



[Burns](#)

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Low Level Laser Therapy—a conservative approach to the burn scar?

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Abstract

Burn scars are known **to be difficult to treat** because of their tendency to worsen with **hypertrophy** and **contracture**. Various experimental and clinical efforts have been made to alleviate their effects but the problem has not been solved.

Since patients keep asking for Low Level Laser Therapy (**LLLT**) and believe in its effectiveness on burn scars, and since former studies show contradictory results of the influence of **LLLT** on wound healing, this prospective study was designed to objectify the effects of **LLLT on burn scars**.

Nineteen patients with 19 burn scars were treated with a 400 mW 670 nm Softlaser **twice a week over 8 weeks**. In each patient a control area was defined, that was not irradiated. Parameters assessed were the Vancouver Scar Scale (**VSS**) for macroscopic evaluation and the Visual Analogue Scale (**VAS**) for **pruritus** and **pain**. Photographical and clinical assessments were recorded in all the patients.

Seventeen out of 19 scars exhibited an improvement after treatment. The average rating on the **VSS** decreased from 7.10 ± 2.13 to 4.68 ± 2.05 points in the treated areas, whereas the **VSS** in the control areas decreased from 6.10 ± 2.86 to 5.88 ± 2.72 . A correlation between scar duration and improvement through **LLLT** could be found. **No negative** effects of **LLLT** were reported.

The present study shows that the 400 mW 670 nm softlaser has a positive, yet sometimes limited effect on burn scars concerning macroscopic appearance, pruritus, and pain.