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## Efficacy of Low-Level Laser Therapy for the Therapeutic Management of Neuropathic Orofacial Pain: A Systematic Review

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## **Abstract**

**Aims:** To evaluate the efficacy of low-level laser therapy (LLLT) for the therapeutic management of neuropathic orofacial pain.

**Methods:** This systematic review was conducted according to PRISMA guidelines. A comprehensive search of the literature was conducted in the PubMed/MEDLINE, Scopus, and Cochrane Library databases up to March 8, 2018, using terms such as low-level laser therapy, neuropathic pain, orofacial pain, neuropathy, and all the entities described in section 13 of the International Classification of Headache Disorders, third edition. The primary outcome was measurement of pain intensity.

**Results:** A total of 997 studies were obtained with the initial search; 13 (8 randomized controlled trials, 2 prospective studies, and 3 case series) met the inclusion criteria and were analyzed for data extraction. Three provided data for the treatment of trigeminal neuralgia, 1 for occipital neuralgia, and 10 for burning mouth syndrome. All studies showed a reduction in pain intensity (most of them significant). The different studies analyzed LLLT alone and compared to placebo, to another treatment, or to different LLLT application protocols.

**Conclusion:** LLLT seems to be effective as a treatment option for different neuropathic orofacial pain entities such as trigeminal neuralgia, occipital neuralgia, and burning mouth syndrome as a single or combined treatment. However, more quality studies assessing all outcome measures of chronic pain are needed in the medium and long terms. Furthermore, due to the lack of standardization of the application technique, more well-designed studies are required to confirm the results of this systematic review.

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