Scientific Review
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Clinical documentation on OsseoSpeed® Profile implants

Following tooth extraction or tooth loss, alveolar ridge remodeling occurs as the bone heals. This remodeling appears to be a consequence of the adaptation of bone mass and structure to the new levels of strain after extraction[1]. The remodeling has been shown to be more pronounced buccally than lingually, which often results in a sloped ridge[2, 3]. When placing a regular implant in a healed sloped ridge the implant shoulder can either be installed in level with the lingual marginal bone or in level with the buccal marginal bone. Consequently, this will result in exposed threads on the buccal aspect or unsupported lingual bone, both situations being unfavourable from a long-term esthetical point of view. A more optimal solution would be to use an implant with a sloped shoulder that follows the bony anatomy to optimize the bone support and, thereby possibly avoid the risk for augmentation procedures. The OsseoSpeed Profile, an implant with a sloped shoulder, was developed in order to meet these requirements for implant treatment in sloped ridge situations.

Clinical multicenter studies evaluating OsseoSpeed Profile implants in situations with healed sloped ridges showed well maintained buccal and lingual bone levels after a 16-week re-entry[4], maintained marginal bone levels, stable soft tissue levels and 100% survival rates[4, 5] after 1 year in function.. These results indicate that the OsseoSpeed Profile implant is a viable treatment option in cases where the alveolar crest is sloped in a lingual to buccal direction[4–6].

An implant can also be placed into a fresh extraction socket. However, studies have shown that despite an implant in place, similar remodeling of the alveolar crest occurs, resulting in a sloped ridge in a lingual to buccal direction[7].

Placement of OsseoSpeed Profile implants using an immediate placement protocol, have shown a nice correlation to the sloped ridge after remodeling and thereafter maintained circumferential marginal bone levels and good esthetic results after up to 3 years in function[8].

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