

SUTURING LECTURE

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22ND SEPTEMBER 2025

SUTURING WORKSHOP



AIMS & OBJECTIVES

- 1) Discuss principles of suturing in oral surgery**
- 2) Recognise the relevant instrumentation required.**
- 3) Appreciate the properties of an ideal suture material**
- 4) Recognise 'basic' suturing techniques**
- 'hands on' approach to suturing**

Basic Surgical Principles



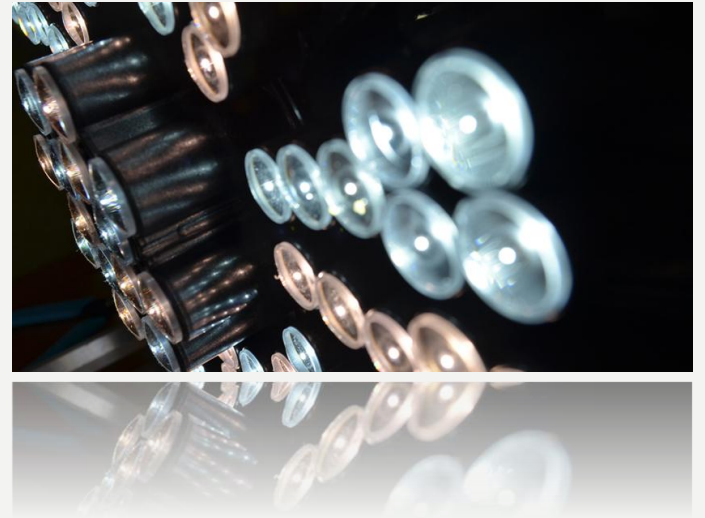
Adequate assistance



Adequate visibility

Adequate visibility

- Access
- Lights
- Surgical field free of blood and other fluids



Instrumentation

- Use 3 point contact – increased precision
- Extend finger along instrument
 - Provides extra stability
- Place ONLY fingertips through hand loops
 - Rotation from the wrist
 - Greater control
 - Quicker to pick up and put down





Fig. 5.2 Toothed forceps.

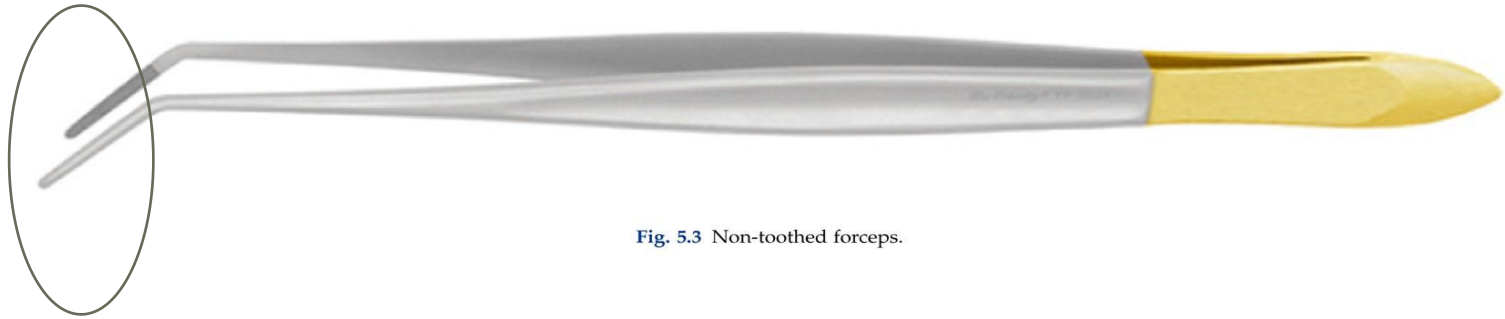


Fig. 5.3 Non-toothed forceps.



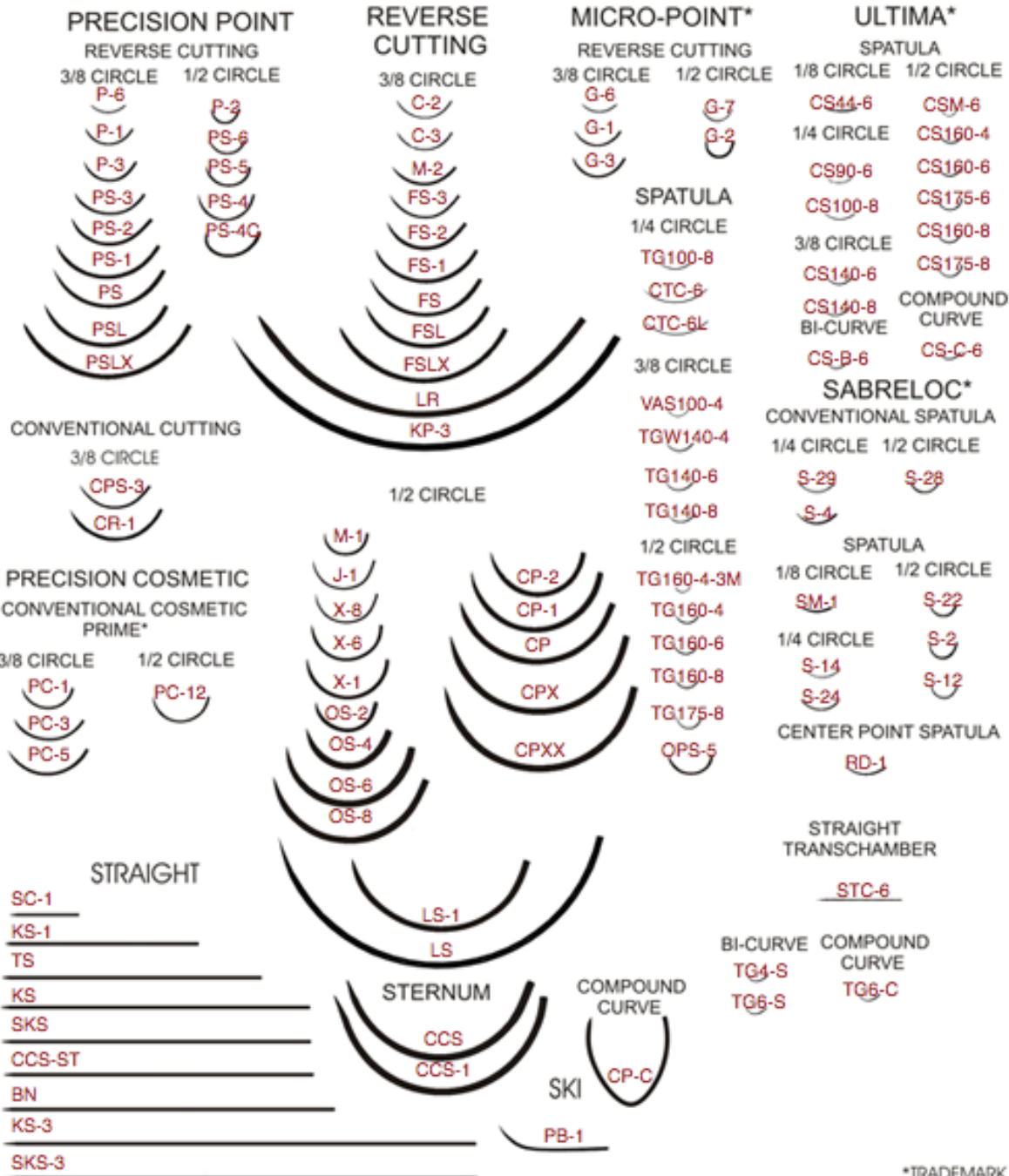
Fig. 5.9 Needle holders.



McIndoe Scissors

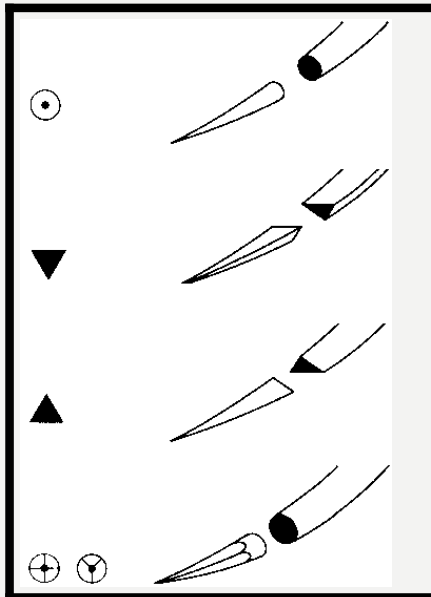
Wound Closure



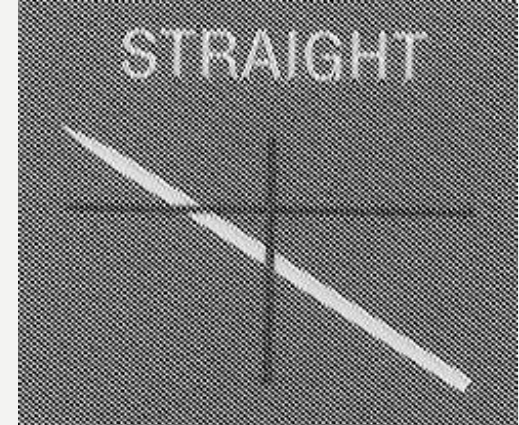
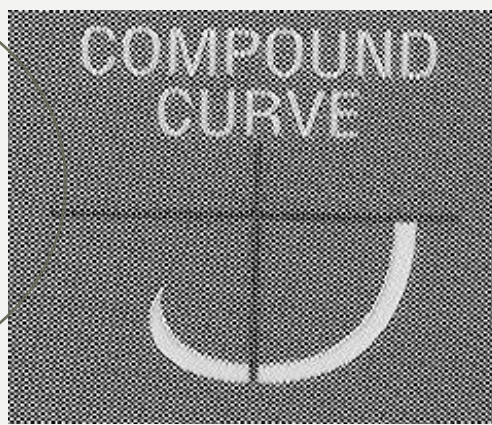
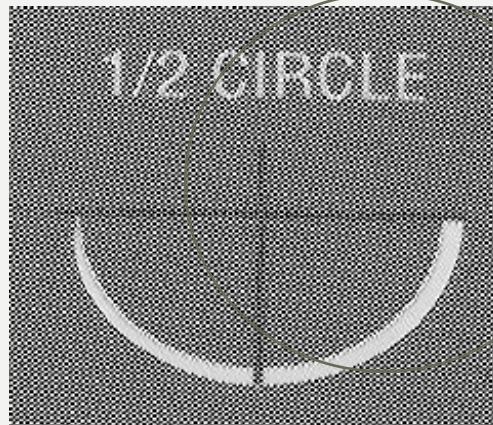
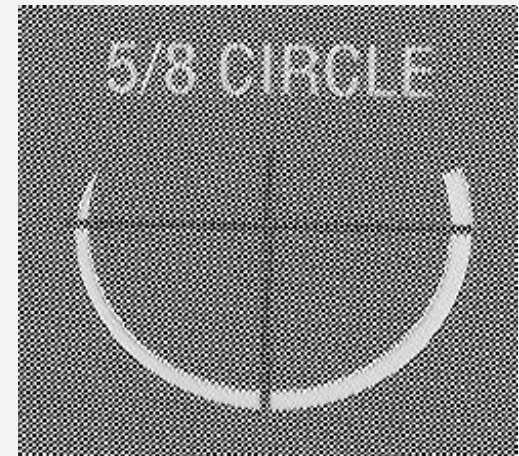
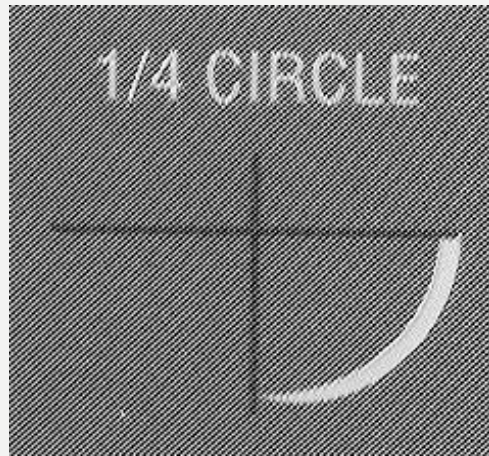


*TRADEMARK

Tip: Needle Point Geometry

	Taper-Point	Suited to soft tissue Dilates rather than cuts
	Reverse cutting	Very sharp Ideal for skin Cuts rather than dilates
	Conventional Cutting	Very sharp Cuts rather than dilates Creates weakness allowing suture tearout
	Taper-cutting	Ideal in tough or calcified tissues Mainly used in Cardiac & Vascular procedures.

Body: Needle Curvature



THE RIGHT NEEDLE CHOICE

- *The appropriate needle choice for any situation is:*
- *...The needle that will cause least possible trauma to the tissue being sutured*

- Adequate tensile strength
- Functional strength
- Non capillary
- Non reactivity
- Flexibility & elasticity
- Easy to handle
- Knotable
- Easily sterilisable
- Uniformity
- Smooth surface
- Monofilament
- Absorbability

ABSORBABLE

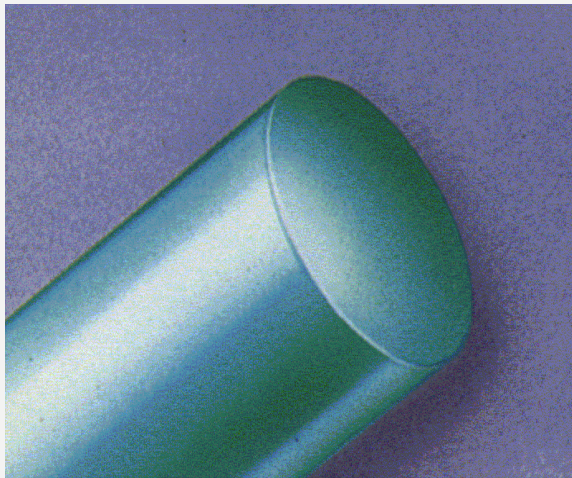
Those that are absorbed or digested by the body cells and tissue fluids in which they are embedded during and after the healing processes.

NON-ABSORBABLE:

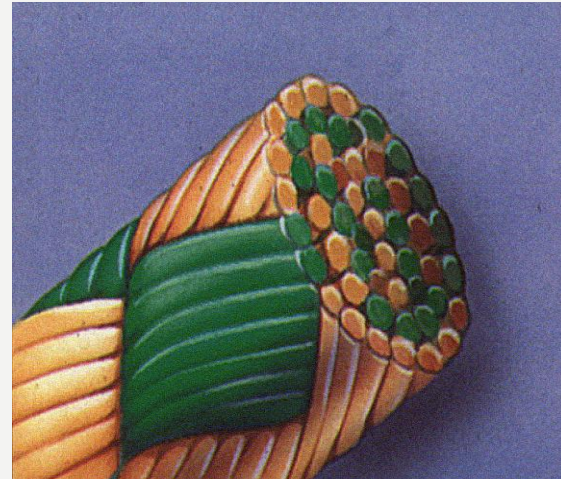
Those suture materials that can not be absorbed by the body cells or fluids. They are removed after healing is complete.

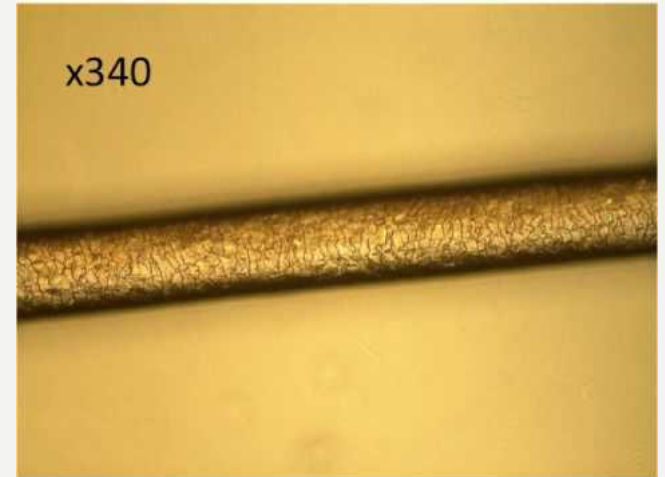
Suture Materials : Structure

Monofilament



Multifilament
(braided)

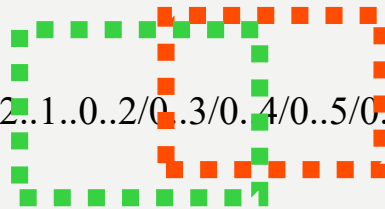




Oral

5..4..3..2..1..0..2/0..3/0..4/0..5/0..6/0..7/0..8/0..9/0..10/0..11/0

General



3-0
(2 Ph. Eur.)

PC-22

22mm 1/2c
CUTTING



PRIME*

45cm

ETHICON®
Coated

VICRYL® rapide

Polyglactin 910
undyed braided absorbable suture
incoloro trenzado suture resorbable
ungefärbt geflochten
chirurgisches Nahtmaterial resorbierbar
non colorato intrecciato suture assorbibile
incoloro trenzado suture absorbible
ongekleurd gevlochten chirurgisch
hechtmateriaal resorbeerbaar

W9927



*Trademark

FOR DB2CCHM0

STERILE | R 2 Δ CE 0086 2016-06

Manufacturer Johnson & Johnson Inc. 3

4-0
(1.5 Ph. Eur.)

PS-2

19mm 3/8c
REVERSE CUTTING



PRIME*

75cm

ETHICON®
Coated

VICRYL® rapide

Polyglactin 910
undyed braided absorbable suture
incoloro trenzado suture absorbible
incoloro tressé suture resorbable
sutura absorvível incoloro entrançada

W9922



*Trademark

FOR DB2GCKM0

STERILE | R 2 Δ CE 0086 2016-06

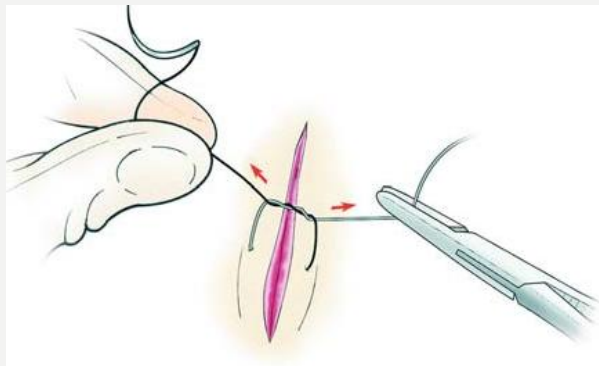
Manufacturer Johnson & Johnson Inc. 4

Approximate wound edges without gaps or tension

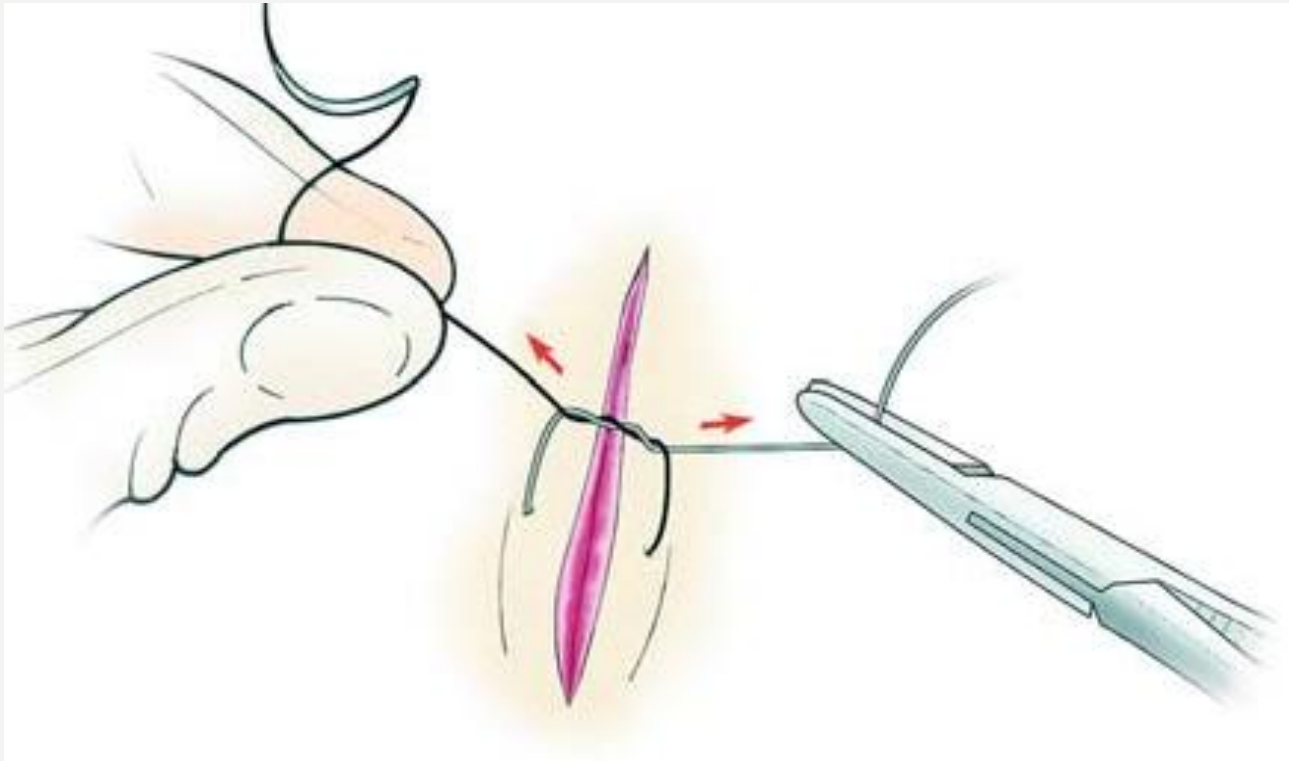
Size of 'bite' and interval between bites should be equal in length - proportional to thickness of tissue being approximated

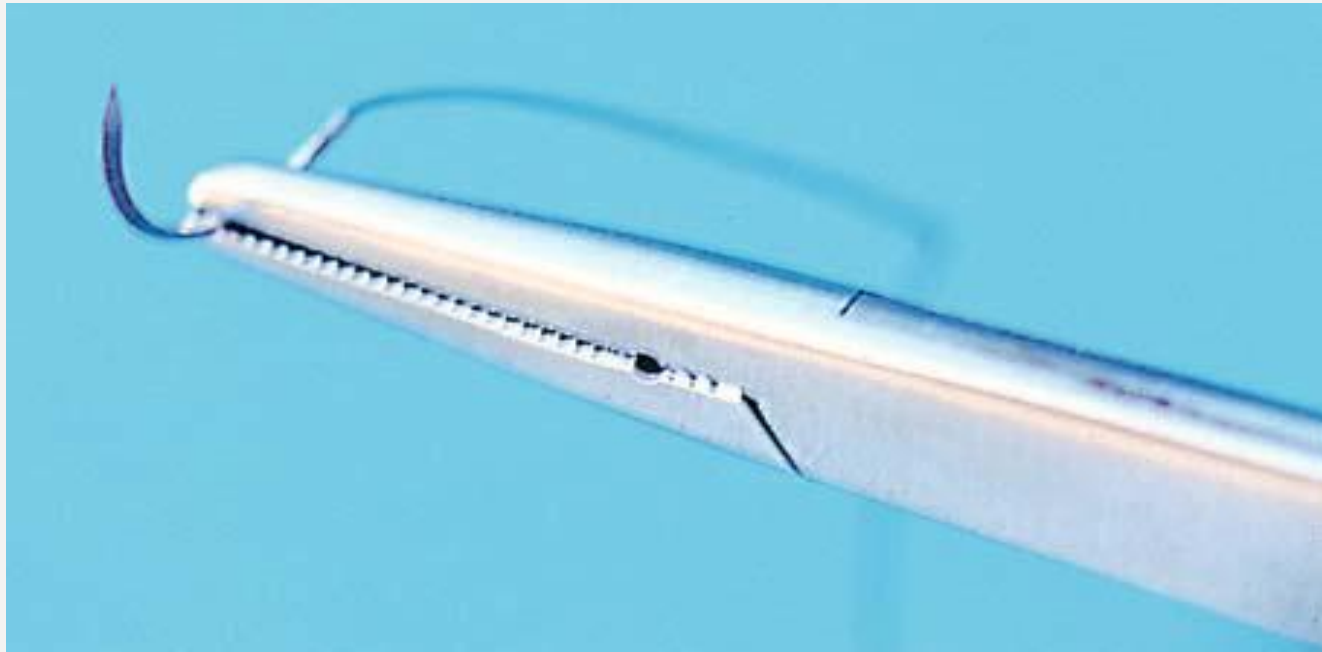
N.B. Suture material is a foreign body

Use minimal size and amount of suture necessary to close the wound



SUTURING

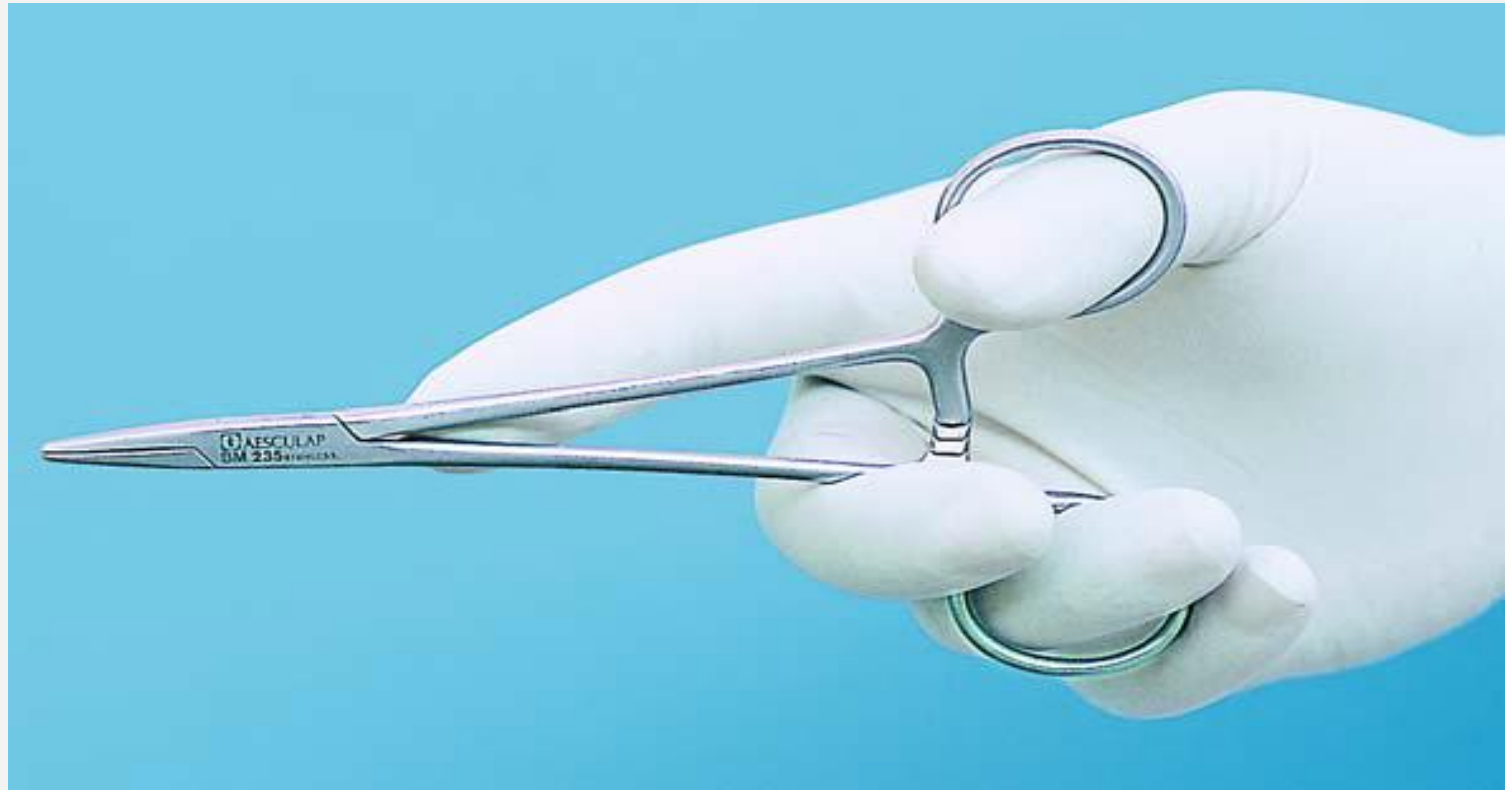


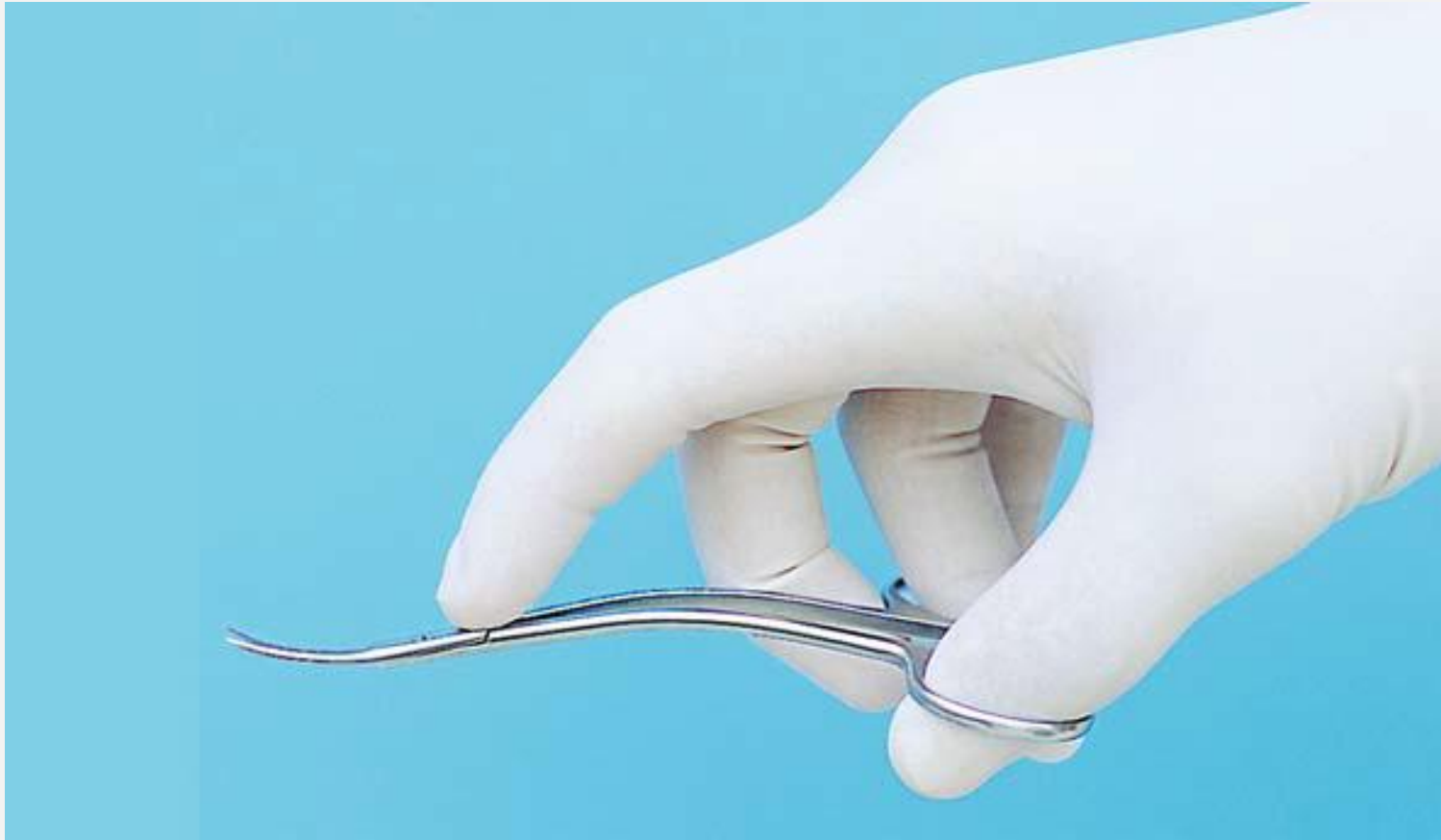


Beak of the needle holder grasps a suture needle.

The needle holder's beak face is crosshatched, ensuring stability of the needle during tissue penetration

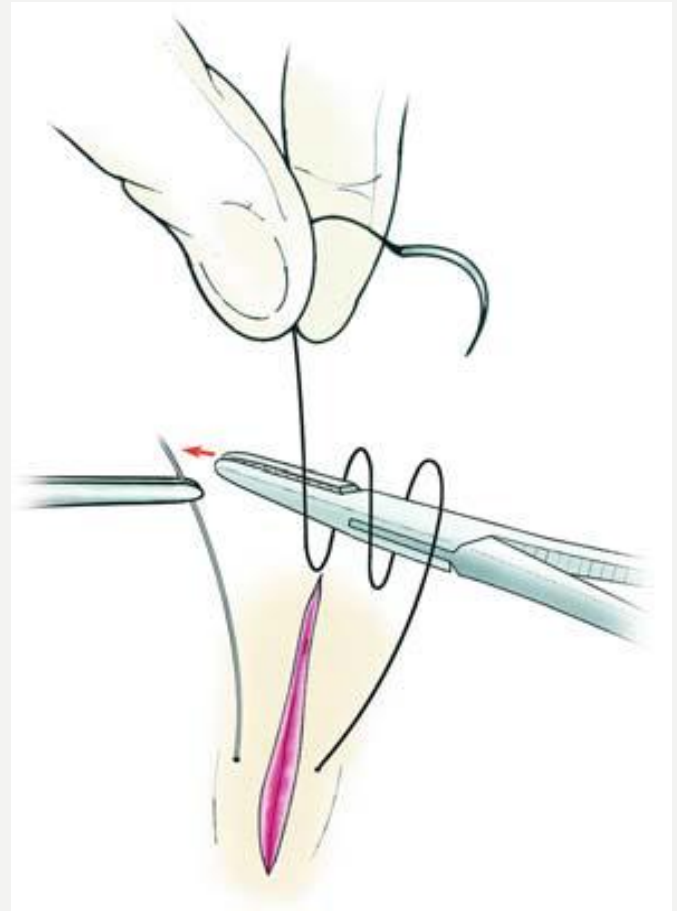
Suturing Techniques : Tools Manipulation

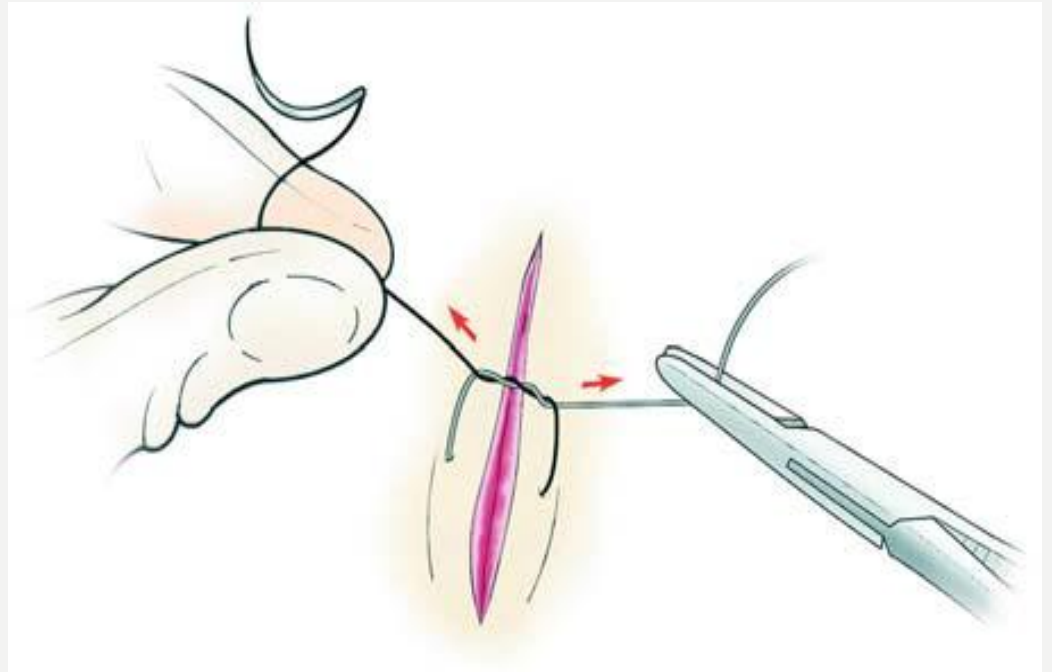




SUTURING TECHNIQUES : KNOTS

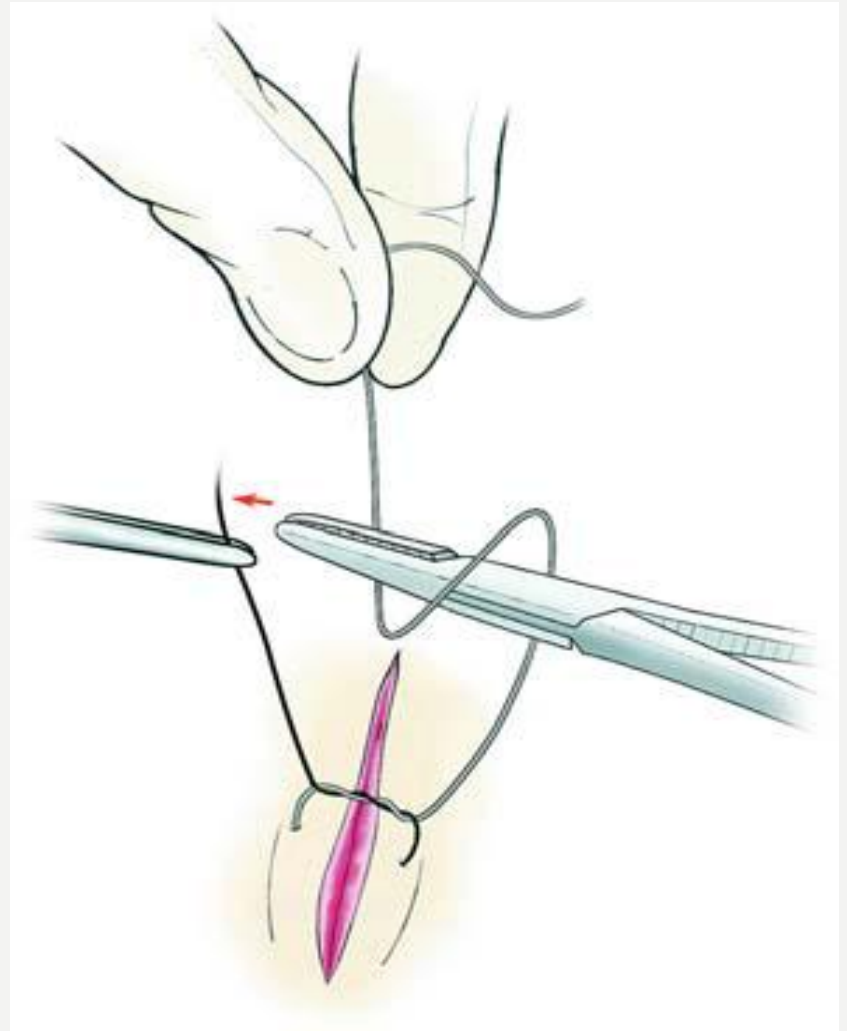
Suture is initially wrapped
twice around the needle
holder



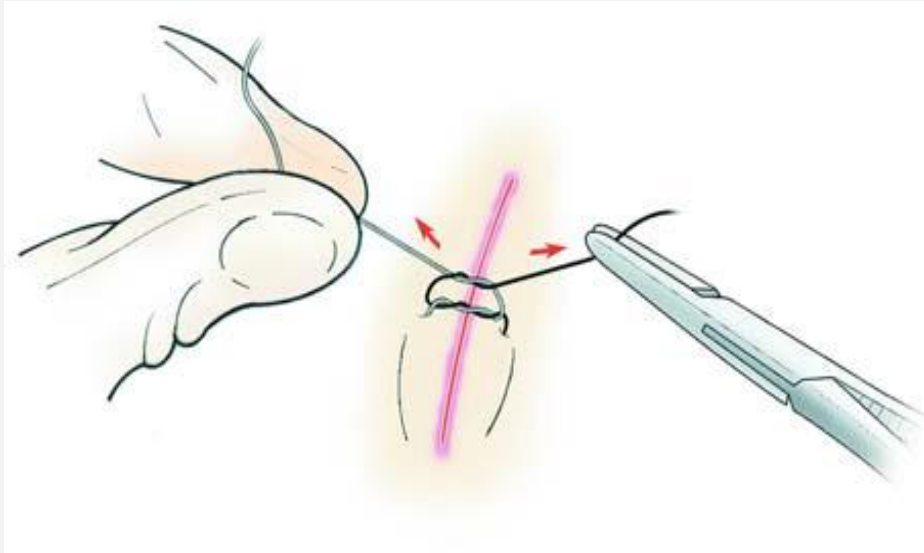


The two ends of the suture are tightened to create
a surgeon's knot over the wound
(double knot)

Safety knot,
created by the single
wrap of the
suture in the anti-
clockwise direction
as opposed to the
first one

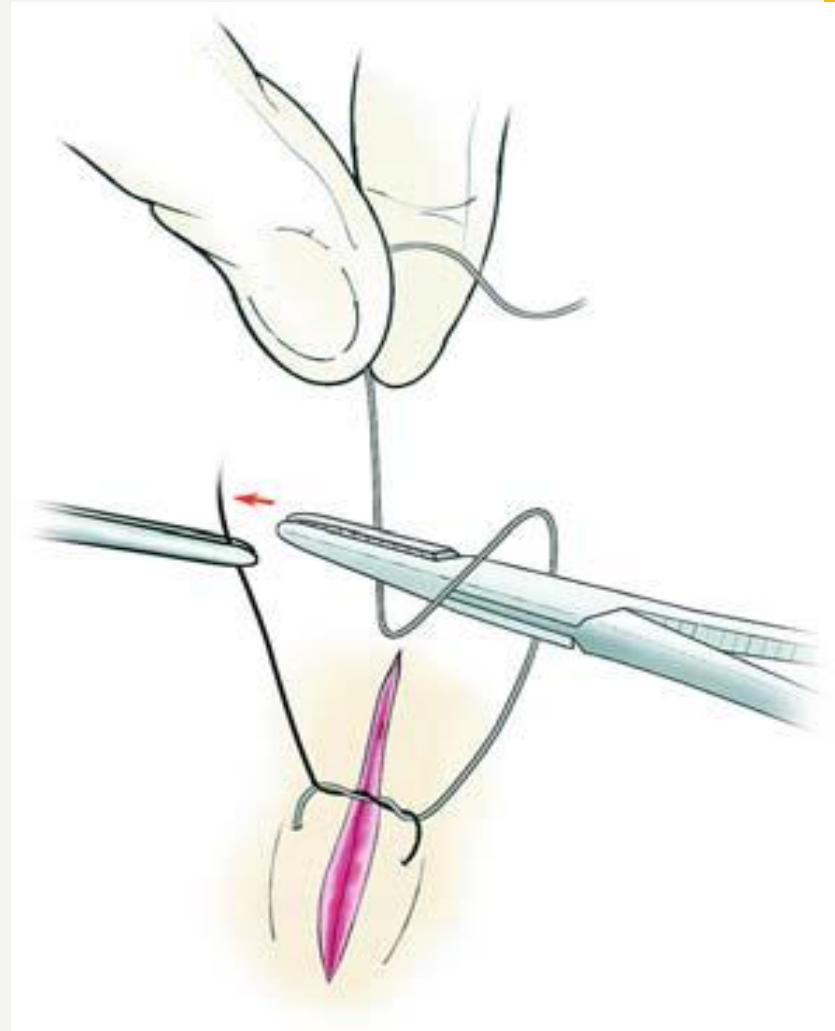


SUTURING TECHNIQUES : KNOTS



**Tightening of the safety knot
over the initial
surgeon's knot**

**And one more but
clockwise**

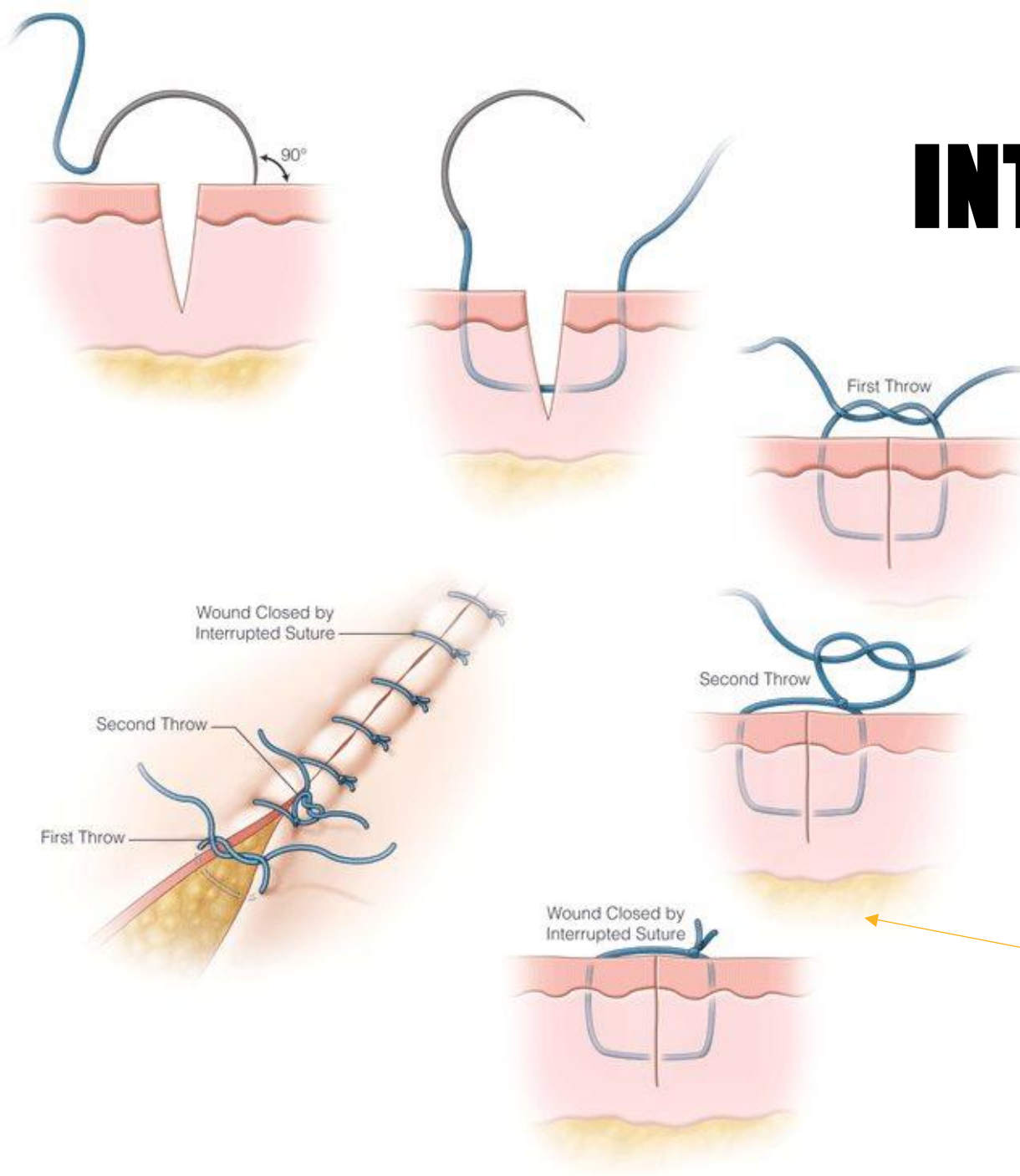




The main sutures used in oral surgery are the

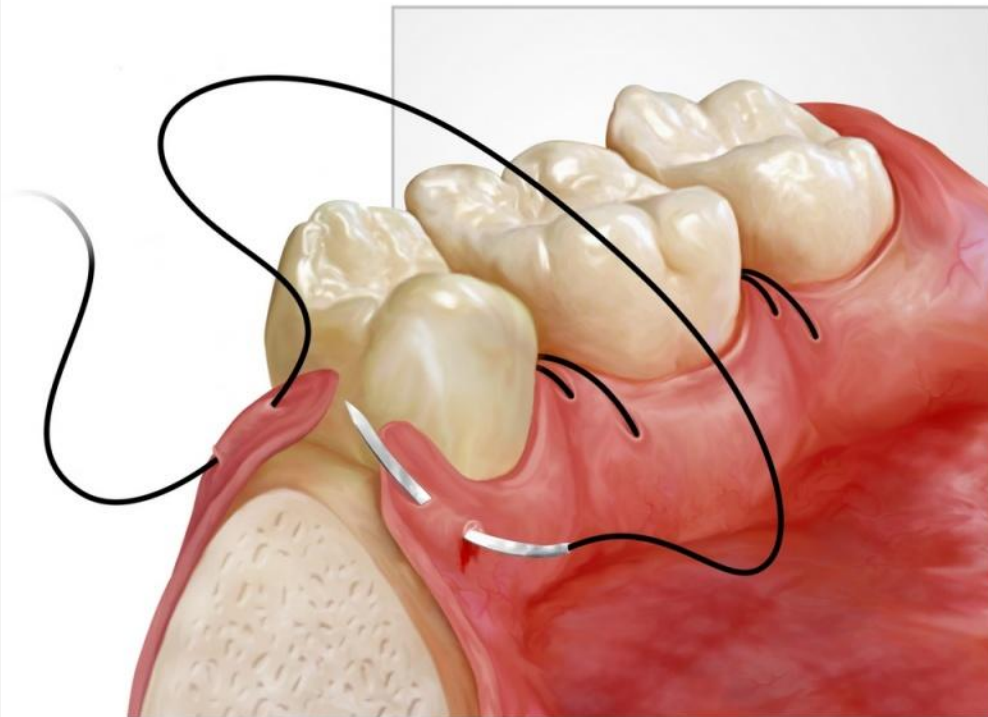
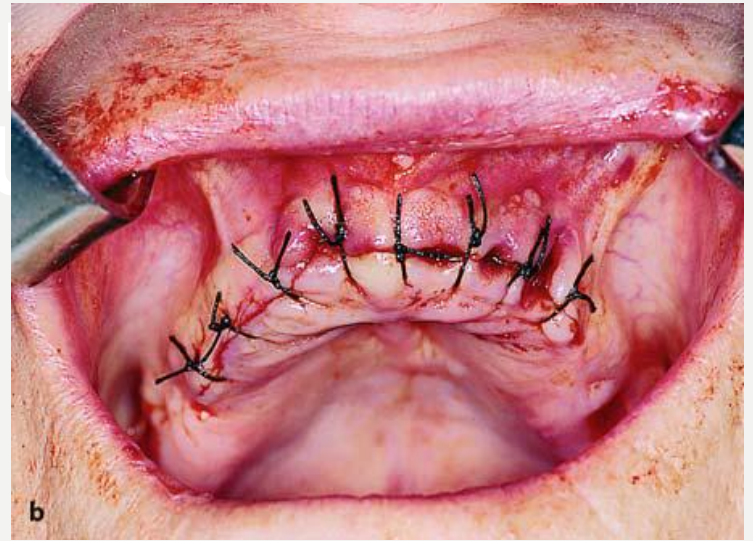
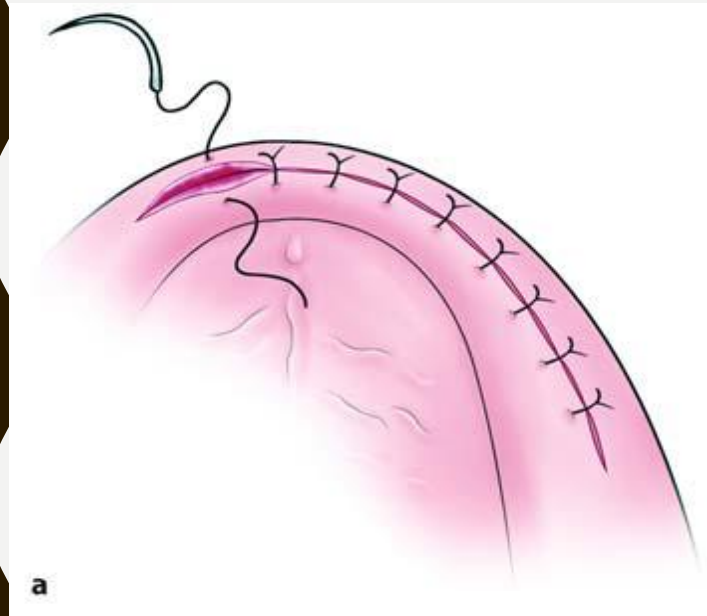
- **Interrupted**
 - **Continuous**
 - **Mattress sutures**
- 

SIMPLE INTERRUPTED

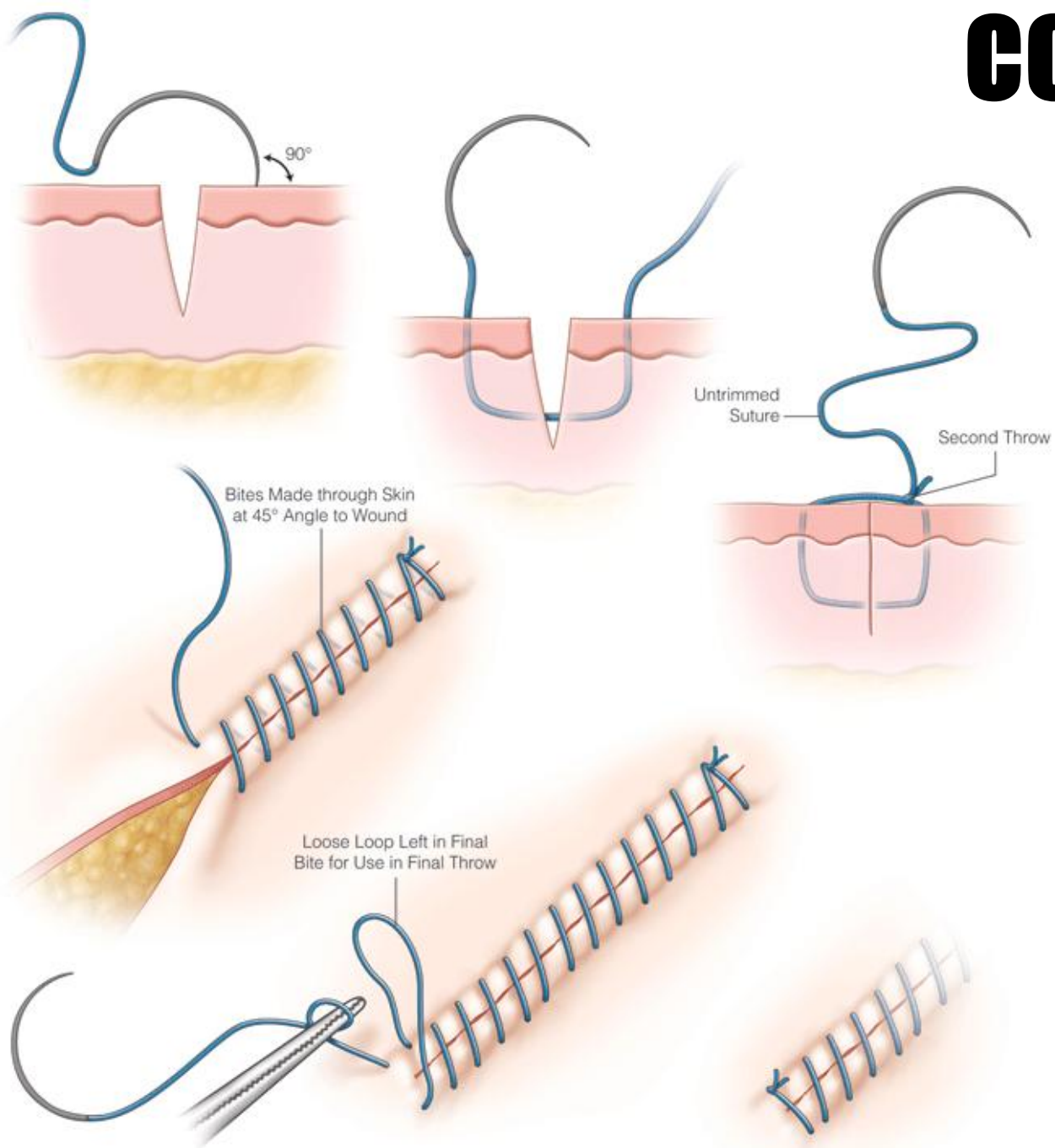


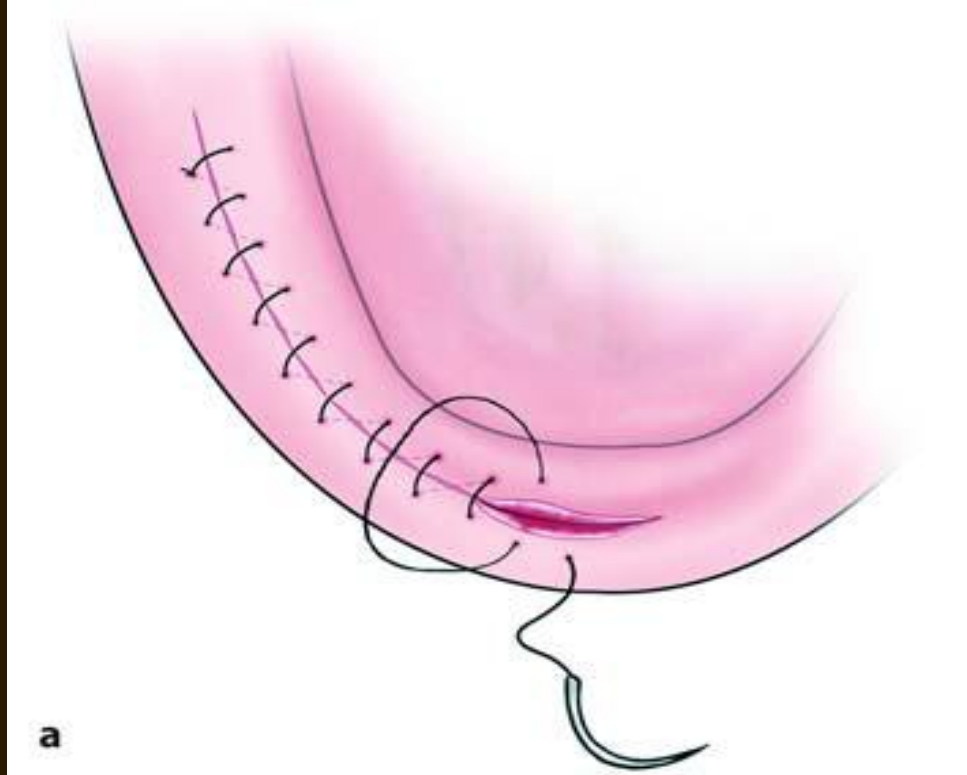
And a 3rd throw forwards

TECH
D SU

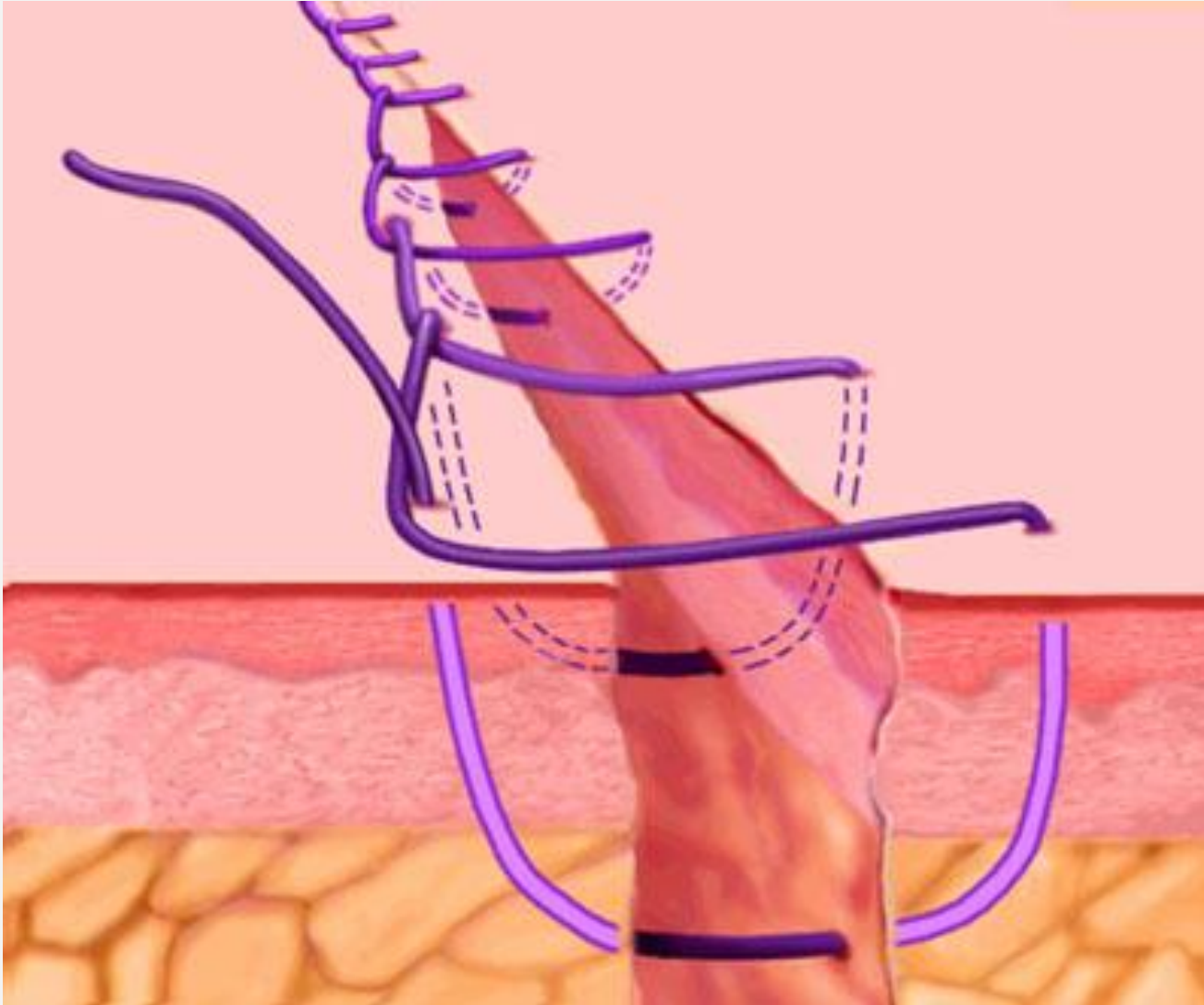


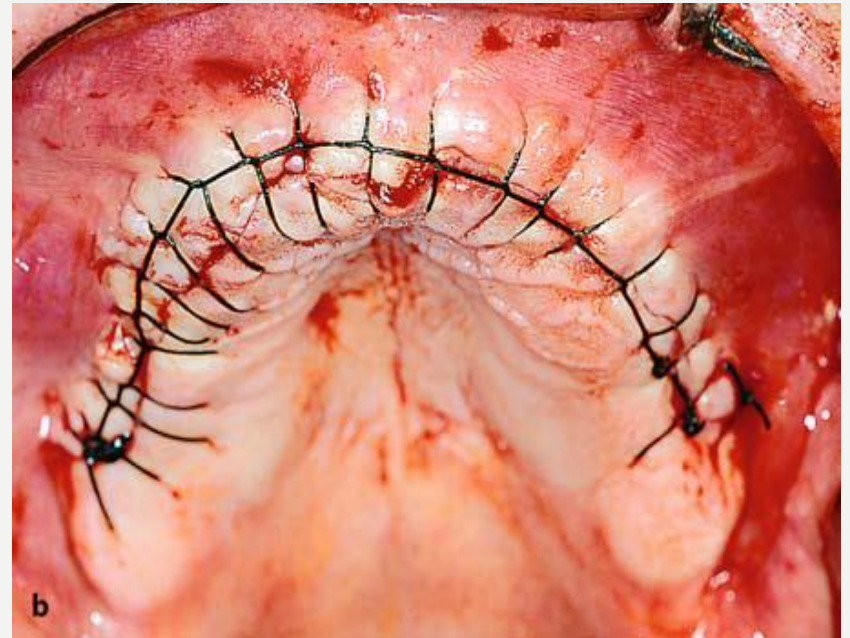
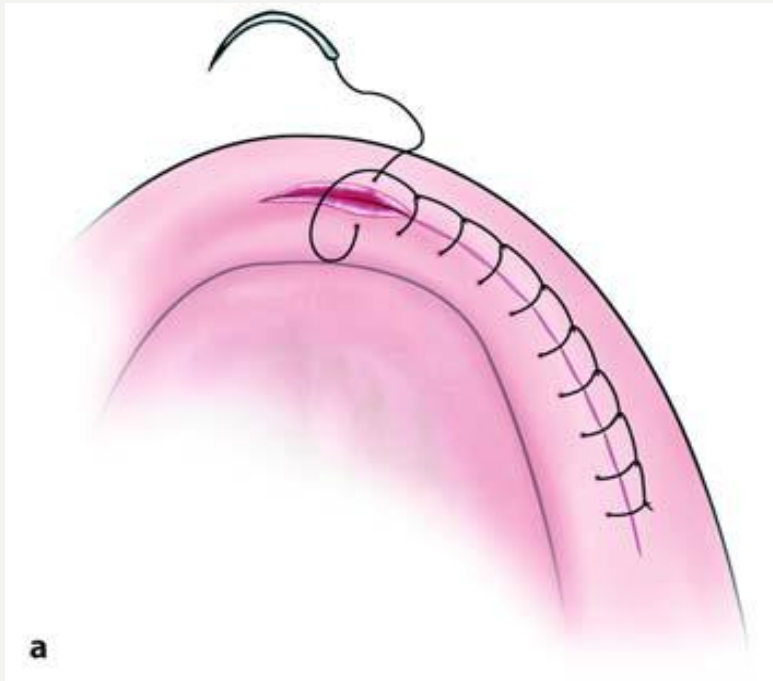
CONTINUOUS



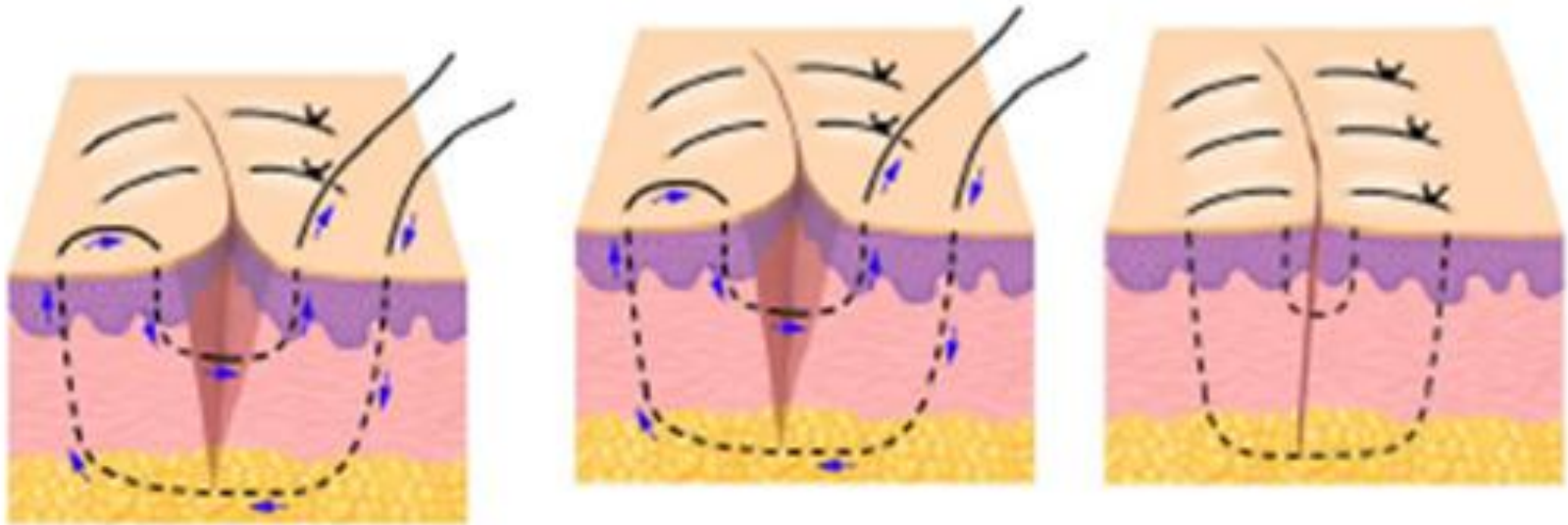


CONTINUOUS LOCKING

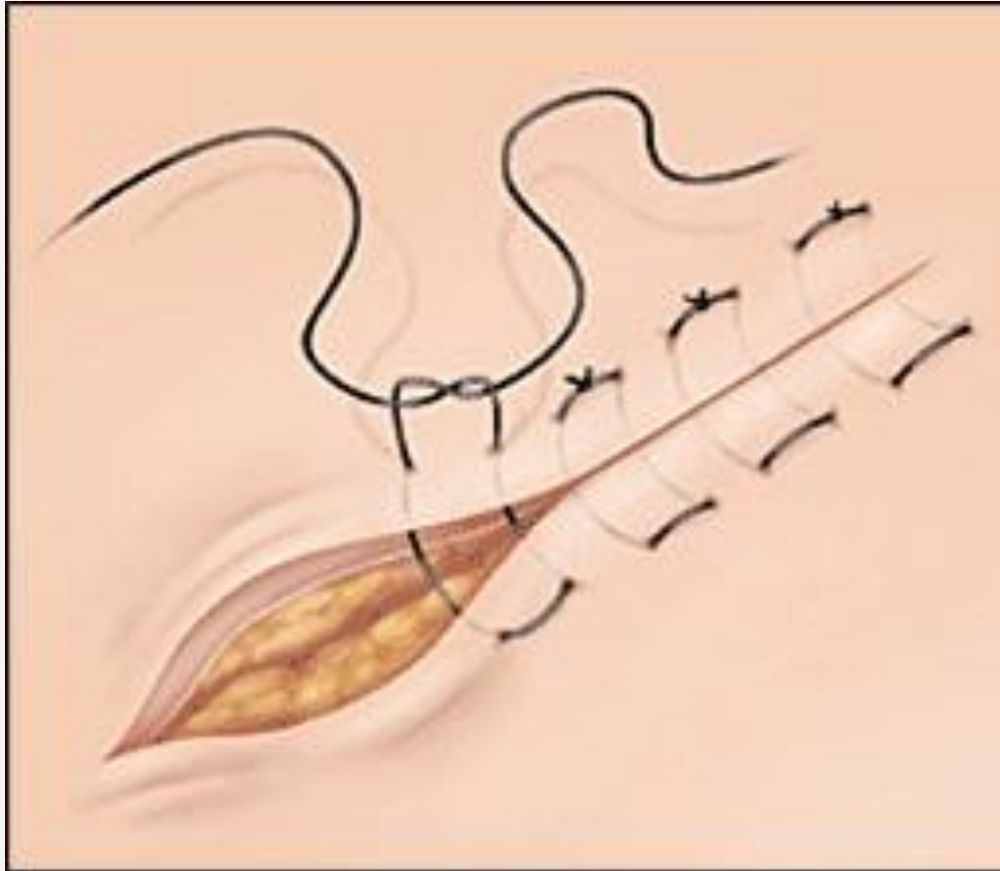


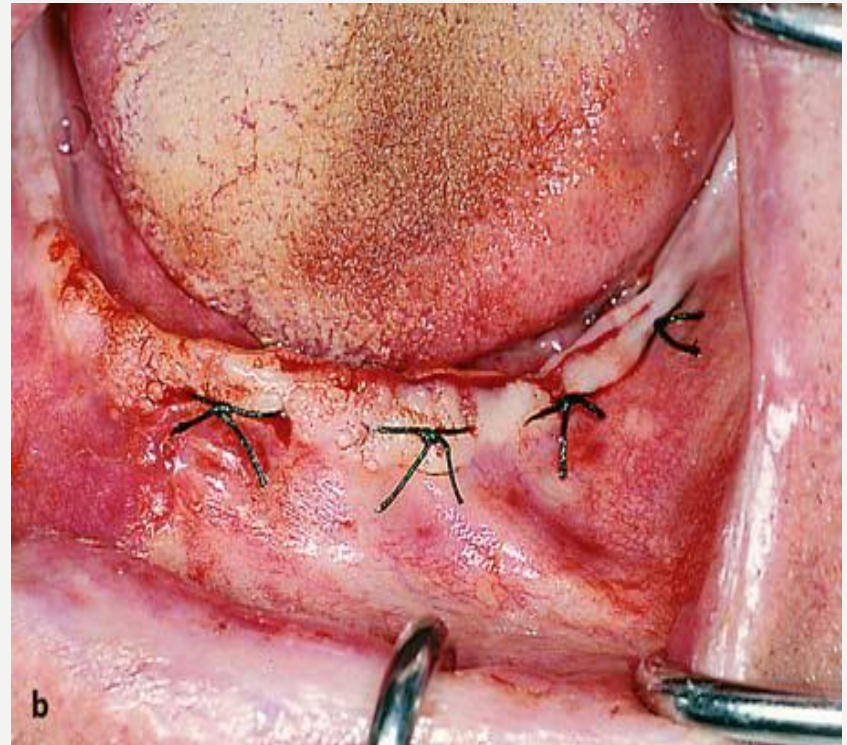
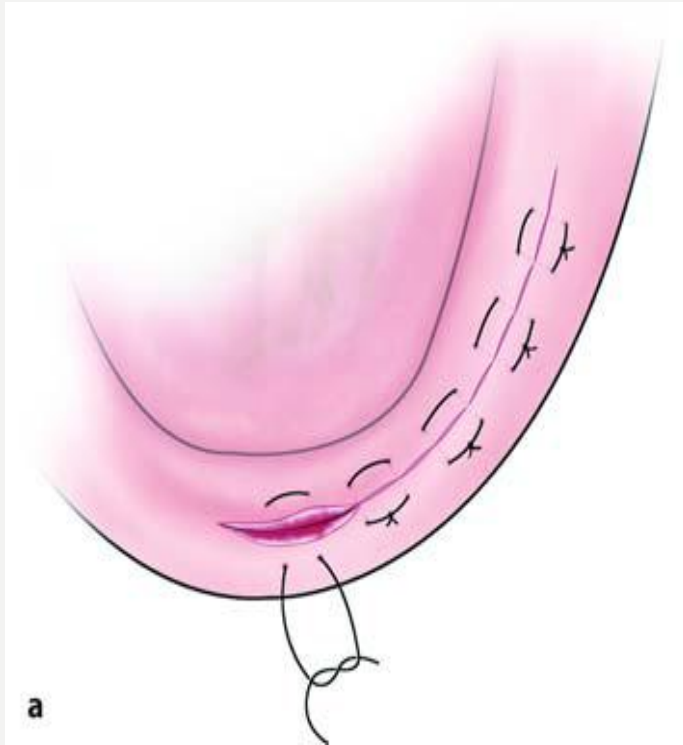


Vertical Mattress



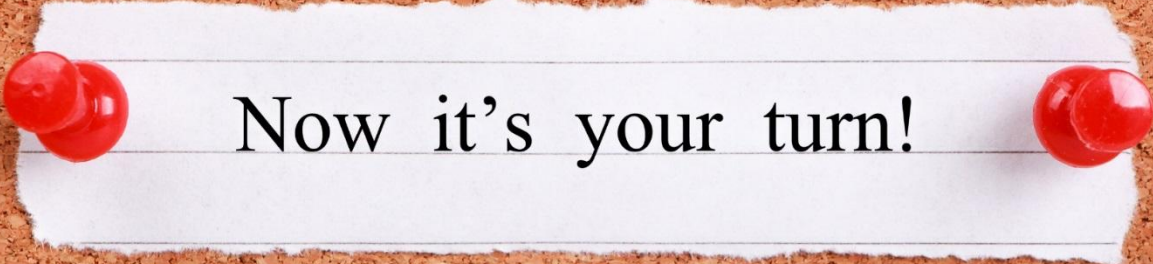
HORIZONTAL MATTRESS











Now it's your turn!