

Heal

A guide to wound care

The basics of wound care include reducing bioburden, reducing edema and maintaining a moist wound environment. In this table, we revisit a 2014 article from the journal, *Plastic Surgical Nursing*, in which Marcia Spear, DNP, ACNP-BC, CWS, CPSN, addressed the “Principles of Wound Care—Back to the Basics.”

BIOBURDEN An overabundance of bacteria in wounds can cause biofilms to spread, which can prompt antimicrobial resistance that inhibits wound healing of both acute and chronic wounds. Antimicrobials and debridement are usually the first go-to treatments for biofilms, but these are not without possible adverse events. Topical agents, such as antibiotic ointments or creams, can lead to contact dermatitis, narrow antimicrobial spectrum, unequal moisture balance and antimicrobial resistance. So, in these cases, dressings or debridement may be preferred.

Bacterial bioburden may be high in cases of increasing exudate, delayed healing, discolored granulation tissue, friable granulation tissue, pocketing at the base of the wound, foul odor, increasing pain, and wound breakdown.

Signs of an infected wound include erythema, localized pain and heat, cellulitis, and edema.

MOIST WOUND HEALING

- Achieving moisture balance is essential in wound healing. “Allowing the wound to dry out decreases fibroblast proliferation and inhibits epithelial cell migration.” Dressings can maintain moisture which can aid in removing excessive exudate and debris. When too much moisture is present, use dressings that absorb moisture.
- Change dressings as necessary to maintain the moisture balance.
- For wounds that are too dry, select dressings that add moisture, such as hydrogels.

TREATMENTS FOR BIOBURDEN

- Silver, combined with foams, alginates, contact layers, hydrogels, collagen have potential for anti-inflammatory action.
- Iodine, such as a cadexomer molecule for absorption and autolytic debridement, allows slow release of the antimicrobial.
- Chlorhexidine, polyhexamethylene biguanide, in a gauze or foam packing.
- Honey, combined with alginates or hydrogel, produces a slow release of peroxide as an antibacterial dressing.
- Methylene blue and gentian violet bound to a foam that is slowly released on the basis of the amount of exudate provides antimicrobial coverage.
- Debridement: surgical, mechanical, sharp, or enzymatic as appropriate

EDEMA

- The presence of edema can inhibit wound healing by causing cell death and creating a toxic wound environment. Edema is a sign of disease, so experts recommend identifying the cause and treating accordingly.

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REFERENCE: Spear, Marcia DNP, ACNP-BC, CWS, CPSN. “Principles of Wound Care—Back to the Basics,” *Plastic Surgical Nursing*. July/September 2014. Volume 34 Number 3, p 150–152

