilateral thighs.