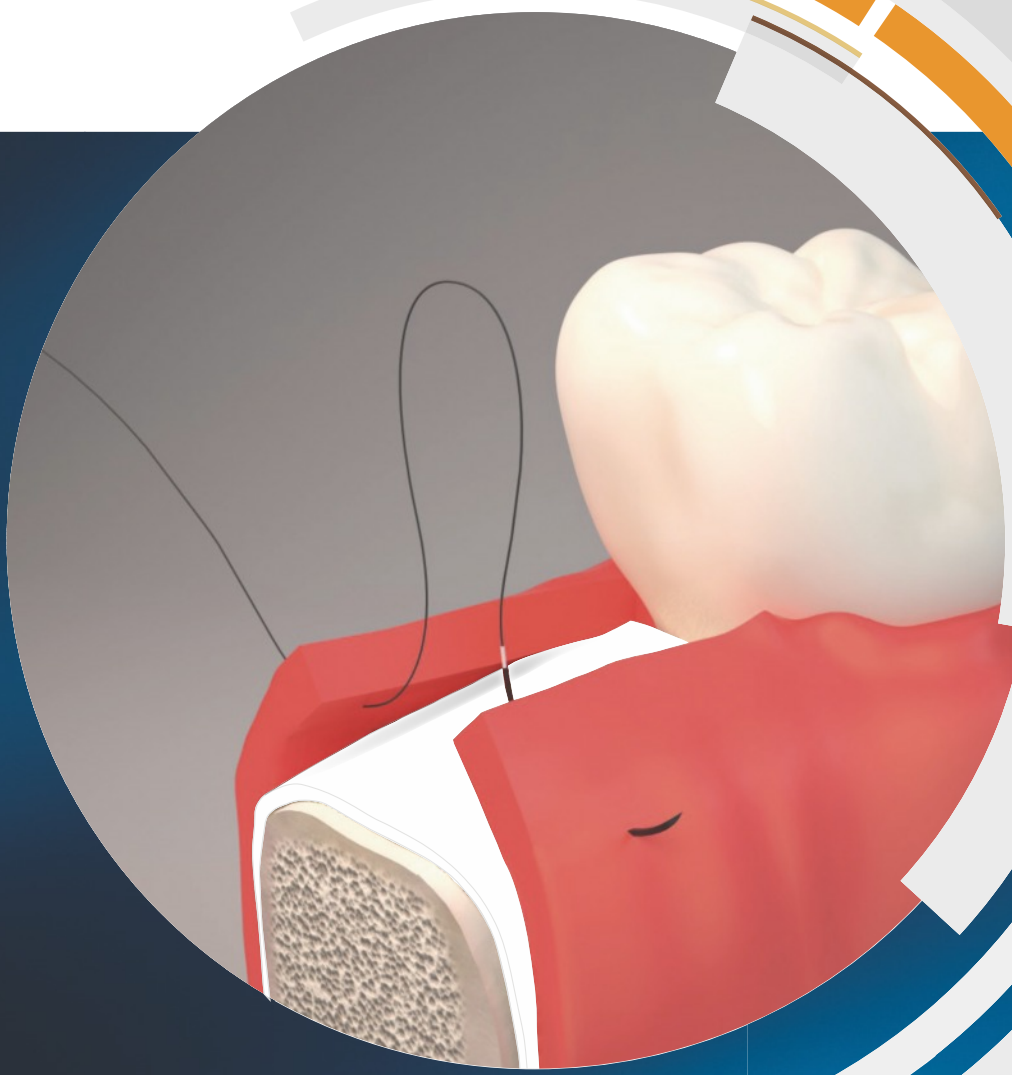
DENTAL SUTURE BOOKLET



RESORBA® Oral Sutures

state of the art wound closure

Our Distributor

heicodent

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RESORBA®

REPAIR AND REGENERATE

an Advanced Medical Solutions Group plc company

Juraj Brozović

Split
Croatia

"RESORBA® sutures are a vital part of my everyday surgical armamentarium due to their bioinert and tensile properties. SUPRAMID ORAL and GLYCOLON® variants might be of particular interest to practitioners as all-rounders, exhibiting convenient handling traits and safe knots. When referring to a microsurgical approach in oral surgery, PVDF monofil sutures (RESOPREN®) definitely win the medal. Combining them with the multitude of needles available will add to one's soft tissue management, making it easier to achieve predictable outcomes in hard and soft tissue grafting procedures."

Rino Burkhardt

Zurich
Switzerland

"RESORBA® combines ultimate precision in needle production, biocompatibility and excellent handling properties of the materials and creativity in needle-thread combinations. RESORBA® sutures – my first choice in periodontal surgery when it comes to wound closure !"

Detlef Hildebrand

Berlin
Germany

"My favorite suturing-material is RESOLON® size 5-0 with DSM 16 and 6-0 with DSMF 11. It's a great pleasure to realize my suturing techniques with this kind of excellence. I always perform a nice wound closure with special techniques like non-interrupted suturings."

Istvan Urban

Budapest
Hungary

"After receiving RESORBA® sutures for testing, I was so impressed by their handling and quality that I changed my previous type of sutures to these and I am very satisfied with them."

BIOLOGICAL THOUGHTS

The treatment of soft tissue to obtain correct aesthetic and functional results has high priority in all surgical interventions.
Two main aspects have to be observed to achieve these priorities:

- Form and management of wound edges → Flap Design
- Suturing technique → Selection of correct products

Aim of the correct wound closure is to:

- protect the fresh wound from infection
- minimize disturbance of wound healing
- stabilize the wound edges during healing phase
- avoid unnecessary tension on soft tissue
- allow haemostasis
- reconstitution of the aesthetic and functional continuity of the tissue
- reducing scar formation
- avoiding tissue shrinkage and loss of tissue substance

A wound is an interruption of the tissue integrity, caused by an injury or a surgical procedure, the tissue reacts with reparation and regeneration

- The correct repositioning of the wound edges, allows an acceleration of the healing processes
- The risk of an infection is reduced

Factors influencing wound healing (locally)

Gap between diameter of needle and diameter of thread:

→ this is creating a "space", bacteria can use as penetration portal

Structure of the Thread:

→ braided sutures offer bacteria a biological niche, which are difficult to reach by the immunological defense of the body (high capillarity)

Material Source:

→ Silk is a natural protein which could cause a foreign body reaction; it should not be used in dental surgery

Suture removal:

→ Using a non-absorbable material, or when removing absorbable suture, the surgeon must take care, not to pull the contaminated part (knot and suture part that have been exposed to oral cavity) through the wound

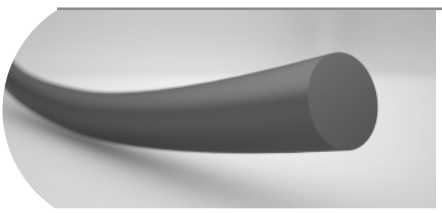
The text on this page is based on Siervo, S (2008) *Suturing Techniques in Oral Surgery.* Berlin: Quintessenz Verlags-GmbH

OVERVIEW

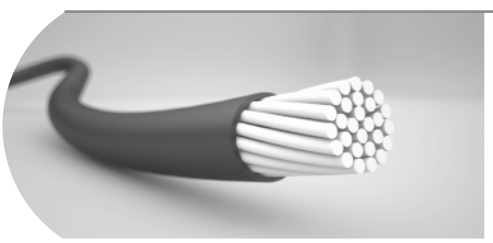
Surgical suture material – suggestions for dental indications

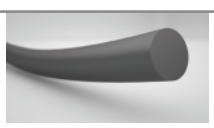
Non-absorbable material

- long-term durability with simultaneous high biocompatibility
- optimal tissue compatibility in the body due to the careful selection of materials and refining process
- easy removal

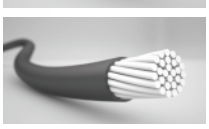


Non-absorbable suture materials remain virtually unchanged in body tissues. Once the scar tissue of the wound edges has become sufficiently strong to hold the wound together, the doctor removes the suture material by simply pulling it out.





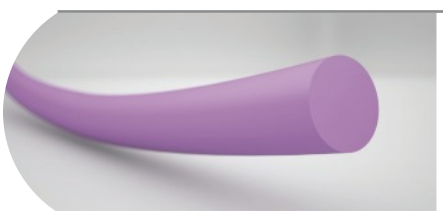
Monofilament
5/0 and smaller



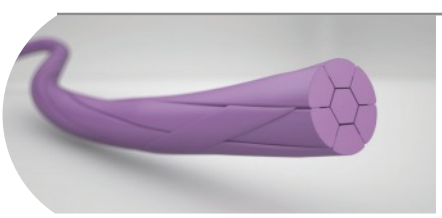
Pseudomonofilament
up to size 4/0

Absorbable material

- for tissue adaptations where the need for mechanical support is time-restricted
- problem-free disintegration and elimination
- optimum biocompatibility due to the chemical properties and refinements



Absorbable suture materials hold the wound edges in place during the healing phase. During this time their tensile and breaking strength gradually diminishes. Absorbable suture materials are broken down either by endogenous proteolytic enzymes or by hydrolysis (in the case of PGA *RESORBA*®, PGA *resoquick*™ and GLYCOLON®).



Name	Material Type	Structure	Colour	USP Sizes	Features
RESOTEX® ORAL	Polyamide	Monofilament	black	5/0, 6/0, 7/0	• Non absorbable • Non irritating • Softer • Easy passage through tissue • Perfect handling and knotting
RESOLON®	Polyamide	Monofilament	blue	5/0, 6/0, 7/0	
RESOTEX® ORAL/ RESOLON®, monofilament, non-absorbable, made from polyamide 6-6/6, extruded from a copolymer of polyamide 6 and polyamide 6/6. RESOTEX® ORAL/ RESOLON® undergoes special treatment during the manufacturing process, which accounts for its above average softness and flexibility.					
NYLON	Polyamide	Monofilament	black	7/0, 8/0, 9/0	• Non-absorbable • Very soft and subtile • Perfect handling and knotting • Easy passage through tissue • No capillarity • Minimal tissue reactions
NYLON is made by polycondensation of hexamethylendiamine and adipinic acid to polyamide 6. On account of ist very high tensile strength, even with the smallest of threat diameters, NYLON is especially well-suited for the finest of sutures in microsurgery.					
MOPYLEN®	Polypropylene	Monofilament	blue	5/0, 6/0, 7/0	• Non absorbable • Low friction • Perfect for running subcuticular sutures • Limited elasticity • Good plasticity • High tensile strength • Non irritating • Hydrophobic
MOPYLEN® has hydrophobic, inert, non-thrombogenic and non-aging characteristics, making this thread especially suitable for permanent implants in which the material has to remain in the tissue for a long period of time.					
SUPRAMID ORAL	Polyamide	Pseudo Monofilament	black	4/0	• Non absorbable • Soft • High tensile strength • Good knotting properties • Exceptional handling qualities • Smooth uniform surface allowing effortless passage through tissue • Easy removal
SUPRAMID	Polyamide	Pseudo Monofilament	black white		
SUPRAMID ORAL / SUPRAMID: monofilament, non-absorbable, made from a copolymer of polyamide 6 and polyamide 6/6. In diameters up to 4/0, it is supplied as pseudomonofilament made from polyamide 6/6, a polymer of hexamethylenediamine and adipic acid with a coating of polyamide 6, an ε-caprolactam polymer.					

Name	Material Type	Structure	Colour	USP Sizes	Remaining Tensile Strength	Features
GLYCOLON® ORAL	Polyglycolic acid-caprolactone	Monofilament	violet	5/0	9 days = 50%	• Short term absorbable suture • Low tissue reaction • Excellent handling • Perfect knot security • High tensile strength • Smooth tissue passage
GLYCOLON®	Polyglycolic acid-caprolactone	Monofilament	violet undyed	4/0, 5/0, 6/0		
GLYOLON® ORAL / GLYCOLON® has a very smooth surface, which allows long suture techniques with minimal tissue trauma. The degradation rate in comparsion with PGA RESORBA® is clearly reduced by the specially selected ratio of polyglycolic acid and carprolactone.						
PGA *RESORBA*®	Polyglycolic acid	Multifilament braided coated	violet undyed	4/0, 5/0, 6/0	21 days=50%	• Mid term absorbable • Soft & flexible • High tensile strength • Perfect knot security
PGA *RESORBA*® is a braided suture with applications in all surgical specialities where a strong absorbable suture is needed.						
PGA *resoquick*™	Polyglycolic acid	Multifilament braided coated	undyed	4/0, 5/0, 6/0	7 days=50%	• Short term absorbable • High tensile strength • Perfect knot security
PGA *resoquick*™ can be used for specialities where rapid absorption may play a significant role in operative success.						

SURGICAL NEEDLES

RESORBA® provides a large needle range – more information on request.

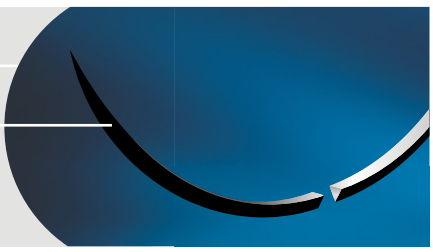
Needle body – profile and point

Reverse cutting needle

▼▽ = S

3/8-circle = DS, DSM

special black needle = ORAL



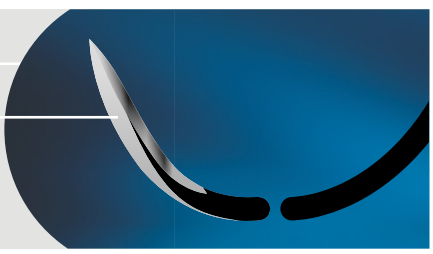
- triangular needle cross-section
- available with PREMIUM-CUT-M

Round-bodied cutting needle

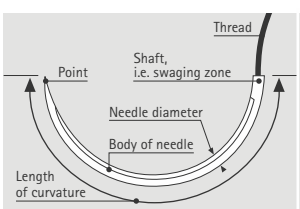
▼ = RT

1/2-, 3/8-circle, asymptotic or straight = HRT, DRT, GRT, ART

special black needle = ORAL



- needle point with three cutting edges, thus producing a narrow puncture canal which easily penetrates tissue



Numbers indicate the straight (extended) length of the needle in mm

	used mostly			
Curvature	1/2-circle = H	3/8-circle = D	straight = G	asymptotic = A
indication	allrounder Posterior deeper layers	allrounder Anterior mucoperiost flap	interdental	muco-gingival surgery

Most common needle sizes 1:1

3/8 circle, cutting = DS PREMIUM-CUT = DSM

▽ DSM 11

▽ DSM 13

▽ DSM 16

▽ DSM 18

1/2 circle round bodied, trocar point = HRT

▼ HRT 16

▼ HRT 18

Asymptotic, round bodied, trocar point = ART

▼ ART 13

▼ ART 25

straight, round bodied = GR

● GR 22

DENTAL SUTURES

Designed especially for oral procedures – special suture range with black needles & coloured threats

RESOTEX® ORAL

- Non-absorbable monofilament suture
- Special treatment for increased suppleness
- Premium tempered black steel needle
- Available in 4/0, 5/0, 6/0, 7/0
- Various needle types

GLYCOLON® ORAL

- Absorbable monofilament suture
- Short term absorption
- Premium tempered black steel needle
- Available in 5/0
- Needles in 3/8 circle

SUPRAMID ORAL

- Non-absorbable polyamide suture
- Pseudomonofilament structure
- Premium tempered black steel needle
- Available in 4/0
- Various needle types

- Black needles & coloured threads

- ➜ no distracting light reflection
- ➜ excellent contrast in bloody environment
- ➜ better visibility through the tissue

RESORBA® needles are designed for specific indications, surgical techniques, and tissue conditions.

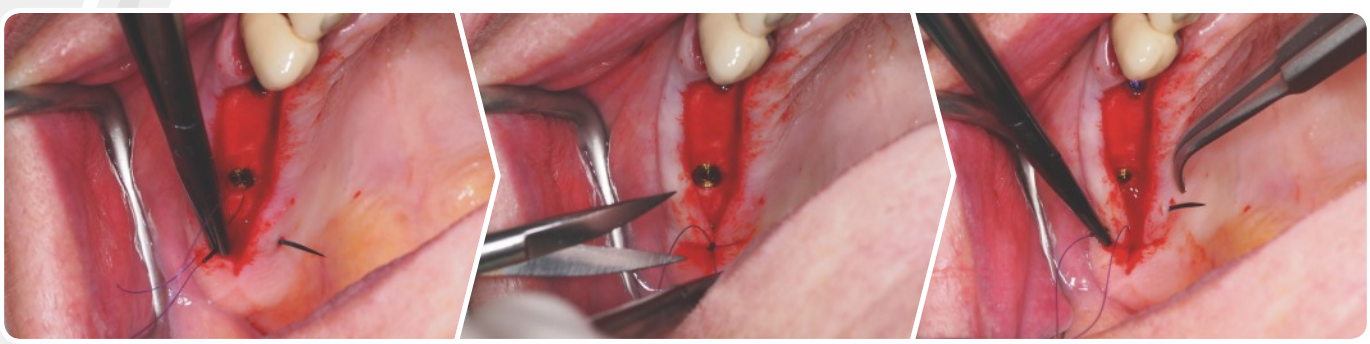
- atraumatic due to optimal transition between needle and thread
- special surface treatment and precision grinding ensures minimal resistance to penetration and smooth passage through the tissue

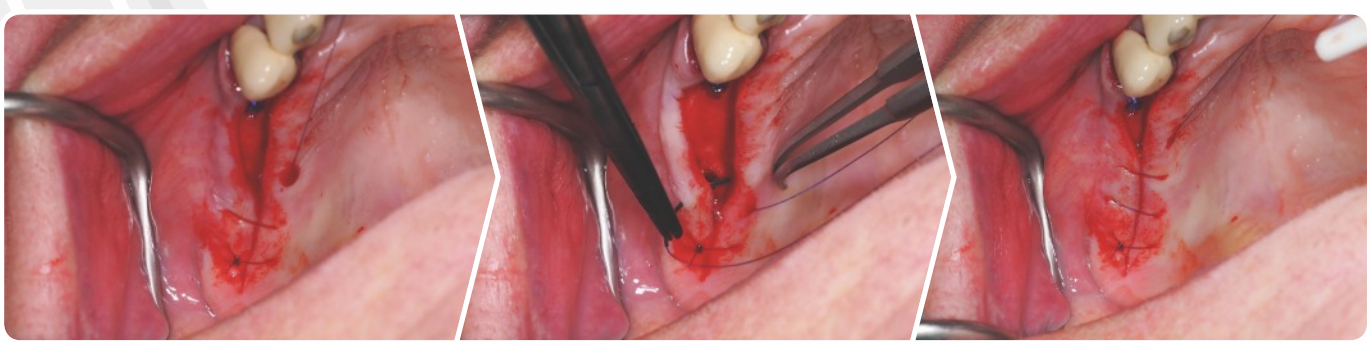
CLINICAL CASES

Continuous suturings

Clinical pictures with courtesy of Dr. Juraj Brozović, Split, Croatia

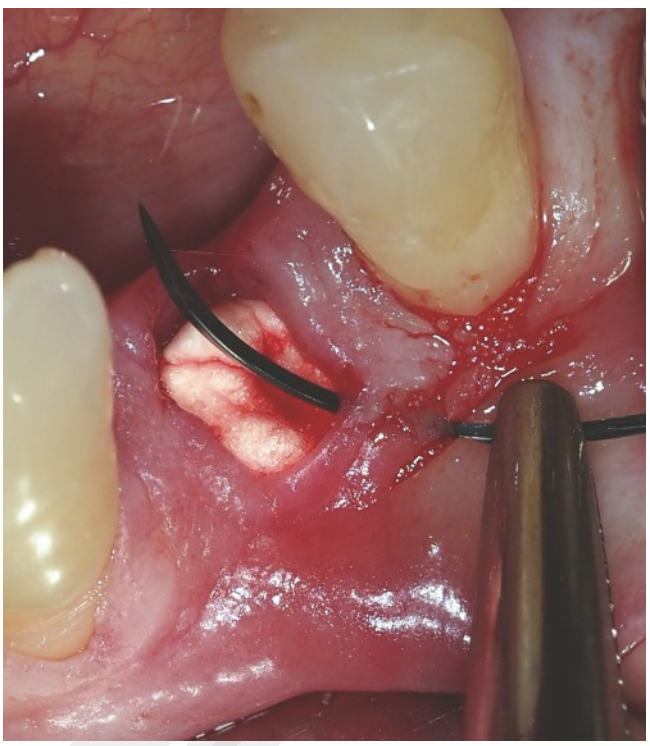
Crestal incision sutured with GLYCOLON® ORAL 5/0 with DSM 16mm "black needle"

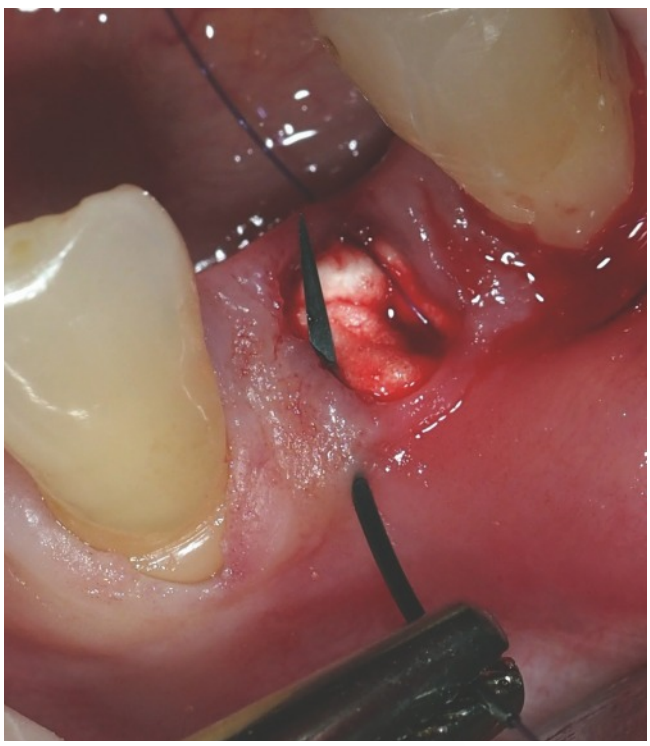




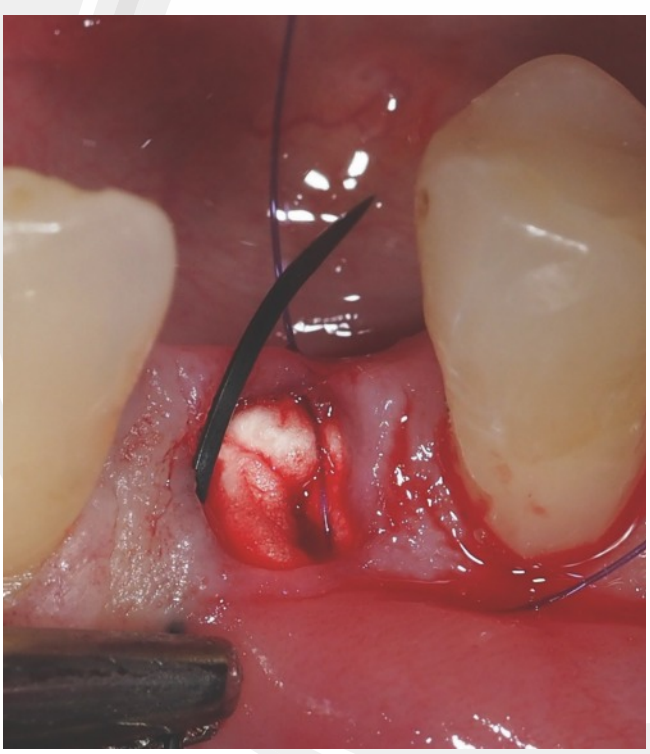
CLINICAL CASES

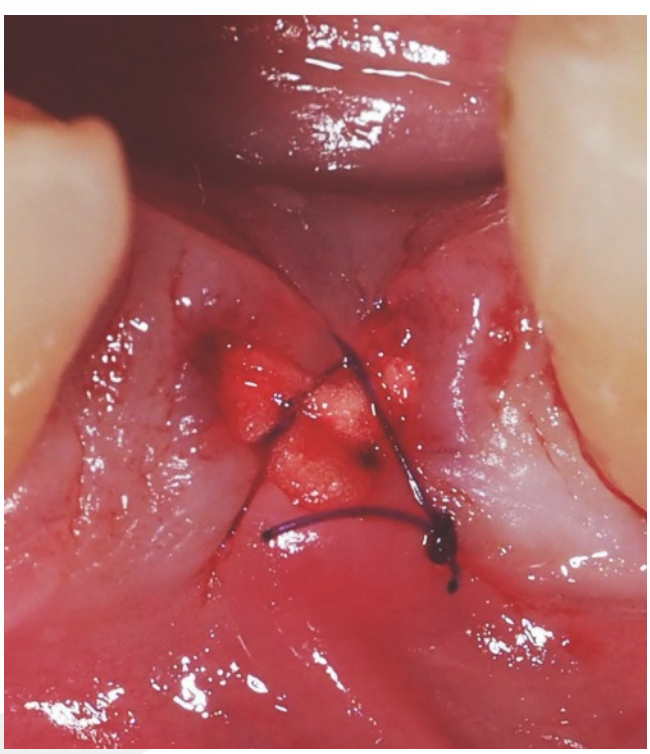
Cross-mattress suture





GLYCOLON® ORAL 5/0 with DSM 18mm "black needle"
Extraction socket treated with PARASORB® Cone

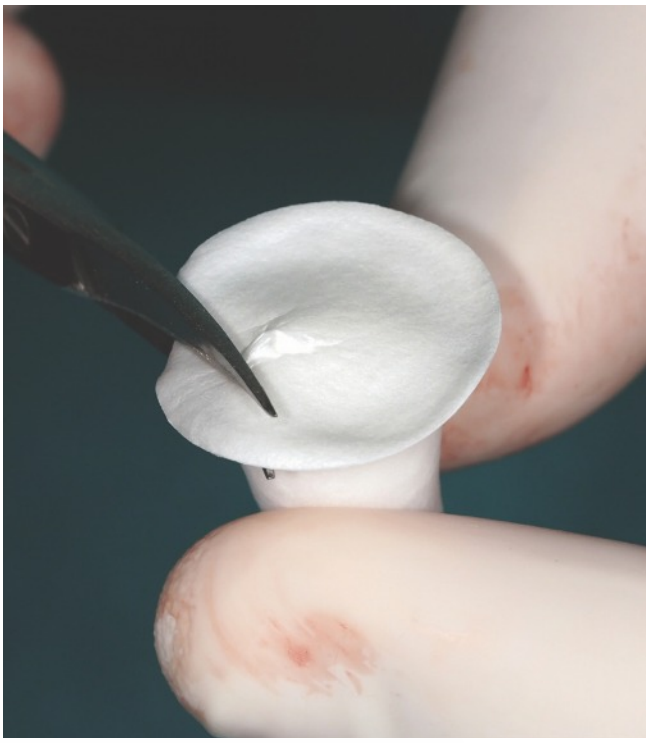




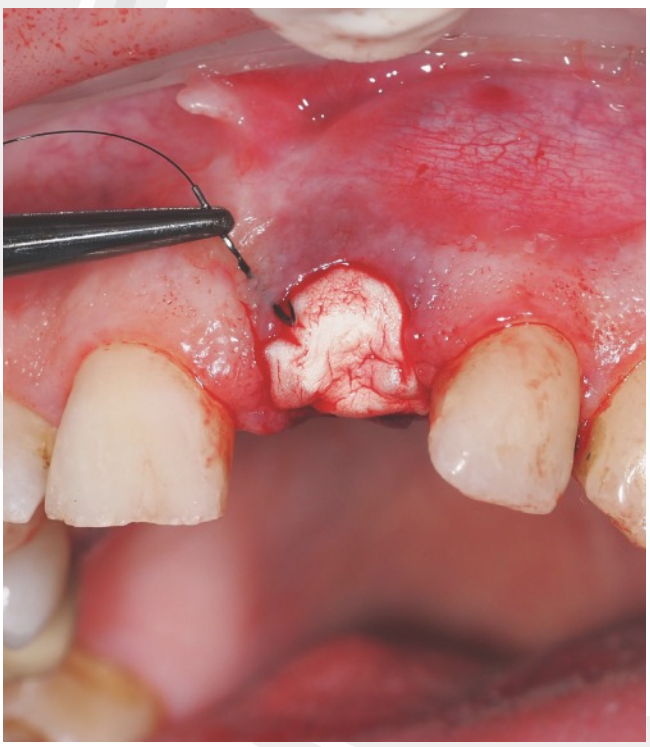
CLINICAL CASES

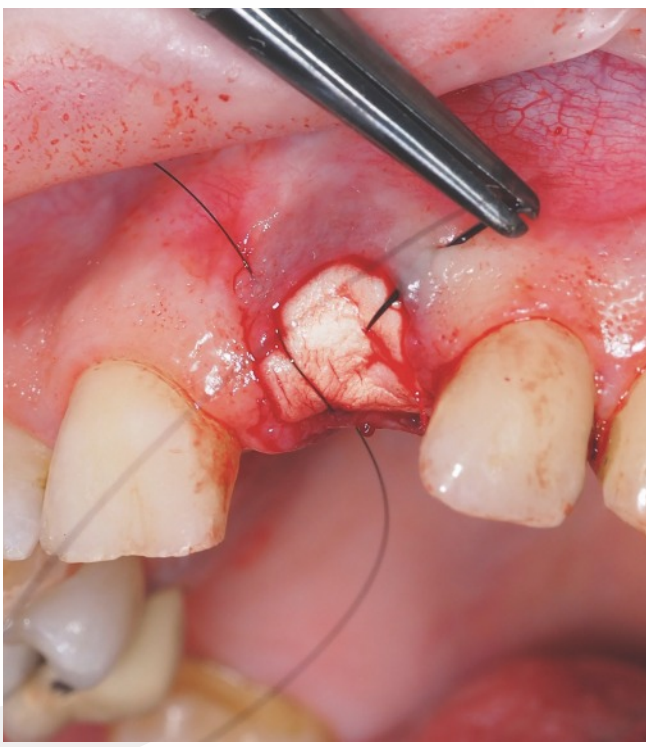
Socket Preservation with PARASORB® Sombrero

Extraction socket



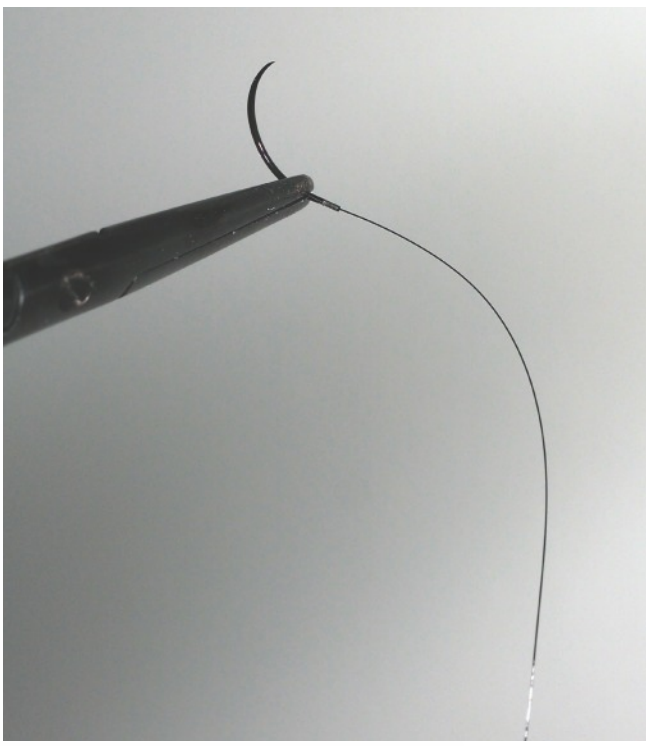
Adaption of PARASORB® Sombrero



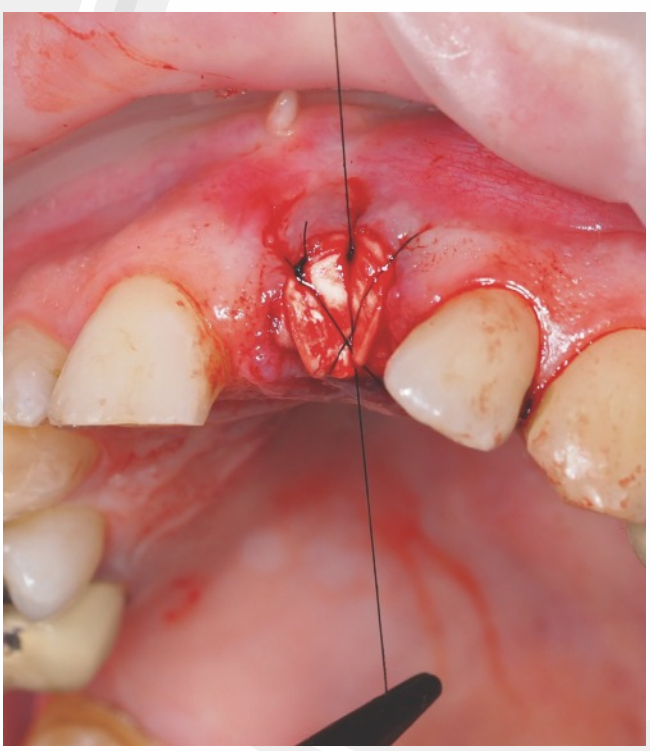


Wound edge approximation with RESOTEX® ORAL 6/0
with HRT 18mm "black needle"

Insertion of PARASORB® Sombrero into the extraction socket and placement of the membrane part under the mucosa



RESOTEX® ORAL 6/0
with HRT 18mm "black needle"



PARSORB® Sombrero secured with a criss-cross suture

RESORBA®
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an Advanced Medical Solutions Group plc company

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