Gur evaluated the efficacy of LLLT (wavelength of 904 nm) in 90 patients with knee osteoarthritis (who were divided into one of three groups: (1) actual low-powered laser treatment of five minutes and exercise; (2) actual low-powered laser treatment of three minutes and exercise; and (3) placebo laser and exercise). 63 Participants were treated with laser or placebo laser treatment over the course of two weeks, for a total of ten sessions. Results were measured at baseline and then again at four, eight, and 12 weeks after the last laser therapy sessions. In both active LLLT groups, statistically-significant improvements were detected in all outcome measures, including pain level at movement, pain level at rest, pain level while flexing, and painless walking duration and distance, in the post-therapy period when compared to pre-therapy (p < 0.01). Moreover, improvements of pain measures, including pain at movement, at rest, and at knee flexion in both LLLT groups were statistically significant when compared to the placebo group (p< 0.05). Moreover, improvements in WOMAC scores in both of the actual laser groups were statistically significant compared to placebo (p < 0.05). Finally, patients treated with LLLT reported more than 50% pain relief after four weeks of ten treatments.

Hegedus studied the effect of LLLT on joint pain, pressure sensitivity, and joint flexion in 35 patients with mild or moderate knee osteoarthritis. Subjects received either LLLT (wavelength 830 nm) or placebo twice a week over a period of four weeks. For the LLLT group, a significant change could be detected compared to the initial value at every time examined, whereas none was detected for the placebo group (p < 0.05). For example, joint pain decreased significantly at all times examined for the LLLT group compared to baseline, but no similar trend was observed for the placebo group (p < 0.05). When comparing the active to placebo group, the study found a significant improvement with regard to joint flexion, pain, and pressure sensitivity at the times examined. Thus, both the Gur and Hegedus studies provide competent and reliable scientific evidence that LLLT has a beneficial effect in those with osteoarthritis.

RX Reference:


Both the Gur study (2003) and the Hegedus (2009) study demonstrated that LLLT is effective in treating the symptoms of osteoarthritis.