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## Role of implant diameter on long-term survival of dental implants placed in posterior maxilla: a systematic review.

Review article

Javed F, et al. Clin Oral Investig. 2015.

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### Abstract

**OBJECTIVE:** We speculated that the long-term survival of narrow or conventional diameter (<5 mm) implants is higher than that of wide-diameter implants ( $\geq 5$  mm) when placed in posterior atrophic maxillae. The aim of this paper was to systematically review indexed literature regarding the influence of implant diameter on long-term survival of dental implants placed in posterior maxilla.

**MATERIALS AND METHODS:** The addressed focused question was "Does implant diameter influence long-term survival of dental implants placed in posterior maxilla?" Databases were searched from 1986 till June 2014 using the following MeSH terms: "dental implants," "dental implant-abutment design," "maxilla," and "survival." Review articles, case reports, letters to the editor, unpublished data, and studies published in languages other than English were excluded. Reference list of potentially relevant original and review studies was hand-searched.

**RESULTS:** The initial search yielded 51 studies. Scrutiny of the titles and abstracts reduced the number of clinical studies included in the present review to 19. Mean age of the patients ranged between 37 and 60 years. Cylindrical and tapered implants were used in 12 and 3 studies, respectively. In all studies, threaded, rough-surfaced dental implants with diameters ranging between 3.0 and 5.5 mm were used. In all studies, follow-up periods and cumulative survival rates ranged between 5 and 15 years and 80.5 and 100 %, respectively.

**CONCLUSION AND CLINICAL RELEVANCE:** The role of implant diameter on long-term survival of dental implants placed in posterior maxilla is secondary. A well-designed surgical protocol, achievement of sufficient primary stability at the time of implant placement, and pre- and postsurgical oral hygiene maintenance visits are critical factors that influence the long-term survival of dental implants placed in posterior atrophic maxilla.

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