



BioXclude®

SOCKET PRESERVATION

Comprehensive User Guide:

- Minimally Invasive Socket Preservation
- Socket Preservation with Flap Elevation
- Suturing & Post-Operative Instruction

SIMPLE EFFECTIVE VERSATILE



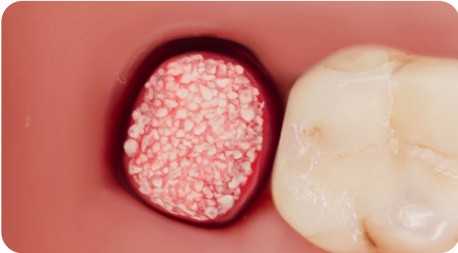
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Socket Preservation Handling Guide

Step-by-step handling instructions for BioXclude®
Dehydrated human deepithelialized amnion-chorion membrane (ddACM)

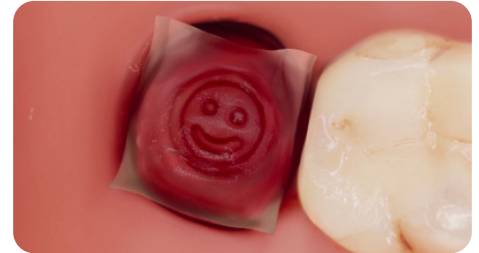
Minimally Invasive Socket Preservation



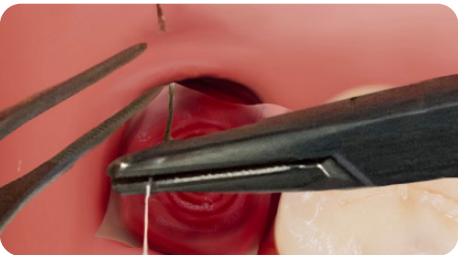
1. A contained extraction socket should be filled with bone graft to the height of the crestal walls. BioXclude® should be placed on top of bone graft material with minimal flap reflection.



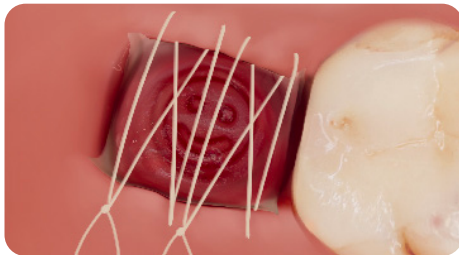
2. Place dry, untrimmed 8 x 8mm (anterior) or 12 x 12mm (posterior) BioXclude® using dry forceps. Orientation during placement does not matter. BioXclude® may be placed UP or DOWN.



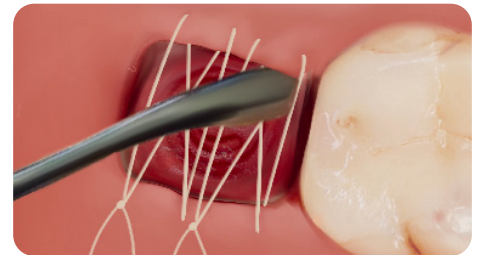
3. BioXclude® will hydrate and adapt to bone particulate. Drops of irrigant (sterile saline) can speed up membrane hydration. Damp gauze can be used to help adapt BioXclude® over the underlying graft while absorbing excess fluids.



4. It is easiest to not manipulate the membrane and instead suture from the inside of the socket (connective tissue side out) to avoid nicking the membrane first.



5. Using this reverse, inverted suturing method in a figure 8 (one for an anterior site and two for a posterior site) will approximate the tissues over the membrane. A PTFE suture is recommended. Continue to blot with damp gauze as needed.



6. Use a wetted instrument (Buser periosteal elevator works well) to tuck the edges of BioXclude® as necessary. BioXclude® only needs to be 1 mm under the gingival margin.

Instruments

1. Adson/Brown Tissue Forceps
2. Minnesota Retractor
3. Molt #9 Periosteal Elevator
4. Lucas Bone Curette
5. Buser Periosteal Elevator
6. Castro-Viejo Needle Holder
7. Scissors
8. Cotton Pliers
9. Stainless Steel Cup w/ Lid
10. Bowl (for saline)
11. Sterile Gauze
12. Suture
13. Curved Tip Irrigation Syringe
14. Sterile Saline



Welcome to handling, without rules:

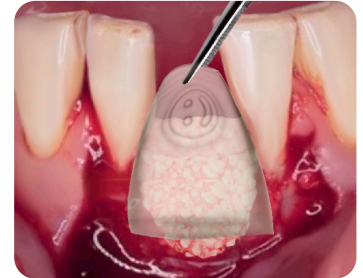
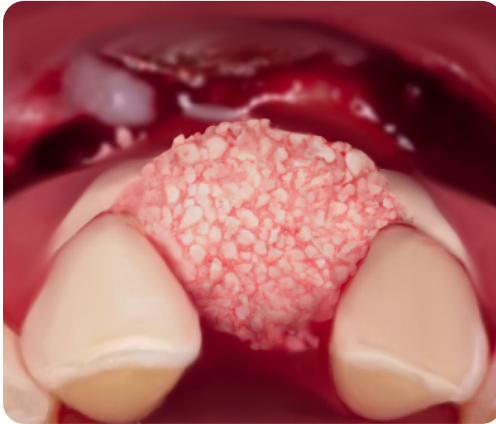
- » No need to trim, tack or suture
- » No orientation - place BioXclude® “up” or down, fold it or allow the membrane to “bunch” up
- » Safely touch tooth, root or implant surfaces
- » Place over or under other membranes or mesh
- » Self-adheres and adapts

Socket Preservation with Flap Elevation

Helpful Hint:

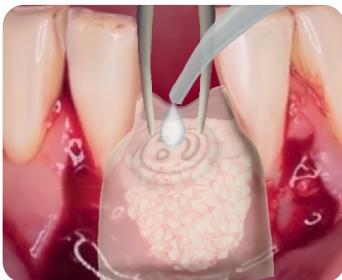
Bone particulate with a mineralized component is commonly used.

Note the necessity to overbulk the buccal defect with bone particulate due to the likelihood of resorption.



1. BioXclude® is placed last, after all of the bone particulate is placed. There is no need to trim BioXclude® - it is safe to touch adjacent tooth surfaces.

2. BioXclude® is brought to the site dry. Choose a BioXclude® size to extend over all graft material and onto native buccal bone, over the crest and tucked



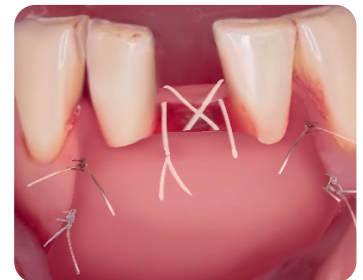
3. Use an instrument to anchor BioXclude® on the crest. A monoject syringe with sterile saline can be used to hydrate the membrane as needed.



4. BioXclude® will naturally adapt and adhere to bone particulate and to adjacent native bone.



5. A damp gauze may be pressed against the site to absorb additional fluid to reapproximate the flap without disrupting the membrane.

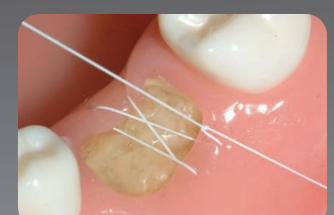
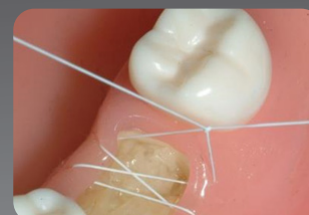
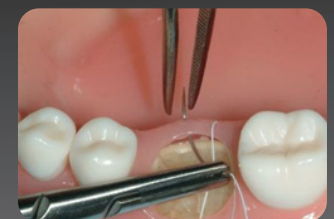
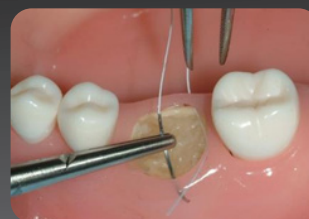
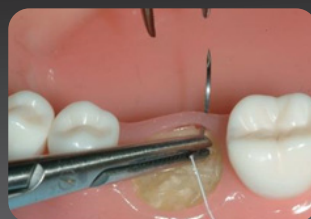


6. After vertical releases are sutured, non-primary closure can be obtained and a reverse figure eight technique (see ‘Suturing Guide’ instructions below).

Suturing Guide

Reverse or “inverted” sutures pull the tissue both inward and downward. In an open socket this is ideal for membrane retention.

This method also greatly decreases the potential for nicking the membrane.



Note: Each pass begins from inside the socket (connective tissue side).

BioXclude® Size Choices



CHOOSING THE RIGHT SIZE:

- No Flap Elevation:**
Tuck 1mm under gingival margin
- Flap Elevation:**
Cover all graft material and extend onto native bone 3mm
- Sinus Perforation:**
Extend 5mm past edge of perforation

Post Operative Guidance

When the membrane is exposed to the oral environment:

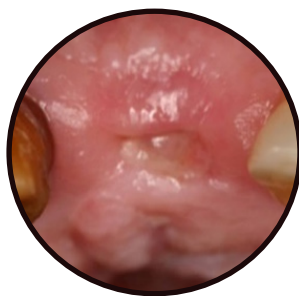
- » **No rinsing, swishing, spitting, or sucking through a straw for the first 3 days.** These actions can dislodge the membrane.
- » **No chlorhexidine or OTC mouth rinses.** Oral rinses are used to kill bacteria. To varying degrees, oral rinses adversely impact the health of gingival cells, thus slowing wound closure. Fortunately, Purion® processed amnion-chorion allografts have demonstrated natural anti-microbial properties.
- » After **3 days**, gentle rinsing with tap water is recommended for the next **7 days**. Only tap water should be used during this time frame. After **10 days** post-operatively, the patient may begin using an oral rinse for plaque control.

Appearance During Healing Using BioXclude® with Non-Primary Closure

Variation in healing appearance, including translucent, opaque, and yellowish appearance, are all normal and common.



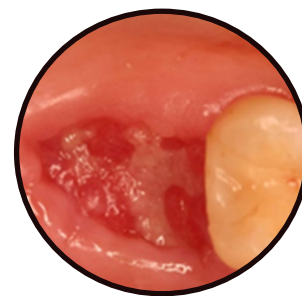
4 day post-op
Anthony Del Vecchio, DDS



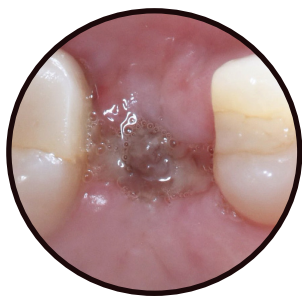
3 day post-op
Dan Holtzclaw, DDS, MS



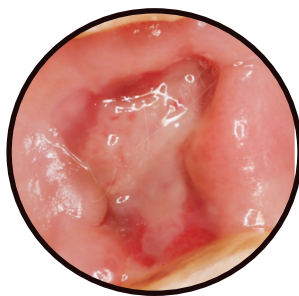
4 day post-op
Anthony Del Vecchio, DDS



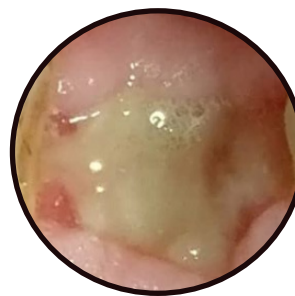
4 day post-op
Dan Holtzclaw, DDS, MS



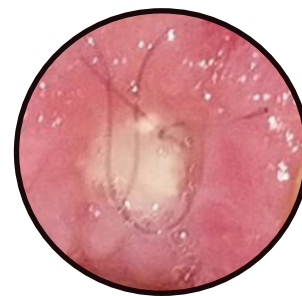
10 day post-op
Matthew J. Fien, DDS



2 week post-op
Dean Licenblat, BDent, MSc



2 week post-op*
(*pt is a smoker)
Vinay Bhide, DDS, MSc

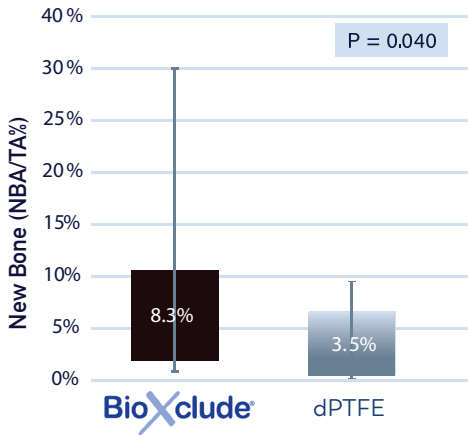


10 day post-op
Vinay Bhide, DDS, MSc

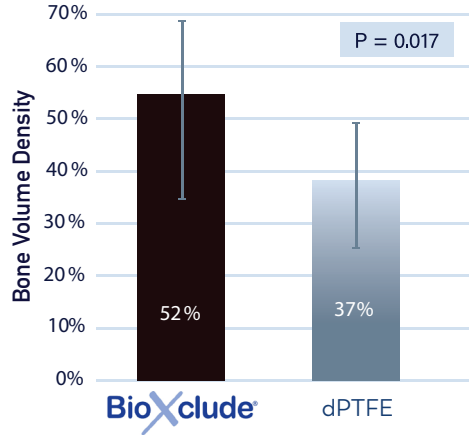
Your Membrane Choice Matters

Superior bone growth was observed when comparing BioXclude® dehydrated human deepithelialized amnion-chorion membrane to dPTFE in socket preservation

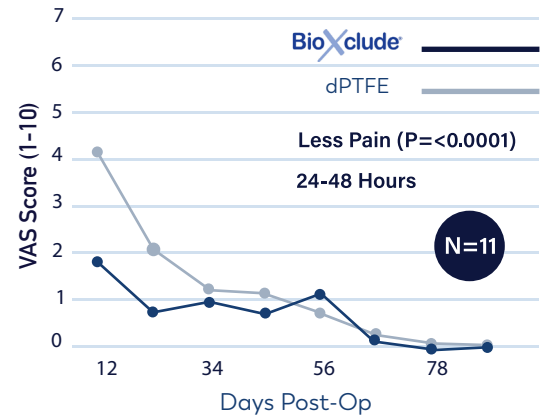
New Osteoid/Bone Formation



Bone Volume Density



Patient Discomfort



The Reason why BioXclude® is successful

Amnion-Chorion Membrane

- Immunoprivileged allograft tissue
- No history of graft rejection
- Natural tissue barrier
- Intact basement membranes
- Active growth factors and chemokines
- Known to play critical roles in tissue repair and regeneration
- Antibacterial properties

Purion® Processed

- The gold standard in placental tissue processing
- Safely and gently ensures that the key elements associated with healing are preserved
- Proprietary to BioXclude®

The Difference is in the Deepithelialization

- Exposes underlying basement membranes
- Improves cellular attachment
- Allows membrane to be placed “up” or “down” at the treatment site

Randomized Clinical Trials

- Samer, A. (2020). *Journal of Oral Implantology*
- Hassan, M. (2017). *International Journal of Oral and Maxillofacial Implants*

Case Series

- Maksoud, M.A (2018). *Clinical Advances in Periodontics*
- Holtzclaw, D. (2014). *Compendium of Continuing Education in Dentistry*
- Wallace, S. (2011). *Journal of Implant and Advanced Clinical Dentistry*
- Holtzclaw, D. (2011). *Journal of Implant and Advanced Clinical Dentistry*

Case Reports

- Cullum, D. et al. (2019). *Compendium of Continuing Education in Dentistry*
- Prakasam, S. (2017). *Decisions in Dentistry*
- Wallace, S. (2010). *Journal of Implant and Advanced Clinical Dentistry*

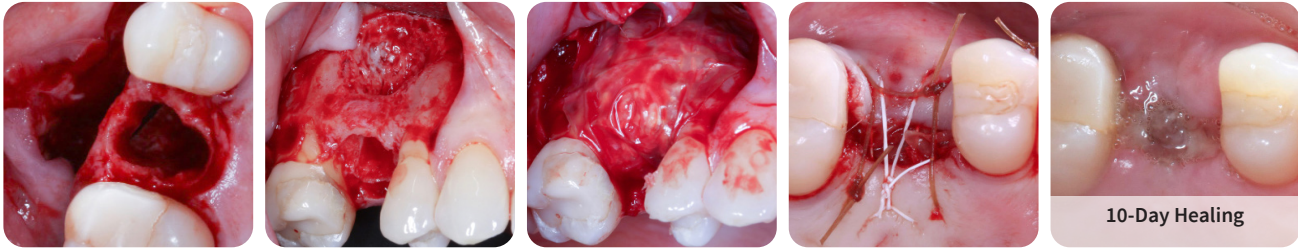
SIMPLE
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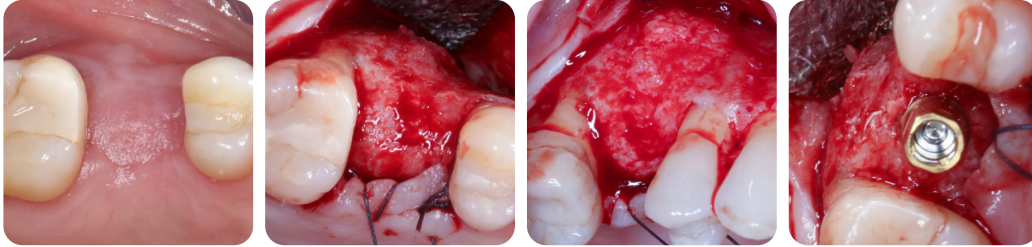
9 Total
Publications

on socket preservation ranging from
case reports to randomized clinical trials

BioXclude[®] Socket Preservation: Clinical Cases

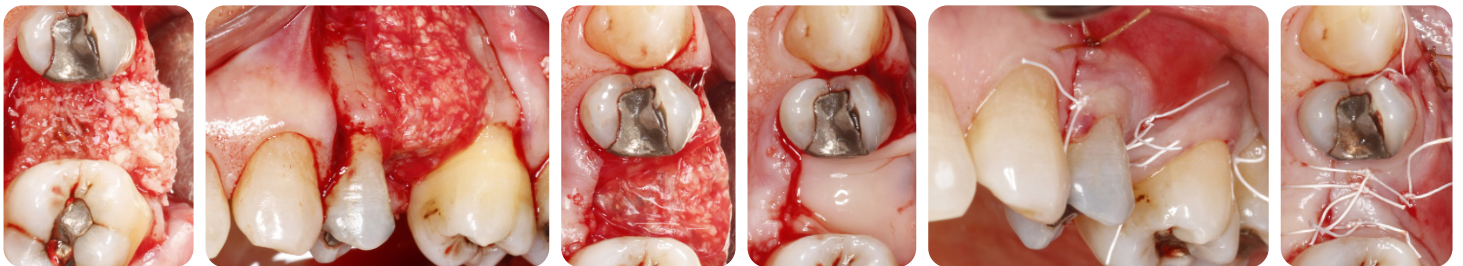
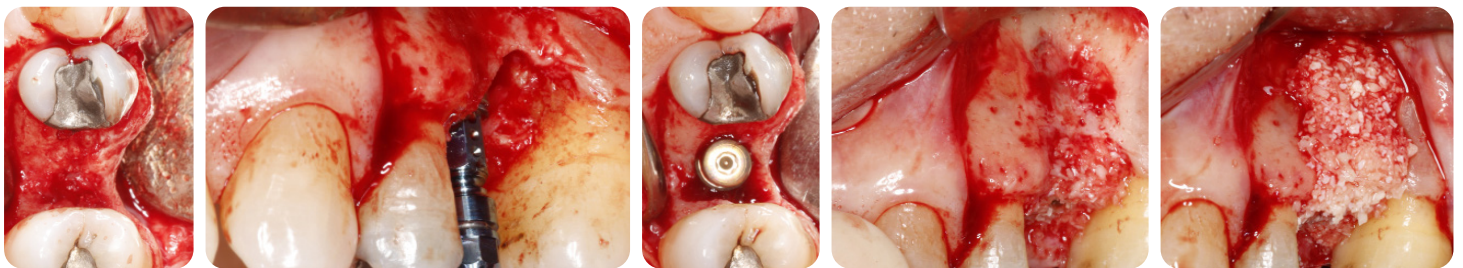
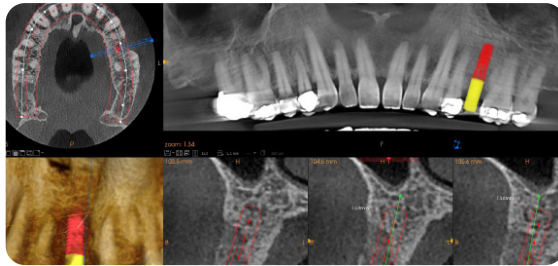


10-Day Healing

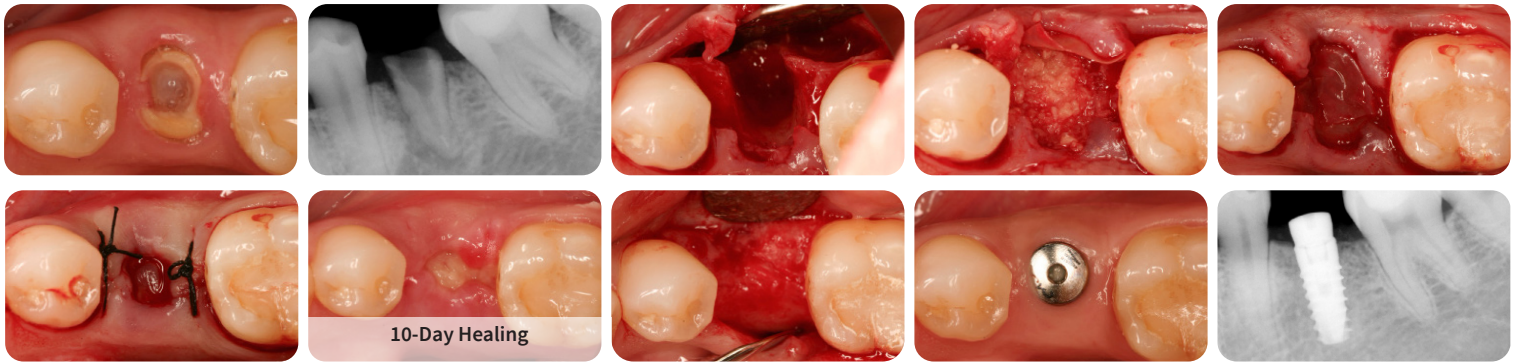


Matthew J. Fien, DDS
Fort Lauderdale, FL
@fienodontics

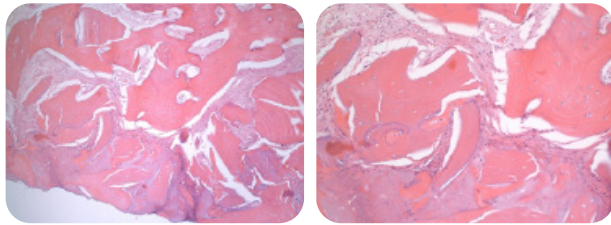
John Kim,
DMD, MS, PA
Rocky Mount, NC
@rockymountperio



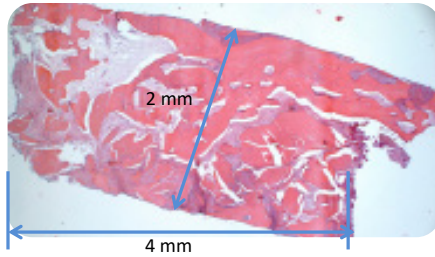
6 Months
Post-op



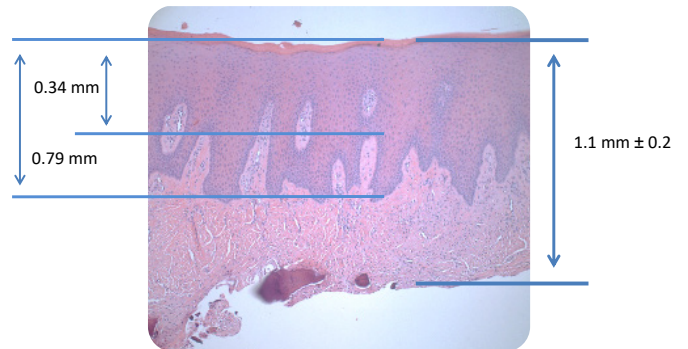
Hard Tissue Histology



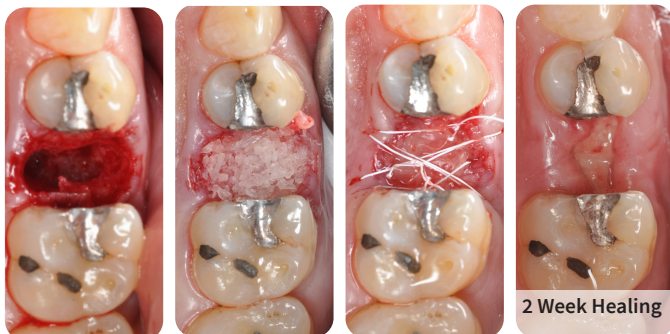
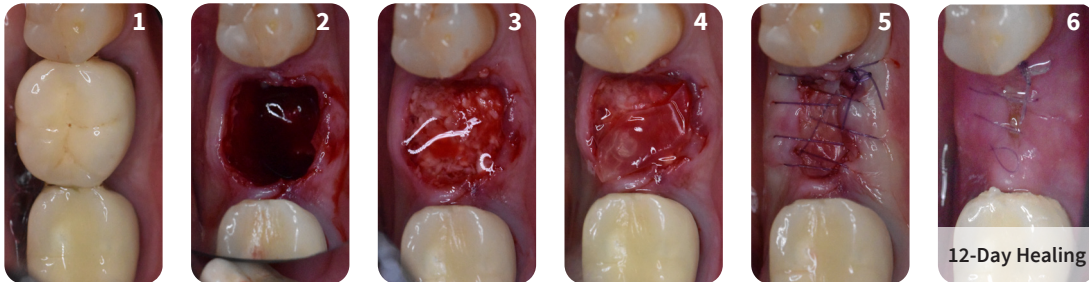
Surface area of new bone/host bone = 51.1%
 Surface area of residual graft material = 24.2%
 Surface area of connective tissue = 24.7%



Soft Tissue Histology



This specimen represents the classic keratinized stratified squamous epithelium. There was little to no parakeratin and the stratum granulosum was not well developed; however, this presentation is still within normal limits. Parakeratin and a well developed granular cell layers are more typical of attached gingiva that receives "stimulation" from daily tooth brushing and mastication



VINAY BHIDE, DDS, MSc

@DRBHIDEPERIO | TORONTO, ON

“BioXclude® has been a game changer for me in practice. The biological properties, handling, versatility for multiple therapeutic indications, and consistency of results is second to none!”

**Michael Block, DMD**

CENTER FOR DENTAL RECONSTRUCTION | METAIRIE, LA

“I have been using BioXclude® to cover my extraction site grafts and to cover larger grafts for ridge augmentation. My incision dehiscence rate is almost zero. The soft tissue healing using this material is very strong. I recommend it without reservations.”

**Matthew Fien, DDS**

@FIENODONTICS | PLANTATION, FL

“BioXclude® is an incredible biomaterial and it has changed the way I practice. The applications are endless”

**Dan Holtzclaw, DDS, MS**

DENTAL IMPLANT CENTER | AUSTIN, TX

“I have used it thousands and thousands of times - I have used it on family members, I have used it on friends. I know that it works. Now, there are many, many, published studies that also show that this material works and there are histological studies to back it up.”

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