

Geistlich
Bio-Gide[®]

Guided By Design



LEADING REGENERATION

Geistlich Bio-Gide®

Documented, Reliable, Experienced

Geistlich Bio-Gide® is ideally suited to guide your daily regenerative needs. Throughout our long history of quality and innovation, Geistlich biomaterials have been intentionally designed for each application. In the patented production of Geistlich Bio-Gide®, the native collagen fibers are preserved in a non cross-linked porcine derived collagen membrane. The unique bilayer structure is designed with both a cell occlusive and a fibrous surface which protect the site during healing and allow for the deposition of proteins¹. This results in early vascularization and subsequent bone formation.^{2, 4, 12}

The preservation of native fibers ensures that vital building blocks are present to promote the initial biologic processes of cell adhesion and proliferation.¹⁴⁻¹⁶ Geistlich Bio-Gide® integrates with surrounding tissues to protect the initial coagulum and then optimally degrades to allow for the cascade of biologic events leading to regeneration.²⁻⁴ It is the sum of these characteristics that defines the biofunctionality of Geistlich Bio-Gide® and is the basis for its long-term clinical success.

The Original by Design

Geistlich Bio-Gide® redefined predictability in guided tissue/bone regeneration – and still sets the standard.

As the first membrane of its kind, Geistlich Bio-Gide® was originally developed to eliminate problems associated with soft-tissue dehiscences and improve handling characteristics. Today, with over 20 years of clinical success and supported by more than 271 publications, the original Geistlich Bio-Gide® is the reliable choice for:

- Optimal soft-tissue healing^{5, 6}
- Excellent tissue integration^{4, 9}
- Early and complete vascularization^{2, 4}
- Undisturbed bone regeneration^{2, 12}
- Predictable outcomes in the esthetic zone¹⁰
- Ease-of-use in a wide range of indications

For optimal bone formation and soft-tissue healing, a barrier function is just the beginning.

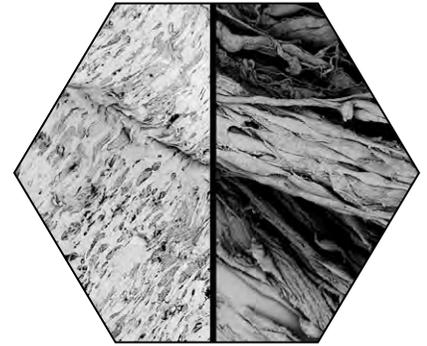
Geistlich Bio-Gide® is comprised of Type I and III collagens, the predominant collagen constituents of human oral tissues, which provide collagen signals and fibril guidance for healing cells¹³. It is designed with a smooth, compact cell occlusive layer which is an ideal catalyst for the attachment of fibroblasts.^{2, 4-13} This unique surface and its similarity to periosteum guides fibroblasts to lay down and align on the surface, creating a functional “biologic membrane” for favorable healing of the gingival tissue.

The fibrous layer facing the defect acts as a guide for angiogenic and osteoblastic cells which become the foundation^{2, 4-12} for optimal bone formation and regenerative healing.

Geistlich Bio-Gide® is indicated in the following therapeutic areas:

- Extraction Socket Management
- Minor Bone Augmentation
- Major Bone Augmentation
- Periodontal Regeneration
- Peri-Implantitis
- Sinus Floor Elevation

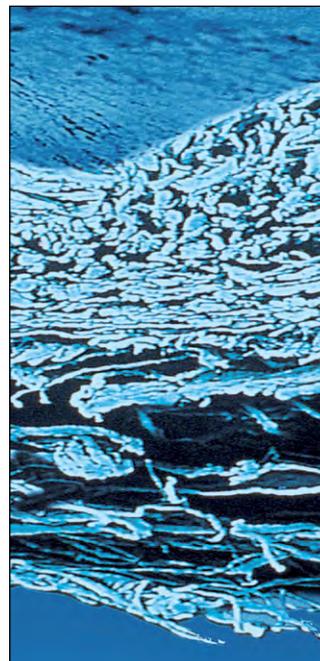
For clinical indications where both a physical matrix and a barrier are needed, Geistlich Bio-Oss® provides the volume and space preservation necessary to make it a natural companion to Geistlich Bio-Gide®.*



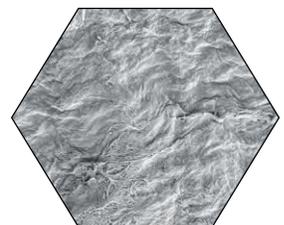
The image on the left demonstrates the attachment and proliferation of fibroblasts on the cell occlusive surface of Geistlich Bio-Gide®.

The image on the right demonstrates the attachment and proliferation of osseous cells on the fibrous surface.

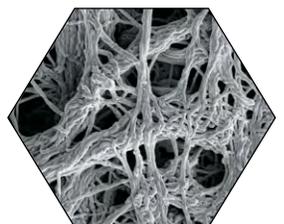
The bilayer structure of Geistlich Bio-Gide®



Geistlich Bio-Gide® with a natural source bilayer structure (scanning electronic microscope image, 100x).



The smooth side of Geistlich Bio-Gide® prevents soft-tissue from growing into the defect (scanning electronic microscope image, 250x) Dr. Bufler (Wolhusen, Switzerland).



The porous side of Geistlich Bio-Gide® serves as a framework for bone cells and blood vessels.³⁻⁵ (scanning electronic microscope image, 10,000x) Dr. Bufler (Wolhusen, Switzerland).

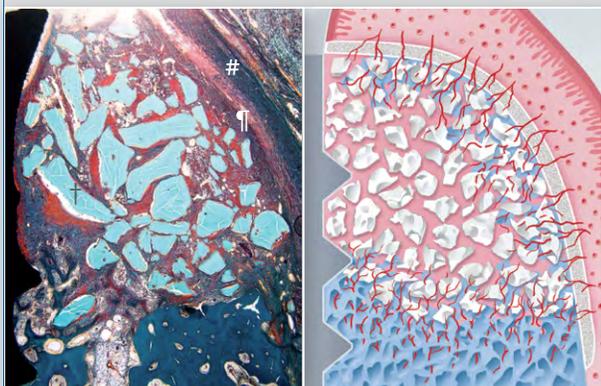
* Additional information regarding indications for Geistlich Bio-Gide® and Geistlich Bio-Oss® can be found on the back panel of this brochure.

Early Vascularization Encourages Bone and Periodontal Regeneration

The unique properties of Geistlich Bio-Gide® allow for early vascularization of the membrane and play a central role in the angiogenesis fundamental to new bone and periodontal tissue regeneration.^{2,7}

Membrane vascularization is a key step in bone and periodontal regeneration with Geistlich Bio-Gide®:

At 2 weeks*



The dense network of blood vessels is surrounded by newly formed trabeculae of woven bone at two weeks. Due to early and complete vascularization, new bone formation occurs not only adjacent to the bone defect but also directly underneath Geistlich Bio-Gide®.²

#		Geistlich Bio-Gide®
†		Geistlich Bio-Oss Collagen®
¶		newly formed bone

Membrane resorption
(adapted from Schwarz 08)



New bone formation
(adapted from Schwarz 08)

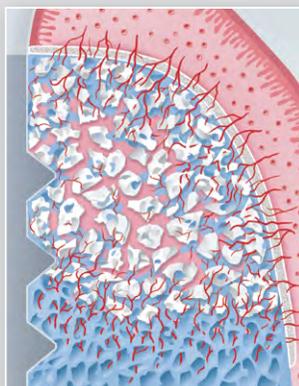


2 weeks*

6 weeks*

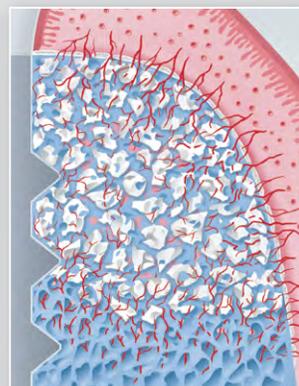
12 weeks*

At 6 weeks*



Wound healing is characterized by ongoing bone formation at six weeks. The blood clot has transformed into a primary reinforced scaffold of woven bone.²

At 12 weeks*



Within 12 weeks, healing is primarily characterized by a continual filling of the intertrabecular spaces where maturation to lamellar bone begins.^{2,8}

* dog model

Geistlich Bio-Gide® – optimally timed for enhanced performance

Optimal Esthetics with Geistlich Bio-Gide®

Optimal bone formation is crucial for predictable long-term results, leading to successful hard-tissue contour and soft-tissue stability.¹⁰

Predictable esthetic outcomes

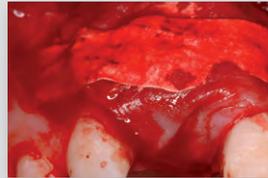
Case: Prof. Dr. Daniel Buser (Bern, Switzerland)



With a visible buccal dehiscence, the implant has been placed in an optimal position.



Geistlich Bio-Oss® is mixed with blood and placed in the defect.



Geistlich Bio-Gide® is applied in two layers to enhance stabilization of the augmentation material.



8 weeks post-operative result. The augmentation site with an esthetically pleasing contour and soft-tissue healing.

Individual results may vary.

Case: Dr. Ronald E. Jung, PD PHD (Zurich, Switzerland)



Visible bony defect after flap elevation.



Following implant placement, the defect is filled with Geistlich Bio-Oss®.

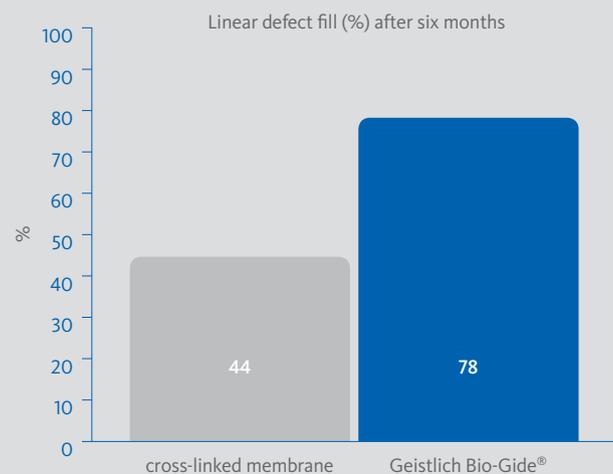
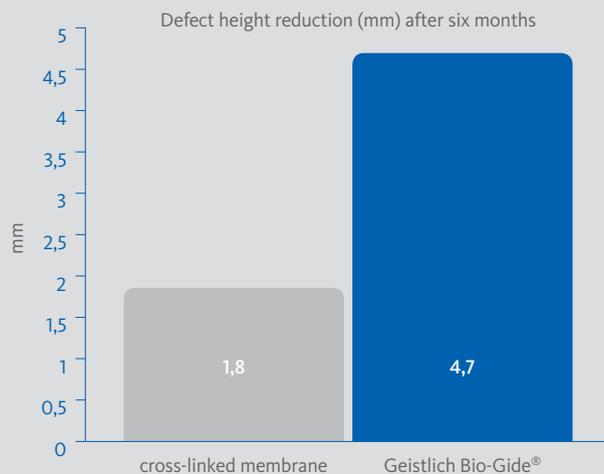


Placement of Geistlich Bio-Gide® over the augmentation material.



Soft-tissue healing and excellent esthetic outcome.

Predictable bone formation with Geistlich Bio-Gide®

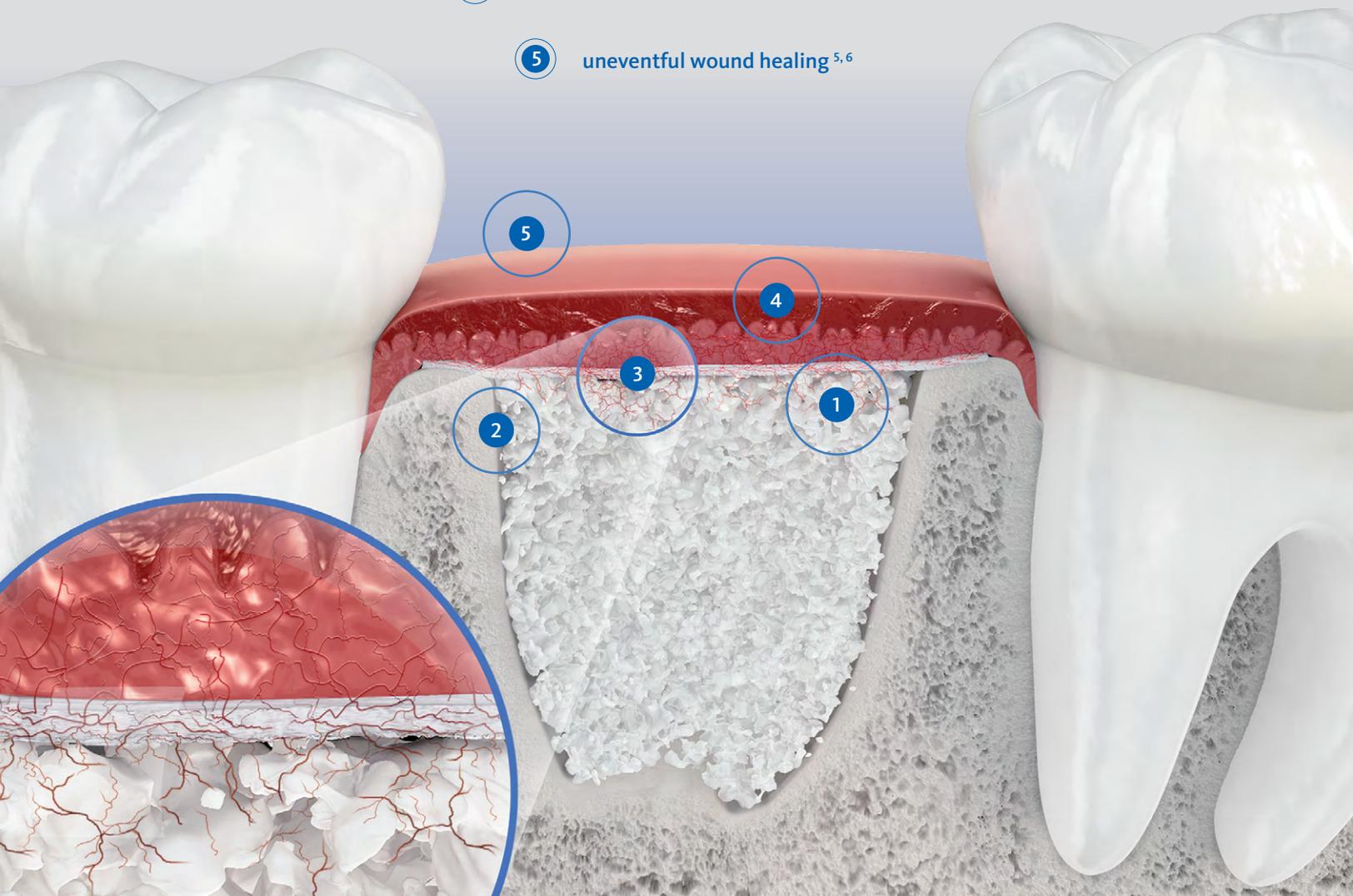


In a randomized controlled clinical trial, patients treated with Geistlich Bio-Gide® showed significantly greater defect fill than those with an experimental cross-linked membrane. Insufficient bone regeneration was associated with the cross-linked membrane having a prolonged resorption time, while substantial defect fill was observed with Geistlich Bio-Gide®.¹¹

Geistlich Bio-Gide® - optimal results for predictable bone regeneration

Advantages of Early Vascularization:

- ① supports bone formation ^{2,7}
- ② wound stabilization ^{4,5}
- ③ oxygen and nutrient transfer ^{4,7}
- ④ tissue integration ^{4,9}
- ⑤ uneventful wound healing ^{5,6}



DOCUMENTED: More than 1,000 publications
RELIABLE: More than 30 years of clinical experience
EXPERIENCED: 163 years of Geistlich collagen competence



Geistlich Bio-Gide®

Resorbable bilayer collagen membrane

13 mm x 25 mm
 16 x 22 mm
 25 mm x 25 mm
 40 mm x 50 mm

Customer Care
Toll-free 855-799-5500

www.geistlich-na.com

Geistlich Pharma North America, Inc.

202 Carnegie Center • Princeton, NJ 08540

References:

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CAUTION: Federal law restricts these devices to sale by or on the order of a dentist or physician.

Indications:

Geistlich Bio-Oss®, Geistlich Bio-Oss Collagen® and Geistlich Bio-Oss Pen® are indicated for the following uses: Augmentation or reconstructive treatment of the alveolar ridge; Filling of periodontal defects; Filling of defects after root resection, apicoectomy, and cystectomy; Filling of extraction sockets to enhance preservation of the alveolar ridge; Elevation of the maxillary sinus floor; Filling of periodontal defects in conjunction with products intended for Guided Tissue Regeneration (GTR) and Guided Bone Regeneration (GBR); and Filling of peri-implant defects in conjunction with products intended for GBR.

Warnings:

Possible complications which may occur with any surgery include swelling at the surgical site, flap sloughing, bleeding, local inflammation, bone loss, infection or pain. As Geistlich Bio-Oss Collagen® contains collagen, in very rare circumstances cases of allergic reactions may occur.

Indications:

Geistlich Bio-Gide® and Geistlich Bio-Gide® Perio are indicated for the following uses: Augmentation around implants placed in immediate and delayed extraction sockets; Localized ridge augmentation for later implantation; Alveolar ridge reconstruction for prosthetic treatment; Filling of bone defects after root resection, cystectomy, removal of retained teeth; GBR in dehiscence defects; and GTR procedures in periodontal defects.

Warnings:

As it is a collagen product, allergic reactions may not be totally excluded. Possible complications which may occur with any surgery include swelling at the surgical site, flap sloughing, bleeding, dehiscence, hematoma, increased sensitivity and pain, bone loss, redness, and local inflammation.

For more information about Geistlich Biomaterials indications, warnings, contraindications, precautions, and instructions for use, please visit: www.geistlich-na.com/ifu