

LEADING REGENERATION

Geistlich
Biomaterials

A photograph of a man and a woman sitting at a table, smiling and looking at each other. The man is on the right, wearing a dark suit jacket over a light blue shirt, with his hand near his chin. The woman is on the left, with her hair in a bun, wearing a dark top. The background is blurred, suggesting an outdoor or semi-outdoor dining area. A large blue diagonal shape is overlaid on the bottom left of the image, containing white text.

We Want
to Keep You
Smiling

Bone Regeneration
with Geistlich Bio-Oss®
and Geistlich Bio-Gide®

Strong Bone for a Healthier Smile

Strong and healthy teeth provide a feeling of well-being, self-confidence and enhance your personal appeal – both in your private and professional life.

Therefore, your dentist takes great care in planning how missing teeth can be replaced and diseased teeth can best be treated to give you back an improved quality of life. Your dentist wants to keep you smiling – and so do we.

Bone regeneration treatment can improve the function and appearance of your teeth. To do this, your dentist can utilize materials that meet the highest safety standards, Geistlich Biomaterials regenerative products are quality tested, based on scientific evidence and clinical efficacy, making them the natural choice for your regenerative therapy.



What Are the Causes of Bone Loss?

A sufficient amount of bone is essential to ensure the long-term stability of your teeth or dental implants. It can also be critical for ensuring the esthetic appearance of your teeth and gums.

Bone loss may occur from trauma or inflammation of the gums and bone due to:

- › Bacteria found in dental plaque that if not removed causes inflammation. This can damage your gums, and the bone surrounding your teeth (periodontitis).
- › Following tooth removal over time, the height and thickness of the bone diminishes due to the natural healing process and lack of mechanical loading.

When Is Bone Regeneration Necessary?

1 Dental Implants

To support and augment the bone surrounding dental implants, if the existing volume of bone is not sufficient for long-term stability.



2 Periodontitis

To preserve existing teeth that have lost their supporting structures due to periodontal disease.



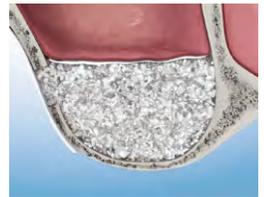
3 Extensive Bone Defects

To regenerate lost bone due to trauma or missing teeth and regain sufficient bone height for future restoration.



4 Sinus Floor Augmentation

To correct a bone defect in the posterior region of the upper jaw to gain additional height for implant placement.



5 Extraction Sockets

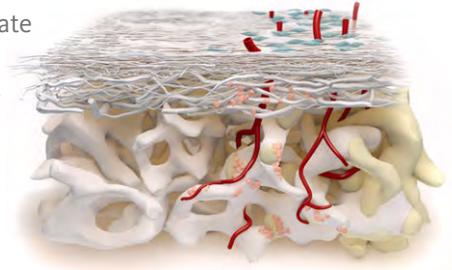
To support the bone and improve the soft-tissue appearance following tooth extraction.



How Can Bone Be Regenerated?

Human bone possesses the ability to regenerate lost bone, however some assistance may be required to gain an adequate volume of bone.

The properties of Geistlich Bio-Oss® bone substitute and Geistlich Bio-Gide® membrane support the body's own bone regenerative processes extremely effectively.^{1,2,3}



The illustration to the right demonstrates how Geistlich Bio-Oss® and Geistlich Bio-Gide® support the regenerative process. Their structures serve as a framework for the in-growth of blood vessels leading to new bone growth and tissue healing.

What Are Geistlich Bio-Oss® and Geistlich Bio-Gide®?

Geistlich Bio-Oss® is made from the mineral part of bovine bone. During manufacturing, unnecessary components are removed, so that only the hard bone structure consisting of calcium compounds remains.

Geistlich Bio-Gide® is a membrane prepared from porcine collagen. The natural protein structure of Geistlich Bio-Gide® promotes wound healing and allows optimal bone regeneration by acting as a protective barrier.^{4,5,6}

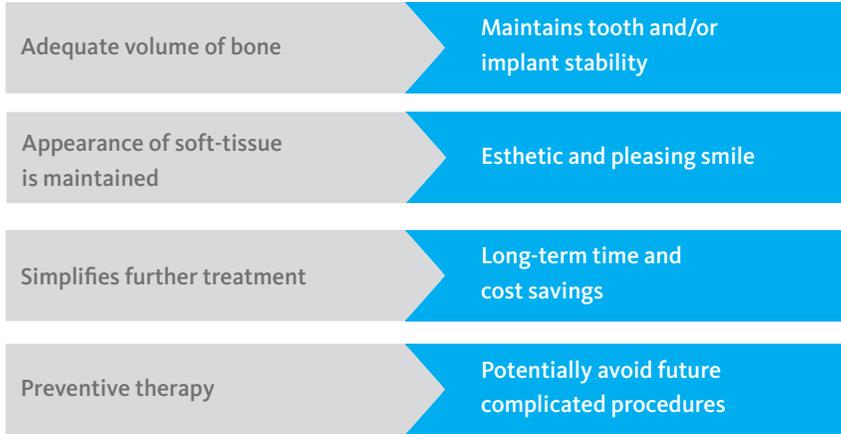
How Are Our Products Made?

Geistlich Bio-Oss® and Geistlich Bio-Gide® conform to the highest quality and safety standards.

Our Criteria:

- > Careful selection of raw materials, using only bone substance or collagen from monitored establishments
- > Highly effective and thorough cleansing process
- > Regularly monitored production process by independent and governmental authorities
- > Sterilization of end products
- > Documented quality assurance system

Why Is Bone Preservation Important?



Case: Dr. Behnam Shakibaie-M. (Tehran, Iran)



Case 1: Example of a case following tooth extraction without preventive treatment to support the bone



Case 2: Example of a case 2 years following preventive treatment to support the bone using Geistlich Bio-Oss®



Following Your Procedure

Following any surgical procedure, some swelling may occur. A damp cold compress placed on the side of the face, where the surgery was performed, can be used to help alleviate the swelling.

- > If you experience pain following your procedure, please contact your dentist.
- > For the first 2 weeks, when brushing your teeth, avoid the surgical area and use an antibacterial mouthwash if recommended by your dentist.
- > After this initial period, a toothbrush with soft bristles can be used for cleaning the area around the surgical site.
- > Avoid coffee, alcohol and smoking for 2–3 days after the procedure. This reduces the risk of post-surgical bleeding, and promotes better wound healing.
- > It is essential to attend the follow-up appointments with your dentist even if healing is uneventful.



Geistlich Bio-Oss® and Geistlich Bio-Gide® should be used with special caution in patients with:

- > Metabolic diseases (diabetes, hyperparathyroidism, osteomalacia)
- > Osteoporosis
- > Severe renal dysfunction or severe liver disease
- > High dose therapy with corticosteroids
- > Vascular impairment at the implant site
- > Autoimmune disease
- > Radiotherapy
- > Heavy smoking habits
- > Acute or chronic infection (e.g., osteomyelitis) at the surgical site

Effect on pregnant or lactating women is not known.

Success rates may vary depending on the type of procedure performed.



Why Is Treatment Beneficial?

Smile With Confidence

Esthetically pleasing outcomes and healthy teeth

Prevention

Preventative procedures following tooth loss may help avoid complicated procedures in the future

Successful Outcomes

Long-term success has been documented in more than 1,000 scientific publications

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

Indications:

Geistlich Bio-Oss® is 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 are swelling at the surgical site, flap sloughing, bleeding, local inflammation, bone loss, infection or pain.

Indications:

Geistlich Bio-Gide® is 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 with Geistlich Bio-Gide® 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 on contraindications, precautions, and directions for use, please refer to the Geistlich Bio-Oss® and Geistlich Bio-Gide® Instructions for Use at: www.geistlich-na.com/ifu

References

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- 3 Zitzmann, NU. et al. (2001). Int J Oral Maxillofac Implants. 16(3): 355–366.
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- 5 Tal, H. et al. (2008). Clin Oral Implants Res. 19(3): 295–302.
- 6 Becker, J. et al. (2009). Clin Oral Implants Res. 20(7): 742-749.

Geistlich Pharma North America, Inc.

202 Carnegie Center

Princeton, NJ 08540

Customer Care Toll-free: 855-799-5500

info@geistlich-na.com

www.geistlich-na.com/patients