

(Mepilex Ag), and a wound contact layer with glycosaminoglycan hydrogel (Mepitel).

Biologic skin coverings.

Permanent coverage of extensive burns is a prolonged process that requires repeated operative procedures using general anesthesia for atraumatic care in debridement and grafting. Early closure shortens the period of metabolic stress and decreases the likelihood of burn wound sepsis. In the acute phase, biologic dressings cover and protect the burn from contamination, reduce fluid and protein loss, increase the rate of epithelialization, reduce pain, and facilitate movement of joints to retain range of motion.

Allograft (homograft) skin is obtained from human cadavers that are screened for communicable diseases. Allograft is particularly useful as a temporary skin covering of surgically excised deep partial- and full-thickness burns and extensive burns when available donor sites are limited. Severe immunosuppression occurs in massively burned children, and the allograft becomes adherent. The allograft can remain in place until suitable donor sites become available. Typically, rejection is seen approximately 14 to 21 days after application ([Kagan, Winter, and Robb, 2012](#)). The availability of tissue banks and a supply of suitable donors limit the use of allografts.

Xenograft from a variety of species, most notably pigs, is commercially available. In large burns, the porcine xenograft is commonly applied when extensive early debridement is indicated to cover a partial-thickness burn; this provides a temporary covering for the burn until an available autograft can be applied to the full-thickness areas ([Lee, Norbury, and Herndon, 2012](#)). Pigskin dressings are replaced every 1 to 3 days. They are particularly effective in children with partial-thickness scald burns of the hands and face, because they allow relatively pain-free movement, which reduces contracture formation and has the added benefit of improving appetite and morale.

When applied early to superficial partial-thickness burns, biologic dressings stimulate epithelial growth and faster wound healing. However, biologic dressings must be applied to clean burns. If the dressing covers areas of heavy microbial contamination, infection occurs beneath the dressing. In the case of