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#### FAST FACT AND CONCEPT #41

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**Background** *Fast Fact* #40 discussed the staging and prevention of pressure ulcers; this Fast Fact discusses their management. The first step in deciding how to manage pressure ulcers is an assessment of whether or not the wound is likely to heal. If the patient has a prognosis of months to years, adequate nutrition, and blood flow to the tissue, then healing is possible. If the patient has a prognosis of days to weeks, anorexia/cachexia, and/or the wound has inadequate perfusion, then symptom control alone is appropriate and uncomfortable/burdensome treatments are not appropriate.

**Debridement** Always provide adequate analgesia! Necrotic tissue must be removed for ulcer healing; surgical debridement is the fastest and most effective method when there is healthy surrounding tissue. Note: If the patient is close to dying, and/or the wound will never heal, then debridement should not be attempted. Debridement gels (such as Hypergel, Santyl, Nu-gel) are applied onto an ulcer under an occlusive dressing (such as DuoDerm), are available for ulcers that don't require surgery or when surgical debridement is incomplete. These products come with or without enzymes to encourage autolytic or enzymatic debridement. For minimally necrotic ulcers, occlusive dressings such as DuoDerm, changed weekly, promote autolysis.

A commonly prescribed form of mechanical debridement is the use of saline, wet-dry dressings. This treatment actually retards healing by pulling off new epithelial cells as part of healthy granulation tissue; its use for the treatment of skin ulcers should be abandoned.

**Antimicrobials** Ulcer healing is delayed if there is bacterial infection within the wound bed. Erythema, purulent exudate and fever are signs of infection. Cleansing and application of topical antibiotics may be sufficient for superficial infection with minimal surrounding erythema. Systemic antibiotics are indicated for deep/surrounding tissue infection, or if ulcer healing is delayed. Cleanse wounds that are expected to heal with non-cytotoxic fluids (e.g. saline). Cytotoxic fluids (e.g. Betadine) will kill granulation tissue. **Clinical Pearl:** do not cleanse an ulcer with any fluid you wouldn't put in your eye if you want the ulcer to heal.

**Dressings** Living tissue requires moisture for transport of oxygen and nutrients. A moist ulcer environment promotes the migration of fibroblasts and epithelial cells; growth factors are present in the serous exudate that speed healing. In contrast, a dry environment is conducive to necrosis and eschar.

There are 6 classes of dressings distinguished by the wear time and whether you want to add or remove fluid in order to maintain the ideal moist, interactive ulcer-healing environment. A dry ulcer needs to have moisture added through a hypotonic gel (donates water). With wet exudates, a hypertonic gel or foam is used to remove water.

1. *Polyurethane foams* (LYOfoam, Allevyn, Nu-Derm, Flexzan): most absorptive; used under a covering secondary dressing.
2. *Alginates* (Kaltostat, Sorbsan): desiccate an overly wet wound, prevent maceration of surrounding skin from excess fluid, and are hemostatic and may reduce infection risk.
3. *Hydrogels* (IntraSite, Elasto-Gel, ClearSite, Aquasorb): used for wounds with larger volumes of exudate. Require a secondary dressing to secure.
4. *Hydrocolloid wafers* (DuoDerm, Comfeel, Tegaserb, Restore): promote autolysis, angiogenesis and granulation. Self-adhesive. Remain in place for 5-7 days. Often used to "seal" a wound that is otherwise clean in order to promote healing. Can also be used to seal an underlying dressing in order to maintain a moist

environment in which the wound can heal. Note: do not to use an occlusive dressing if there is a substantial risk of infection.

5. *Thin films* (OpSite, Tegaderm): for skin at risk or Stage I pressure ulcers. Can also hold another type of absorbent dressing in place.
6. *Cotton Gauze*: used to cover the primary dressing. Rarely an appropriate dressing for a significant skin ulcer. Note: Saline wet-to-dry dressings are only useful for mechanical debridement.

## References

1. Walker P. The pathophysiology and management of pressure ulcers. In: Topics in Palliative Care, Volume 3. Portenoy RK, Bruera E, eds. New York, NY: Oxford University Press; 1998: pp 253-270.
2. Walker P. Update on pressure ulcers. Principles & Practice of Supportive Oncology Updates. 2000; 3(6):1-11.

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