

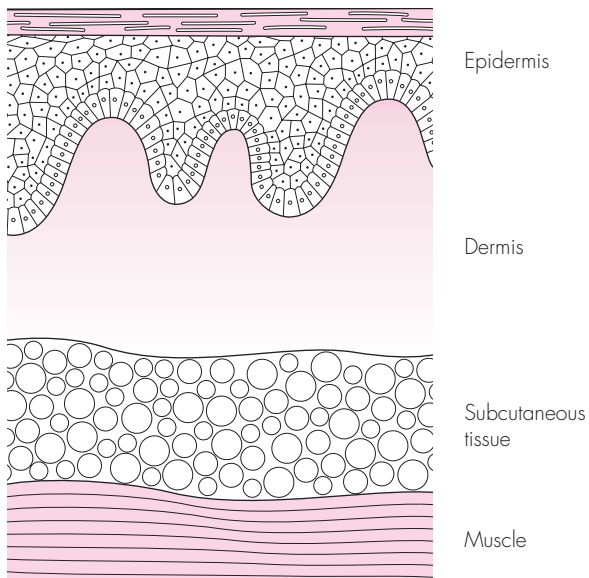
CHAPTER 1

THE BURN WOUND

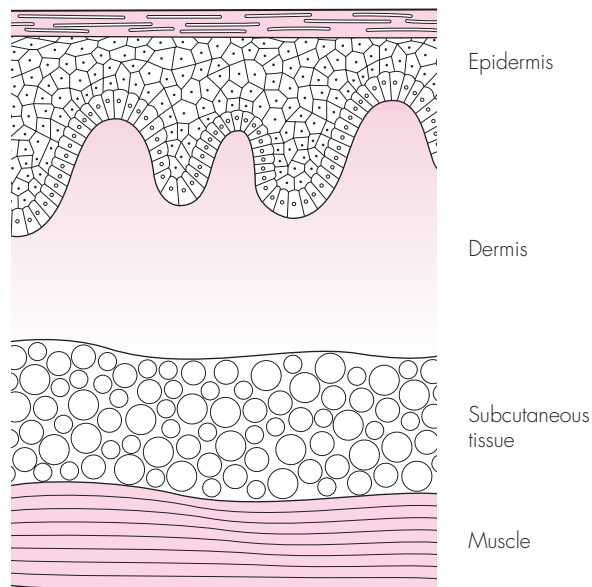
Juan P. Barret, MD and Peter Dziewulski, FRCS, FRCS (Plast)

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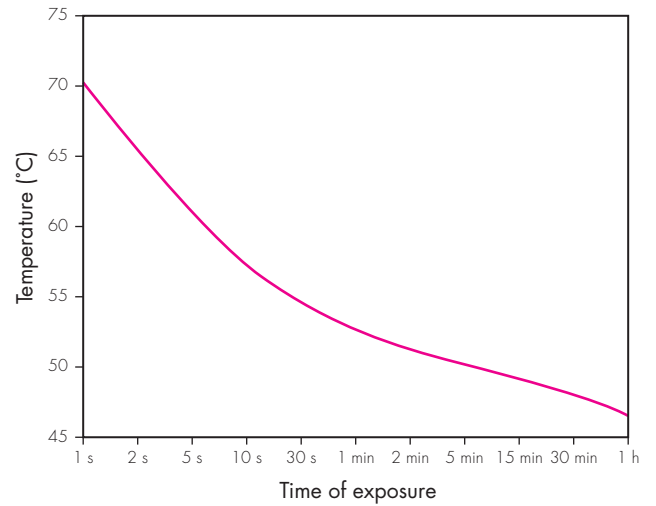
1. THE BURN WOUND



1.1.1.1 Diagram of normal skin. Note the architecture of the epidermal papillae and dermal crest. Their indentation is responsible for many physical properties of skin. Sweat glands and hair follicles are present deep in the dermal and subcutaneous tissue, and are responsible for re-epithelization of second-degree burns and donor sites.



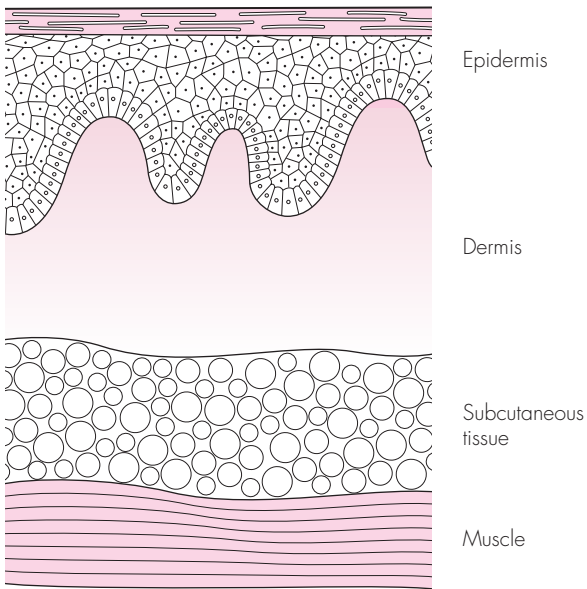
1.1.2.1 First-degree burn. Only the epidermis has been damaged.



1.1.1.2 Skin surface temperature needed to produce full thickness damage versus time.



1.1.2.2 First-degree burn to the palmar surface of an infant. Note the red, hyperemic appearance of the surface, which, along with the hypersensitivity and discomfort, are typical of these injuries.



1.1.3.1 Superficial second-degree burn (superficial partial thickness). Epidermis and superficial (papillary) dermis have been damaged. Regeneration occurs by proliferation of epithelial cells from hair follicles and sweat gland ducts. Conversion to full thickness burns is rare, provided proper wound care is instituted.



1.1.3.2 Superficial second-degree burn to the lower leg and forefoot. Blistering and extreme pain are typical of such injuries. Sensation is preserved with different degrees of hyperesthesia.



1.1.3.3 Extended blisters on a superficial second-degree contact burn to the palm of an infant.

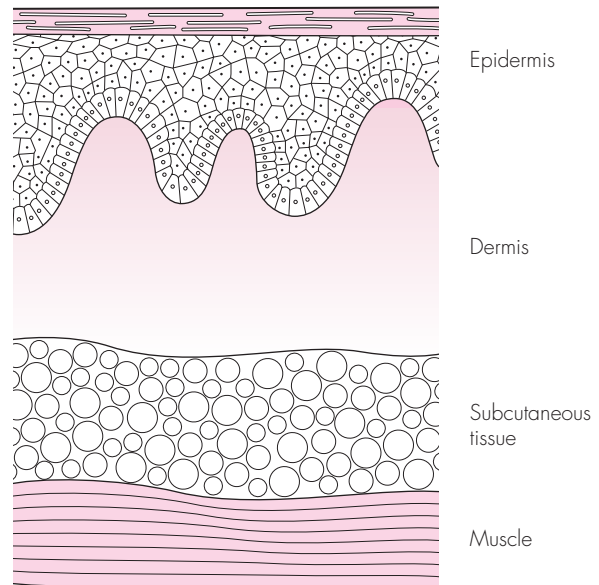


1.1.3.4 Superficial second-degree burns to the dorsa of the fingers. Splinting and early mobilization are important for treatment of burns in this location.

1. THE BURN WOUND



1.1.3.5 Typical appearance of superficial second-degree burns after removal of the blister. A moist, pink appearance that blanches with pressure, along with extreme pain and hyperesthesia are common among these injuries.



1.1.4.1 Deep second-degree burn (deep partial thickness burn). Epidermis, papillary dermis, and various depths of reticular (deep) dermis have been damaged. Regeneration occurs by proliferation of epithelial cells from hair follicles and sweat gland ducts. Concentration of such structures is less than in depths of superficial second-degree burns, and regeneration progresses slower. Conversion to full thickness injury is possible.



1.1.4.2 Deep second-degree burn to the dorsum of the hand. Note the pink-white appearance. These injuries tend to be hypoesthetic, presenting with less pain than superficial second-degree burns. Blistering does not normally occur, or is present many hours after the injury. A dry appearance is common.



1.1.4.3 Deep second-degree burn to the palm. These injuries are best treated conservatively, and sequelae are rare.