maxxeus™ | BioXclude®

Socket Preservation

Comprehensive User Guide:

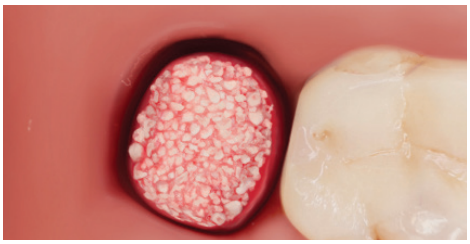
- Minimally Invasive Socket Preservation
- Socket Preservation with Flap Elevation
- Suturing & Post-Operative Instruction

Simple • Effective • Versatile

Socket Preservation Handling Guide

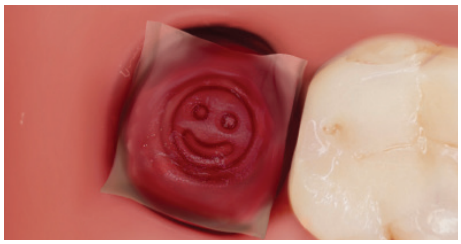
Step-by-step handling instructions for BioXclude®
Dehydrated human deepithelialized amnion-chorion membrane (ddACM)

Minimally Invasive Socket Preservation

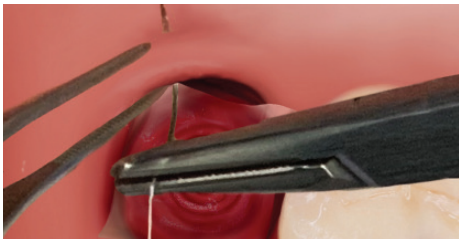


1 A contained extraction socket should be filled with bone graft to the height of the crestal walls. BioXclude should be placed on top of bone graft material with minimal flap reflection.

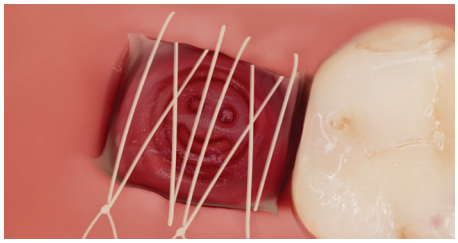
2 Place dry, untrimmed 8.0 x 8.0 mm (anterior) or 12.0 x 12.0 mm (posterior) BioXclude using dry forceps. Orientation during placement does not matter. BioXclude may be placed up or down.



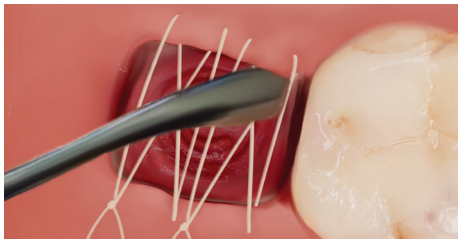
3 BioXclude will hydrate and adapt to bone particulate. Drops of irrigant (sterile saline) can speed up membrane hydration. Damp gauze can be used to help adapt BioXclude over the underlying graft while absorbing excess fluids.



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 eight (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 1.0 mm under the gingival margin.

Toolkit

1. Adson Forcep
2. Minnesota Retractor
3. Molt #9 Periosteal Elevator
4. Curette
5. Buser Periosteal Elevator
6. Needle Holder
7. Scissor
8. Cotton Forcep
9. SS Medicine Cup
10. SS Iodine bowl (for saline)
11. Sterile Gauze
12. Suture
13. Monoject Syringe
14. Sterile Saline

Welcome to handling, without rules:

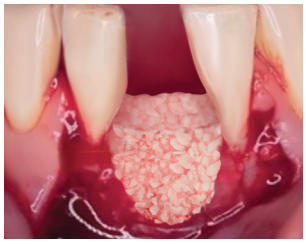
- No need to trim, tack or suture
- No orientation - place BioXclude up or down, fold it, or allow the membrane to "bunch" up
- Safely touch tooth, root or implant surfaces
- Place over or under other membranes or mesh
- Self-adheres and adapts

Socket Preservation with Flap Elevation

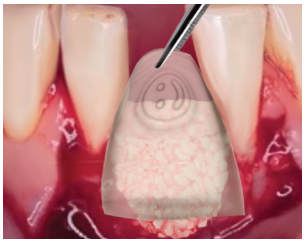
Helpful Hint:

Bone particulate with a mineralized component is commonly used.

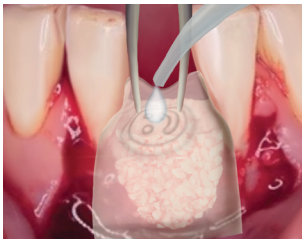
Note the necessity to overbulk the buccal defect with bone particulate due to the likelihood of resorption.



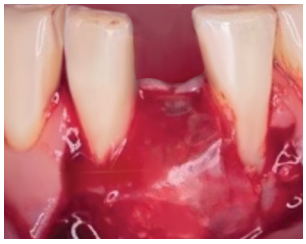
1 BioXclude is placed last, after all of the bone particulate is placed. There is no need to trim BioXclude - it is safe to touch adjacent tooth surfaces.



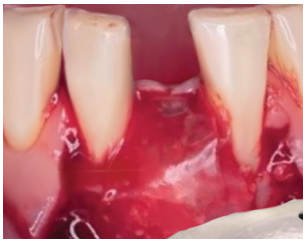
2 BioXclude is brought to the site dry. Choose a BioXclude size to extend over all graft material and onto native buccal bone, over the crest and tucked lingually.



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.

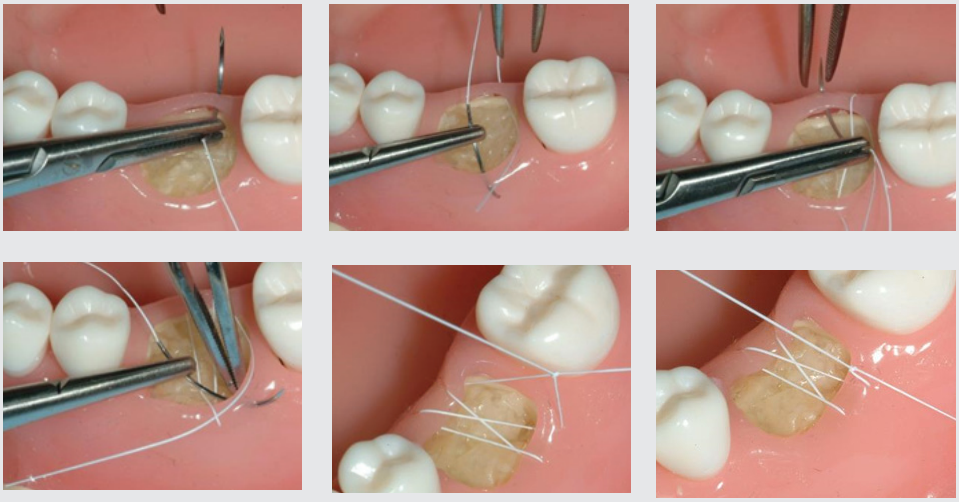


4 BioXclude will naturally adapt and adhere to bone particulate and to adjacent native bone.



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 using 4.0 PTFE suture, and a reverse figure eight technique (see 'Suturing Guide' instructions below).



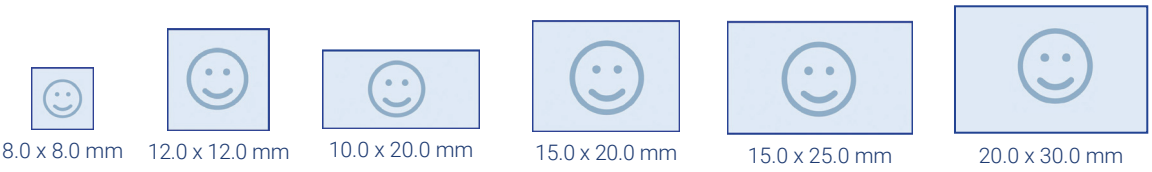
Suturing Guide

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).

Size Choices



Choosing The Right Size:

No Flap Elevation: Tuck 1.0 mm under gingival margin

Flap Elevation: Cover all graft material and extend onto native bone 3.0 mm

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 chlorhexadine 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, Snoasis Medical's Proprietary 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

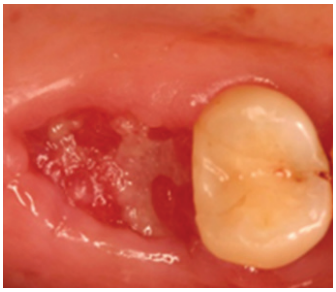
Using BioXclude with Non-Primary Closure

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

4 Day Post-Op
Anthony Del Vecchio, DDS

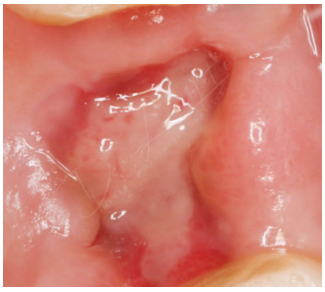
3 Day Post-Op
Dan Holtzclaw, DDS, MS

4 Day Post-Op
Anthony Del Vecchio, DDS



4 Day Post-Op
Dan Holtclaw, DDS, MS

10 Day Post-Op
Matthew J. Fien, DDS



2 Week Post-Op
Dean Licenblat, BDent, MSc

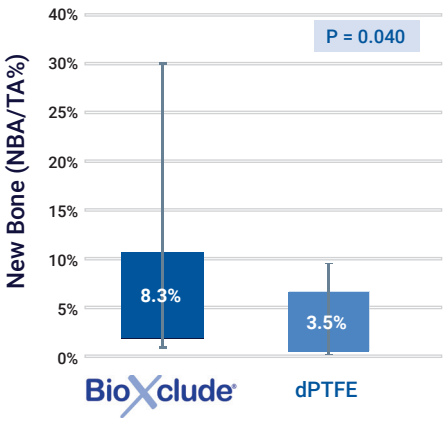
*2 Week Post-Op**
Vinay Bhide, DDS, MSc
(*pt is a smoker)

10 Day Post-Op
Vinay Bhide, DDS, MSc

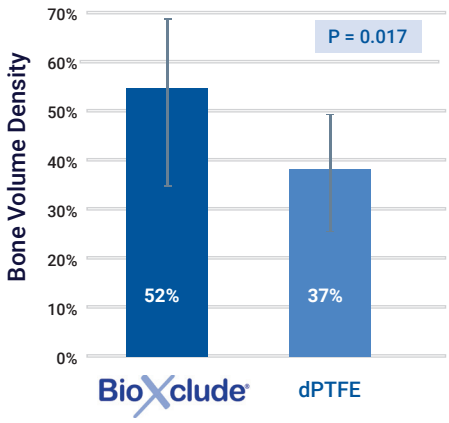
Your Membrane Choice Matters

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

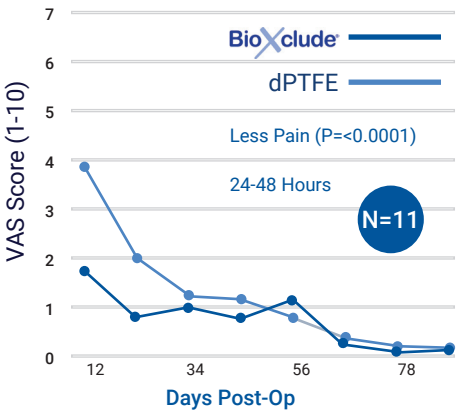
New Osteoid/Bone Formation



Bone Volume Density



Patient Discomfort



The Keys to BioXclude's Success

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

Snoasis Medical's Proprietary Process

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

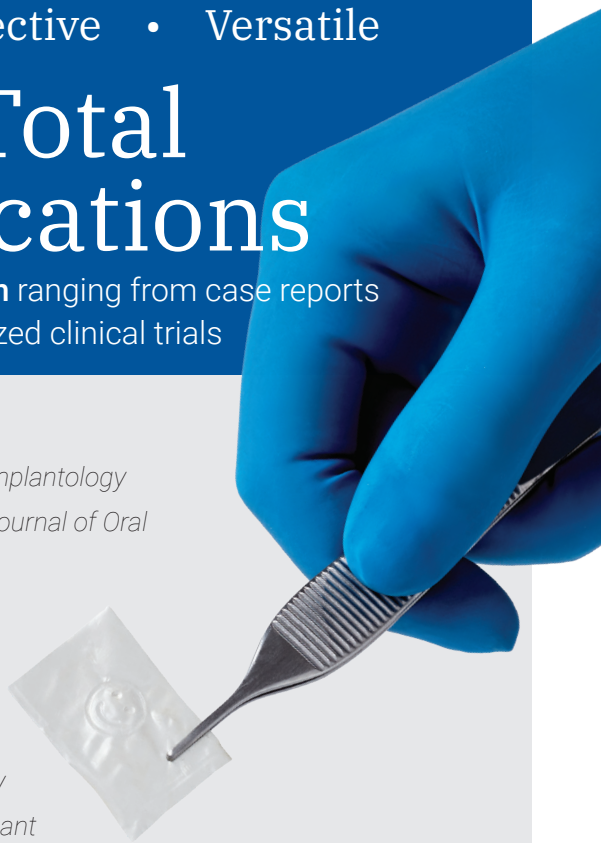
The Difference is in the Deepithelialization

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

Simple • Effective • Versatile

9 Total Publications

on **socket preservation** ranging from case reports to randomized clinical trials



Randomized Clinical Trials

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

Case Series

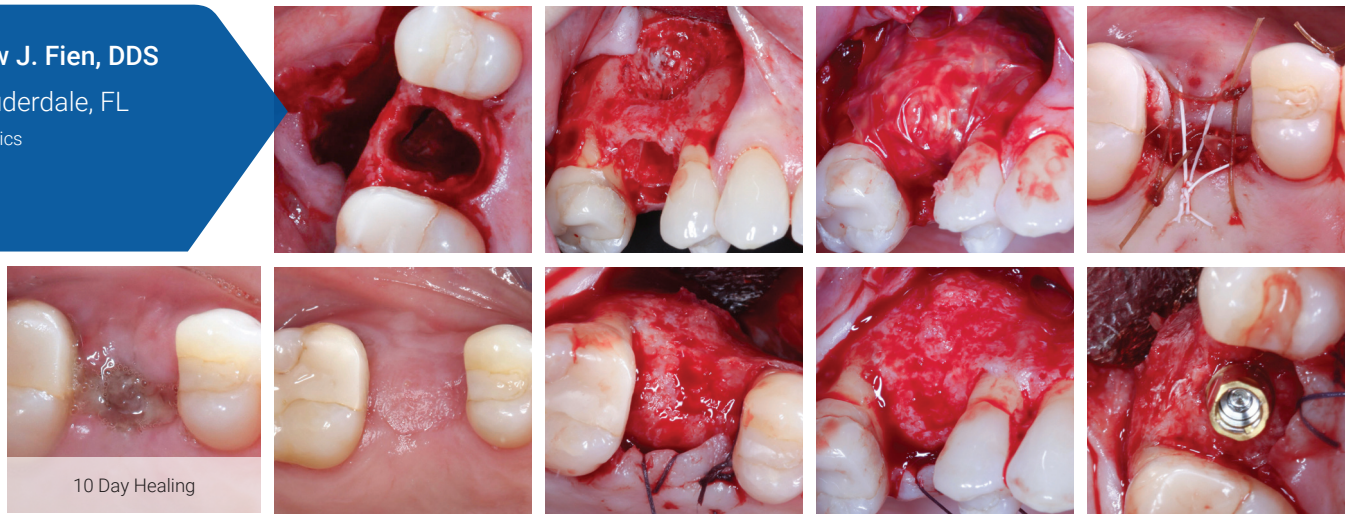
- Maksoud, M.A (2018). *Clinical Advances in Periodontics*
- Holtzclaw, D. (2014). *Compendium of Continuing Education in Dentistry*
- Wallace, S. (2011). *Journal of Implant and Advanced Clinical Dentistry*
- Holtzclaw, D. (2011). *Journal of Implant and Advanced Clinical Dentistry*

Case Reports

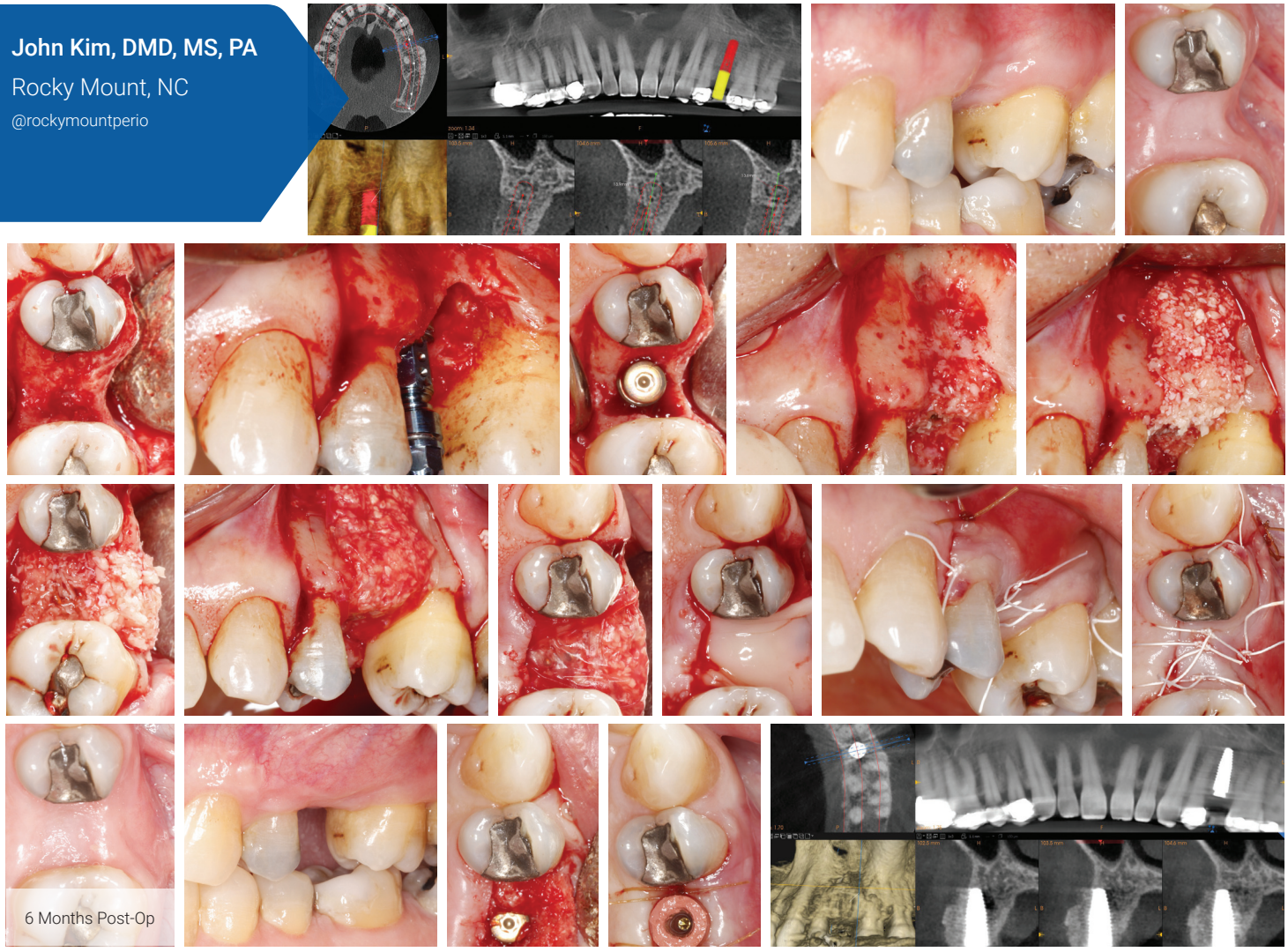
- Cullum, D. et al. (2019). *Compendium of Continuing Education in Dentistry*
- Prakasam, S. (2017). *Decisions in Dentistry*
- Wallace, S. (2010). *Journal of Implant and Advanced Clinical Dentistry*

BioXclude® Socket Preservation: Clinical Cases

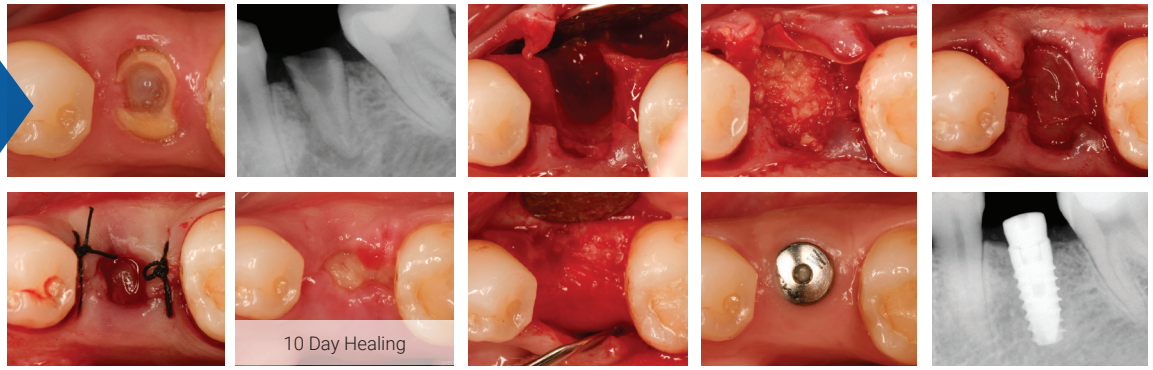
Matthew J. Fien, DDS
Fort Lauderdale, FL
@fienodontics

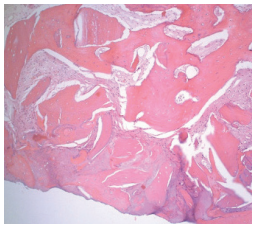


John Kim, DMD, MS, PA
Rocky Mount, NC
@rockymountperio



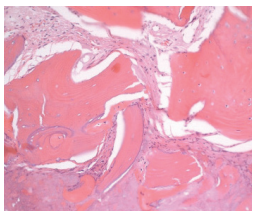
Dan Holtzclaw, DDS, MS
Austin, TX
@danholzklau

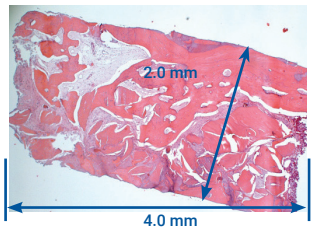




Hard Tissue Histology

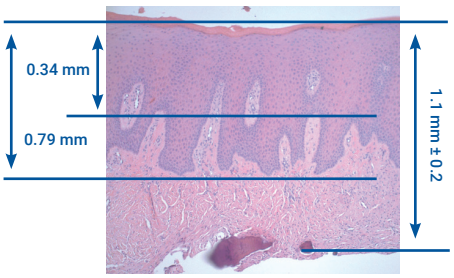
Surface area of
new bone/host bone = 51.1%
Surface area of
residual graft material = 24.2%
Surface area of
connective tissue = 24.7%





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.



Dean Licenblat, BDent, MSc
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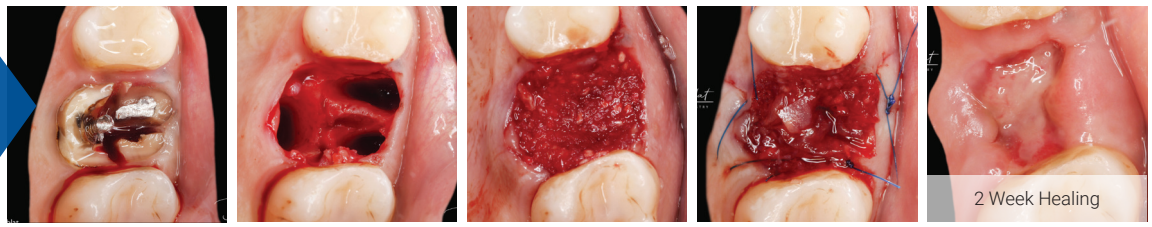
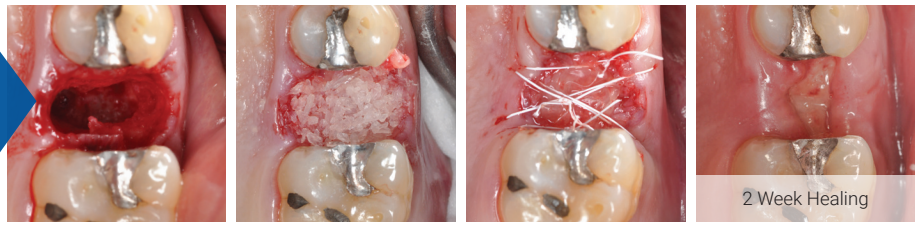
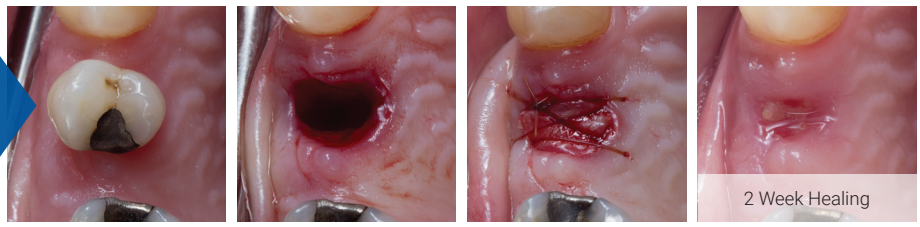
@dr.deanlicenblat



Jin Sub Oh, DMD, MS
Mount Kisco, NY
@dr.jinsuboh



Cliff Lee, DMD, MS
CA, USA
@bonegumsinharmony



"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."

– **Michael Block, DMD**
Center For Dental Reconstruction
Metairie, LA

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

– **Matthew Fien, DDS**
Fienodontics
Plantation, FL

"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."

– **Dan Holtzclaw, DDS, MS**
Dental Implant Center
Austin, TX

"My patients have experienced far less pain, swelling and bad taste with this membrane than with anything else I have used. I have noticed a marked reduction in mucosa inflammation and faster healing.

– **John Alonge, DDS, MS**
Oral Surgery of Erie
Erie, PA

Visit www.maxxeusdental.com or call 800-684-7783 to order