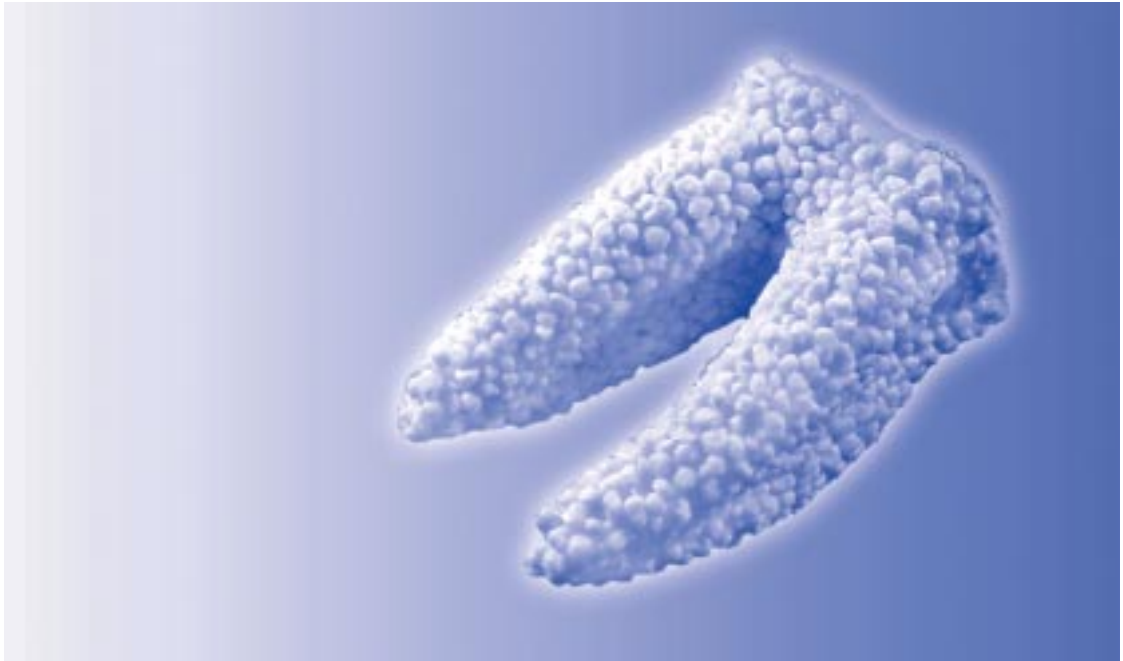


*RootReplica*TM



*Therapy for prevention of atrophy
of the alveolar crest after tooth extraction*

Product Description

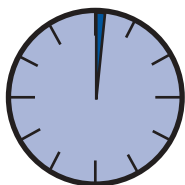


The goal of the new therapy *RootReplica™* is the closure of the bone wound using an exact copy of the tooth root made from a degradable bone augmentation biomaterial. This copy is made chairside within 5 minutes after extraction. The implant is resorbed within 9 – 15 months and replaced by autologous bone.

left: Original tooth and *RootReplica™*

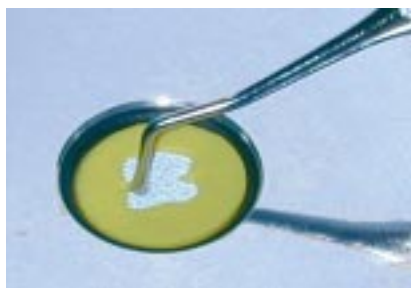
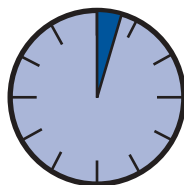
Fabrication

after 2 minutes



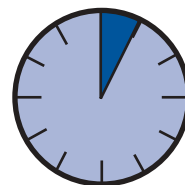
1. Moulding of the extracted tooth.

after 4 minutes



2. Fabrication of the exact copy of the root.

after 5 minutes

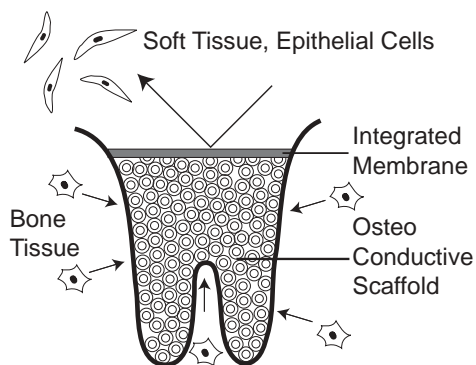


3. Within a few minutes, *RootReplica™* is ready for implantation.

Fabrication

Using a well known copying technique, a mould is fabricated from the extracted tooth root. Subsequently, the mould is filled with the granular biomaterial. Under compression the biomaterial fuses, forming a mechanically stable copy of the root. Finally, *RootReplica™* is placed in the alveolus.

Mode of action



The haemostatic *RootReplica™* seals the alveolar wound and supports the surrounding bone structure. Due to the porosity and the accuracy of the copy of the tooth root, an immediate contact to the surrounding bone tissue is achieved, allowing bone tissue in-growth. The implant optimises the wound healing process and preserves the anatomy of the alveolar ridge.

A high primary stability prevents the loss of the Replica. The high porosity of *RootReplica™* allows an uptake of blood from the surrounding bone and thus favours complete bone regeneration. Animal studies have proven the osteo conductivity and complete resorbability of the used biomaterial.

Indications

RootReplica™ represents a simple and easy to use therapy for an immediate wound treatment after tooth extraction. Compared to the state of the art of augmentation techniques, using granular biomaterials and membranes, *RootReplica™* simplifies the clinical procedure significantly.

Due to its preventive character regarding alveolar bone loss, *RootReplica™* creates optimal conditions for any subsequent prosthetic treatment.

Case Study

Before Extraction:



Buccal dehiscence of the bone. Vertical root fracture.

After Implanting RootReplica™:



RootReplica™ fits exactly in the alveolus.

6 month post extractionem:



Sound, compact bed of bone. Excellent primary stability of the titanium implantat.

A vertical root fracture of tooth 21 was diagnosed after raising a flap and applying methylene blue disclosing agent. The buccal crestal bone had receded significantly. It was decided to apply *RootReplica™*-therapy to preserve the dimensions of the alveolar ridge.

After extracting the tooth, granulation tissue and residual periodontal tissue was carefully removed. A *RootReplica™* was manufactured as described above and inserted into the bleeding socket with slight pressure. Because of the exact fit of the *RootReplica™*, no primary closure nor any mattress sutures were necessary.

Clinical and radiological examinations after one, 12 and 24 weeks indicated good healing without any complications. After 6 months an ITI-Esthetic Plus implant (\varnothing 4.1 mm, 10 mm length) was inserted. The full thickness periosteal flap prepared during this procedure indicated partial regeneration of the buccal crestal bone. Furthermore, a sound compact bed of bone could be prepared at the implantation site, enabling excellent primary stability of the titanium implant.

Contact

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