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## Combination 830-nm and 633-nm light-emitting diode phototherapy shows promise in the treatment of recalcitrant psoriasis: preliminary findings.

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### Abstract

**BACKGROUND AND OBJECTIVES:** Psoriasis is one of the major problems facing dermatologists worldwide. Planar arrays of light-emitting diodes (LEDs) have recently attracted attention in the treatment of difficult dermatological entities, 830 nm in near **infrared** (near-IR) and 633 nm in visible red. This study was designed to assess the efficacy of combination 830-nm and 633-nm **LED** phototherapy in the treatment of recalcitrant psoriasis.

**SUBJECTS AND METHODS:** Nine informed and consenting patients with psoriasis were enrolled in this preliminary study, (3 men, 6 women, mean age 34.3, **skin** types I to IV). All had chronic psoriasis, which in most cases had proved resistant to conventional treatments. They were treated sequentially with **LED** arrays delivering continuous-wave 830 nm (near-IR) and 633 nm (red) in two 20-min sessions over 4 or 5 weeks, with 48 h between sessions (830 nm, 60 J/cm<sup>2</sup>; 633 nm, 126 J/cm<sup>2</sup>).

**RESULTS:** All patients completed their **LED** regimens (4 requiring 1 regimen, 5 requiring a second). Follow-up periods were from 3 to 8 months, except in two patients who were lost to follow-up. Clearance rates at the end of the follow-up period ranged from 60% to 100%. Satisfaction was universally very high.

**CONCLUSIONS:** The antiinflammatory effects of **LED** energy at 830 nm and 633 nm have been well documented, as has their use in wound healing. **LED** phototherapy is easy to apply, pain free and side-effect free, and is well tolerated by patients of all **skin** types. The promising results of this preliminary study warrant a proper controlled double-blind study with a larger patient population.

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