

# WOUND CARE, TISSUE REPAIR & REGENERATIVE MEDICINE

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## LOW LEVEL LASER THERAPY IN THE TREATMENT OF PRESSURE ULCERS: SYSTEMATIC REVIEW

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**Purpose:** To evaluate the effects of low level laser therapy (LLT) in pressure ulcers (PU) in humans through a systematic review of randomized studies.

**Methods:** Data sources: The search includes the databases MEDLINE, PEDro, Cochrane CENTRAL and Lilacs, as well a manual search until May, 2016. Eligibility criteria: This included randomized clinical trials of LLT compared with other interventions, different types of LLT, LLT placebo or control in the treatment of PU. The outcomes evaluated were the ulcer area, healing rate and overall healing rate. Appraisal and synthesis methods: The risk of bias was evaluated with the tool of the Cochrane Collaboration and the results were analyzed descriptively.

**Results:** From the 386 articles identified, only four studies were included, with two LLT used with single wavelength (1: 904nm vs control and 2: 904nm vs. 808nm vs. 658nm vs placebo) and two LLT used to probe cluster. One study compared to different single wavelengths showed a significant 71% reduction in the area of the PU an improved healing rate in which 47% of PU healed completely after one month of therapy with the use of LLT with a wavelength of 658 nm compared with other lengths. The other wavelengths analyzed, were not significant in the outcomes assessed.

**Conclusion:** Significant results were observed in the use of LLT with a 658nm wavelength and no evidence was found for use of wavelengths above that for the treatment of PU. Therefore, we also found no evidence in the laser used to probe the cluster.