BASIC WOUND CARE

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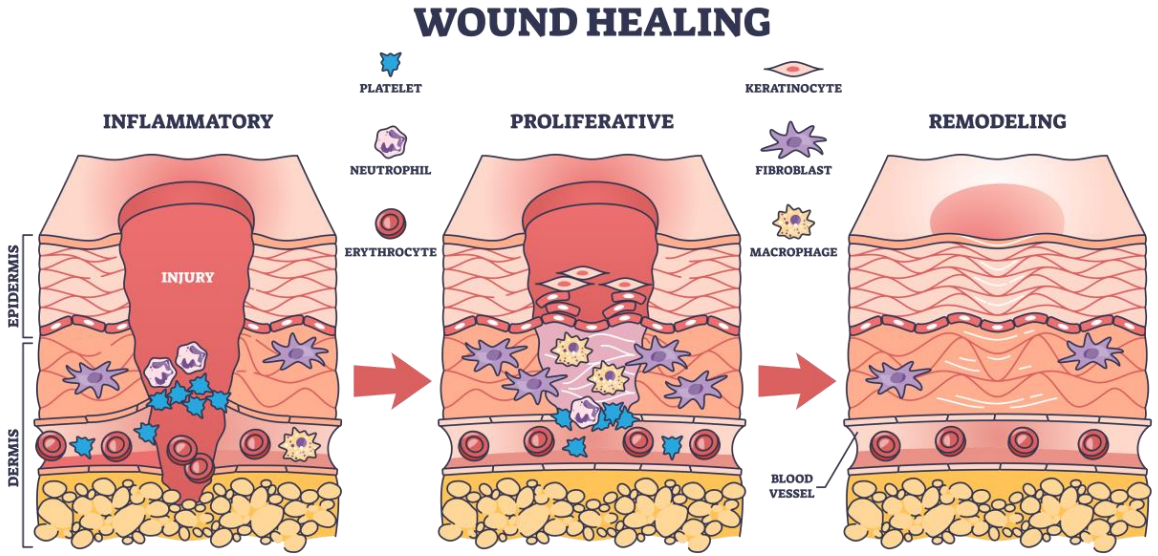
INTRODUCTION

This presentation will introduce HCPs to:

- Phases of wound healing and how acute and chronic wounds differ
- Factors that impact wound healing
- How to perform holistic wound assessment
- Wound bed preparation
- Examples of common dressings used in our facility
- Wound care documentation

PHASES OF WOUND HEALING: ACUTE WOUNDS

- **Hemostasis**: Once the wound is created, small blood vessels constrict and platelets aggregate in the wound to trigger the clotting cascade and growth factors that create the fibrin matrix (Beitz, 2022).
- **Inflammation**: Neutrophils and macrophages enter the wound bed to eradicate pathogens and cellular debris (Beitz, 2022). Macrophages begin to release growth factors to promote synthesis of new blood vessels and collagen in the next phase (Beitz, 2022).



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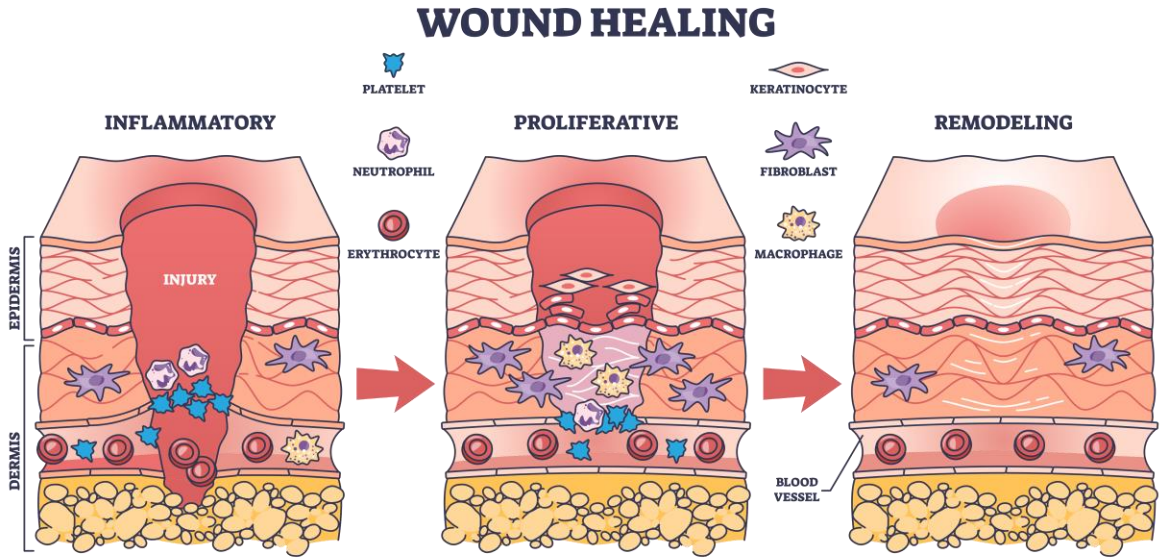
PHASES OF WOUND HEALING: ACUTE WOUNDS

- **Proliferation**: Fibroblasts migrate to the wound from the dermis and begin constructing the extracellular matrix, or granulation tissue, by synthesizing provisional collagen (Beitz, 2022). Neoangiogenesis ramps up in this phase, creating a highly vascular tissue, and epithelial resurfacing takes place (Beitz, 2022). If the wound is full-thickness, wound contraction will occur in this phase to shrink the size of the defect needing repair (Beitz, 2022).
- **Maturation**: This phase may also be called remodeling and occurs over months to years. Provisional collagen will be replaced with a stronger form and new blood vessels are trimmed back (Beitz, 2022).



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PHASES OF WOUND HEALING: CHRONIC WOUNDS

- Acute wound healing is an orderly, predictable process with four stages and a brief inflammatory phase (Beitz, 2022)
- Chronic wounds are characterized by a protracted inflammatory phase
- Chronic wounds may “stall” in the phases of healing (Beitz, 2022, p. 46)
- Chronic wounds are more likely to experience biofilms, infection, necrotic tissue, and insufficient fibroblast and endothelial activity necessary to repair tissue and blood vessels (Beitz, 2022).

FACTORS IMPACTING WOUND HEALING

Modifiable

- Medications
- Substance use, e.g. tobacco or alcohol
- Malnutrition
- Glycemic control
- Pain
- Infection
- Stress
- Dehydration
- Social determinants of health

Non-modifiable

- Age
- Sex
- Medications
- Anatomic location of the wound
- Chronic disease:
  - -Diabetes mellitus
  - -Spinal cord injury
  - -Peripheral vascular disease
  - - COPD
  - -Cancer and its treatment
  - -Skin disorders
  - -Heart failure

HOLISTIC WOUND ASSESSMENT

- Holistic wound assessment must focus on the whole person, not just their wound
- It should address patient goals, social determinants of health, systemic causes, barriers to care, and interdisciplinary collaboration (Ermer-Seltun & Rolstad, 2022)
- Recognize that patients have the right to refuse certain or all aspects of their care (Ermer-Seltun & Rolstad, 2022)
- Patients experience improved quality of life and greater treatment adherence when a holistic approach is implemented (Moatarri et al., 2023).

WOUND BED PREPARATION: TIMERS

- Tissue Management
- Infection & Inflammation Control
- Moisture Balance
- Epithelial Advancement
- Regeneration & Repair
- Social & Systemic Factors

DRESSING SELECTION: ALGINATES

Classification

- Non woven dressings made of polysaccharides or gel from brown seaweed

Indications and Contraindications

- Indicated for wounds with moderate to heavy exudate (Jaszarowski & Murphee, 2022)
- Contraindicated in dry wounds or wounds with exposed tendon, ligaments, or bone due to their highly absorptive capacity (can desiccate these tissues) (Jaszarowski & Murphee, 2022)

Example Nursing Orders

- Thoroughly cleanse wound with normal saline then pat dry. Cover wound with alginate dressing, ensuring contact with wound bed. Fill dead space or tunnels with rope format of alginate. For highly exudative wounds, apply abdominal pad over top of alginate. Secure with tape. Change every 3 days or PRN for saturation.

Figure 1. ALGISITE M Calcium Alginate Dressing.
Adapted from Smith+Nephew, n.d. (https://www.woundsource.com/product/algisite-m-calcium-alginate-dressing)

DRESSING SELECTION: FOAMS

Classification

- Foams are a diverse dressing classification
- Most foam dressings are made with polyurethane
- Some may be impregnated with antimicrobial agents, such as Mepilex Ag

Indications and Contraindications

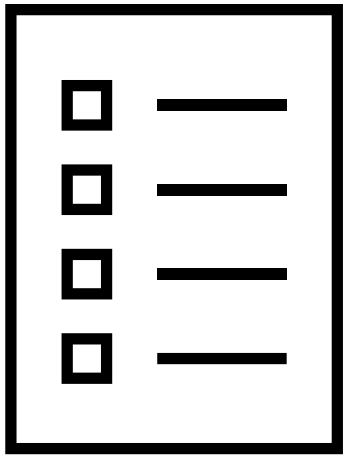
- Indicated for moist wounds with low to heavy exudate (Jaszarowski & Murphee, 2022)
- Contraindicated in dry wounds, full thickness burns, and ischemic wounds with dry eschar (Jaszarowski & Murphee, 2022)

Nursing Orders

- Cleanse the wound with normal saline and pat dry with sterile gauze. Apply Mepilex Ag to the wound bed, ensuring 1-2 cm overlap with intact periwound skin. Secure with appropriate secondary dressing, such as transparent film. In highly active pediatric patients, secure with Kerlix and Spandage. Mepilex Ag can stay in place five days. Change if soiled or not intact.

WOUND CARE DOCUMENTATION

- The electronic health record is a legal document and important communication tool among providers
- Appropriate documentation is necessary to receive adequate reimbursement for services
- Proper wound care documentation should include: (Bates-Jensen, 2022).
  - -Wound etiology
  - -Location, shape, size, depth
  - -Edges, tunneling, undermining
  - -Presence of necrotic tissue (i.e. slough or eschar) and their respective %
  - -Presence of granulation tissue and the respective %
  - -Type and amount of exudate, odor
  - -Condition of periwound skin
  - -Wound pain assessment



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