

DENTAL

Osteomesh[®] In Guided Bone Regeneration



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BIOMIMETIC

Osteomesh[®] is a specially engineered 3D printed bioresorbable mesh designed to mimic the microarchitecture of natural bone. The characteristics of this regenerative technology meet the procedural needs of guided bone regeneration. The easy-to-handle Osteomesh[®] scaffold implant composed of Polycaprolactone (PCL) encloses the graft material and forms the contours of the desired reconstructed jaw.

PCL has a proven clinical history^[1,2] for maxillofacial indications. The interconnected micro-architecture of Osteomesh[®] facilitates osteoblast proliferation and infiltration whilst enabling bone graft stability and natural bone regeneration. The Osteomesh[®] predictable resorption profile^[3,4] avoids the need for an additional procedure, thus delivering clinical ease and patient comfort.



FEATURES

BENEFITS

Manufactured from PCL	 Bioresorbable, biocompatible, proven technology, and non-toxic. 	
100% synthetic	 No animal tissue concerns such as disease transmission or cross reaction. 	
Predictable resorption profile	• Protects against soft tissue collapse and predictably maintains both shape and volume of the desired bone tissue. Bone remodeling takes place before complete degradation at 18 - 24 months.	
User friendly	 Semi-flexible, easy to handle and provided in a range of sizes which can be trimmed with scissors. 	Porosity of
3D Printed	 Can be customised to specific patient anatomical needs as required to achieved optimal outcomes. 	Osteomesh®





 PRODUCT CODE	SIZE (L X B X T)/MM
PC12(20,10,0.75)	20 x 10 x 0.75
PC12(20,15,0.75)	20 x 15 x 0.75
PC12(30,20,0.75)	30 x 20 x 0.75

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Pictures of the product in actual size

More sizes available, please approach your country's distributor



PATIENT'S PERSPECTIVE

• Osteomesh[®] has an excellent safety profile. Adverse reaction is not observed to date.

CLINICAL PERSPECTIVE

- Osteomesh[®] was carefully designed to speed up procedure due to its semi-flexible feel, easier cutting characteristics and ease of use, which is essential for the success of the treatment.
- Osteomesh[®] works well with all type of graft materials including autogenous bone.
- Osteomesh[®] has an ideal structures that can maintain its contour and shape throughout the course of healing.

Successful horizontal width and vertical height restoration



Osteomesh[®] trimmed and moulded into an "L-Shape" that creates stable horizontal and vertical bone volume around the defect. This results in a stable hard and soft-tissue condition following healing.

References

¹ Schuckert KH, Jopp S, Teoh SH. Mandibular defect reconstruction using three-dimensional polycaprolactone scaffold in combination with platelet-rich plasma and recombinant human bone morphogenetic protein-2: de novo synthesis of bone in a single case. Tissue Eng Part A. 2009 Mar;15(3):493-9. doi: 10.1089/ten.tea.2008.0033. PMID: 18767969.

² Goh BT, Teh LY, Tan DB, Zhang Z, Teoh SH. Novel 3D polycaprolactone scaffold for ridge preservation--a pilot randomised controlled clinical trial. Clin Oral Implants Res. 2015 Mar;26(3):271-7. doi: 10.1111/clr.12486. Epub 2014 Sep 27. PMID: 25263527.

³ Lam CX, Hutmacher DW, Schantz JT, Woodruff MA, Teoh SH. Evaluation of polycaprolactone scaffold degradation for 6 months in vitro and in vivo. J Biomed Mater Res A. 2009 Sep 1;90(3):906-19. doi: 10.1002/jbm.a.32052. PMID: 18646204.

⁴ Lam CX, Savalani MM, Teoh SH, Hutmacher DW. Dynamics of in vitro polymer degradation of polycaprolactone-based scaffolds: accelerated versus simulated physiological conditions. Biomed Mater. 2008 Sep;3(3):034108. doi: 10.1088/1748-6041/3/3/034108. Epub 2008 Aug 8. PMID: 18689929.

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MCN 04 011B XE Rev 0



Empowering Natural Tissue Regeneration

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