Geistlich
Biomaterials

Tooth out – what's next?

LEADING REGENERATION

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› Why Ridge Preservation?

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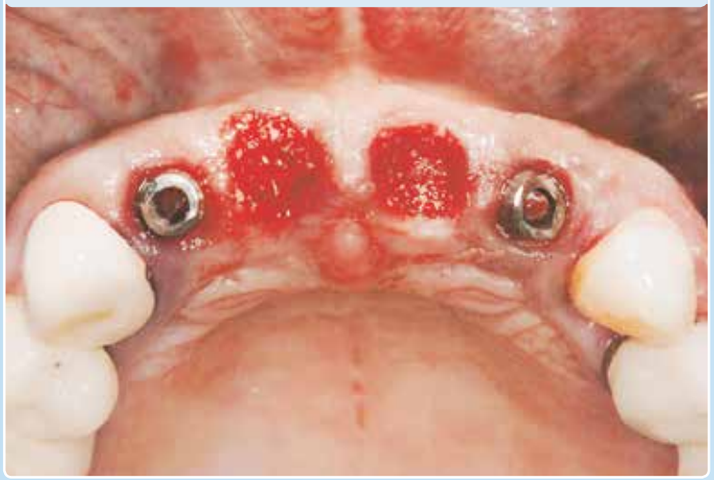
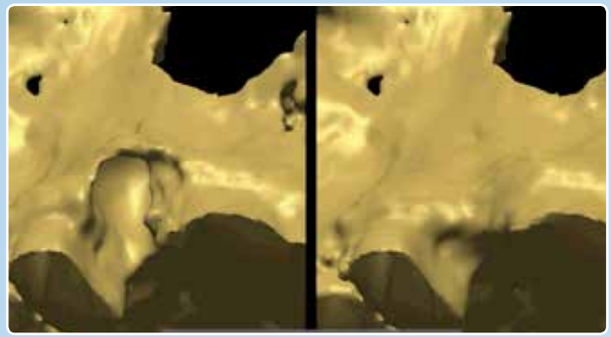


After tooth extraction: Why Ridge Preservation?

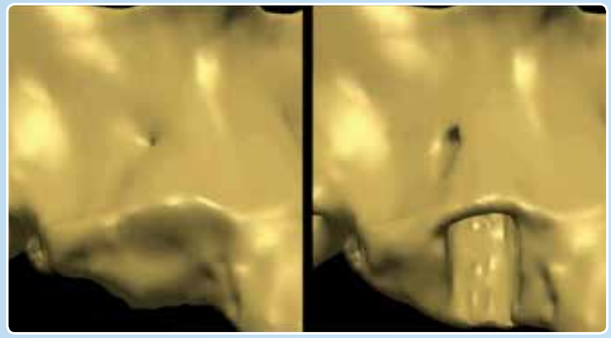
Without Ridge Preservation

Spontaneous healing



With Ridge Preservation

Ridge Preservation with Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal



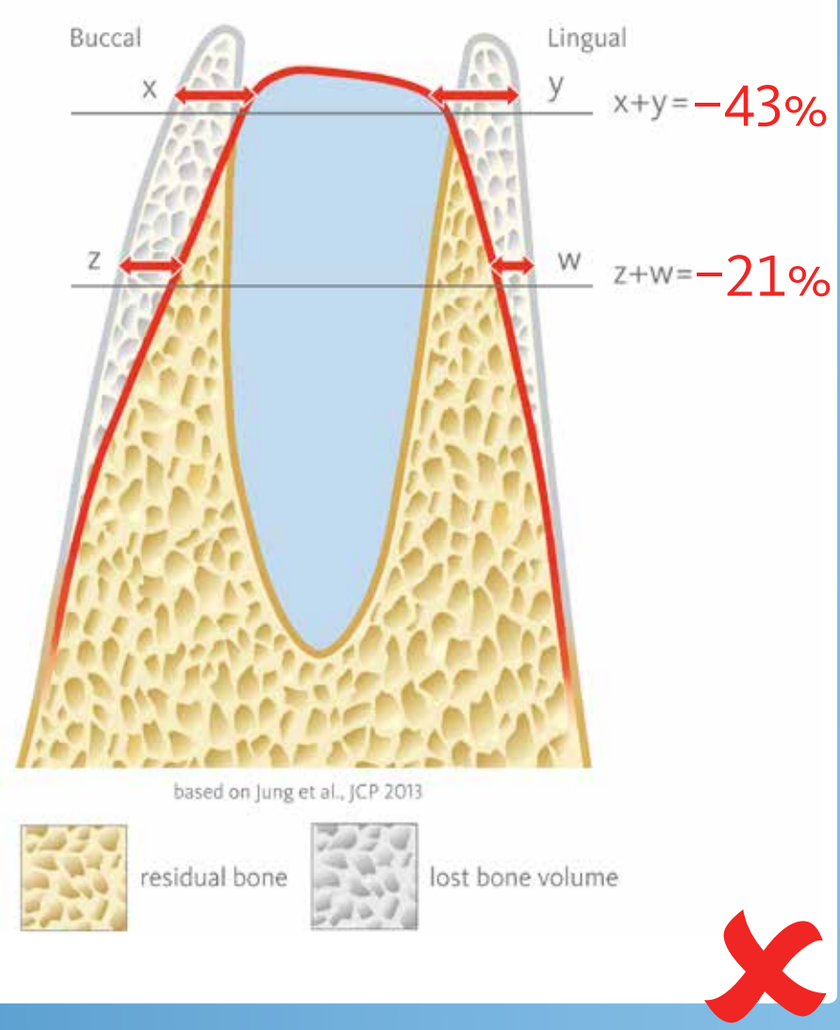
Minimise invasion with Geistlich Biomaterials

- Bone volume preservation
- Open healing

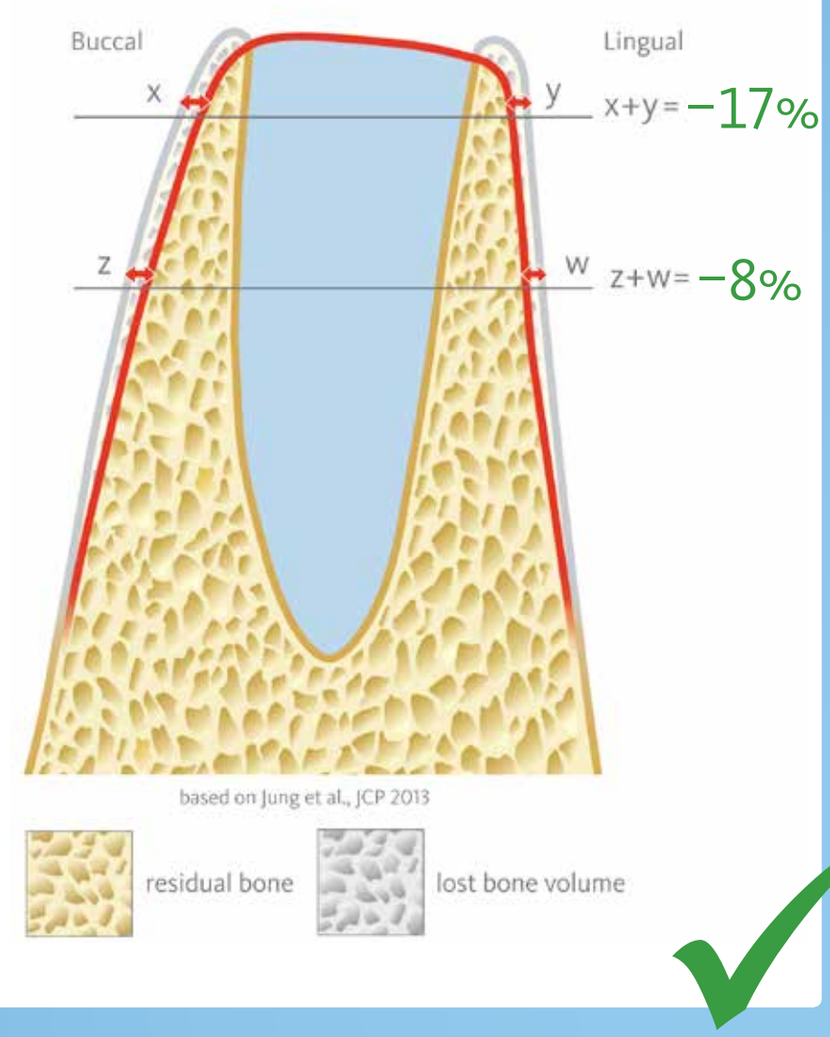
Minimise Invasion: Bone volume preservation

Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal preserve significantly more bone volume than spontaneous healing[1]

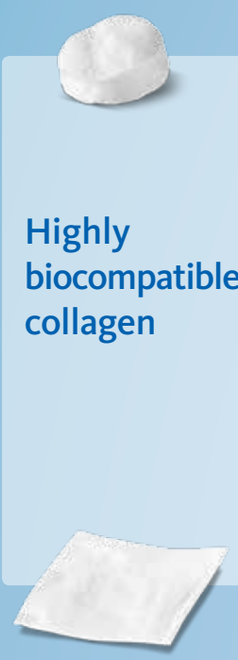
Spontaneous healing after 6 months



Ridge Preservation with Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal after 6 months



Minimise invasion: Open healing



Highly biocompatible collagen

Open healing (healing by secondary intention)

Minimise invasion
- flapless surgery possible
- mucogingival line is preserved

Geistlich Mucograft® Seal

Case by Dr. Cavalcanti

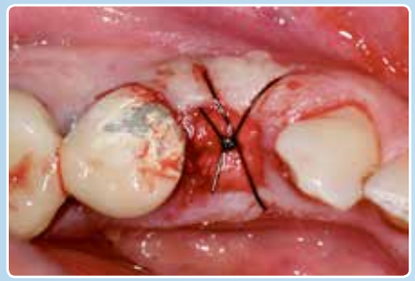
Extraction socket grafted with Geistlich Bio-Oss® Collagen and sealed with Geistlich Mucograft® Seal.

Healing of the soft tissues 2 weeks after tooth extraction and ridge preservation.

Implant placement 45 days after tooth extraction.

Geistlich Bio-Gide®

Case by Dr. Cardaropoli



The socket has been augmented with Geistlich Bio-Oss® Collagen and covered with a protective Geistlich Bio-Gide® membrane. It is inserted into the sulcus and secured by a cross mattress suture.

Clinical image 2 weeks after extraction: the re-epithelisation above the socket is almost complete, thereby protecting the grafted area.

4 months after extracting: a complete healing with mature soft and hard tissues has been achieved.

Treatment Options

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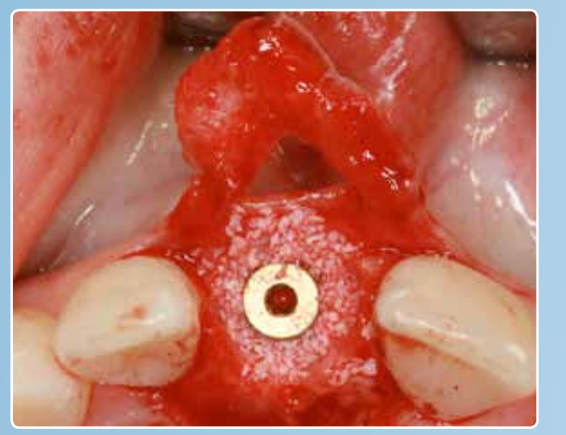
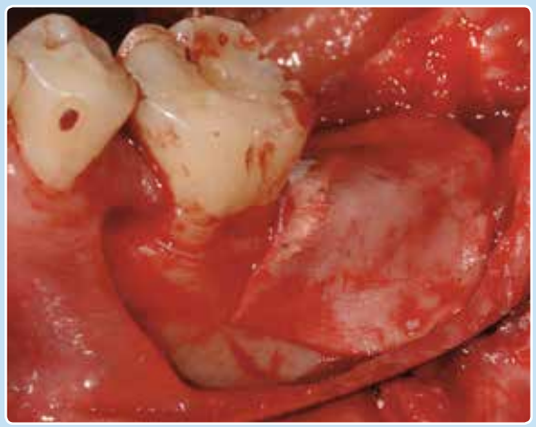
When should I place an implant? What are the consequences for my further treatment steps?

Immediate (Type I)[2]	Early (Type II)[2,7]	Delayed (Type III)[2]	Late (Type IV)[2]
Fill the gap	Ridge Preservation and socket sealing/spontaneous healing	Ridge Preservation	Ridge Preservation





Immediate implant placement

Preserved extraction socket: Definition of preserved extraction socket varies and may include minor bony defects from 0 to 50% of buccal bone wall.

Fill the gap

Geistlich Bio-Oss®

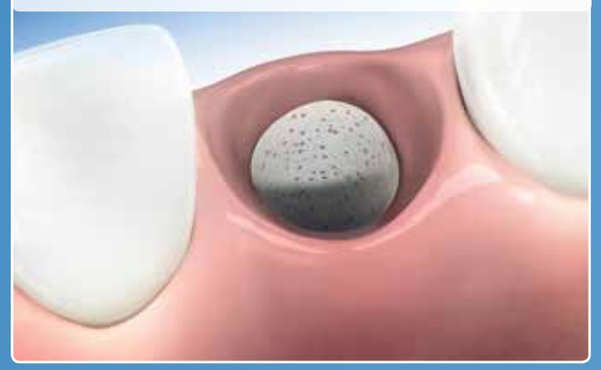
Geistlich Bio-Oss® Collagen

Geistlich Mucograft® Seal

Day 0[2]

Early implant placement

Preserved extraction socket: Definition of preserved extraction socket varies and may include minor bony defects from 0 to 50% of buccal bone wall.



Spontaneous Healing*

OR

Geistlich Mucograft® Seal

+

Geistlich Bio-Oss® Collagen

?

If needed: Guided bone regeneration at implant placement

Geistlich Bio-Gide®

Geistlich Bio-Oss®

Day 0 → 8 – 10 weeks (based on Advisory Board Meeting Consensus)[7]

* Based on ITI consensus statement: Early implant placement is typically 4–8 weeks after tooth extraction[2]

Disadvantages of spontaneous healing: [2]

- Site morphology may complicate optimal placement and anchorage.
- Treatment time is increased.
- Socket walls exhibit varying amounts of resorption.
- Adjunctive surgical procedures may be required.
- Procedure is technique-sensitive.

Advantages for the use of Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal:

- Geistlich Bio-Oss® Collagen can compensate for the horizontal and vertical bone loss, thus preserving the coronal bone structure. [3, 4]
- Geistlich Bio-Oss® Collagen can preserve soft-tissue volume, leading to an improved treatment outcome. [5]
- Geistlich Bio-Oss® Collagen counteracts loss of soft-tissue contour above the resorbing bone lamina. [6]
- The use of Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal minimises invasion and maximises soft-tissue outcomes. [7]
- Soft-tissue remodelling is possible 6–8 weeks after tooth extraction. [7]
- Geistlich Bio-Oss® Collagen shows its highest osteoconductive potential 4–8 weeks after placement. [8]
- The regenerating tissue may not be fully matured, nevertheless after 6–8 weeks implants can be placed. [8]
- The treatment time is shortened because the bone is able to regenerate since tooth extraction and a guided bone regeneration at implant placement may be prevented.

Delayed implant placement

Preserved extraction socket

Geistlich Mucograft® Seal

Geistlich Bio-Oss® Collagen

If needed: Guided bone regeneration at implant placement

Geistlich Bio-Gide®

Geistlich Bio-Oss®

Defect extraction socket

Geistlich Bio-Gide®

Geistlich Bio-Oss® Collagen

If needed: Guided bone regeneration at implant placement

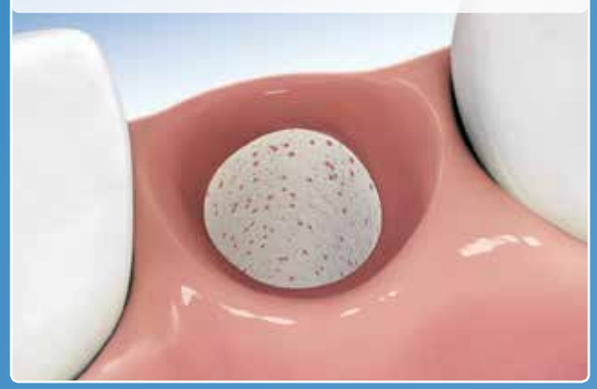
Geistlich Bio-Gide®

Geistlich Bio-Oss®

Day 0 → 3–4 months[2]

Late implant placement

Preserved extraction socket



Geistlich Mucograft® Seal

Geistlich Bio-Oss® Collagen

If needed: Guided bone regeneration at implant placement

Geistlich Bio-Gide®

Geistlich Bio-Oss®

Defect extraction socket

Geistlich Bio-Gide®

Geistlich Bio-Oss® Collagen

If needed: Guided bone regeneration at implant placement

Geistlich Bio-Gide®

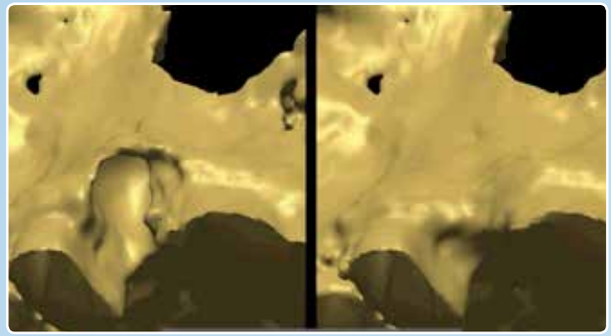
Geistlich Bio-Oss®

Day 0 → after 4 months [2]

Bridge: Why Ridge Preservation?

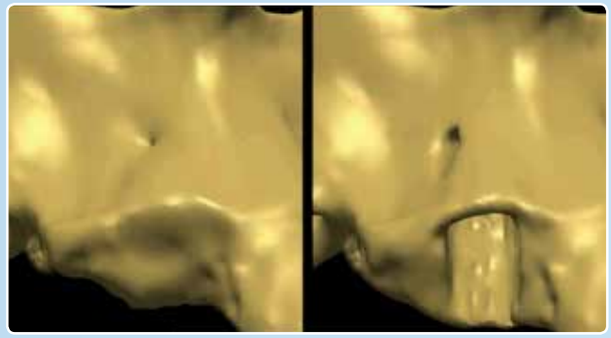
Without Ridge Preservation

Spontaneous healing



With Ridge Preservation

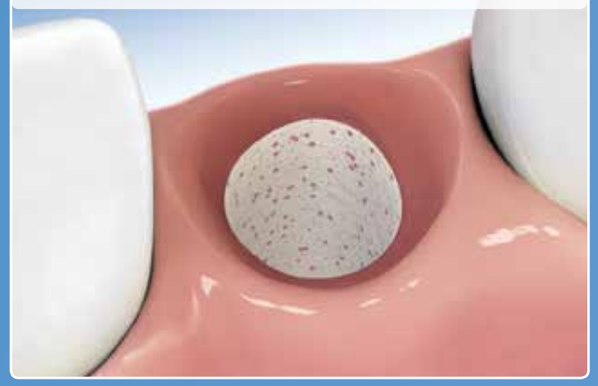
Ridge Preservation with Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal



› Ridge Preservation pays off when placing a bridge [21]

Bridge

Preserved extraction socket



Geistlich Mucograft® Seal

Geistlich Bio-Oss® Collagen

Defect extraction socket

Geistlich Bio-Gide®

Geistlich Bio-Oss® Collagen

Day 0 → 6 months

Clinical Cases

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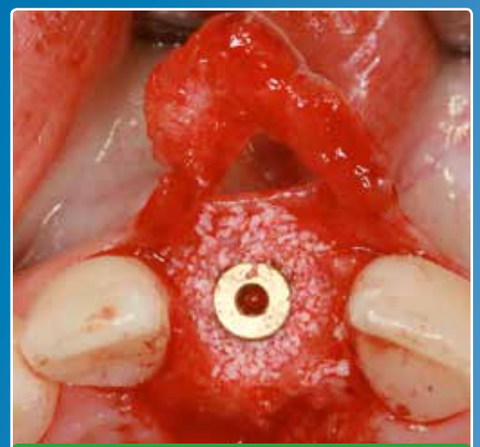


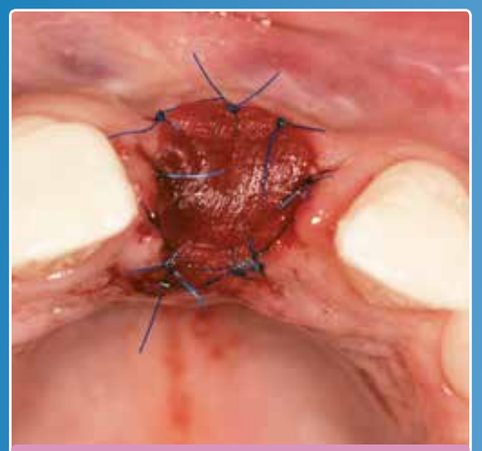
› Immediate implant placement minor bony defects

› Early implant placement GBR after spontaneous Healing

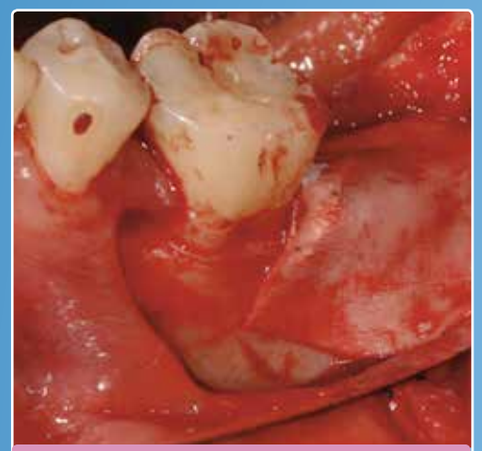
› Early implant placement minor bony defects

› Delayed implant placement preserved extraction socket

› Delayed implant placement defect extraction socket

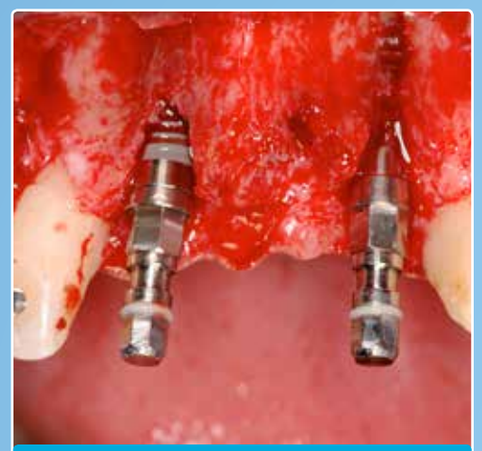


› Late implant placement preserved extraction socket



› Late implant placement defect extraction socket

› Bridge preserved extraction socket

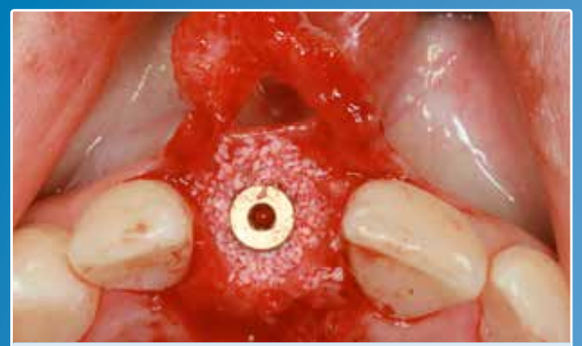


› Bridge defect extraction socket

Geistlich Biomaterials

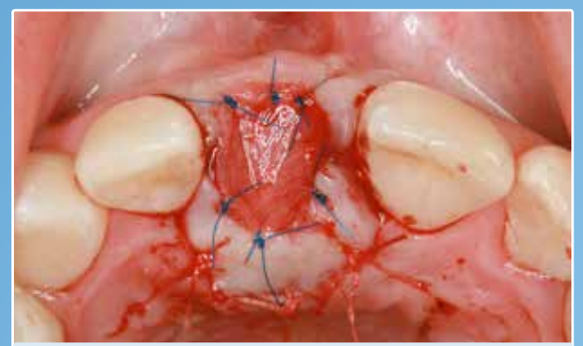
Immediate implant placement with minor bony defect

Dr. Michael Back, Dr. Oliver Blume

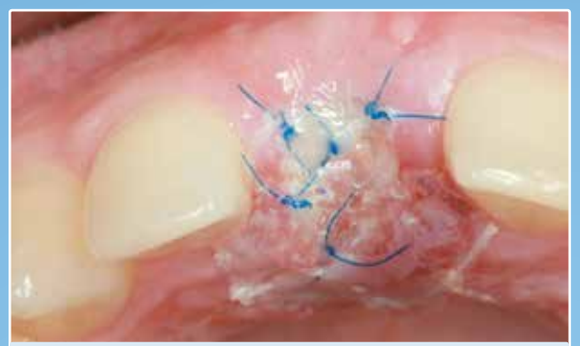


Immediate implant placement after flap elevation.

Implant and Geistlich Bio-Oss® covered with Geistlich Bio-Gide®.



Geistlich Mucograft® sutured with single sutures on top of augmented area.



Clinical situation 2 days post-op.

Clinical situation 3 weeks after surgery.

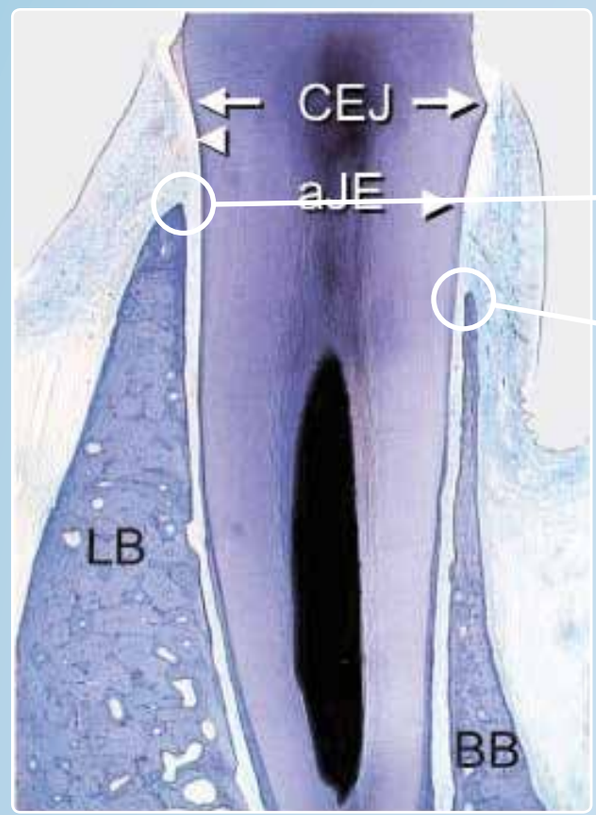
Clinical situation 6 weeks after surgery.

Re-entry and abutment connection after 12 weeks.

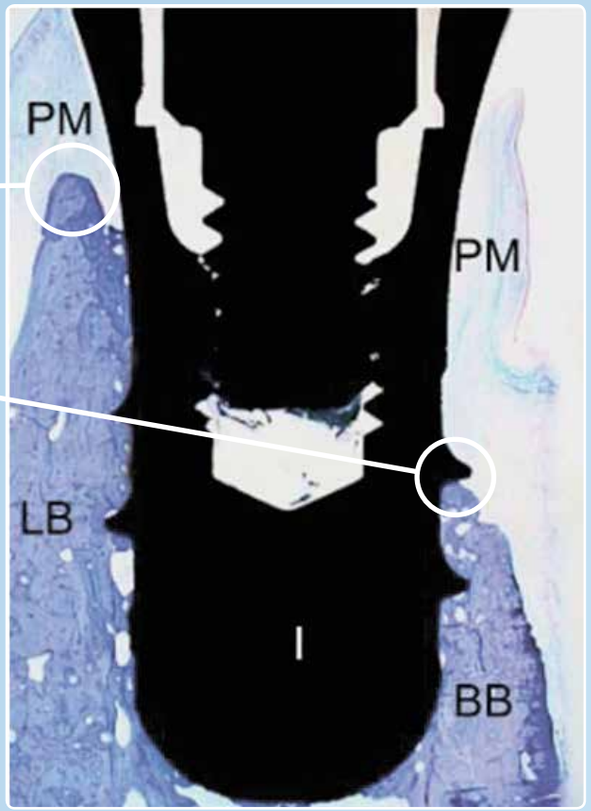
Geistlich Biomaterials

Benefit: Effective Ridge Preservation with Geistlich Biomaterials[20]

Immediate implant placement : Bone resorption is not avoided with an implant alone[9]



Initial situation: 0 weeks



Situation after: 12 weeks

Geistlich Biomaterials

Early implant placement with GBR after spontaneous Healing

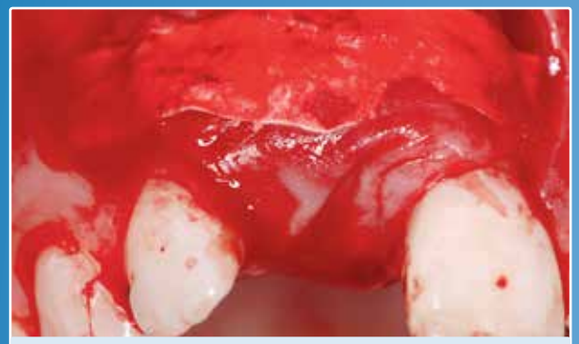
Prof. Daniel Buser

After tooth extraction without flap elevation, the alveole is carefully debrided to remove the inflammatory tissue. The extraction socket is allowed to heal for 4–8 weeks.

Following the healing period, during which soft tissue is allowed to heal, implant surgery is performed. Special attention is paid to correct prosthetic positioning of the implant in all three dimensions with good primary stability.

The crater-like defect exposing a part of the buccal implant surface is covered with locally harvested autogenous bone chips in order to promote bone re-formation in the region of the defect as quickly as possible.

The bone volume is further optimised by local augmentation using Geistlich Bio-Oss® granules. The low substitution rate of Geistlich Bio-Oss® helps to maintain the volume of the alveolar ridge over time, a factor of great importance to the maintenance of the long-term aesthetic outcome.



A collagen membrane, used as a barrier, is applied in two layers in order to improve the stability. Geistlich Bio-Gide® not only acts as a temporary barrier, but also as a place-holder and stabiliser for the augmentation material applied.

Following the release of the flap by means of mucoperiosteal incisions, a tension-free primary wound closure is achieved. Provisional implant prosthesis starts after 8 weeks.

Clinical and x-ray findings at the 4-year follow-up. The peri-implant bony conditions are absolutely stable.

The clinical and radiographic follow-up at 7 ½ years shows a pleasing esthetic long-term outcome and an intact facial bone wall in the Cone Beam CT.

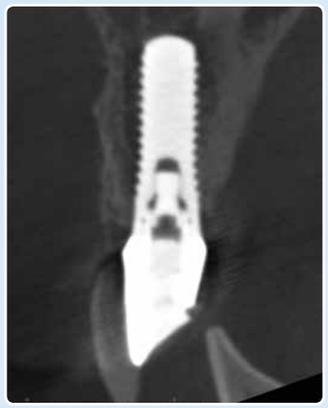
Geistlich Biomaterials

Benefits:

Prof. Daniel Buser
Berne, Switzerland

Using Geistlich Biomaterials for ridge contour augmentation results in:[22]

- › Pleasing aesthetic outcome
- › Stable bony and soft-tissue situation after 3 years
- → High pink aesthetic score
- › Minimal marginal bone loss and low risk of mucosal recession



The radiographic follow-up at 7 1/2 years shows a pleasing esthetic long-term outcome and an intact facial bone wall in the Cone Beam CT.

Geistlich Biomaterials

Early implant placement with minor bony defect

Dr. Raffaele Cavalcanti

Initial situation before extraction.

Empty extraction socket with de-epithelialised wound margins.

Extraction socket filled with Geistlich Bio-Oss® Collagen.

Extraction socket filled with Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal and sutured with single interrupted sutures.

Three days after extraction and therapy with Geistlich Mucograft® Seal.

10 weeks after extraction at implant placement pre-op clinical situation.

Clinical situation of implant in place after 10 weeks.

X-ray of implant in place after 10 weeks.

Geistlich Biomaterials

Benefit: Soft-tissue quality

Dr. Daniel Thoma
Zurich, Switzerland

"A treatment with Geistlich Mucograft® showed faster healing than spontaneous healing on the 4th and 8th day after treament start. Complete re-epitheliazation was diagnosable on the 15th treatment day."[10]

Geistlich Biomaterials

Delayed implant placement with preserved extraction socket

Dr. Stefan Fickl

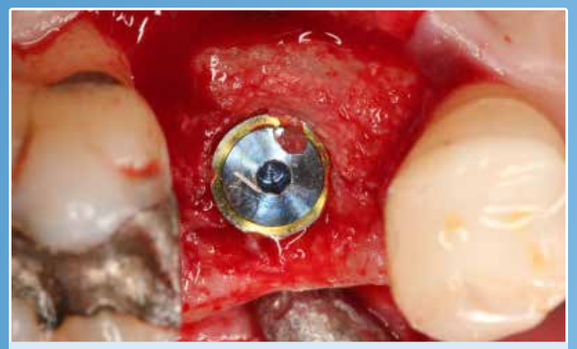
Situation right before tooth extraction, OP-Day.

Alveole filled with Geistlich Bio-Oss® Collagen.

Geistlich Mucograft® Seal in place right before suturing.

Situation after 6 days.

Situation after 4 months, right before implant placement.



Placement of the implant.

Final restoration 11 months after tooth extraction.

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Benefit: Soft-tissue quality for remodelling

Dr. Stefan Fickl
Würzburg, Germany

"By using the treatment concept of Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal for delayed implant placement after 4 months in extraction sockets (with buccal walls present), I was impressed by the good/mature/solid bone at that time. Furthermore the soft-tissue quality was perfectly suited for proper tissue remodelling at the time point of implant placement thus confirming the fast and uneventful soft-tissue regeneration that was observed during early wound healing. I could achieve an optimal clinical and aesthetic result for the patient."

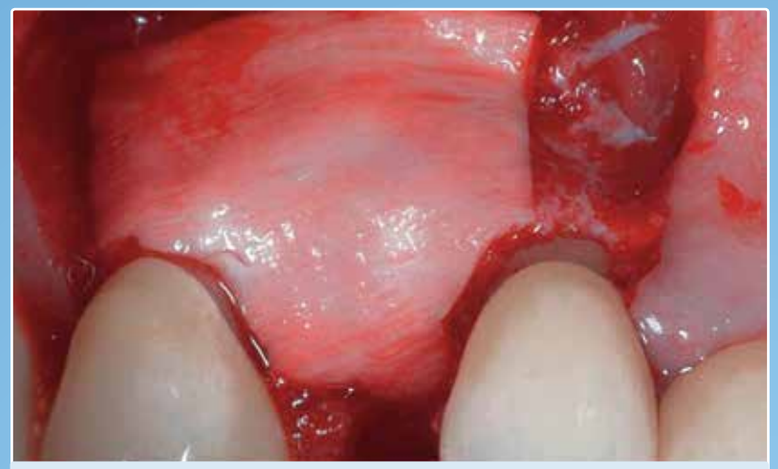
Geistlich Biomaterials

Delayed implant placement with defect extraction socket

Prof. Maurício Araújo

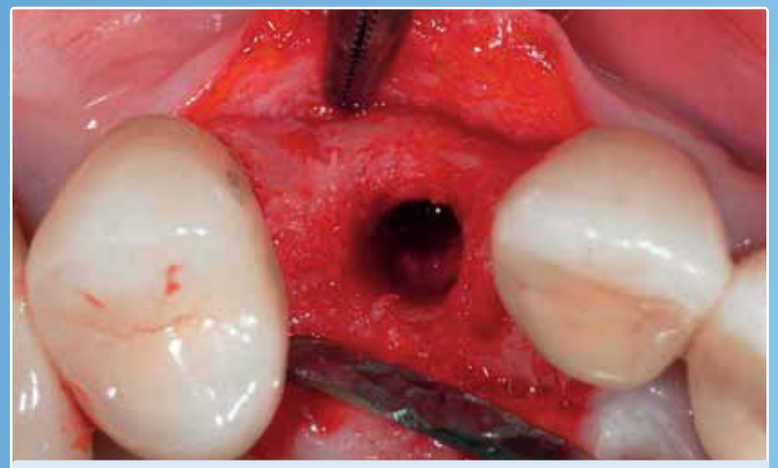
Significant buccal bone dehiscence visible after extraction of tooth 14 and flap elevation.

Defect augmentation with Geistlich Bio-Oss® Collagen.



A Geistlich Bio-Gide® membrane is applied to cover the augmented area.

Occlusal view of the preserved ridge contour after 4 months.



4 months after extraction: widely formed new buccal bone.

Geistlich Biomaterials

Benefit: Maintenance of the ridge profile

Prof. Maurício Araújo
Maringa, Brazil

"Socket grafting with Geistlich Combi-Kit Collagen promotes the maintenance of the ridge profile."

"Geistlich Bio-Oss® Collagen is a user friendly and reliable biomaterial. It can promote a proper ridge profile for the future restoration. I use Geistlich Bio-Gide® combined with Geistlich Bio-Oss® Collagen or Geistlich Bio-Oss® granules in extraction sockets which exhibit loss of one or two walls. I trust Geistlich biomaterials because they are supported by scientific evidence and years of successful clinical experience."

Geistlich Biomaterials

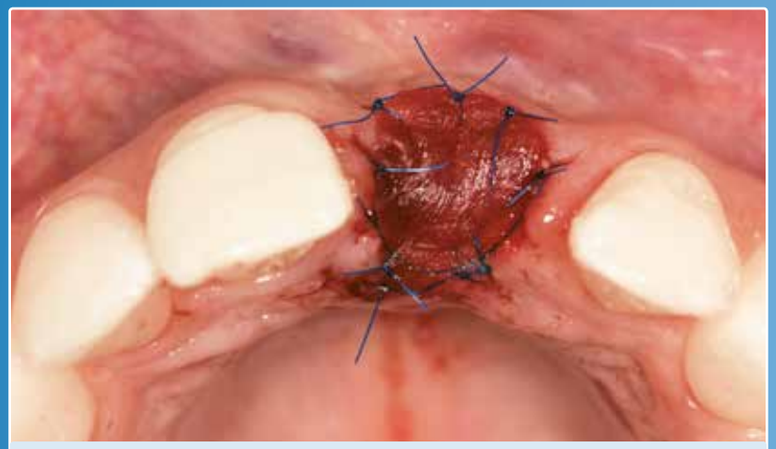
Late implant placement with preserved extraction socket

Dr. Ronald Jung

Extraction of tooth 21 due to a trauma with concomitant external resorptions. Care was taken in preserving the alveolar bone.

Crestal view of the socket after tooth extraction. No flaps are raised around the affected area. A slight buccal bone defect was observed.

Filling of the extraction socket with Geistlich Bio-Oss® Collagen to the level of the palatal bone.



Suturing of the Geistlich Mucograft® with 6–0 single interrupted sutures.

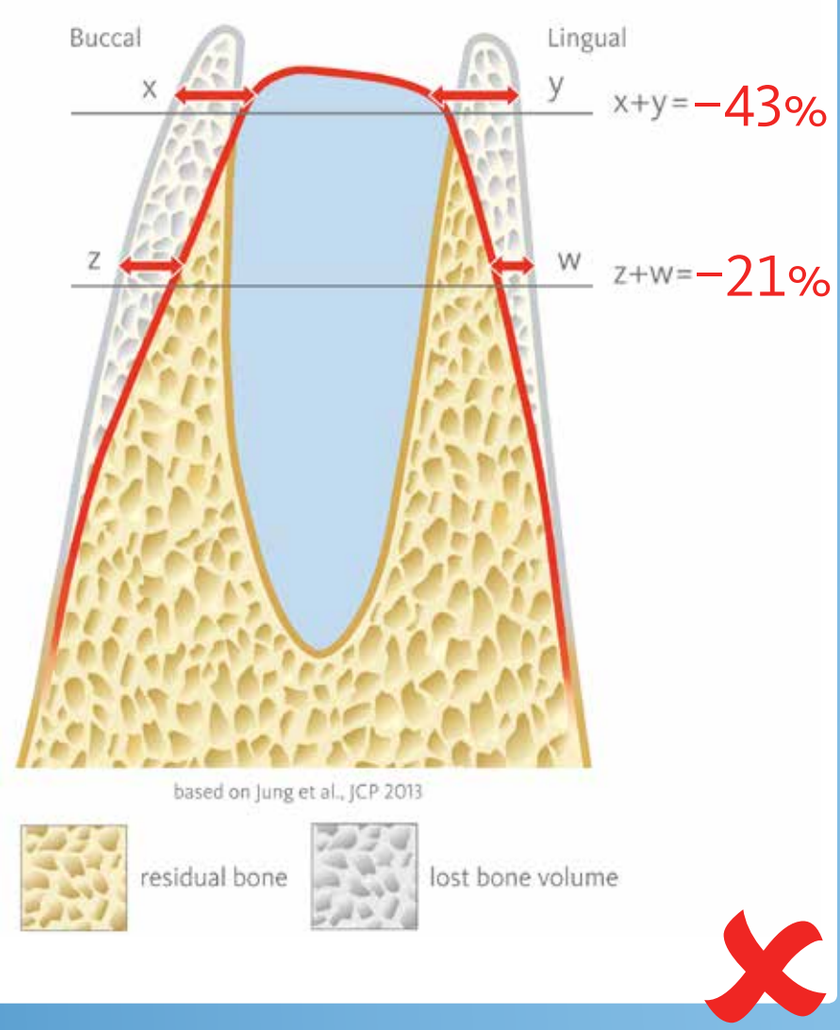
Situation 7,5 months after extraction revealing nice soft-tissue situation with a slight dip at the buccal aspect.

Geistlich Biomaterials

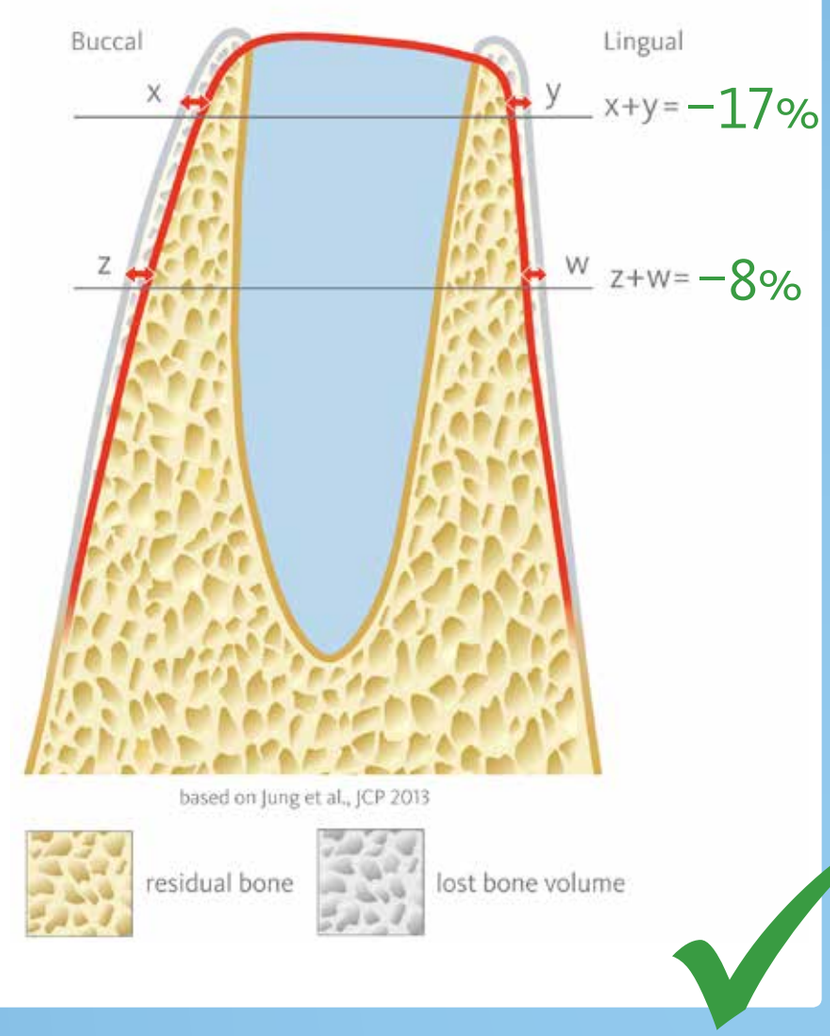
Benefit: Bone volume preservation

Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal preserve significantly more bone volume than spontaneous healing[1]

Spontaneous healing after 6 months



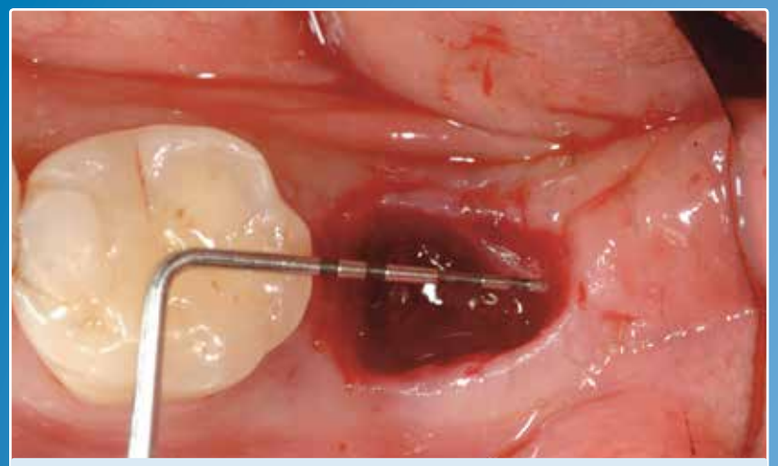
Ridge Preservation with Geistlich Bio-Oss® Collagen and Geistlich Mucograft® Seal after 6 months



Geistlich Biomaterials

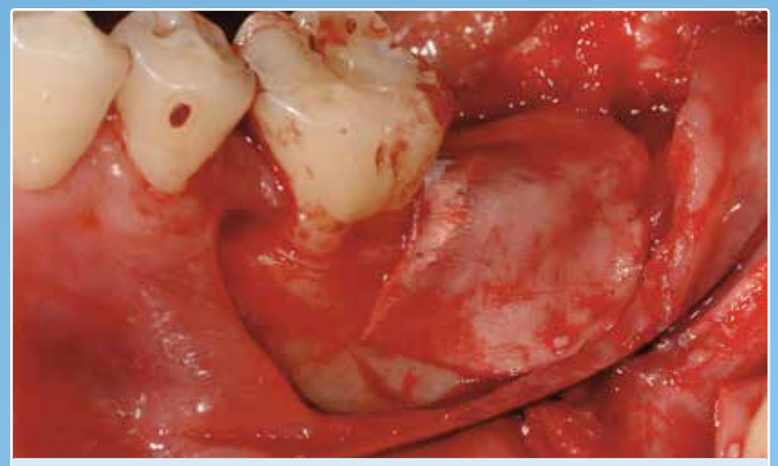
Late implant placement with defect extraction socket

Dr. Byung - Do

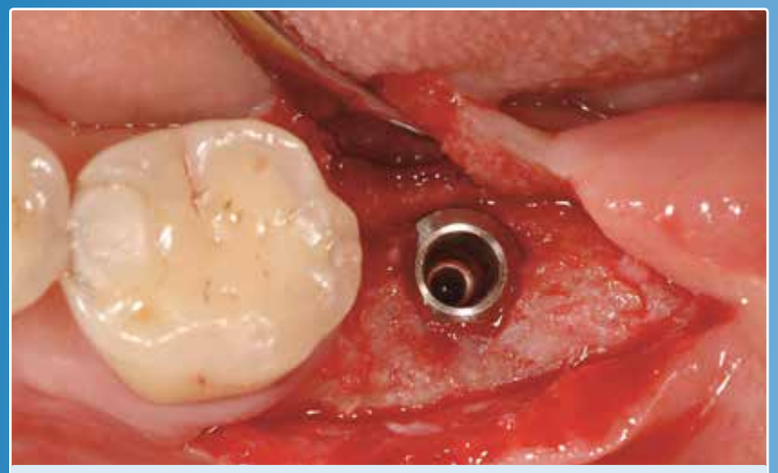


Status following atraumatic extraction of tooth 37.

Filling of the extraction socket up to the crestal bone level using Geistlich Bio-Oss® Collagen.



Placement of the Geistlich Bio-Gide® membrane over the defect.



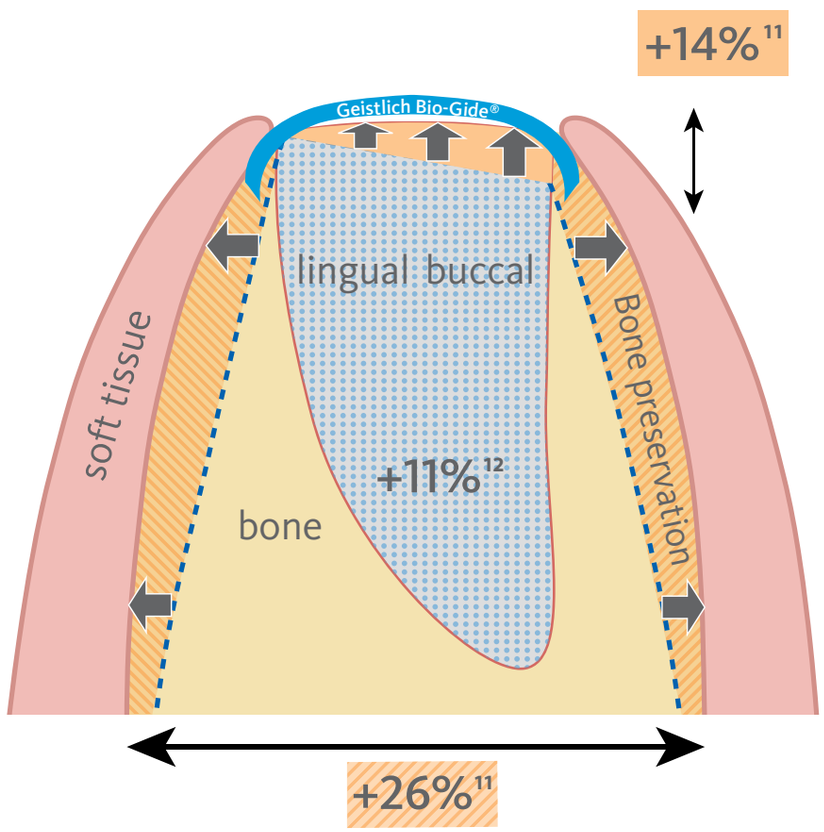
Newly formed hard tissue 6 months post-op. Geistlich Bio-Oss® Collagen is not visible.

Radiological view after implantation.

Geistlich Biomaterials

Benefits: Efficient Ridge Preservation with Geistlich Biomaterials [11]
More bone with Geistlich Bio-Gide® [12]

Difference in **dimensional changes** and in **new bone** formation



bone WITHOUT preservation

effect of bone preservation WITH Geistlich Biomaterials

new bone formation

Ridge Preservation Outcomes

Less Resorption with Geistlich Biomaterials.

+26%[11] width
+14%[11] height
} Biomaterials induced bone preservation

Geistlich Bio-Oss® Collagen + Geistlich Bio-Gide® show better results vs. spontaneous healing. *(Cardaropoli et al., 2012)

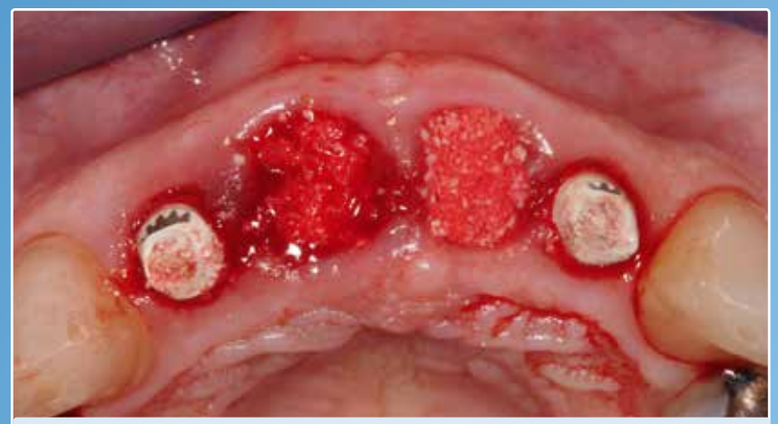
+11%[12] new bone with Geistlich Bio-Oss® and the additional use of Geistlich Bio-Gide®

Geistlich Biomaterials

Bridge with preserved extraction socket

Dr. Jeffrey Ganeles

Maxillary central incisors scheduled for extraction due to recurrent endodontic infections. Implants placed in #7 and #10 two months prior.



Extraction sockets grafted with Geistlich Bio-Oss®.

Geistlich Mucograft® is trimmed and placed over the occlusal surfaces as a socket seal. Provisional restoration held the pieces in place.

Vascularization and integration of Geistlich Mucograft® after two weeks.

Post-operative situation at 9 months with the final restoration.

Geistlich Biomaterials

Benefit: Maintenance of alveolar contour

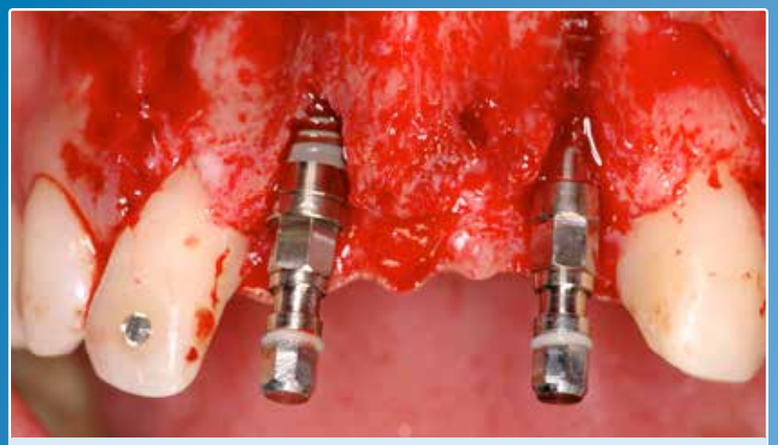
Dr. Jeffrey Ganeles
Boca Raton FL, USA

"Geistlich Mucograft® and Geistlich Bio-Oss® were used generally to maintain alveolar contour, which is a combination of hard and soft tissue. Geistlich Mucograft® prevents particulate graft from leaking out of the socket before being incorporated into healed tissue."

Geistlich Biomaterials

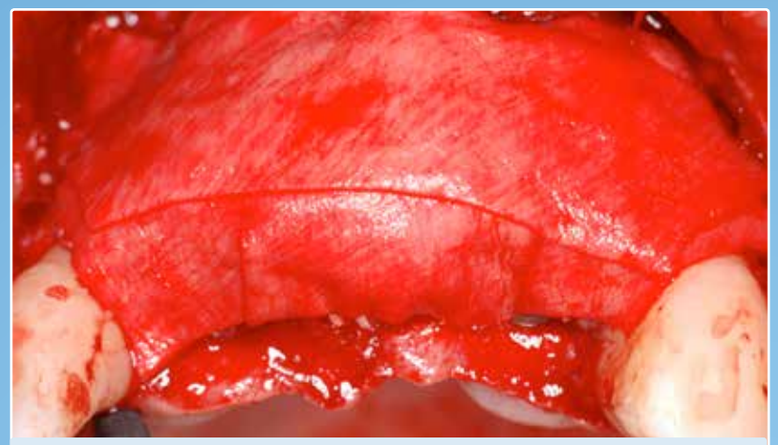
Bridge with defect extraction socket

Prof. Daniel Buser



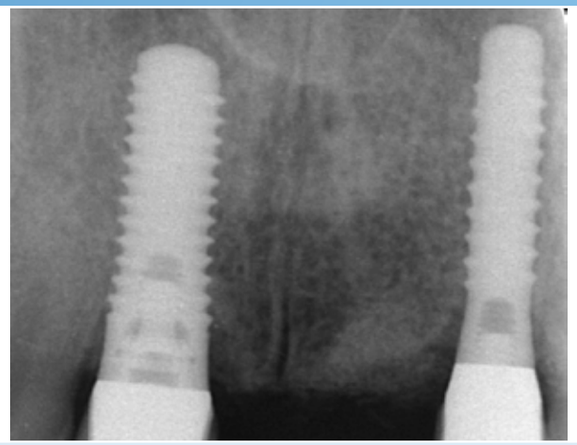
Status following implant placement. Note the local bone defect between the two implants.

Bone anatomy was improved by contour augmentation using autogenous bone chips and Geistlich Bio-Oss® granules. In the pontic area Geistlich Bio-Oss® Collagen was used.



The augmentation material was covered by a Geistlich Bio-Gide® membrane in accordance with the GBR principle.

Successful outcome of contour augmentation in the pontic area, status at the 5-year follow-up.



The periapical 5-year radiograph documents successful contour augmentation in the pontic area.

Geistlich Biomaterials

Benefit: Soft-tissue aesthetics for implant-supported bridges

Prof. Daniel Buser
Berne, Switzerland

"GBR with Geistlich Bio-Oss® Collagen optimises soft-tissue aesthetics for implant-supported bridges."

"We use Geistlich Bio-Oss® Collagen routinely for triple tooth gaps in the pontic area of implant-supported bridges. Through the horizontal and vertical bone augmentation, the soft-tissue aesthetics are optimised. This bone augmentation always pairs autogenous bone chips with the use of a collagen membrane. The Geistlich Bio-Gide® membrane has, for more than 15 years, proven itself to be reliable and is characterised by a very low complication rate."

Product related Questions & Answers

Geistlich Biomaterials

› Geistlich Mucograft® Seal

› Geistlich Bio-Gide®

› Geistlich Bio-Oss® Collagen

› Geistlich Bio-Oss®

› Geistlich Combi-Kit Collagen

Geistlich Mucograft® Seal

? What's the difference between collagen sponges made by other manufacturers and Geistlich Mucograft® Seal?

? How long is the Geistlich Mucograft® Seal resorption time?

? Does Geistlich Mucograft® Seal take up blood and saline equally well?

? Why should I use Geistlich Bio-Oss® Collagen with Geistlich Mucograft® Seal, if I wish to be cost-efficient and plan to implant after 8–10 weeks?

Geistlich Mucograft® Seal

What's the difference between collagen sponges made by other manufacturers and Geistlich Mucograft® Seal?

Geistlich Mucograft® Seal is specifically designed for soft-tissue regeneration.[13] The collagen of Geistlich Mucograft® is specially processed to favour immediate blood clot stabilisation. This leads to early vascularisation,[14,15] facilitates soft-tissue cell ingrowth[14] and excellent integration of the 3D-matrix with surrounding tissues.[14,15] Geistlich Mucograft® and Geistlich Mucograft® Seal are well scientifically documented and their clinical benefits are proven.

Geistlich Mucograft® Seal

How long is the Geistlich Mucograft® Seal resorption time?

The resorption time of every biomaterial including Geistlich Mucograft® Seal depends on multiple factors: defect size, metabolism and general health of the patient, etc. On the other hand, to determine an average resorption time of Geistlich Mucograft® Seal in humans, biopsies would be needed of the healing soft tissues after tooth extraction at different time points. This procedure is obviously not ethical and thus the average resorption time cannot be measured. However, single human histologies indicate that after 8 weeks Geistlich Mucograft® is completely integrated into the newly formed soft tissue.

Geistlich Mucograft® Seal

Does Geistlich Mucograft® Seal take up blood and saline equally well?

The hydrophile properties of Geistlich Mucograft® Seal favour a rapid moistening of the device either with saline or with blood.

Geistlich Mucograft® Seal

Why should I use Geistlich Bio-Oss® Collagen with Geistlich Mucograft® Seal, if I wish to be cost-efficient and plan to implant after 8 – 10 weeks?

Geistlich Mucograft® Seal needs the support of Geistlich Bio-Oss® Collagen underneath for a good ridge preservation of the soft and the hard tissues. After 8 weeks, the soft tissues are healed but the mixture of the blood clot, Geistlich Bio-Oss® Collagen and the newly forming bone is still soft. Nevertheless the implant can be drilled carefully into the socket and the remaining Geistlich Bio-Oss® Collagen will favour the volume preservation of the ridge.

Geistlich Bio-Gide®

? Why Geistlich Bio-Gide®? How does it differ from other collagen membranes?

? Do I need a membrane when using Geistlich Bio-Oss® Collagen?

? How long should a membrane function as a barrier in Guided Bone Regeneration?

? Can Geistlich Bio-Gide® be used with open or closed healing, and does it matter which method is chosen?

Geistlich Bio-Gide®

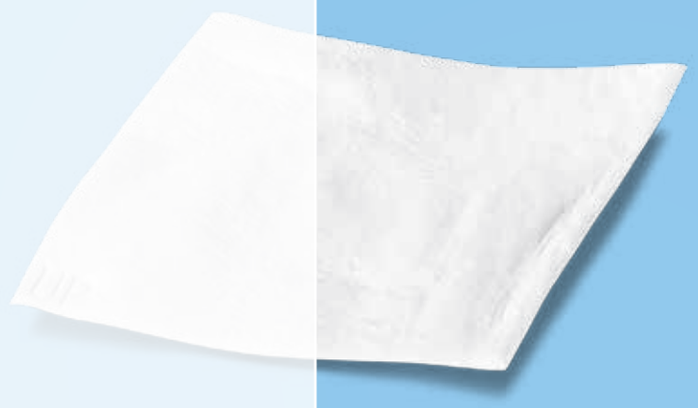
Why Geistlich Bio-Gide®?
How does it differ from other collagen membranes?

Geistlich Bio-Gide® is a membrane with a unique bilayer structure. It combines optimal bone formation with complication-free wound healing and predictable outcomes. An exceptional number of scientific publications and proven long-term success underline the unparalleled performance of Geistlich Bio-Gide®.

Geistlich Bio-Gide®

Do I need a membrane when using Geistlich Bio-Oss® Collagen?

The collagen in Geistlich Bio-Oss® Collagen does not function as a membrane. When the socket is not preserved, it is recommended to use a membrane to receive optimal results.[12]

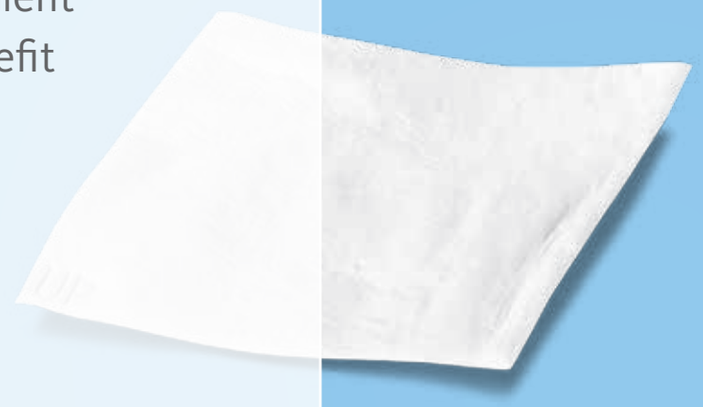


Geistlich Bio-Gide®

How long should a membrane function as a barrier in Guided Bone Regeneration?

Expert oral surgeons have estimated that a membrane used in Guided Bone Regeneration should maintain its barrier function until the provisional matrix and woven bone are present. Barrier duration is considered to be necessary for 7 to 14 days, in most cases (Expert Meeting on Membranes 2011. Data on file, Geistlich Pharma AG, Switzerland). Optimal barrier function now means that occlusiveness is maintained until the wound heals – a process which *normally takes about 2 weeks.

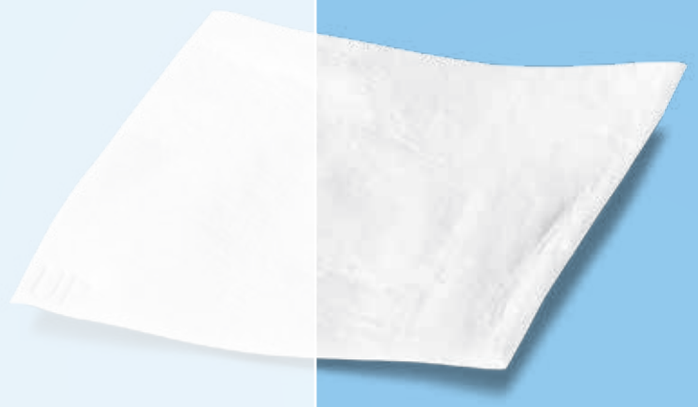
Geistlich Bio-Gide® has proven to support bone regeneration on an equivalent level as membranes with a longer barrier function, with the additional benefit of complication-free wound healing.[16–18]



Geistlich Bio-Gide®

Can Geistlich Bio-Gide® be used with open or closed healing, and does it matter which method is chosen?

Geistlich Bio-Gide® can be used either submerged or for open healing,[11] depending on surgeon preference. Advantages of secondary intention healing with Geistlich Bio-Gide® are the flapless surgery and the preservation of the mucogingival line.



Geistlich Bio-Oss®

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Which indications can I use Geistlich Bio-Oss® for?

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When do you use the large Geistlich Bio-Oss® particles (1–2 mm) and when the small ones (0,25–1 mm)?

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Can Geistlich Bio-Oss® also be used without a membrane?

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Why should Geistlich Bio-Oss® differ from competitive products?

?

Do I have to use venous blood or can I use blood from the defect?

Geistlich Bio-Oss®

Which indications can I use Geistlich Bio-Oss® for?

Geistlich Bio-Oss® has proven effective over its many years of clinical use in the following indications: periimplant defects, extraction socket and sinus floor augmentation. For complex augmentations and for large volume augmentations, such as horizontal or vertical augmentation, Geistlich Bio-Oss® is often combined with autologous bone. In defects with acute inflammation or infections Geistlich Bio-Oss® should not be used.

Geistlich Bio-Oss®

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When do you use the large Geistlich Bio-Oss® particles (1 –2 mm) and when the small ones (0,25 – 1 mm)?

Fundamentally, the use of small particles is recommended for small defects (up to 2 dental alveoli) and for augmenting autogenous grafts and the large particles for large defects (> 2 dental alveoli, sinus lifts). However, preferences can vary from dentist to dentist.

Geistlich Bio-Oss®

Can Geistlich Bio-Oss® also be used without a membrane?

A membrane should be used as a barrier against ingrowth of soft tissue.[19]
Native collagen membranes such as Geistlich Bio-Gide® also support wound healing and increase therapeutic safety in the event of a postoperative wound dehiscence.[16,18]
Physicians should read the package insert prior to use.

Geistlich Bio-Oss®

Why should Geistlich Bio-Oss® differ from competitive products?

Geistlich Bio-Oss® distinguishes itself from competitors through its unique biofunctionality, the long-term clinical success, the wide range of indications, and the extensive scientific documentation.
Biofunctionality: Geistlich Bio-Oss® shows strong similarity to human bone. Due to its high porosity and microstructure, new bone can optimally grow around the particles. Geistlich Bio-Oss® effectively becomes an integral part of the new bone structure.

Geistlich Bio-Oss®

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Do I have to use venous blood or can I use blood from the defect?

Blood from the defect may be used for mixing.
Care should be taken to avoid contamination with salivary bacteria.

Geistlich Bio-Oss® Collagen

Geistlich Bio-Oss® Collagen

Is Geistlich Bio-Oss® Collagen a collagen plug?

No. Geistlich Bio-Oss® Collagen is a mixture of 90% Geistlich Bio-Oss® spongiosa granules and 10% highly purified porcine collagen in a block form. Geistlich Bio-Oss® is a natural bone mineral of bovine origin. The collagen facilitates adaptation of the Geistlich Bio-Oss® to the defect site.

Geistlich Bio-Oss® Collagen

Geistlich Bio-Oss® Collagen or Geistlich Bio-Oss® ?

According to the package insert both products can be used for the same indications. It is an individual preference.

Geistlich Bio-Oss® Collagen

How long is the Geistlich Bio-Oss® Collagen resorption time?

Geistlich Bio-Oss® Collagen is a mixture of 90% Geistlich Bio-Oss® spongiosa granules and 10% porcine collagen. Thus the resorption time of Geistlich Bio-Oss® Collagen resembles the one of Geistlich Bio-Oss® to 90%. Histologies and long-term studies have shown the presence of Geistlich Bio-Oss® Collagen even after 15 years. Geistlich Bio-Oss® is a low resorbable biomaterial.

Geistlich Bio-Oss® Collagen

Do I need a membrane when using Geistlich Bio-Oss® Collagen?

The collagen in Geistlich Bio-Oss® Collagen does not function as a membrane. When the socket is not preservwed, it is recommended to use a membrane to receive
optimal results.[12]

Geistlich Combi-Kit Collagen

? Which indications can I use Geistlich Combi-Kit Collagen for?

? Can you use Geistlich Combi-Kit Collagen products separately?

? Is Geistlich Bio-Oss® Collagen a collagen plug?

? Why Geistlich Bio-Gide®? How does it differ from other collagen membranes?

Geistlich Combi-Kit Collagen

Which indications can I use Geistlich Combi-Kit Collagen for?

The Geistlich Combi-Kit Collagen contains 100 mg Geistlich Bio-Oss® Collagen and a 16 × 22 Geistlich Bio-Gide®. It is recommended for augmentation / reconstruction of alveolar ridges, filling of extraction sockets, filling of bone dehiscences.

Geistlich Combi-Kit Collagen

Can you use Geistlich Combi-Kit Collagen products separately?

Geistlich Combi-Kit Collagen is packed in a double blister. After the outer blister has been opened, product steritlity can no longer be guaranteed. The product Geistlich Combi-Kit Collagen is registered for single use only.

Geistlich Combi-Kit Collagen

Is Geistlich Bio-Oss® Collagen a collagen plug?

No. Geistlich Bio-Oss® Collagen is a mixture of 90% Geistlich Bio-Oss® spongiosa granules and 10% highly purified porcine collagen in a block form. Geistlich Bio-Oss® is a natural bone mineral of bovine origin. The collagen facilitates adaptation of the Geistlich Bio-Oss® to the defect site.

Geistlich Combi-Kit Collagen

Why Geistlich Bio-Gide®?
How does it differ from other collagen membranes?

Geistlich Bio-Gide® is a membrane with a unique bilayer structure. It combines optimal bone formation with complication-free wound healing and predictable outcomes. An exceptional number of scientific publications and proven long-term success underline the unparalleled performance of Geistlich Bio-Gide®.

References

Geistlich Biomaterials

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Minimise invasion, maximise soft-tissue outcome

Geistlich Mucograft® Seal is a unique 3D-matrix designed specifically for soft-tissue regeneration in extraction sockets for Ridge Preservation. It is made of porcine collagen and provides an alternative to autogenous soft-tissue grafts, while avoiding painful tissue harvesting procedures.

Minimise invasion, maximise soft-tissue outcome

Benefits [7]

- minimal invasion
- less morbidity
- good wound healing
- easy to use
- unlimited availability
- good tissue integration
- constant quality
- natural colour and texture match
- reduced surgical chair time
- predictable soft-tissue dimensions for soft-tissue management at implant placement

Higher patient satisfaction

Geistlich Mucograft® Seal

Collagen matrix for soft-tissue regeneration in extraction sockets

Available size:
8 mm diameter

Technical Guidelines

Based on more than five years of clinical experience with Geistlich Mucograft® and consensus of the Geistlich Mucograft® Seal Advisory Board Meeting (2013)[7], the technical guidelines for Geistlich Mucograft® Seal used with Geistlich Bio-Oss® Collagen are:

Geistlich Mucograft® Seal is an alternative to autogenous soft-tissue grafts and is recommended for use in the extraction socket for Ridge Preservation in combination with Geistlich Bio-Oss® Collagen as socket fill material.

Use of Geistlich Mucograft® Seal with Geistlich Bio-Oss® Collagen is recommended following atraumatic tooth extraction when the alveolar buccal walls are preserved. Definition of preserved extraction socket varies and may include minor bony defects from 0 to 50% of buccal bone wall.

Technical Guidelines

Geistlich Mucograft® Seal must be used with a socket fill material (e.g. Geistlich Bio-Oss® Collagen).

Geistlich Mucograft® Seal does not require pre-hydration or washing. It should be handled and applied in a dry state.

Before applying Geistlich Mucograft® Seal, adjacent soft-tissue margins should be de-epithelialized. This allows epithelial cells to freely migrate from the soft-tissue border into the matrix.

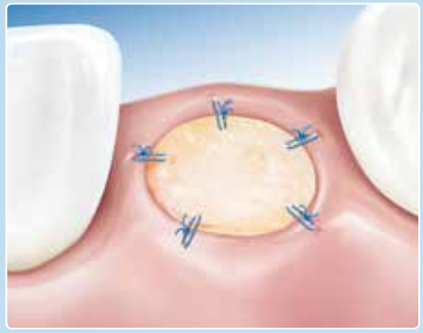
Orientation of Geistlich Mucograft® Seal:
The compact structure of the matrix should face outwards and the spongy structure towards the extraction socket. Geistlich Mucograft® Seal spongeous structure is striped for easier differentiation of the two sides.

Technical Guidelines

Geistlich Mucograft® Seal should be sutured using non-resorbable sutures, not glued. The close adaptation of the device to tissue borders can be accomplished by single interrupted sutures, double interrupted sutures, or cross sutures.

The finest possible suture material comfortably used by the surgeon should be selected: for single interrupted sutures, the 6.0 or 5.0 suture size is recommended; for cross-suturing, a 5.0 suture size is appropriate.

When suturing Geistlich Mucograft® Seal, assure a tension-free close adaptation of the device edges to the de-epithelialized marginal soft-tissue borders of the extraction socket.



Technical Guidelines

A provisional restoration, either removable or fixed, should not place pressure on the graft or cause tissue impingement.

The Geistlich Mucograft® Seal protocol may be followed with either thick or thin gingival biotypes.

Patient selection criteria, an infection-free site, and patient compliance are important factors, which contribute to therapeutic success.

Open the blister containing Geistlich Mucograft® Seal cautiously. Rapid or uncontrolled package opening may cause the device to dislodge.

Product Range

Geistlich Mucograft® Seal

Geistlich Mucograft® Seal

Collagen matrix for soft-tissue regeneration in extraction sockets

Available size:
8 mm diameter

Geistlich Mucograft®

Collagen matrix for soft-tissue regeneration

Available sizes:
15 × 20 mm
20 × 30 mm

Geistlich Combi-Kit Collagen

Geistlich Bio-Oss® Collagen
100 mg

Geistlich Bio-Gide®
16 × 22 mm

Geistlich Bio-Oss® Collagen

Spongious bone substitute
Preformed block with Collagen

Available sizes:
100 mg
250 mg
500 mg

Geistlich Bio-Gide®

Resorbable bilayer membrane

Available sizes:
13 mm × 25 mm
25 mm × 25 mm
30 mm × 40 mm

Perio-System Combi-Pack

Geistlich Bio-Oss® Collagen
100 mg

Geistlich Bio-Gide® Perio
16 × 22 mm

Geistlich Bio-Oss®

Spongious bone substitute
Small granules 0,25 mm – 1 mm

Available sizes:
0,25 g ~ 0,5 cc
0,5 g ~ 1 cc
2 g ~ 4 cc

Geistlich Bio-Oss®

Spongious bone substitute
Large granules 1 mm – 2 mm

Available sizes:
0,5 g ~ 1,5 cc
2 g ~ 6 cc

Geistlich Bio-Oss Pen®

Small granules 0,25 mm – 1 mm

Available sizes:
0,25 g ~ 0,5 cc
0,5 g ~ 1,0 cc

Large granules 1 mm – 2 mm

Available sizes:
0,5 g ~ 1,5 cc