

# **OsteoGen®** Plug

One Step Bone Grafting Solution For Socket Preservation



OsteoGen<sup>®</sup> Non-Ceramic Bioactive Resorbable Bone Grafting Crystals Type I Bovine Achilles Tendon Collagen



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# **Key Benefits**

The OsteoGen<sup>®</sup> Bone Grafting Plug is an easy and cost-effective way to clinically deliver bone graft for ridge maintenance and socket preservation. The idea is simple – we take a collagen plug and fill it with our OsteoGen<sup>®</sup> non-ceramic bone graft crystals to create the OsteoGen<sup>®</sup> Bone Grafting Plug at an affordable price. The result is a bone graft combined with a collagen plug for ease of clinical delivery.

- The OsteoGen<sup>®</sup> Bone Grafting Plug combines our OsteoGen<sup>®</sup> Bioactive Resorbable Calcium Apatite with a bovine achilles tendon collagen matrix to create a structure that mimics the organic and inorganic components of physiologic bone.
- OsteoGen<sup>®</sup> is a bioactive and resorbable calcium apatite based bone graft that is
  physicochemically and crystallographically similar to human bone.<sup>1.4</sup> The OsteoGen<sup>®</sup>
  non-ceramic production process yields a resorbable bone graft with a unique Ca:P
  ratio that is not a ß-TCP and not a ceramic HA, nor is it a biphasic mixture of the two.

#### PROSPECTIVE SPLIT MOUTH RIDGE PRESERVATION STUDY

Data in line with research showing efficacy of human bone allografts<sup>6</sup>



Research published in Journal of Periodontology shows significantly better biocompatibility of the OsteoGen<sup>®</sup>Plug compared to Human Bone and BioOss Collagen.<sup>7</sup>



#### **OsteoGen<sup>®</sup> vs. Allograft:** COMPARISON STUDY HIGHLIGHTS<sup>5</sup>

Clinical histomorphometric study comparing a competitive corticocancellous allograft and membrane to OsteoGen<sup>®</sup> Plug alone between 3 and 5 months after implantation:

- No significant difference in the quality of bone for placing an implant at 3-5 months between the OsteoGen<sup>®</sup> Plug and the current "gold standard" of corticocancellous allograft and membrane.
- Authors noted that the benefits of using an OsteoGen<sup>®</sup> Plug include simplified clinical application saving chair time, decreased costs and no need for a second surgery to remove the membrane.
- Additional findings include no difference in post op patient reported time. All samples yielded viable bone for implant support.



CBCT analysis. The horizontal and vertical dimensional changes were measured by comparing the CBCT images taken immediately after the graft (baseline) and after (4 months). I: Control group, II: Test group, A; Immediately after extraction, A<sub>b</sub>. OsteoGen® Plug applied, B; Empty socket after 4 months, B<sub>1</sub>: OsteoGen® Plug after 4 months.

Yosouf, K., Heshmeh, O. and Darwich, K., 2021. Alveolar Ridge Preservation Utilizing Composite Graft: A Cone-Beam Computed Tomography Assessment in a Bandomized Split-Mouth Contelled Trial. Journal of Biomedical Science and Engineering, 14(2), pp. 64-73.



Iones, K., Williams, C., Yuan, T., Digeorge-Foushee, A.M., Chambers Wilson, R., Burton, T., Hamlin, N. and Martinez, L., 2022. Comparative in vitro study of commercially available products for alveolar ridge preservation. Journal o periodontology, 93(3), pp.403-411.

## CLINICAL APPLICATION CLINICAL IMAGES COURTESY OF GERMAN MURIAS DDS, ABOI/ID



Tooth #15, set to be extracted.



The surgical site was initially debrided to induce bleeding and establish the Regional Acceleratory Phenomenon.<sup>8</sup>



As the OsteoGen<sup>®</sup> crystals are resorbed and replaced by host bone, the site will become radiopaque (typically 3 - 5 months).

The collagen promotes keratinized soft tissue coverage over the graft.



Insert Large or Slim sized OsteoGen<sup>®</sup> Bone Grafting Plugs and allow blood to absorb.



Solid bone is seen upon re-entry prior to implant placement. In this image, a core sample was retrieved.



OsteoGen® Plugs are in place. Suture over top of socket to contain. No membrane is required.



Implant is placed. Note the histology showing mature osteocytes in lamellar bone formation. Some of the larger OsteoGen® crystals and clusters are slowly resorbing. Bioactivity is demonstrated by the high bone to crystal contact, absent of any fibrous tissue encapsulation.<sup>3,4</sup>



OsteoGen<sup>®</sup> is a low density bone graft and the OsteoGen<sup>®</sup> Plugs will show radiolucent on the day of placement.

### **OSTEOGEN<sup>®</sup> PLUG AVAILABILITY** THE OSTEOGEN<sup>®</sup> BONE GRAFTING PLUGS ARE AVAILABLE IN THREE SIZES:

PLUG SIZE	BOX SIZE	PRICE
Large: 10mm D x 20mm L	BOX OF 5 BOX OF 10 BOX OF 25	\$299.00 \$549.00 \$1,269.00
Slim: 6mm D x 25mm L	BOX OF 5 BOX OF 10 BOX OF 25	\$299.00 \$549.00 \$1,269.00
Extra Large: 15mm D x 20mm L	BOX OF 5	\$549.00

 OsteoGen<sup>®</sup> Bone Grafting Plugs are an easy and affordable way to graft extraction sites Mineral and Collagen composition mimics structure of human bone



Slim: 6mm diameter x 25mm Length Large: 10mm diameter x 20mm Length Extra Large: 15mm diameter x 20mm Length



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1. Ganz (2002) 2. Valen (2002) 3. Spivak (1990) 4. Ricci (1992) 5. Ferreira (2022) 6. Yosouf (2021) 7. Jones (2022) 8. Frost (1983)