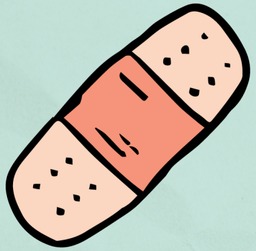


Centre of Excellence HEALTH

New Nouveau Brunswick

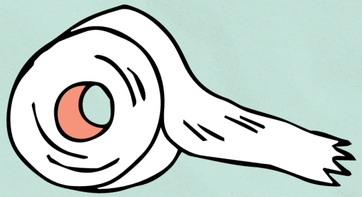


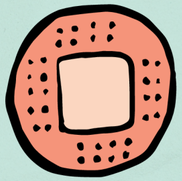
Artful Suturing: How Skin Protects Us











LEARNING GOALS

We are learning to

- explain how skin protects the body,
- describe how closing the wound can help healing begin, and
- name some careers that help people with wound care and healing.



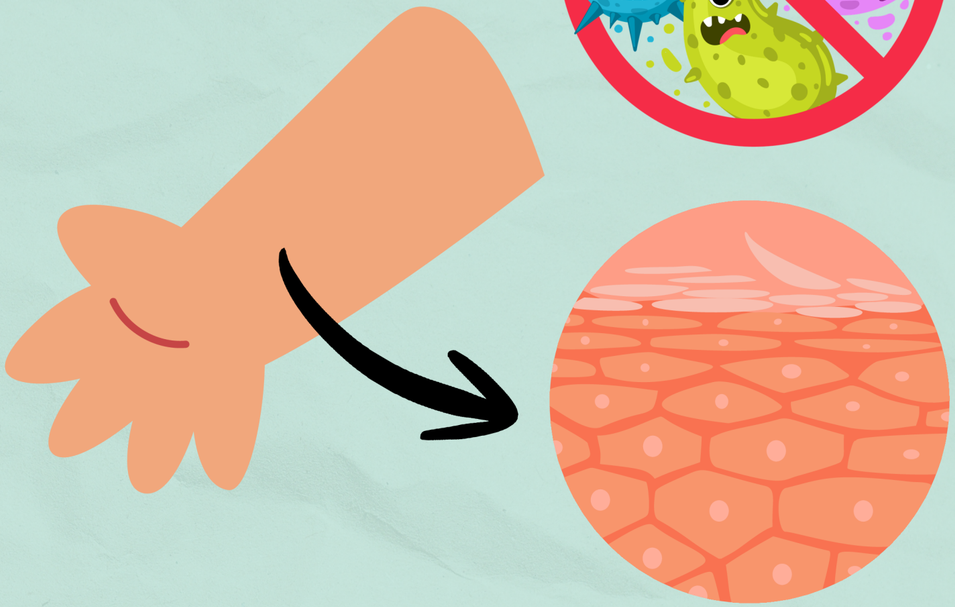




SKIN - YOUR BODY'S PROTECTION SYSTEM



- Skin covers the whole body.
- Skin helps protect what's inside you.
- Skin helps keep dirt and germs out.
- Skin is one of your body's first lines of defence.

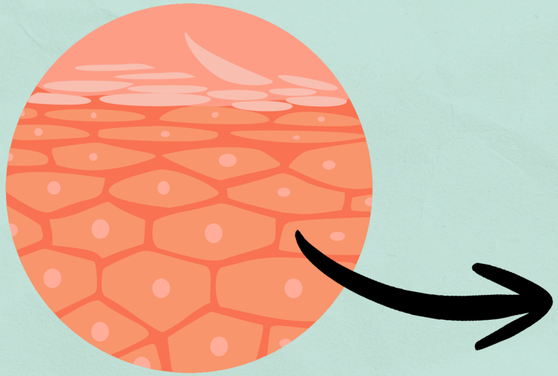


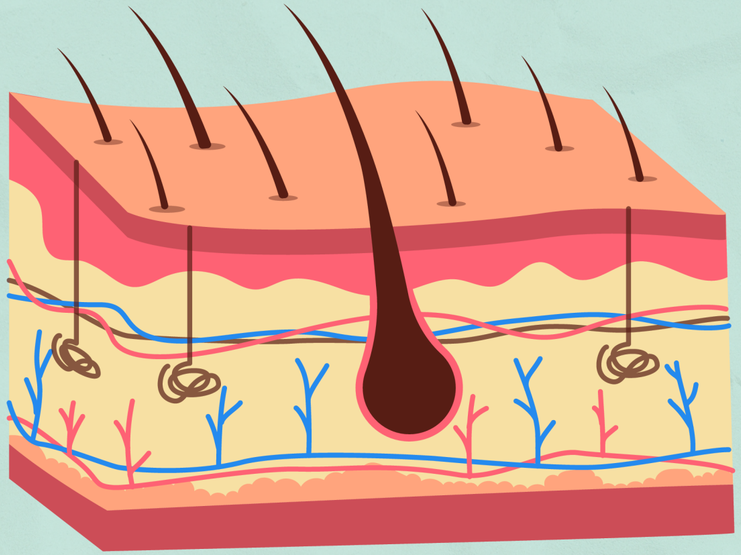


Turn and talk: What are two ways your skin helps you every day?

A CLOSER LOOK

Beneath the surface



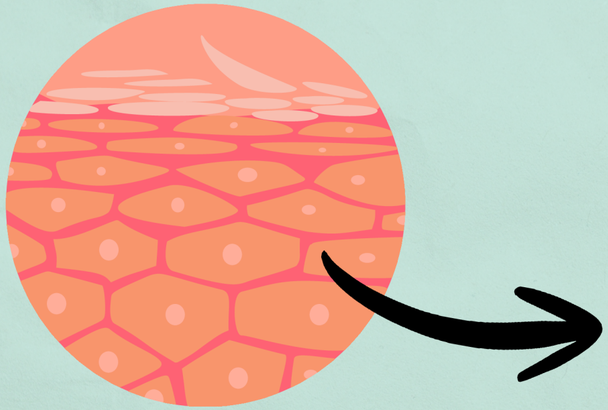


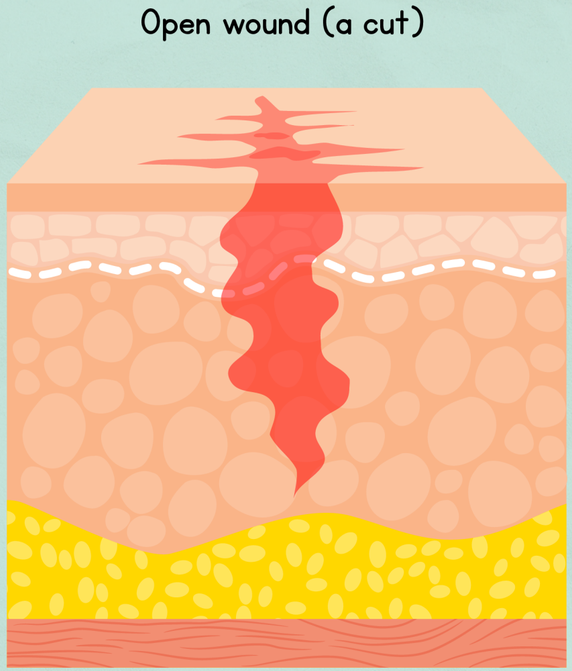
SKIN LAYERS

- → Epidermis (top)
- → Dermis (middle)
- → Hypodermis (lower)

Embed the student-facing “Layers of the Skin” visual aid

WHAT HAPPENS WHEN SKIN IS CUT?





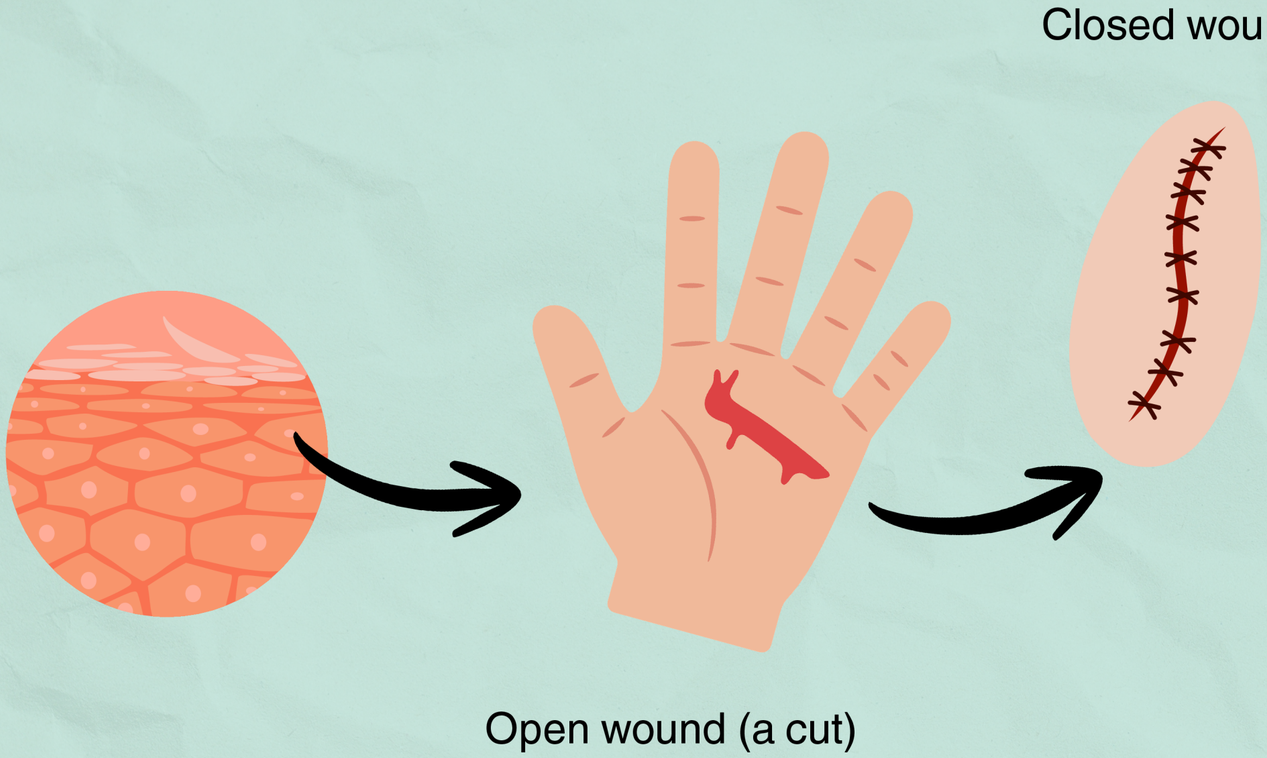
A cut opens the skin.

The body loses some protection.

Germs can get in.

The body starts trying to heal.

WHY CLOSE SOME WOUNDS?



To help protect the body.

To help the edges come together.

To help healing begin.

WHO HELPS WITH WOUNDS



Embed the teacher-facing Health and Social Care careers showcase document.

Careers: Registered Nurse & Nurse Practictioner

RN

Registered Nurse



Helps care for patients, gives treatments, and checks how they are healing.

Talents:
Care • Teamwork • Observation • Communication

Average Income in NB:
$83,850

RN

NP

Nurse Practitioner

Diagnoses and treats illness, helps patients heal, and can provide advanced care.



Talents:
Problem-solving • Leadership • Care • Communication

Average Income in NB:
$105,300

NP

Careers: Dentist & Medical Doctor

DDS

Dentist



Cares for teeth, gums, and the mouth, and helps people heal after dental treatment.

Talents:
Care • Focus • Precision • Communication

Average Income in NB:
$132,000

DDS

MD

Medical Doctor

Treats illnesses and injuries and helps patients recover over time.



Talents:
Problem-solving • Care • Listening • Decision-making

Average Income in NB:
$187,297

MD

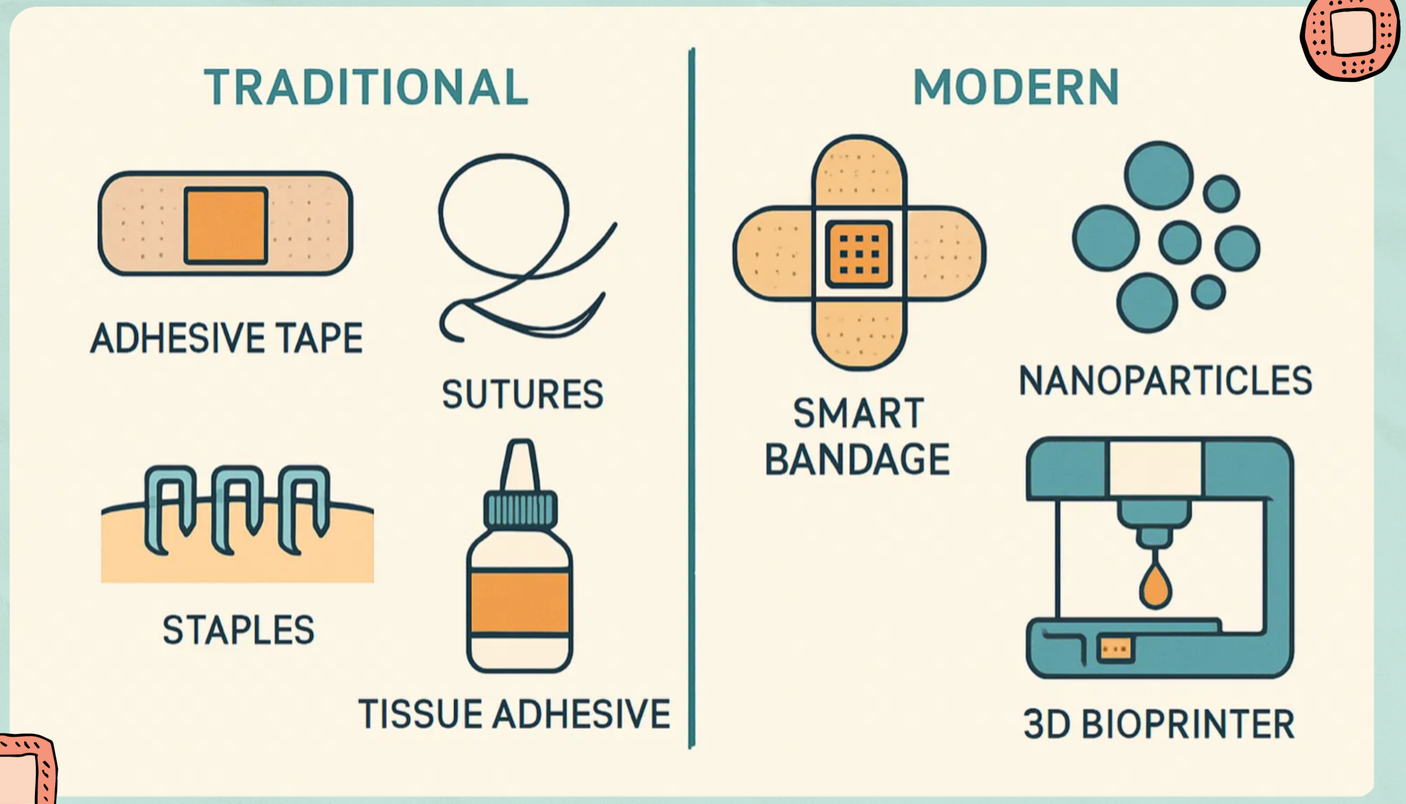
More Ways Wounds Can Be Closed

Grade 6+ Extension

These ideas are optional extra learning about newer technologies in wound care.

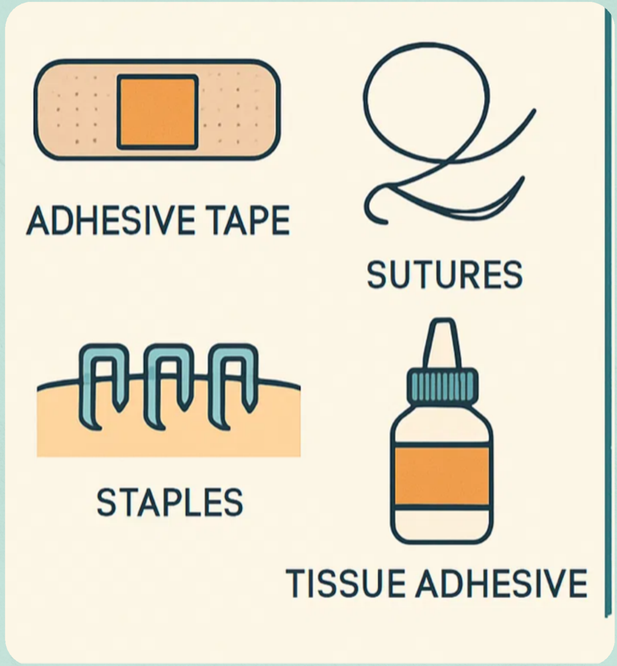
Wound Closure Methods

Health care practitioners still use stitches, staples, and medical tape to close many cuts, especially when the wound is new and the skin can be brought together easily.



Grade 6+ Extension

TRADITIONAL



Traditional methods such as adhesive tape, sutures, staples, and tissue adhesive remain common and are often used to help close cuts and protect the skin as it heals.

Adhesive Tape

Adhesive tape (AKA Band-aid) gently holds the skin together without needles and work best for small cuts where the skin is not being pulled apart.

Tissue Adhesive

Tissue adhesives are special glues that close the skin without needles and are often used on small cuts, especially on the face.



Sutures

Sutures are the most common way to close wounds and use thread to hold the skin together while it heals.

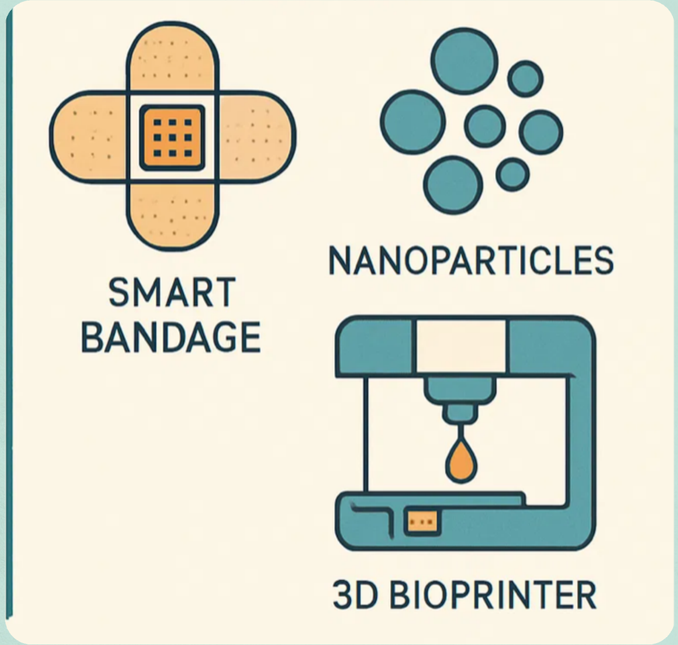
Staples

Staples close the skin very quickly and are often used for long cuts, but they can sometimes be less comfortable during healing.



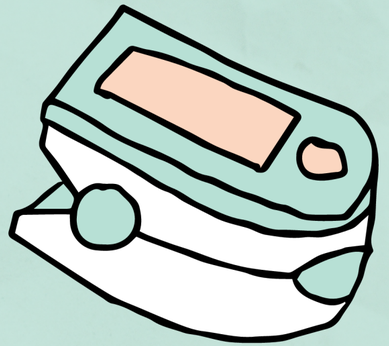
MODERN

Modern methods such as smart bandages, nanoparticles, and 3D bioprinters use advanced technology to support healing, reduce scarring, and help close wounds in new ways.



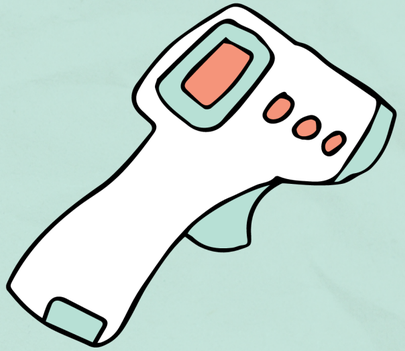
1. Smart Wound Dressing

Smart wound dressings are high-tech bandages that check how a wound is healing and send useful information.



2. Nanotherapeutics

Nanotherapeutics use very tiny particles in bandages or creams to help fight germs and speed up healing.



3. 3D Bio Printing

3D bioprinting creates new skin tissue to help repair large wounds where the body needs extra help to heal.



Teacher Appendix

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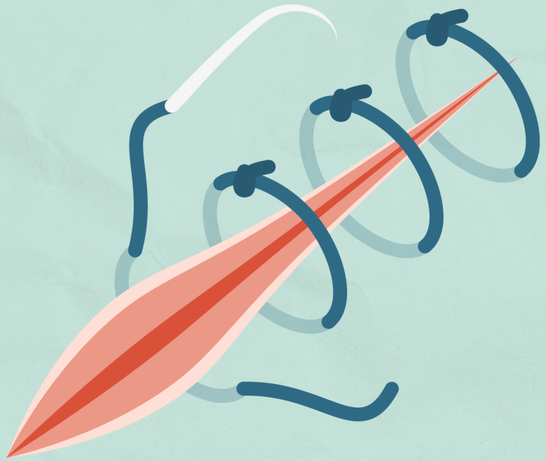
Figure 1 - Interrupted Suture



Interrupted Suture

An interrupted suture is made one stitch at a time. Each stitch is tied separately. This helps hold the two sides of the wound closer together

Everyday example



It is a bit like buttoning up a shirt: each button is its own “stitch” that helps bring the two sides together, one at a time.

Figure 2 - Suture Spacing

Stitches work best when they are spaced in an even way.

Even spacing helps the wound close more neatly and helps the edges line up.

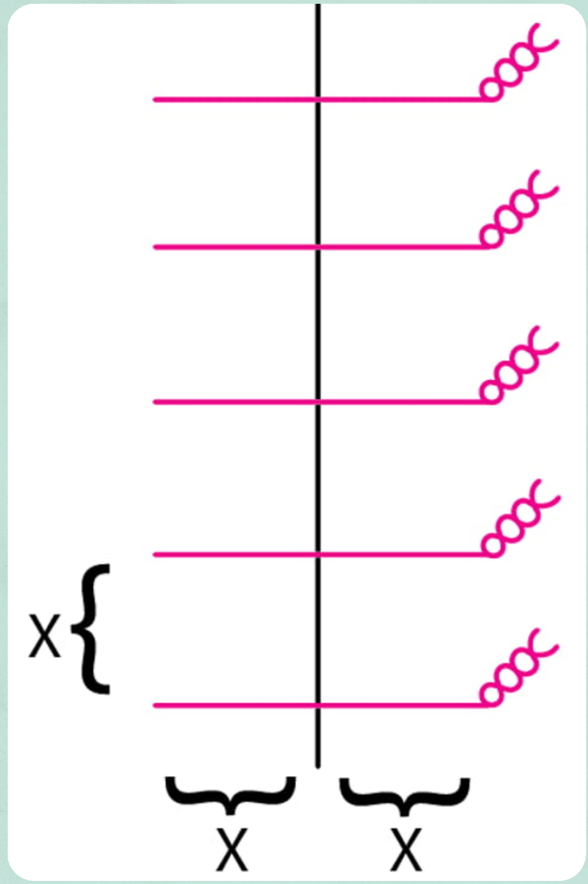


Image source: https://www.merckmanuals.com/professional/multimedia/image/suture-spacing

Figure 3 - Square Knot

A square knot helps keep a stitch in place.

The knot should feel secure, but not so tight that it pulls too hard on the wound model.

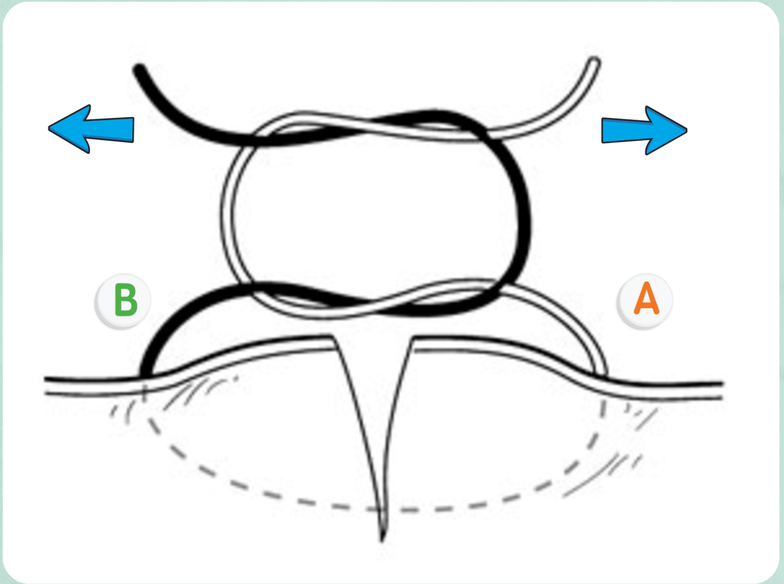
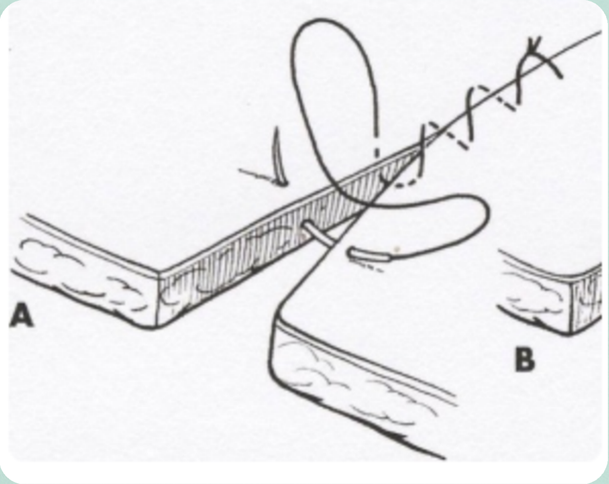


Figure 4 - Continuous Suture

Continuous (aka running) Suture



A continuous suture uses one long piece of cord. Instead of tying a knot after every stitch, the cord keeps moving along the wound and is tied at the beginning and the end.

It is a bit like lacing a shoe or sewing along a line without stopping after every stitch.

Everyday example

