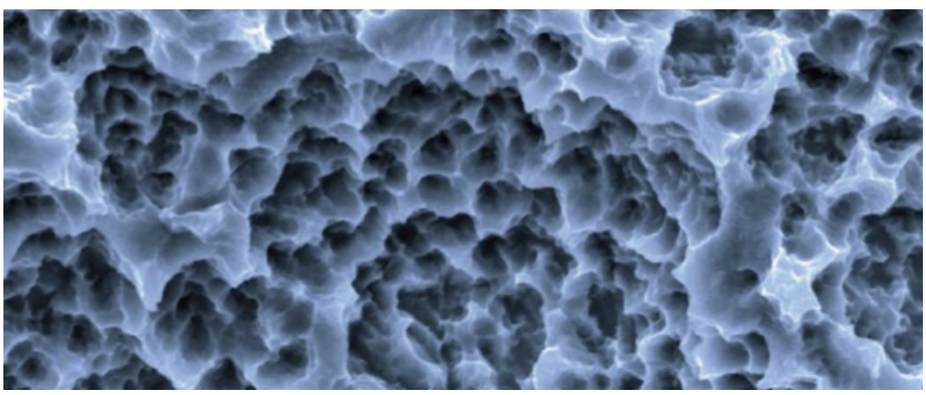
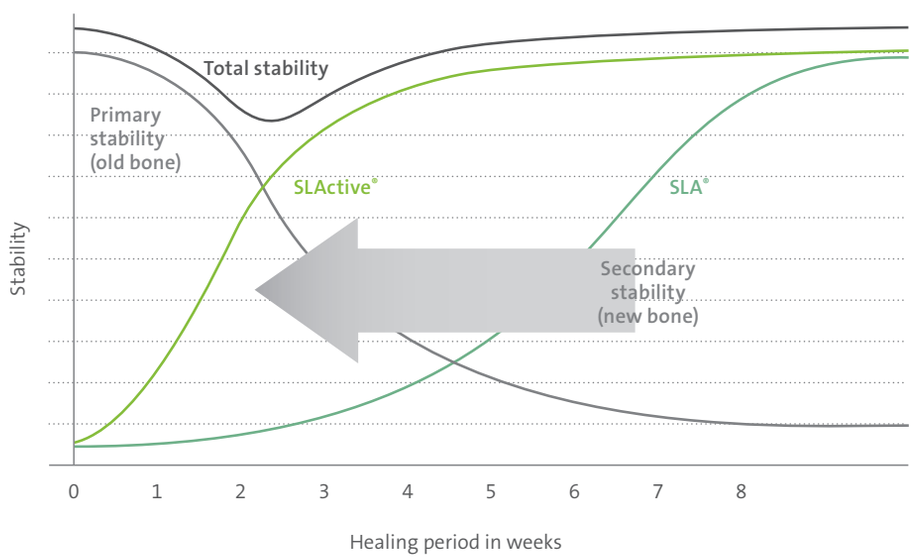
# Smart Product Descriptions

## SLActive® surface

**The Straumann® SLActive® surface is based on the scientifically proven SLA® topography.**



In addition, it has a fundamentally improved hydrophilic surface chemistry. SLActive® significantly accelerates the osseointegration process in the early healing phase (weeks 2-4) and delivers everything you expect from a successful and patient-friendly implant treatment.




**Benefits:**

- Safer and faster treatment in 3-4 weeks for all indications[1–10]
- Reduced healing times from 6-8 weeks down to 3-4 weeks[6,10–14]
- Increased treatment predictability in critical protocols[15]

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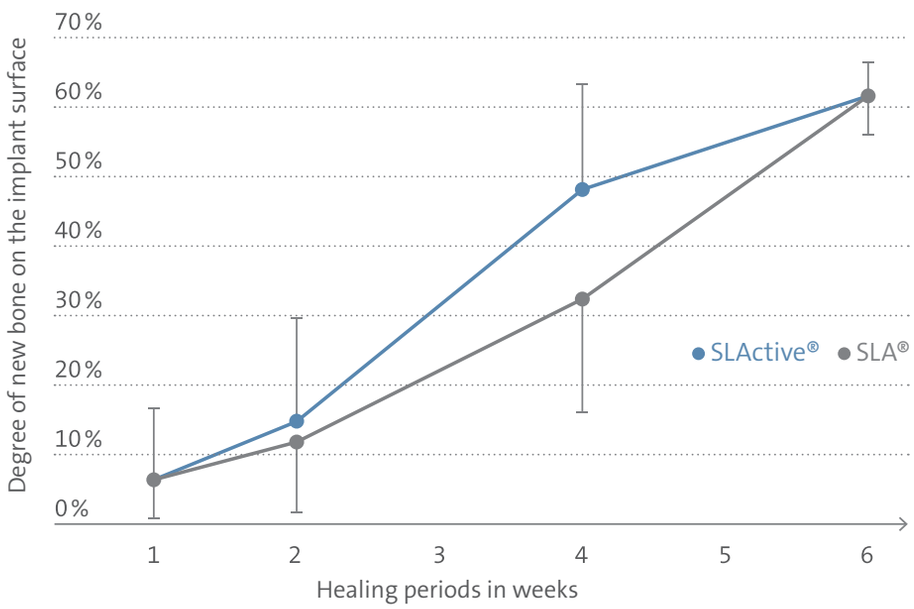


The SLActive® surface shows a faster integration into new bone after 4 weeks (50 %) compared to the SLA® surface (30 %).

Most early implant failures occur in the critical healing period between weeks 2 and 4 after implant placement[8]. Although similar healing patterns were observed for both SLA® and SLActive® Implants, bone-to-implant contact (BIC) was greater after 2 weeks and significantly greater after 4 weeks for SLActive® ($p$-value < 0.05)[7].

With the chemically active and hydrophilic SLActive® surface Straumann has established a new standard in oral implantology.

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**REFERENCES**


**1** Rupp F et al. : Enhancing surface free energy and hydrophilicity through chemical modification of microstructured titanium implant surfaces. Journal of Biomedical Materials Research A, 76(2):323-334, 2006.

**2** DeWild M : Superhydrophilic SLActive® implants. Straumann document 151.52, 2005.

**3** Maniura K : Laboratory for Materials – Biology Interactions Empa, St. Gallen, Switzerland Protein and blood adsorption on Ti and TiZr implants as a model for osseointegration. EAO 22nd Annual Scientific Meeting, October 17 – 19 2013, Dublin.

**4** Schwarz F et al. : Bone regeneration in dehiscence-type defects at non-submerged and submerged chemically modified (SLActive®) and conventional SLA® titanium implants: an immunohistochemical study in dogs. J Clin.Periodontol. 35.1 (2008): 64– 75.

**5** Rausch-fan X et al. : Differentiation and cytokine synthesis of human alveolar osteoblasts compared to osteoblast-like cells (MG63) in response to titanium surfaces. Dental Materials 2008 Jan;24(1):102-10. Epub 2007 Apr 27.

**6** Schwarz F et al. : Histological and immunohistochemical analysis of initial and early osseous integration at chemically modified and conventional SLA® titanium implants: Preliminary results of a pilot study in dogs. Clinical Oral Implants Research, 11(4): 481-488, 2007.

**7** Lang, NP et al. : Early osseointegration to hydrophilic and hydrophobic implant surfaces in humans. Clin Oral Implants.Res 22.4 (2011): 349–56.

**8** Raghavendra S et al.: Early wound healing around endosseous implants: a review of the literature. Int. J. Oral Maxillofac. Implants. 2005 May–Jun;20(3):425–31.

**9** Oates TW et al. : Enhanced implant stability with a chemically modified SLA® surface: a randomized pilot study. Int. J. Oral Maxillofac. Implants. 2007;22(5):755–760.

**10** Schwarz F et al. : Bone regeneration in dehiscence-type defects at chemically modified (SLActive) and conventional SLA titanium implants: A pilot study in dogs. J. Clin. Periodontol. 2007;34(1):78–86.

**11** Buser D et al. : Enhanced bone apposition to a chemically modified SLA titanium surface. J. Dent. Res. 2004 Jul;83(7):529–33.

**12** Schwarz F et al. : Histological and immunohistochemical analysis of initial and early subepithelial connective tissue attachment at chemically modified and conventional SLA® titanium implants. A pilot study in dogs. Clin. Oral Impl. Res. 2007;11(3):245–455.

**13** Schwarz F et al. : Effects of surface hydrophilicity and microtopography on early stages of soft and hard tissue integration at non-submerged titanium implants: An immunohistochemical study in dogs. J. Periodontol. 2007;78(11):2171–2184.

**14** Zöllner et al. : Immediate and early non-occlusal loading of Straumann implants with a chemically modified surface (SLActive®) in the posterior mandible and maxilla: interim results from a prospective multicentre randomized-controlled study. Clinical Oral Implants Research, 19(5), 442-450,2008.

**15** Nicolau P et al. : Immediate and early loading of chronically modified implants in posterior jaws: 3-year results from a prospective randomized study. Clin Implant Dent Relat Res. 2013 Aug;15(4):600-612.

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**DISCLAIMER**

Straumann® Smart is a blended training and education program focused on the education of general dentists who want to become surgically active in the field of dental implantology. The program is limited to information pertaining to straightforward implant cases and focuses on a reduced portfolio of products that are suitable for the treatment of such cases.

All clinical Straumann® Smart content – such as texts, medical record forms, pictures and videos – was created in collaboration with Prof. Dr. Christoph Hämmerle, Prof. Dr. Ronald Jung, Dr. Francine Brandenberg-Lustenberger and Dr. Alain Fontolliet from the University of Zürich, Clinic for Fixed and Removable Prosthodontics and Dental Material Science, Switzerland.

Straumann does not give any guarantee that Straumann® Smart provides sufficient knowledge or instruction for the dental professional to become surgically active in the field of implantology. It is the dental professional's sole responsibility to ensure that he/she has the appropriate knowledge and instruction before placing dental implants.

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