Nobel Biocare™

creos™

YOU ARE WHAT WE STAND FOR.

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Nobel Biocare™

advanced

Upwards and on the rise

Innovation is our passion but it's your reality THAT DRIVES US.

creos

creos™ is the Nobel Biocare regenerative product portfolio, built to meet your everyday needs. Join us and experience the carefully designed, easy-to-use, effective solutions.

We aim to be the trusted regenerative partner for you and your patients, because you are what we stand for.

Enhancing the experience

easy-to-use

Sideways to your side

effective

creos™ xenoprotect

A membrane with outstanding handling that facilitates bone gain

OUTSTANDING HANDLING [1, 2]

- Does not stick to instruments.
- Repositioning in-situ possible.
- Low surface expansion when hydrated.
- Both sides can face the defect.

HIGH MECHANICAL STRENGTH [2, 3, 4]

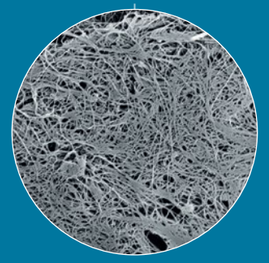
- Excellent suture retention.
- Highly tear-resistant.

ENDURING RESISTANCE TO DEGRADATION IN VIVO* [3]

- Manufacturing process intended to preserve the natural structure of the collagen fiber network, to confer a high resistance to degradation.

FACILITATES BONE GAIN [2, 3, 5, 6, 7, 8]

- Excellent tissue compatibility.[3]
- Good clinical results.[5]



"What I like is that the handling is very easy. The mechanical stability is very high and when it is rehydrated it adapts very well to the underlying bone"

Dr. Bastian Wessing, Germany

Porcine

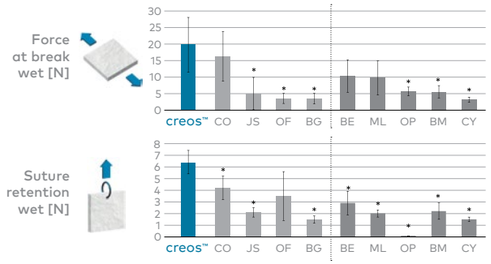
*As shown in an animal model (rat, subcutaneous)

High mechanical strength

In an in vitro study aiming to compare the mechanical strength of commonly used native non-chemically cross-linked and chemically cross-linked collagen membranes[4]:

- creos™ xenoprotect demonstrated the highest force at break, wet (21.2 N).
- creos™ xenoprotect had the highest suture retention, wet (6.1 N).

Comparison of commercial membrane in a hydrated state



Non cross-linked collagen membranes (NXL) – CX: creos™ xenoprotect [Nobel Biocare]; CO: Copios [Zimmer]; JS: Jason [botiss]; OF: Osseoguard Flex [3i]; BG: Bio-Gide [Geistlich]

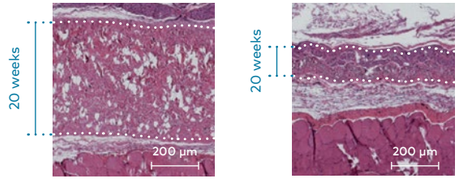
Cross-linked collagen membranes (XL) – BE: BioMend Extend [Zimmer]; ML: Mem-Lok [BioHorizons]; OP: OssixPlus [Datum Dental]; BM: BioMend [Zimmer]; CY: Cytoplast RTM [Osteogenics]

*Statistically significant

Enduring resistance to degradation in vivo without chemical cross linking [3]

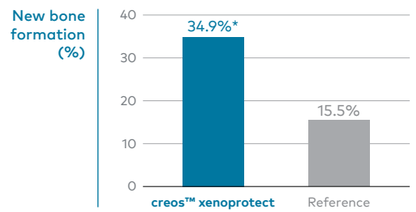
Manufacturing process intended to preserve the natural structure of the collagen fiber network, to confer a high resistance to degradation.[3]

In an animal model, after 20 weeks, the thickness of xenoprotect decreased only slightly, whereas the reference membrane showed a thickness loss of around 50%, confirming the higher stability of xenoprotect against biodegradation in vivo.[3]



Representative histological images at 20 weeks implantation in a rat model.

Facilitates new bone formation [2, 3, 5, 6, 7, 8]



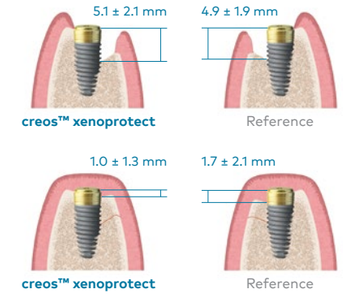
*Statistically significant

In a comparative in vivo study, creos™ xenoprotect demonstrated significantly higher new bone formation in the central portion of the defect.

This increase in bone formation was associated with significantly increased expression of the growth factor *Bmp2*, which has a strong role in osteogenesis.[7]

In a randomized controlled clinical trial, 24 patients were treated with creos™ xenoprotect and 25 with a reference membrane. In the creos™ xenoprotect group, the defect height reduced at 6-month re-entry by 81%.
In the reference membrane group, the defect height reduced at 6-month re-entry by 62%.[5]

Schematic showing the defect height prior to treatment and 6 months after GBR



Scan the code for clinical resources.

creos™ xenogain

3 methods of application to meet all your bone grafting needs

Regenerating bone for 15 years

THREE DIFFERENT METHODS OF APPLICATION:

vial | bowl | syringe

SIMILAR TO HUMAN BONE

– Chemical composition: Ca/P ratio.
– Interconnected macropores.[9, 10]

EASY HANDLING

– Homogenous particle size.[9]
– Hydrophilic for fast rehydration.[11, 12]

SOLID FOUNDATION FOR DENTAL IMPLANT TREATMENT

– Osteoconductive properties.[10]
– Long-term volume stability.[13]
– Uneventful healing.[8, 11, 12, 13, 14]

"I appreciated its handling properties and I see its high hydrophilicity as a biological advantage in sinus grafting and peri-implant defect regeneration"

Dr. Werner Zechner, Austria

Bovine

creos™ xenogain collagen

block | syringe

Purified cancellous bovine bone mineral granules and 10% porcine collagen in block form and syringe.

The collagen helps to hold creos™ xenogain collagen in the desired place.

Especially recommended for extraction socket management.

Bovine and Porcine

Scaffold for successful regeneration

Preserved natural features of bone through optimized manufacturing process.[10]

CHEMICAL COMPOSITION

With a calcium phosphate ratio that reflects the composition in human bone and a structure with low crystallinity. The body accepts creos™ xenogain as a suitable framework for bone formation.[9]

PARTICLE SIZE

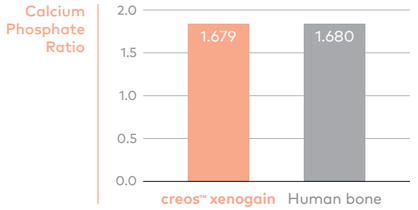
Homogenous particle size.[9]
Maintains space for bone regeneration.[12]

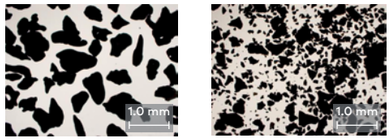
PRESERVED NANOSTRUCTURE

Nanostructure preserved thanks to treatment at comparatively low temperature (600°C) and no sintering.[10]

MACRO AND MICRO-STRUCTURE

Interconnected macropores allow cells to invade bone grafts and micropores contribute to capillary liquid uptake (hydrophilicity).[15, 16]

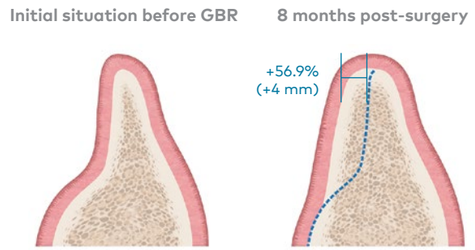




Photographic micrograph of creos™ xenogain and reference product showing the particle size distribution (magnification 20x)

Solid foundation for implant placement

The graft integrates with the newly formed bone, building a basis for successful implant placement.[12]

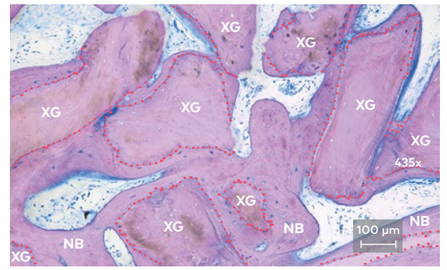


Schematic showing the defect and bone size prior to and after GBR

In a multicenter clinical study involving 46 patients, bone increase after 8 months was 4.0 mm (+56.9 % gain) and 4.7 mm (51.0 % gain) at 1 and 3 mm from the top of the crest, respectively.[8]

GBR led to robust bone regeneration during the 8 months of healing, enabling successful placement of 91 implants in 43 patients, with an average insertion torque of 37.8 ± 5.1 Ncm.[8]

Histological assessment of the trephine cores showed 37.3 % of new bone, 39.1 % of graft material, and 23.6 % of soft tissue (n = 6 cores, 3 patients).[8]

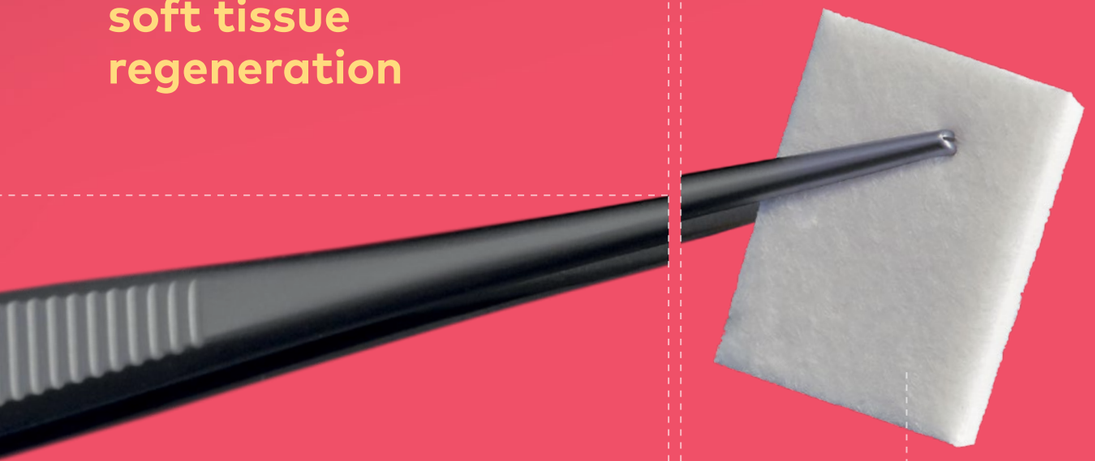


Histological cross section of the cellular components; NB – new bone, XG – graft, scale bar shown in the bottom right corner, red dashed line: bone to graft particle contact.

Scan the code for clinical resources.

creos™ mucogain

Unique oriented porous structure designed for guided soft tissue regeneration



SUBSTITUTES THE NEED FOR A SECOND SURGICAL SITE [17, 18, 19]

PATENTED MANUFACTURING METHOD

- Open interconnecting porous structure.
- Designed to promote soft tissue regeneration through the migration of cells and blood vessels into the matrix.[20, 21, 22]

VARIETY OF CHOICES

- A choice of different sizes and thicknesses.

EXCELLENT HANDLING

- Easy to use.[23]
- High suture retention and stress resistance.[23]
- Memory effect after hydration and cycling loading in vitro.[20]
- Trim to precisely fit surgical site.[23]

CLINICALLY EFFECTIVE

- Shown to promote soft tissue health and maintain adequate soft tissue thickness in a clinical study. [23, 24, 25, 26]

"It felt like an autogenous tissue graft and the mechanical stability is amazing"

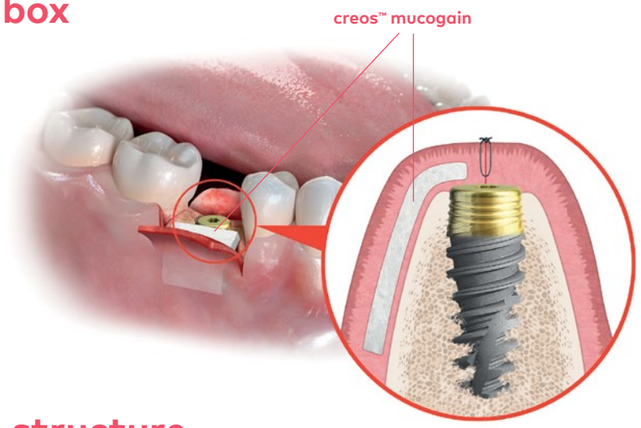
Dr. Miguel González Menéndez, Spain

Porcine

Use straight out of the box

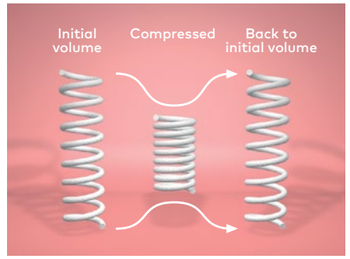
creos™ mucogain is intended to be used for soft tissue augmentation indications in the oral cavity around teeth or implants:

- Guided tissue regeneration (GTR) procedures in recession defects for root coverage.
- Localized gingival augmentation to increase keratinized tissue around teeth and implants.

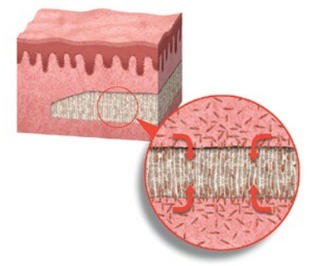


Unique oriented porous structure

1. Matrix structure
Interconnecting porous structure, produced by a patented process.[20, 21, 22]



2. Mechanical properties
After hydration and compression in 49 cycles in vitro, the graft regains its initial volume.[20]



3. Biological outcome
Designed to promote soft tissue regeneration through the migration of cells and blood vessels into the matrix.[20, 22]

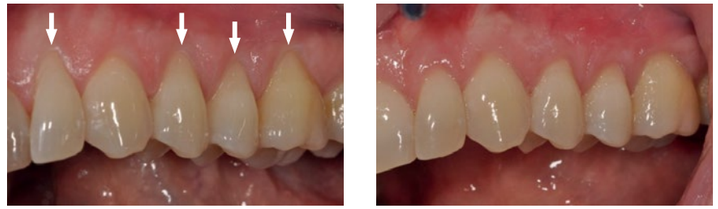
Clinically effective [23, 24, 25, 26]

Clinically effective for soft tissue regeneration in combination with immediate implant placement and bone grafting procedure.[23, 24]

A retrospective analysis including 45 patients with a follow-up of up to 4.5 years (mean of 1.8 ± 1.3 years) demonstrated that creos™ mucogain promotes soft tissue health and maintains adequate soft tissue thickness when used simultaneously with implant placement.[25]

Clinical case

Cirillo F. (March 2020).
Periodontal plastic surgery: gingival recession coverage with a xenogenic collagen matrix. The Foundation for Oral Rehabilitation (FOR.org): https://bit.ly/2TkLsgu
Images reprinted with permission of the author and FOR.



Buccal view prior surgery (left) and 8 months after surgery (right) on #22, #24, #25, #26 after treatment with creos™ mucogain.

Scan the code for clinical resources.

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Products

creos™ xenoprotect

porcine collagen membrane

Size	Article No.
15x20 mm	N1520
25x30 mm	N2530
30x40mm	N3040

creos™ mucogain

porcine collagen matrix

Size	Thickness	Article No.
15x20 mm	3 mm	MU15203
25x30 mm	3 mm	MU25303
15x20 mm	5 mm	MU15205
25x30 mm	5 mm	MU25305

creos™ xenogain

deproteinized bovine bone matrix

Weight	Granule size	Volume	Vial	Bowl	Syringe
0.25 g	Small (0.2-1.0 mm)	0.36 cc	N1110	N1110-B	N1210
	Large (1.0- 2.0 mm)	0.54 cc	N1111	N1111-B	N1211
0.50 g	Small (0.2-1.0 mm)	0.82 cc	N1120	N1120-B	N1220
	Large (1.0- 2.0 mm)	1.27 cc	N1121	N1121-B	N1221
1.00 g	Small (0.2-1.0 mm)	1.71 cc	N1130	N1130-B	
	Large (1.0- 2.0 mm)	2.69 cc	N1131	N1131-B	
2.00 g	Small (0.2-1.0 mm)	3.64 cc	N1140	N1140-B	
	Large (1.0- 2.0 mm)	5.74 cc	N1141	N1141-B	

creos™ xenogain collagen

creos™ xenogain + 10% porcine collagen type I

Size	Block size	Article No.
100 mg	6 x 6 x 6 mm	N1320
250 mg	7 x 8 x 9 mm	N1330
500 mg	9 x 10 x 11 mm	N1340

Size	Syringe size	Article No.
250 mg	4.6 x 40 mm	N1410
500 mg	5.6 x 45 mm	N1420

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