

Moist Wound Healing

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Moisture is a key component for keeping every cell in the body alive and functioning. The concept *moist wound healing* originated in 1962 when George Winter discovered that epithelialization would proceed twice as fast in a moist environment as under a scab.

Cells require moisture to migrate from the wound edges to close a wound; they cannot migrate in a dry wound where granulation tissue production is impaired and new epithelial cells must burrow beneath the eschar or scab. Therefore, wounds that are allowed to dry out will heal more slowly than those that have the benefit of moisture. Additionally, moist wound healing maintains optimal wound temperatures and reduces the rate of infection and scarring.

Dressing choice is an important part of the healing process. The essential role and function of a dressing is to provide an environment that promotes wound healing. Dressings that are semi-occlusive, moisture-retentive, and nonadherent to the wound bed help provide the optimal environment for wound healing. Moist wound dressings include foams, alginates, hydrogels, hydrocolloids, transparent films, and some topical treatments. Care must be taken to ensure optimal moisture in the intact periwound skin, as well as the wound bed.

At the same time, constant moisture may cause maceration of wound and periwound tissue. To manage excess drainage, a dressing must be absorbent. When not using an indicator dressing that allows the clinician to visualize when the dressing should be changed, a skin barrier such as a cream or skin sealant may be placed on the surrounding intact skin to protect it in order to help reduce maceration risk.

The appropriate dressing can have a positive impact on wound healing. ■

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Commentary from Ferris Mfg. Corp.

Maintaining optimal moisture levels is crucial to wound healing. In a representative case study,¹ a healthy 18-year-old from Ghana, West Africa, suffered a painful crush injury to her right fourth finger in a cooking accident that prevented her from working. Although her wound was treated with triple antibiotic ointment and gauze, it was not healing. The periwound skin became macerated from the ointment and the wound remained avascular and dry. It was challenging to provide a moist healing environment living in dry weather conditions.

Drug-free multifunctional PolyMem® Silver dressings were applied for their antimicrobial and other unique abilities — ie, they can lessen the chronic inflammatory reaction known to interfere with healing, help reduce both persistent and procedural wound pain, and manage maceration. PolyMem dressings also help maintain optimal moisture levels under dry environmental conditions and hydrate dry wounds. The dressings contain hydrophilic components that draw fluid from the body to permeate the wound and encourage tissue growth. PolyMem dressings are indicator dressings; in addition, they are especially absorbent and have been shown to help reduce the risk of periwound skin maceration. Because the PolyMem dressings have a built-in wound cleanser, no manual cleansing was needed during dressing changes, in this case performed every other day. New tissue growth was apparent at the first dressing change. The wound had been closed for a few days when the patient demonstrated her healing progress 20 days later.

References

1. Benskin L. Activation of a Stalled Traumatic Finger Wound With Silver Polymeric Membrane Dressings. Poster presentation the 3rd Congress of the World Union of Wound Healing Societies. Toronto, Ontario, Canada. June 4–8, 2008.



November 15:
Silver PolyMem dressing applied to 8-day-old stalled wound. On application, pain and inflammation decreased.



December 6:
Patient showed off her healed wound and returned to work.

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