

Depth of Injury

A burn is a three-dimensional wound that is also assessed in relation to depth of injury. Traditionally, the terms *first*, *second*, and *third degree* have been used to describe the depth of tissue injury. However, with the current emphasis on wound healing, these have been replaced by more descriptive terms based on the extent of destruction to the epithelializing elements of the skin (Fig. 13-4).

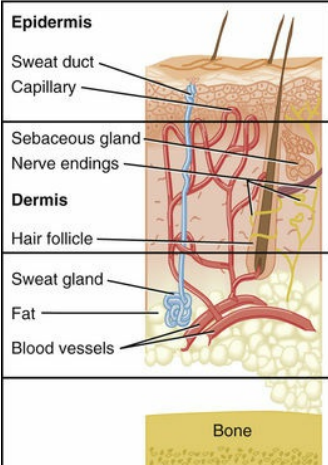
		Wound Appearance	Wound Sensation	Course of Healing
	Partial-Thickness Burn			
	1st Degree	Epidermis remains intact and without blisters Erythema; skin blanches with pressure	Painful	Discomfort lasts 48–72 hours. Desquamation occurs in 3–7 days.
	2nd Degree	Wet, shiny, weeping surface Blisters Wound blanches with pressure	Painful Very sensitive to touch, air currents	Superficial partial-thickness burn heals in <21 days. Deep partial-thickness burn requires >21 days for healing. Healing rates vary with burn depth and presence or absence of infection.
	3rd Degree	Color variable (i.e., deep red, white, black, brown) Surface dry Thrombosed vessels visible No blanching	Insensate (↓ pinprick sensation)	Autografting is required for healing.
Full-Thickness Burn				
4th Degree		Color variable Charring visible in deepest areas Extremity movement limited	Insensate	Amputation of extremities is likely. Autografting is required for healing.

FIG 13-4 Classification of burn depth according to depth of injury. (From Black JM: *Medical-surgical nursing: clinical*

management for positive outcomes, ed 8, Philadelphia, 2008, Saunders/Elsevier.)

Superficial (first-degree) burns are usually of minor significance. This type of injury involves the epidermal layer only. There is often a latent period followed by erythema. Tissue damage is minimal, and there is no blistering. The protective functions of the skin (such as bacterial and vapor barrier) remain intact, and systemic effects are rare. Pain is the predominant symptom, and the burn heals in 5 to 10 days without scarring. A mild sunburn is an example of a superficial burn.

Partial-thickness (second-degree) burns involve the epidermis and varying degrees of the dermal layer. These wounds are painful, moist, red, and blistered. With superficial partial-thickness burns, dermal elements are intact, and the wound should heal in approximately 14 to 21 days with variable amounts of scarring (Fig.