



BioXclude®

PRODUCT GUIDE

An Introduction to BioXclude®

Dehydrated De-epithelialized Amnion-Chorion Allograft Membrane for Dental and Oral Maxillofacial Procedures





BioXclude® is the market's original **dehydrated de-epithelialized amnion-chorion allograft membrane** available for use in dental, endodontic, oral maxillofacial, and periodontal procedures.¹⁻³ Created using Snoasis Medical's **proprietary** tissue processing methods, BioXclude® membranes contain natural **structural** and **biological factors** known to play **critical roles** in **wound healing** and **tissue repair**.⁴⁻¹¹

One membrane. Many benefits.

- **Natural** – Biological membrane with dynamic structural matrices and active growth factors ⁴
- **Antibacterial** – Demonstrated efficacy against pathogenic oral bacteria ^{12,13}
- **Resorbable** – Naturally resorbs over 8-12 weeks as tissues heal
- **Versatile** – One product for multiple applications and procedures
- **Easy to Use** – Unrestrictive handling “rules” simplify product use and reduce chair time
- **Safe** – Non-immunogenic allograft tissue with no reported adverse immune responses
- **Backed by Science** – >50 peer-reviewed publications (no borrowed references!)
- **Proven** – Over 640,000 BioXclude membranes distributed for clinical use

Nature's Premier Protective Barrier Membrane

BioXclude is composed of amnion and chorion membranes, the innermost and outermost layers of the amniotic sac, respectively.⁴ Together, the amnion and chorion membrane layers form a strong **protective barrier** around the developing fetus during pregnancy.^{14,15} Given the dynamic nature of the uterine environment, these membranes must be tremendously **reliable** while simultaneously allowing for significant stretching and movement in all directions. The extracellular matrices found within the amnion and chorion layers is composed of a unique combination and organization of collagens and laminins that create a tissue network that is both **strong and pliable**.^{4,8} In addition, as these membranes are required to grow at a pace that is commensurate with fetal growth, these tissues are **abundant in activating growth factors** that stimulate cellular proliferation and tissue development.¹⁶⁻¹⁸ Critically, the chorion layer utilizes distinct biological mechanisms to prevent the mother's immune system from detecting the fetus, effectively “cloaking” the fetus from adverse immune responses that would threaten its existence and making it virtually **immuno-privileged** as an allograft tissue.¹⁹⁻²¹

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Simple. Effective. Versatile.

SITE PRESERVATION

IMMEDIATE IMPLANTS

RIDGE AUGMENTATION

PERIODONTAL DEFECTS

PERI-IMPLANTITIS

SINUS PERFORATION

PERIODONTAL POCKETS

GINGIVAL RECESSON

VITAL PULP THERAPY

WOUND DRESSING

Forget the Membrane "Rules"

BioXclude's unique physical and handling properties overcome many of the time-consuming hassles commonly associated with traditional collagen and synthetic membranes.

By changing the "rules" of membrane use, BioXclude enables simplified, minimally invasive approaches to the cases that consume valuable chair time in your clinic without compromising patient outcomes.

BioXclude makes your job easier:

- **NO ORIENTATION RESTRICTIONS** – NO "UP" OR "DOWN" SIDES
- **NO NEED TO TRIM** – BIOXCLUDE CAN BE FOLDED, BUNCHED
- **NO PLACEMENT LIMITATIONS** – SAFE WITH ROOT AND IMPLANT SURFACES
- **COMPATIBILITY** – PLACE WITH OTHER MEMBRANES, MESH, OR TISSUES
- **PLIABILITY** – EASILY ADAPTS AND CONFORMS TO IRREGULAR SURFACES
- **NO NEED TO TACK OR SUTURE** – ADHERES RAPIDLY TO WET SURFACES
- **THIN PROFILE** – FACILITATES PLACEMENT, PRIMARY CLOSURE
- **NO PRE-HYDRATION REQUIRED** – APPLYING DRY IMPROVES ADHESION
- **NO RETRIEVAL** – NATURALLY RESORBS AS HEALING PROGRESSES
- **STORAGE AT ROOM TEMPERATURE** – WITH A 5-YEAR SHELF LIFE

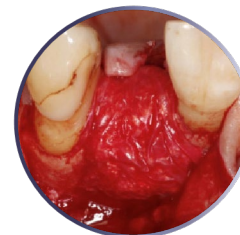
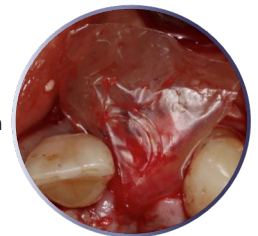


KEEP IT MINIMALLY INVASIVE

- No flap elevation required
- Simply tuck BioXclude 1mm under gingival margin
- Easily achieved with a reverse (inverted) suturing technique

NO NEED TO TRIM

- Allow BioXclude to drape and adhere
- This allows a larger piece to bunch up between the teeth adjacent to the site, while also extending over the buccal portion of the graft and onto native bone

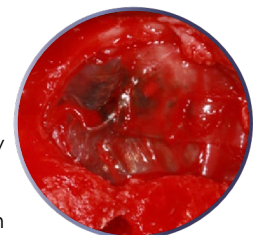


NO NEED TO FIXATE

- BioXclude will stick to any hydrated surface
- Place dry and allow it to hydrate to the site, or hydrate over the top with sterile saline
- BioXclude adheres like shrink wrap

UNMATCHED ADHESION

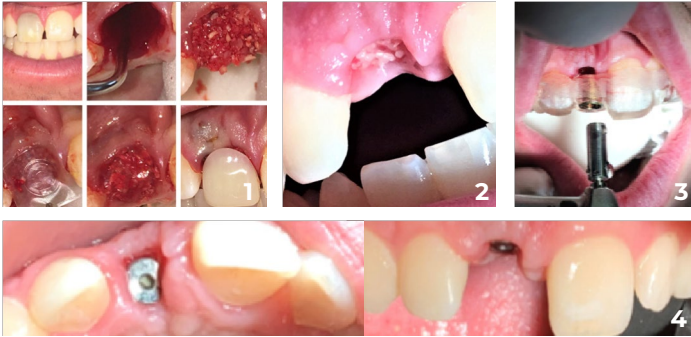
- Adheres quickly to the Schneiderian membrane
- Easily applied dry, naturally hydrates and seals the perforation like a patch
- No need for further fixation



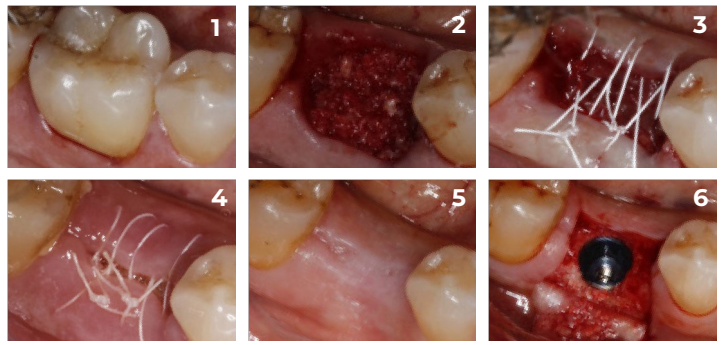
Photos courtesy of: (1) Jin Sub Oh, DMD, MS; (2,3) John Kim, DMD, MS, PA; (4) Arthur Yagudayev, DDS, MS

Anterior Socket Preservation: Minimally-Invasive

1. FDBA + BioXclude
2. 4-day healing
3. 5-month re-entry
4. Implant placement



Photos courtesy of Anthony Del Vecchio, DDS,
Yorktown Heights, NY



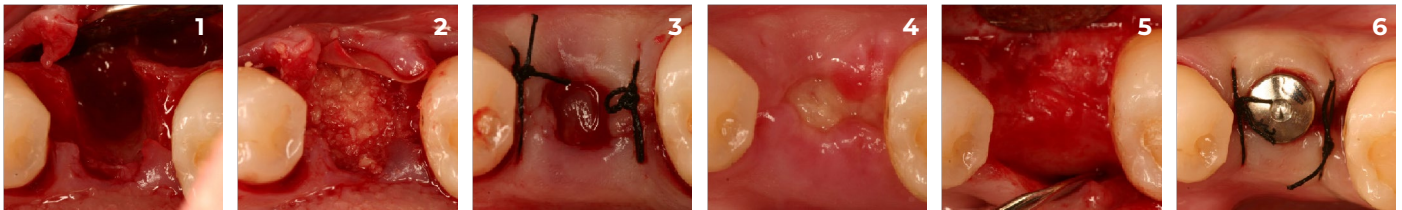
Photos courtesy of Dan Cullum, DDS, Coeur D'Alene, ID

1. Pre-op
2. FDBA + BioXclude
3. (2) Reverse figure-eight sutures
4. 10-day post-op
5. 6-month post-op
6. Implant placement

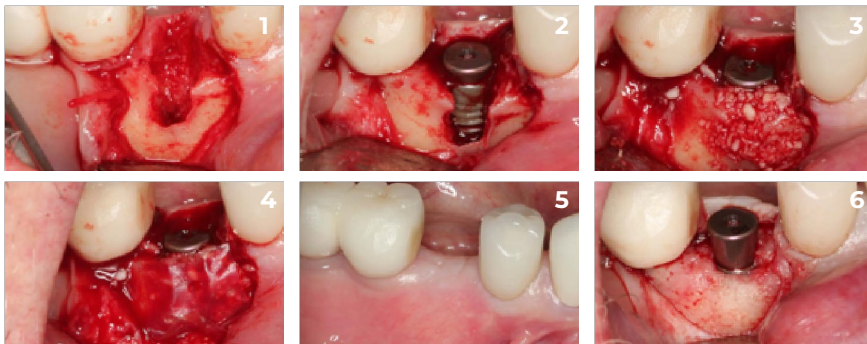
Posterior Socket Preservation: Minimally-Invasive

Socket Preservation: Significant Bony Defect

1. Buccal defect
2. FDBA + BioXclude
3. Site left exposed
4. 10-day healing
5. 3-month re-entry
6. Implant placement



Photos courtesy of Dan Holtzclaw, DDS, MS, Austin, TX



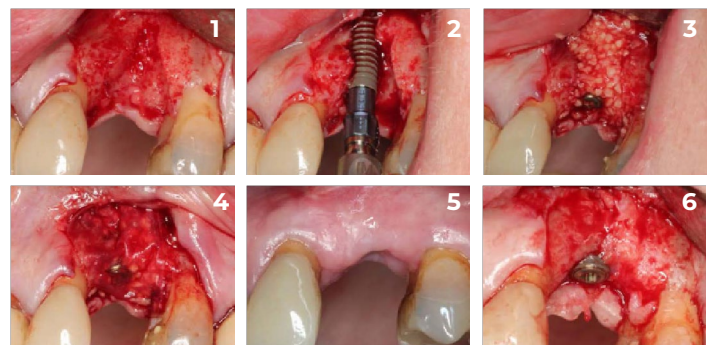
Photos courtesy of Robert Miller, DMD, Plantation, FL

Immediate Implant

1. Failed implant removal
2. Implant placement
3. Bone graft placement
4. BioXclude placement
5. Post-op view
6. Re-entry

Immediate Implant: Moderate Facial Defect

1. Buccal defect
2. Implant placement
3. Bone graft placement
4. BioXclude placement
5. Post-op view
6. Re-entry

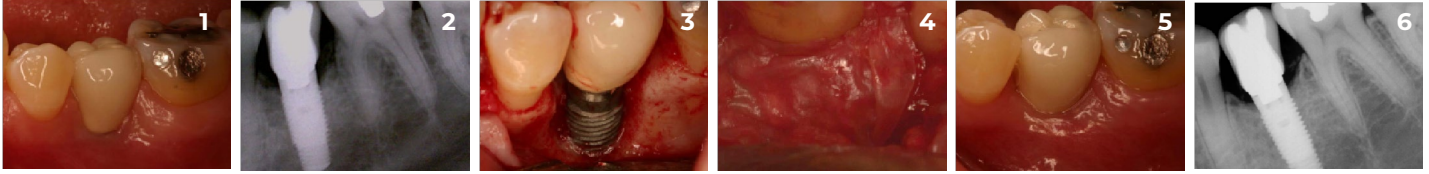


Photos courtesy of Robert Miller, DMD, Plantation, FL

Clinical Cases

Implant Repair: Peri-implantitis

1. Pre-op implant #20
2. Pre-op PA
3. Defect
4. BioXclude in place (grafted with Accell® bone putty)
5. 12-month post-op
6. 12-month PA



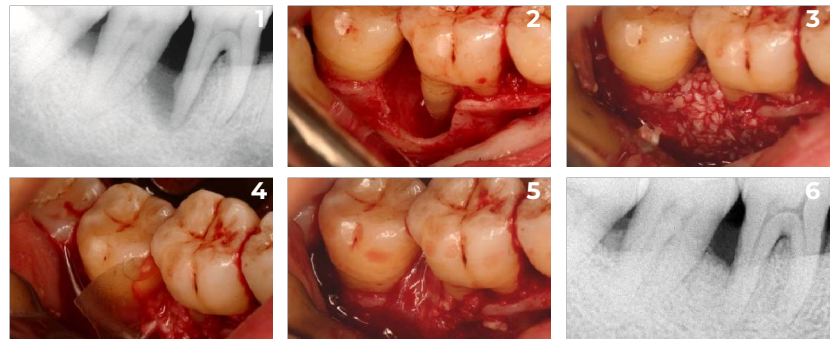
Photos courtesy of Dan Holtzclaw, DDS, MS, Austin, TX

Guided Tissue Regeneration

1. Pre-op #30
2. Defect
3. Grafted with FDBA
4. BioXclude placed interproximally - can flash hydrate
5. BioXclude hydrated
6. 16-month post-op

Probing Depth

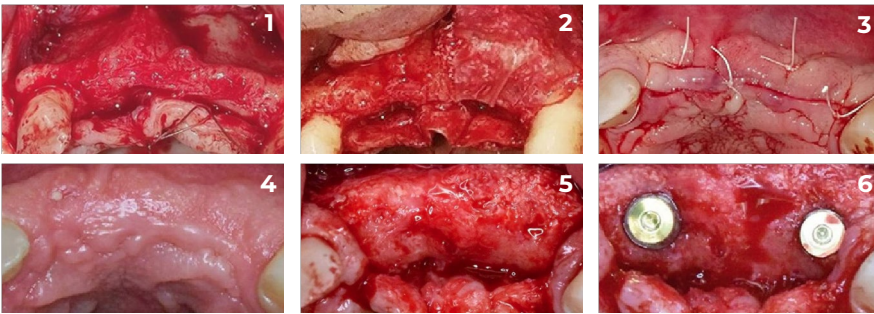
Pre-Op = 12 mm
3-Month = 3 mm



Photos courtesy of Dan Holtzclaw, DDS, MS, Austin, TX

Ridge Augmentation: BioXclude Only

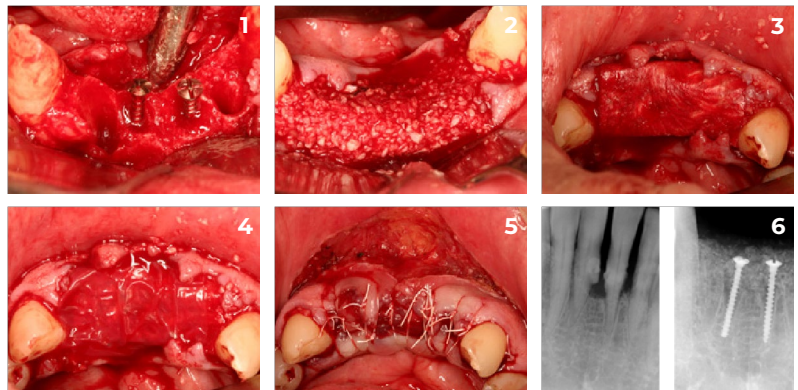
1. Pre-op defect
2. Autogenous scrapings / xenograft bone, BioXclude placed
3. Primary closure with PTFE
4. 8-month healing
5. 8-month re-entry
6. Implants placed



Photos courtesy of Vinay Bhide, DDS, MSc, Ontario, CAN

Ridge Augmentation: Double Membrane

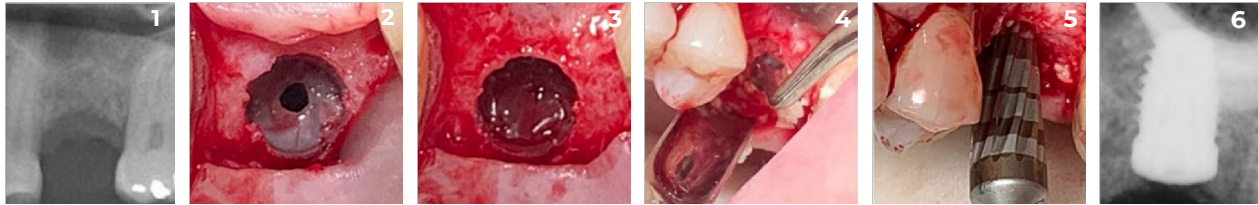
1. Extraction #23-26; tenting screws placed
2. Grafted with FDBA
3. Collagen membrane placed
4. BioXclude placed OVER collagen
5. Non-primary closure (vestibular dissection into chin performed to close the site).
6. Pre-op/post-op PA



Photos courtesy of Dan Holtzclaw, DDS, MS, Austin, TX

Perforation Repair: Crestal Sinus Lift

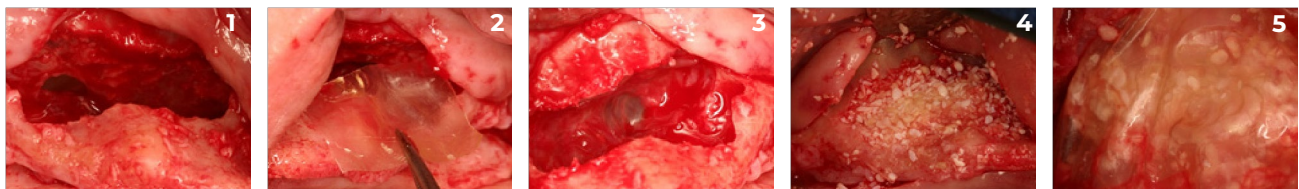
1. Pre-op PA
2. Sinus perforation
3. BioXclude in place
4. FDBA
5. Versah® bur used. Implant placed
6. Immediate post-op PA



Photos courtesy of Anthony Del Vecchio, DDS, Yorktown heights, NY

1. Sinus membrane perforation
2. BioXclude placed dry
3. BioXclude adheres to sinus and seals perforation
4. FDBA placed
5. Lateral sinus window covered with BioXclude

Perforation Repair: Lateral Sinus Lift



Photos courtesy of Dan Holtzclaw, DDSMS, Austin, TX

Periodontal Pockets: Adjunct to Non-Surgical Scaling and Root Planing (ScRP)

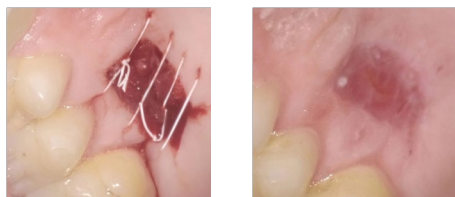
Dodge, JR, and Rademacher, AM. (2021). **Dehydrated Human Amnion-Chorion Product as An Adjunct to Scaling and Root Planing.** *Perio & Prosthodontics*, 7(4):80



(1) Evaluation of PD of periodontal pocket; (2) Hemostasis following scaling and root planing; (3) Hydration of BioXclude membrane; (4) Placement of BioXclude into instrumented pocket; (5) Use of probe to condense BioXclude into the apical extent of the treated site.

Patients	Sites	Initial PD (mm)		Final PD (mm)		CAL Gain (mm)		Resolution of BOP
		Mean	SD	Mean	SD	Mean	SD	
16	30	7.0	1.0	4.4	1.0	2.6*	0.9	83%#

*# ScRP + Arestin resulted in **CAL gain of 1.2 mm** and **25% reduction in BOP** when reported by Goodson et al., *J Perio* 2007; 78 (8): 1568-1579



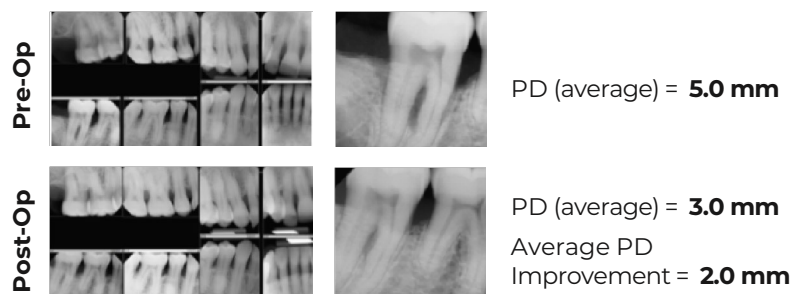
Initial **One Week Post-Op**

Rapid healing with limited inflammation and minimal pain reported

Soft Tissue Dressing: Donor Sites

Photos courtesy of Nicholas Poulos, DDS, MS, Denver, CO

Periodontal Laser Therapy + BioXclude Adjunct



Photos courtesy of Nicholas Poulos, DDS, MS, Denver, CO

Pioneering Research

Snoasis Medical has pioneered the development and use of **amnion-chorion membranes** in **dental-oral maxillofacial surgery**. Rigorous scientific and clinical studies by independent clinicians and researchers have clearly shown that **BioXclude** is **safe, effective, and versatile**.

Don't take our word for it. **Check out these publications:**

Periodontics

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Endodontics

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CHOOSING THE RIGHT SIZE

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

BioXclude®



8x8 mm



12x12 mm



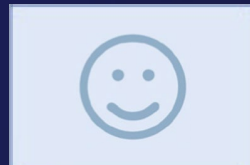
10x20 mm



15x20 mm



15x25 mm



20x30 mm



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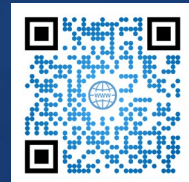
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