

FULL TEXT LINKS

Review [Photobiomodul Photomed Laser Surg.](#) 2019 Dec;37(12):869-886.doi: [10.1089/photob.2019.4707](https://doi.org/10.1089/photob.2019.4707).

Photobiomodulation in Endodontic, Restorative, and Prosthetic Dentistry: A Review of the Literature

[Farshid Vahdatinia](#)¹, [Leila Gholami](#)², [Hamed Karkehabadi](#)³, [Reza Fekrazad](#)^{4 5}

Affiliations

PMID: 31873065 DOI: [10.1089/photob.2019.4707](https://doi.org/10.1089/photob.2019.4707)

Abstract

Objective: To provide a review of the literature about the photobiomodulation therapy (PBMT) dental treatment protocols in endodontic, restorative, and prosthetic dentistry based on validated clinical studies published so far. More specifically, this study was carried out to carefully review therapeutic protocol of PBMT in clinical studies and their conclusions. **Background data:** The importance of using low-power lasers and photobiomodulation (PBM) is increasing in dentistry mainly due to their painless and noninvasive function. However, lack of sufficient clinical studies has led to unclear results regarding PBMT in dentistry, and also lack of an available precise protocol for clinicians. Moreover, scarcity of clinical studies in this area has made conduction of a precise systematic review study difficult. **Methods:** In our study, published clinical studies up to April 2019 were reviewed from library sources, Google Scholar, PubMed and Medline, Elsevier, Embase, Cochrane, Scopus, and Web of science (ISI). Inclusion criteria included those presented in clinical trials and case report/case series, language (English), and studies available in full text. Exclusion criterion was *in vitro* studies. **Results:** In general, findings of clinical studies have shown that PBMT can have a significant role in reducing postoperative dental pain, increasing depth of anesthesia, improving tooth hypersensitivity, reducing inflammation of the tissue, and helping wound healing. **Conclusions:** A review of clinical studies showed that the use of alternative or adjunctive PBMT is of great importance in controlling postoperative pain after endodontic treatments. In addition, evidence suggests that different parameters of light can be efficient in the treatment of tooth hypersensitivity. Nevertheless, lack of sufficient clinical studies and reliable results do not allow introducing a precise treatment protocol.

Keywords: endodontic; photobiomodulation therapy; prosthetic; restorative.

Related information

[MedGen](#)

LinkOut - more resources

Full Text Sources

[Atypon](#)

Miscellaneous

[NCI CPTAC Assay Portal](#)