Fueling innovation in the premium dental market

Francisco Faoro
Head Product Development BUSurgical
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Straumann – a global leader in replacement, restorative and regenerative dentistry

- A pioneer of dental implants
- Founded as a family owned research institute in 1954
- Headquartered in Basel, Switzerland
- Dental solutions available in more than 70 countries through 20 fully owned sales subsidiaries and a broad distributor network
- >2400 employees from 30+ nations
Half a century of science-based innovation and precision engineering

1954 – 1970
Material testing and research

1970 – 1990
Medical devices

Since 1990
Dental medical devices

1974
First Straumann Dental implant

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A global business…

Andover (USA): Implant production

Malmö (S): Regenerative products

Leipzig (D): CADCAM milling

Gräfelfing (D): scanner assembly

Arlington (USA): CADCAM milling

Villeret (CH): Implant production

Present in >70 countries through 20 sales subsidiaries and a broad distributor network
...has achieved leadership through organic growth and innovation.

Drivers

- Geographical
- Expanding provider base
- Innovation
- Solution and service

Tooth replacement, restoration and regeneration

Global GDP

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What drives the choice to buy premium products?

Factors influencing customer choice of implant company¹

Proportion of respondents² willing to pay a premium for indicated product features

- New surface scored highest in the US
- New surface and new material ranked top in Europe
- Prevention of peri-implantitis scored best in Asia

¹ Perception pulse study: dental implants 2011; 2046 respondents in Americas, Asia, and Europe, MRG
² SAi MedPartners 2011 Sample: 170 respondents in Americas, Asia, and Europe
Innovation leadership based on surface- and material science

- 1974 TPS
- Better osseointegration
- 1994 SLA®
- Enhanced osseointegration
- 2009 Roxolid®
- Enhanced mechanical properties
- 2005 SLActive®
- Superior osseointegration
- 2011 NNC®
- Small diameter implants with wider indication

- 400 b.c.
  - Metal straps (Etruscan)
- 600 a.c.
  - Ivory teeth (Honduras)
- 1960
  - Invasive implants in lower jaw
- 1970
  - Blade implants
- 1974 TPS
  - Better osseointegration
- 1994 SLA®
  - Enhanced osseointegration
- 2005 SLActive®
  - Superior osseointegration
- 2009 Roxolid®
  - Enhanced mechanical properties
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Straumann leads implant surface innovation

1974
1st generation

1994
2nd generation

2005
3rd generation

Macro

Micro

Molecular

Development of surface topography

Development of surface chemistry

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Hydrophilic surface cuts healing time in half

Body has to remove the passive layer for osseointegration

Body can immediately access the active surface for osseointegration

Hydrophobic sand blasted and acid etched titanium surface

Hydrophilic sand blasted and acid etched titanium surface

1 Raghavendra, Wood, Taylor, 2005 and Oates et al., 2007
2 Straumann SLA®
3 Straumann SLActive®
Bone remodelling with SLActive® also in large defects

Histological cross-sections at 12 weeks after implant placement

Results from preclinical studies presented by Becker J, Schwarz F (Heinrich-Heine University, Düsseldorf, Germany) at 15th Ann. Sci. Meeting of the EAO, Zürich, 2006
There is an increasing trend towards narrow implants which is based on …

Clinical needs:
- small bone ridge
- small inter-dental gap
- bone conservation

Patient requirements:
- less invasive treatment
- reduced treatment time
- less cost intensive
- aesthetic solution
Roxolid® designed for more confidence by combining strength and excellent osseointegration

- Higher strength than pure titanium\(^1,2,3\)
- Higher stability\(^1,2,3\)
- More bone in-growth\(^4\)
- Improved osseointegration\(^4\)

1 ASTM F67
2 used for all Ti Straumann implants
3 used for all Roxolid Straumann implants
The usage of narrow implants is currently limited to front teeth
Narrow implants have limited treatment options

Strong correlation between implant diameter and its fatigue strength\(^2\)

\(^1\) 2012-09-05 Mech Strength Benchmarking for Dent Impl Syst_V02 (Straumann internal data)
\(^2\) According to ISO 14801; data on file (Straumann)
To maintain leadership in innovation – leapfrogging technology in materials is needed.