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Biomechanics and load resistance of small-diameter and mini dental implants: a review of literature.

Review article

Hasan I, et al. Biomed Tech (Berl). 2014.

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Abstract

In recent years, the application of small-diameter and mini dental implants to support removable and fixed prosthesis has dramatically increased. However, the success of these implants under functional biting forces and the reaction of the bone around them need to be analyzed. This review was aimed to present studies that deal with the fatigue life of small-diameter and mini dental implants under normal biting force, and their survival rate. The numerical and experimental studies concluded that an increase in the risk of bone damage or implant failure may be assumed in critical clinical situations and implants with <3 mm diameter have a risk of fracture in clinical practice. The survival rate of the small-diameter and mini dental implants over 5 years was 98.3-99.4%.

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