The Role of Lasers in Dental Implantology: A Comprehensive Review

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ABSTRACT:

Lasers have brought a new level of precision and comfort to dental implant treatments. This review article explores how different types of lasers are used at every stage of the implant process—from preparing the bone and surgical site to improving healing and managing complications like peri-implantitis. By interacting with tissues in specific ways, lasers can reduce bleeding, minimize pain, and promote faster recovery compared to traditional methods. We take a closer look at commonly used lasers such as Er:YAG, Er,Cr:YSGG, Nd:YAG,CO2 and diode lasers, highlighting their unique properties, clinical uses, and safety guidelines. The article also discusses how low-level laser therapy (LLLT) can support bone growth and improve implant stability. By combining the latest research with practical insights, this review aims to guide clinicians in using laser technology effectively and safely in implant dentistry—while also pointing to exciting future developments in this evolving field.

KEY WORDS: Dental Implants, Er,Cr:YSGG, Er:YAG, Nd:YAG, Diode Laser.