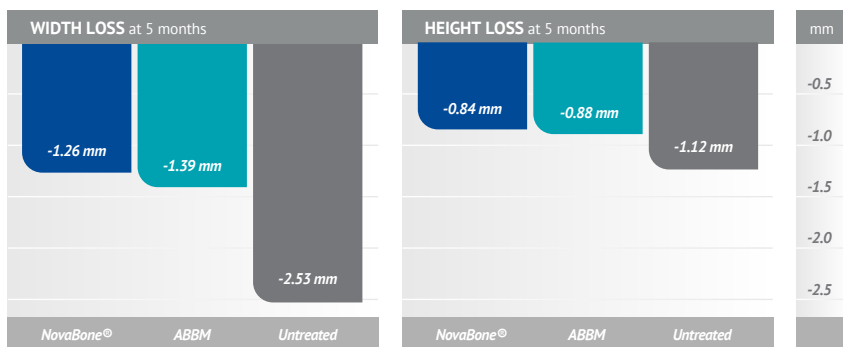


### NovaBone® Dental Putty - Socket Preservation

In a blinded randomized controlled trial comparing dimensional changes at 5 months following socket preservation using NovaBone® Dental Putty or anorganic bovine bone mineral (ABBM), both groups showed a statistically significant reduction in ridge width loss. NovaBone® treated sites showed comparable results to sites treated with ABBM in both width and height changes.<sup>1</sup>



### NovaBone® Dental Putty Histomorphometry

In four separate studies, histomorphometric evaluation of cores taken from extraction sockets grafted with NovaBone® Dental Putty showed vital bone regeneration and significant graft resorption.<sup>2,3,4,5</sup>

	Number of Sites	Average Re-Entry Time	Mean Vital Bone Content	Mean Residual Graft
2015 Lanka et al. <sup>2</sup>	N = 10	4.9 months	47.15%	17.4%
2014 Kotsakis et al. <sup>3</sup>	N = 17	5.7 months	31.76%	11.47%
2012 Lanka et al. <sup>4</sup>	N = 20	4.9 months	49.57%	4.3%
2011 Gonshor et al. <sup>5</sup>	N = 22	5.4 months	48.2%	2.4%

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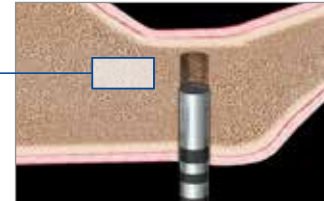
## Minimally Invasive Transcrestal Sinus Augmentation with NovaBone® Cartridge System

There are several ways to access the sinus via a crestal approach to elevate the sinus membrane prior to augmentation. Once access is gained to the sinus membrane, bone graft delivery into the sinus can be challenging. The NovaBone® Cartridge System simplifies the delivery of the graft into the sinus. The tip of the cartridge is 2.8 mm in diameter and is designed specifically to deliver the graft material into the sinus through a crestal approach. The putty's consistency can help prevent membrane tears, and the hydraulic pressure created when delivering the putty to the sinus elevates the sinus membrane with minimal instrumentation.

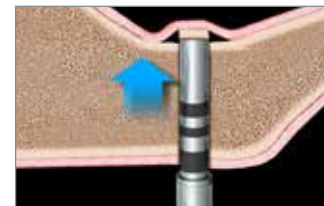
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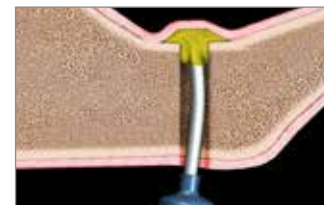
**Socket Preservation** 1. Clinical Evaluation of 262 Osseointegrated Implants Placed in Sites grafted with Calcium Phosphosilicate Putty: A Retrospective Study. Babbush CA, Kanawati A., *J Oral Implantol.* Feb 2015; 41(1): 62-9. 2. One-stage transveolar vs. lateral maxillary sinus augmentation in severely resorbed sites using Calcium Phosphosilicate Putty: A proof of concept study. Kher U, Shanbhag S, *Clin. Oral Impl. Res* Oct 2014; 25(10). 3. Periosteal Values of Implants Placed in Sockets Augmented with Calcium Phosphosilicate Putty Graft: A Comparative Analysis against Implants Placed in Naturally Healed Sockets. Mahesh L, Narayan T, Kostakis G, Shukla S. *J Contemp Dent Pract.* 2014 Mar 1;15(2):181-5. 4. Ridge Preservation with Socket Plug Technique Utilizing an Alloplastic Putty Bone Substitute or a Particulate Xenograft. Mahesh L, Kotsakis G, Venkataraman N, Shukla S, Prasad H., *J Oral Implantol.* Apr 2015; 41(2): 178-83. 5. A Randomized Blinded Controlled Clinical Study of Particulate Anorganic Bovine Bone Mineral and Calcium Phosphosilicate Putty Bone Substitutes for Socket Preservation. Kotsakis G, Salama M, Chrepa V, Hinrichs JE, Gaillard P., *Int. J Oral Maxillofacial Implants.* Jan-Feb 2014; 29(1):141-51. 6. Histomorphologic Evaluation of a Calcium-Phosphosilicate Putty Bone Substitute in Extraction Sockets. Kotsakis G, Joachim F, Saroff S, Mahesh L, Prasad H, Rohrer M. *Int J Periodontics Restorative Dent.* 2014 Mar-Apr; 34(2)233-9. 7. Histologic and Clinical Evaluation of a Bioactive Calcium-Phosphosilicate Bone Graft Material in Post-Extraction Alveolar Sockets. Gonshor A, Lanka M, Saroff S et al., *JACD* Dec 2011; 3(7): 21- 31. 8. Socket grafting with calcium phosphosilicate alloplast putty: A histomorphometric evaluation. Salama MA, Lanka M, Kurtzman GM, Joachim FPC, *Compend Contin Educ Dent.* Sept 2012; 33(8): 109-115. 9. Practical application of the newly introduced natural bone regeneration (NBR) concept utilizing alloplastic putty. Kotsakis G, Chrepa V, Katta S *Int. J Oral Imp Clin Res* Sept-Dec 2011; 2(3):145-149. 10. Ridge preservation with a calcium phosphosilicate putty in 12 consecutive cases.. Kotsakis G, Chrepa V, Katta S., *Clin Oral Implants Res.* Sept 2011; 22(9):10-24.



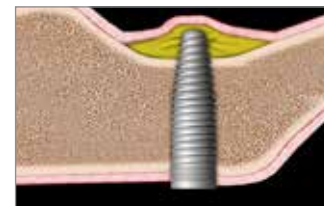
**Step 1:**  
An osteotomy is prepared to less than 1 mm from the sinus floor.



**Step 2:**  
An osteotome is then used to gently fracture the bone at the apex of the osteotomy.



**Step 3:**  
The canula from the cartridge tip can be pressed against the surface of the bone and the putty can then be injected into the area resulting in membrane elevation with hydraulic pressure from the putty.



**Step 4:**  
An implant can then be placed in the augmented area.