

FDI DRAFT POLICY STATEMENT

Dental Implants Science Committee

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Introduction

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A dental implant is a medical device. The majority of implants in use today are made of titanium or titanium alloy and are inserted into the jawbone as 'artificial roots'. They serve to support and/or stabilize different types of fixed or removable dental prostheses in patients who seek to have missing teeth replaced. Indications range from a single to full-arch tooth replacements. Implants can also be used for anchorage in orthodontic tooth movement and allow unidirectional tooth movement without reciprocal action. Implants can be applied extra-orally for anchorage of maxillofacial prostheses.

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The majority of dental implants used today are endosseous screws with a cylindrical or tapered shape, which are surgically inserted into the jawbone. Osseointegration refers to the fusion of the implant surface with the surrounding bone. As such, alveolar bone osseointegrates with the implant without a periodontal ligament.

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Statement

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FDI supports the appropriate use of dental implants in oral healthcare. However, it is essential that every reasonable effort be made to retain teeth before extraction and replacement with implants. A comprehensive clinical and radiographic examination to assess the patient's systemic and oral health, and treatment needs and desires is critical prior to initiating any treatment. Oral diseases such as periodontitis and caries must be treated and controlled prior to implant placement.

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Dentists should acquire the necessary knowledge, skills and competence in treatment planning, surgical placement and restoration, and maintenance of dental implants prior to performing such procedures. Individualized risk assessment should be undertaken to categorize patients as straightforward, advanced and complex (SAC classification), thereby matching the degree of difficulty of a given situation to the clinician's level of education, training, experience and skill.

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Dentists and/or patients should consider the following:

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- Use implant systems, components and treatment-related biomaterials with proven scientific documentation, to comply with ISO/TC106 standards.
- Use implants and components which have received the necessary regulatory approval of the region or country where they are to be used.
- Use implants and components of manufacturers likely to be available for the long-term.
- Follow scientifically proven guidelines when using dental implants, components and treatment-related biomaterials.
- Dental implants (except provisional implants) with a micro-roughened surface represent the state of the art today and their use is recommended.

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- 39 • Dental implants with alternative dimensions have several indications, but concerns include
40 the risk of biomechanical and biological complications after long-term loading, and limited
41 data regarding their clinical performance.
- 42 • If risk assessment reveals that a given treatment is advanced or complex, the dentist is
43 encouraged to consult with specialist colleagues, or refer the patient to them, depending
44 on the dentist's own level of competence.
- 45 • Implant placement should follow a predetermined prosthodontic treatment plan and
46 requires correct implant positioning in all three dimensions (corono-apically, oro-facially
47 and mesio-distally). This is especially important for implant restorations in the aesthetic
48 zone.
- 49 • The most frequent problem with dental implant treatment results from malpositioned
50 implants, i.e., implants provoking restorative, biomechanical, biological or aesthetic
51 compromises and leading to an increased risk for long-term complications.
- 52 • Peri-implant complications including peri-implant mucositis and peri-implantitis can occur,
53 and are more common in patients with a history of periodontitis. All clinicians who treat
54 patients with dental implants should be able to identify these complications in their earliest
55 stage, and provide appropriate treatment using evidence-based approaches.
- 56 • Dentists and patients need to understand the importance of long-term maintenance of
57 implants and implant-supported restorations, through effective daily oral hygiene and
58 regular professional care.

60 **References**

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