LEADING REGENERATION





Retention of Bone is the Future

The healing of extraction sockets and the resorption processes that take place after tooth extraction have been investigated thoroughly in recent years.

Clinical studies show that ...

- > the alveolar volume loss after tooth extraction is severe¹⁻⁵
- > two-thirds of resorption take place within the first three months¹

When Options Turn into Problems

Currently, there are three treatment options that set the tone for the future treatments Lets take a look at the alternative solution.



Around 50% of the alveolar volume is lost over 6 months (horizontal 29–63%, vertical 11–22%).⁶ Without supportive bone, the buccal and labial soft tissue around the socket collapses. The natural formation of new bone in the socket cannot compensate for the loss of alveolar volume.⁷ Compensate later for the initial bone loss by undertaking guided bone regeneration meaning an additional surgical step for your patient. Depending on the degree of bone loss, bone regeneration and implant placement is not possible in one stage and must be split into two surgeries.

Ridge Preservation Your Treatment with Vision

Alveolar ridge loss following tooth extraction is a physiological process that can be minimized: The period immediately following tooth extraction is when volume loss can best be prevented.

The extraction socket can be filled with either

- > Geistlich Bio-Oss[®] Collagen and sealed with Geistlich Bio-Gide[®] Shape in case of defective extraction sockets
- > Geistlich Bio-Oss[®] Collagen and Geistlich Mucograft[®] Seal in case of intact extraction sockets



Let us guide you through the benefits of our Geistlich products

Ridge Preservation with Geistlich biomaterials can prevent volume loss and lead to an optimized hard and soft tissue situation irrespective of the chosen time for implantation.⁸ It can improve the esthetic outcome by preserving the alveolar ridge volume and contour, when the objective of the treatment is to place a bridge.⁹

More new bone formation¹

Geistlich Bio-Gide[®] Shape is a pre-cut collagen membrane designed for the treatment of defective extraction sockets.

- > Convenient: new shape specifically for ridge preservation¹⁵
- > Easy handling: with convenient application. Geistlich Bio-Gide[®] Perio technology for enhanced stiffness¹⁵
- > Ready-to-Use: reducing preparation time¹⁵
- > Significantly more bone formation when Geistlich Bio-Gide[®] is used to protect the Geistlich Bio-Oss[®] in a defective extraction socket¹⁴

+ 93% of the ridge width can be maintained with Geistlich Bio-Oss[®] Collagen and Geistlich Bio-Gide^{®12,13}

+ 83% of the ridge width can be maintained with Geistlich Bio-Oss[®] Collagenand Geistlich Mucograft[®] Seal^s Preserved buccal bone walls ready for implant placement

Seal the Socket

The collagen matrix of Geistlich Mucograft[®] Seal specially designed for soft-tissue regeneration is recommended to be used in combination with Geistlich Bio-Oss[®] Collagen for the treatment of intact extraction sockets.¹⁶

- > Enhances early wound healing¹⁷
- > Offers flexibility in the therapy concepts: from early implantation 8–10 weeks after extraction through to late implantation or bridge restoration¹⁶
- > In combination with Geistlich Bio-Oss[®] Collagen significantly reduces the bone loss when compared to spontaneous healing⁵

How to Use Geistlich Biomaterials – Technical Guide

Defective Extraction Socket Geistlich Bio-Gide® Shape

(1) Geistlich Bio-Gide[®] Shape can be adapted in dry state and should be applied dry with the smooth side facing the vestibulum.

(2) In case of a defective extraction socket*, Geistlich Bio-Gide[®] Shape should be used with a bone filling material (e.g. Geistlich Bio-Oss[®] Collagen) underneath. Therefore, Geistlich Bio-Gide[®] Shape should be placed in the socket with the rough side towards the defect before applying the bone material. Alternatively, Geistlich Bio-Gide[®] Shape can be inserted between the periosteum and the soft-tissue.

(3) Following this, Geistlich Bio-Oss[®] Collagen can be applied both, in dry state or moistened with saline solution or blood. It is recommended to trim and cut Geistlich Bio-Oss[®] Collagen to its required size, shape and carefully insert into the socket with forceps taking care not to compress it too strongly.

(4) The wings of Geistlich Bio-Gide[®] Shape can be tucked under the sulcus. Geistlich Bio-Gide[®] Shape can be left for open-healing or submerged by tension-free closure of the extraction socket.

Intact Extraction Socket Geistlich Mucograft[®] Seal

① When using Geistlich Mucograft[®] Seal to seal the socket, the soft-tissue margins need to be de-epithelialised to ensure blood flow and nutrient supply into the collagen matrix.

② In case of a intact extraction socket*, Geistlich Mucograft[®] Seal can be used with an bone filling material (e.g. Geistlich Bio-Oss[®] Collagen) underneath. Therefore, Geistlich Bio-Oss[®] Collagen can be applied both, in dry state or moistened with saline solution or blood. It is recommended to trim and cut Geistlich Bio-Oss[®] Collagen to its required size, shape and carefully insert into the socket with forceps taking care not to compress it too strongly.

③ The collagen matrix can be adapted to the defect size and should be applied dry. Thereby, the spongy side (marked with grooves) needs to face towards the extraction socket

④ Geistlich Mucograft[®] Seal can be secured and sutured with non-resorbable suture and with various suture techniques e.g. single-interrupted sutures (recommended: 5-0 or 6-0), double interrupted sutures or cross sutures (recommended: 5-0), depending on the defect. Suturing should be tension-free and closely adapted to the de-epithelialised marginal soft-tissue border.



* The definition of an intact or defect extraction socket varies among experts and includes buccal bone defects of o to 50 %.

Geistlich



More details about our distribution partners: www.geistlich-biomaterials.com

Manufacturer

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Geistlich Bio-Oss[®] Collagen

Geistlich Bio-Oss[®] (small granules) + 10% collagen (porcine) 50 mg, 100 mg, 250 mg, 500 mg



Geistlich Bio-Gide®

Bilayer collagen membrane 13×25 mm, 25×25 mm, 30×40 mm*

Geistlich Bio-Gide[®] Shape

Pre-shaped, bilayer collagen membrane 14 × 24 mm

* Product availability may vary from country to country



Geistlich Combi-Kit Collagen

Geistlich Bio-Oss[®] Collagen 100 mg + Geistlich Bio-Gide[®] 16×22 mm



Geistlich Mucograft[®] Seal

Collagen matrix 8 mm diameter

- Schropp L et al. Int J Periodontics Restorative Dent. 2003 Aug;23(4): 313-23. (Clinical study)
- 2 Van der Weij den F et al. J Clin Periodontol. 2009 Dec;36(12):1048–58. (Systematic review)
- 3 Sanz M et al. Clin Oral Implants Res. 2010 Jan;21(1):13-21. (Clinical study)
- 4 Hammerle CH et al. Clin Oral Implants Res. 2012 Feb;23 Suppl 5:80–2. (Systematic review)
- 5 Jung RE et al. J Clin Periodontol. 2013 Jan;40(1):90-8. (Clinical study)
- 6 Tan WL et al. Clin Oral Implants Res. 2012;23 Suppl 5:1-21. (Systematic review)
- 7 Araújo M et al. Clin Oral Implants Res. 2015; Apr 26(4):407–12. (Clinical study)
- Ackermann KL. Int J Periodontics Restorative Dent. 2009 Oct;29(5): 489-97. (Clinical study)
- 9 Schlee M et al. Eur J Oral Implantol. 2009;2(3):209-217. (Clinical study)
- 10 Weng D et al. Eur J Oral Implantol. 2011;4 Suppl:59-66. (Systematic review)
- 11 Fickl S et al. J Clin Periodontol. 2008;35:356-363. (Pre-clinical study)
- 12 Cardaropoli D et al. Int J Periodontics Restorative Dent. 2012;32(4):421–30. (Clinical study)
- Cardaropoli D et al., Int J Periodontics Restorative Dent 2014; 34(5): 631–637. (Clinical study)
- Perelman-Karmon et al. Int J Periodontics Restorative Dent. 2012;32(4):459–65. (Clinical study)
- 15 Data on File. Geistlich Pharma AG, Wolhusen, Switzerland. (Non-clinical)
- 16 Geistlich Mucograft[®] Seal Advisory Board Meeting Report 2013. Data on File. Geistlich Pharma AG, Wolhusen, Switzerland. (Non-clinical)
- 17 Thoma DS et al. J Clin Periodontol. 2012 Feb;39(2):15–65. (Clinical Study)
- Shakibaie B et al., Int. J Periodontics Restorative Dent 2013; 33 (2): 223–228. (Clinical study)

