American Pediatric Surgical Nurses Association Inc.
Safety and Excellence in the Surgical Care of Children

PATIENT AND FAMILY INFORMATION SHEET

Wounds and Wound Care

What can cause skin to breakdown?

Can skin breakdown cause a wound?

Yes. Skin breakdown will cause a wound to form.

What type of wound does my child have?

Your child's care provider will explain your child's type of wound:

- **Partial-thickness wounds** (epidermis and dermis only) -- These are superficial- heal by epithelialization, a process by which the wound heals itself.
- **Full-thickness wounds** (extend through the dermis) – These heal by granulation (scar) formation. Full thickness wounds only regain 80% of the tensile strength of surrounding tissue, therefore remain at risk for reopening. Tensile strength is maximum strength of a wound when fully healed as compared to normal tissue.

How does a wound heal?

The healing of full-thickness wounds occurs in an orderly way, in phases listed below.

- Hemostasis Phase
- Inflammation Phase
- Proliferation Phase
- Maturation Phase (also called Remodeling Phase)

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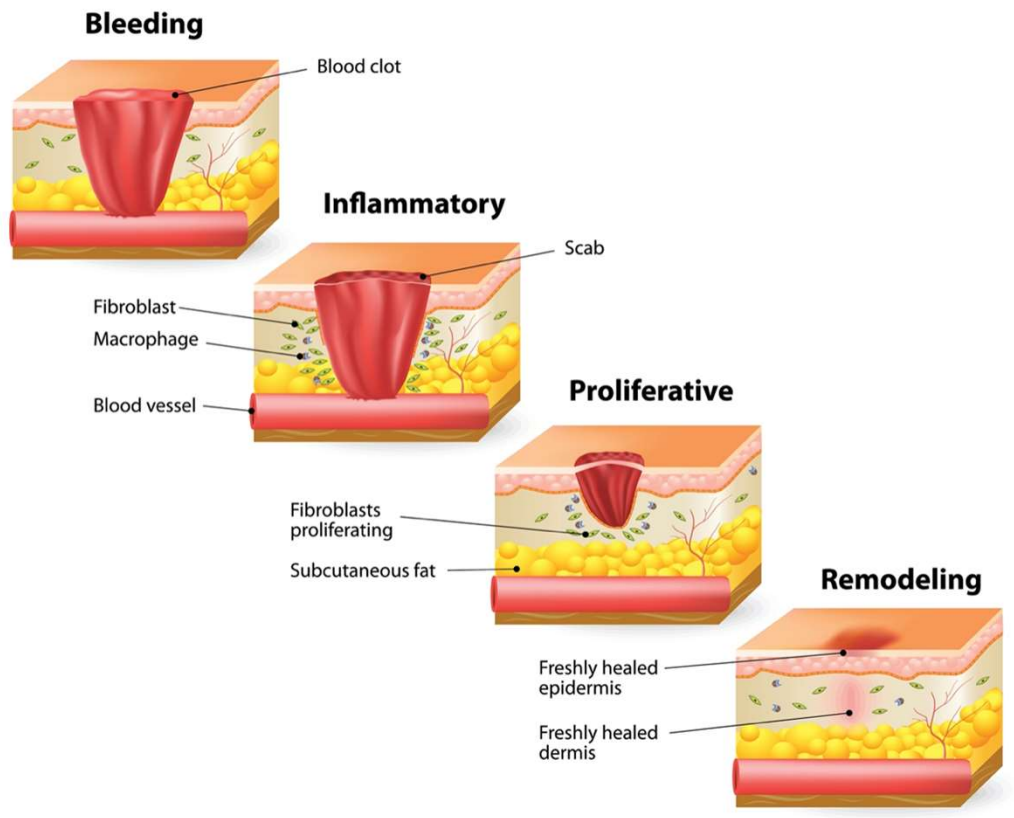
Wounds and Wound Care



ttsz. (2015). Wound healing [digital image]. Retrieved from: https://www.istockphoto.com/vector/wound-healing-gm533174729-56014372

What happens in each phase? *In what phase is my child's wound?*

- **Hemostasis phase**

  During the **Hemostasis Phase** platelets are activated and triggers the clotting cascade. This causes release of growth factors and starts the wound repair process.
- **Inflammatory phase**

  During the **Inflammatory Phase**, hemostasis is established. Neutrophils and macrophages migrate to the wound to remove bacteria, devitalized tissue, and other debris. Cytokines released during this phase promote cell proliferation and the synthesis of extracellular matrix molecules important to processes in the proliferation phase.
- **Proliferation Phase**

  During the **Proliferation Phase**, new tissue forms (angiogenesis, granulation, and epithelialization) and the wound contracts.

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What happens in each phase? *In what phase is my child's wound?*

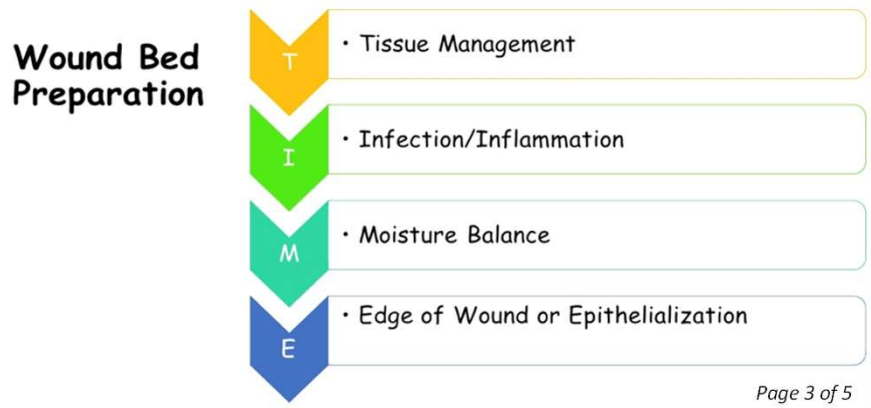
- **Proliferation Phase - Continued**
  - ***Angiogenesis***
    Formation of new capillaries to restore the vascular system.
  - ***Granulation***
    Fibroblasts migrate into the wound and produce new collagen and other extra-cellular matrix substances.
    This tissue is highly vascular because of angiogenesis. It appears as beefy red tissue in the wound bed.
  - ***Epithelialization***
    Epithelial cells migrate from the wound edge. Epithelial stem cells also migrate from any hair follicles that remain in the wound bed.
    Appears clinically along the wound edge as tissue that is thin, pearly, or silvery and shiny.
    Newly epithelialized wound tissue appears pink/paler pink
  - ***Wound contraction***
    Collagen fibers and extra-cellular matrix contract
    Seen clinically as a reduction in wound depth and size

- **Maturation/Remodeling Phase**
  In **Maturation/Remodeling phase** scar tissue is remodeled and strengthened.
  - Scar tissue mass and vascularity decrease
  - This is observable as the shrinking and thinning of the scar and change in scar tissue appearance from red or pink to nearly the same color as the surrounding skin or silvery white
  - In darker skinned individuals, mature scar tissue may appear as an area of hypopigmentation
  - This phase may last for one year or longer. However, scar tissue strength remains less than that of normal tissue (tensile strength).
  - The decline in tensile strength increases the risk for re-injury

Below are the necessary areas that must be addressed in order to heal a wound as quickly as possible.

How long will it take for my child's wound to heal?

Most full thickness wounds heal in 2-4 weeks.



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If my child's wound is infected, what wound care and dressings are needed to help my child's wound heal?

Your child's provider will control bacteria in the wound with the following types of dressings (check all that apply):

- ❑ Silver
- ❑ Honey
- ❑ DACC (dialkylcarbamoyl chloride)
- ❑ Iodine
- ❑ Systemic or topical antibiotics
- ❑ Other:_____

Why is the wound care needed if it is not infected? How does it help my child's wound heal?

Moisture Balance

It is important to maintain a wound surface that is moist but NOT wet (the most challenging part of wound healing). Dry wounds require hydration and wet wounds require absorptive dressings. These dressings are best suited to wounds that are very moist or dry.

WET

- ❑ Alginate
- ❑ Hydrofiber
- ❑ Foam or composite dressing
- ❑ Other: _____

DRY

- ❑ Hydrogel
- ❑ Saline
- ❑ Other:_____

What are the instructions for my child's wound care?

_____
_____
_____
_____
_____
_____
_____
_____
_____

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Wounds and Wound Care

When should I call the office?

If your child experiences any of the following, please call our office:

- A fever of 101.5 or greater
- A wound that looks like it is getting worse, not better
- A wound that becomes more painful or tender
- A wound that has a bad odor or is draining more liquid

Your child will need to follow up with the surgeon. You will receive specific instructions for follow up when your child is discharged.

Please don't hesitate to call our office if you have any problems or concerns.

Surgeon: _____

Nurse Practitioners: _____

Wound Care Specialist:_____

Phone Number (daytime): _____

Phone Number (after hours): _____

Social Worker: _____

Supply Company: _____

Thank you for allowing us to care for your child.

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