

# Scientific Review for Straumann® Bone Level SLActive® Implants.

Tooth replacement with implants in esthetically demanding sites are clinically challenging tasks. Straumann® Bone Level Implants can be effectively used to restore both function and esthetics – to satisfy the high expectations of the dentist and the patient.

Over the last years the Straumann® Bone Level Implant has been extensively researched in preclinical and clinical studies.

The preclinical studies assessed the **effectiveness of the horizontal offset** of the implant-abutment interface. **Less inflammatory reactions and a higher stability** of the marginal bone level compared to butt-joined connections could be shown. Also assessed was the **optimal distance of adjacent implants**.

**A number of 7 clinical studies** have been performed. In general the clinical studies have demonstrated an excellent performance of Straumann® Bone Level Implants in different clinical indications and in different patient conditions. The implants have been used also in cases with very challenging indications, such as early placement in the anterior maxilla or implant placement in augmented sites. In all of these studies the implant survival rates after 1 year have always reached between **98 % and 100 %**. In a recent review of the published literature by den Hartog et al. 2008, an overall implant survival rate of other implants in comparable indications has been documented with 95.5%. Marginal bone loss in the first year ranged between **0.1mm and 0.5mm**, and more importantly, **very stable marginal bone level** conditions were observed over the years in function. As a consequence the **esthetic**

**outcome** was very pleasing, and the satisfaction of the patient and dentist was always at a very high level.

The following statements for **Straumann® Bone Level SLActive® Implants** are proven by scientific evidence:

- The **horizontal offset** of the interface eliminates inflammation. Excellent marginal bone stability is supported by the design of the implant-abutment connection (Jung et al. 2008, Cochran 2009, Heitz-Mayfield et al. 2013, Cochran 2013).
- Excellent clinical performance, outstanding esthetics and high patient satisfaction **in daily dental practice** (Filippi et al. 2013, Furze et al. 2012).
- **Flexibility during placement** of adjacent implants (Elian et al. 2011).
- Long-term proven **clinical performance** and **pleasing esthetic** outcomes in the anterior maxilla (Buser et al. 2009, Buser et al. 2011, (Buser et al. 2013, not published)).
- Proven evidence for **one-stage surgical procedure** in the esthetic zone. A second surgery can be avoided also in augmented sites, resulting in reduced treatment time, lower costs and higher comfort for the patient (Hämmerle et al. 2011, Cordaro et al. 2012, Sanz et al. 2013).
- High predictability of **implant placement in augmented sites** (Santing et al. 2013, Chiapasco et al. 2012 a, Chiapasco et al. 2012 b).

**In conclusion**, based on the available evidence, Straumann® Bone Level Implants can be recommended in all kinds of clinical indication, but especially in esthetically challenging indications like the anterior maxilla.

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