



มหาวิทยาลัยราชภัฏนครปฐม  
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# Burn

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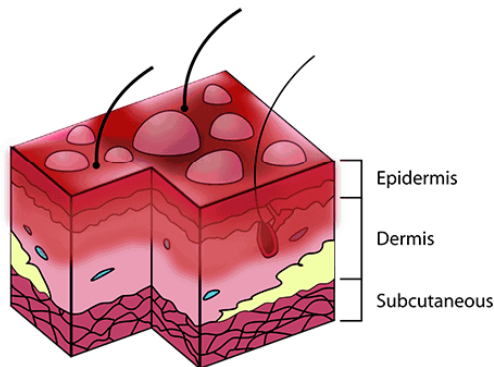
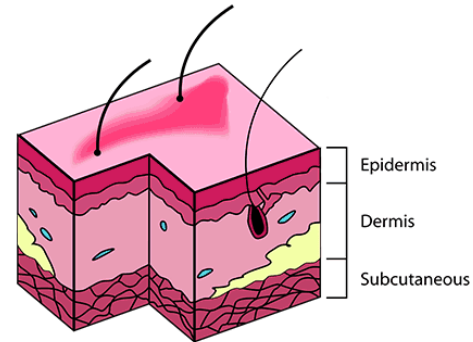


# Burn

- Burn injury is the result of heat transfer from one site to another.
- Burns disrupt the skin, which leads to increased fluid loss; infection; hypothermia; scarring; compromised immunity; and changes in function, appearance, and body image.
- Young children and the elderly continue to have increased morbidity and mortality when compared to other age groups with similar injuries. Inhalation injuries in addition to cutaneous burns worsen the prognosis.
- The severity of each burn is determined by multiple factors that when assessed help the burn team estimate the likelihood that a patient will survive and plan for the care for each patient.

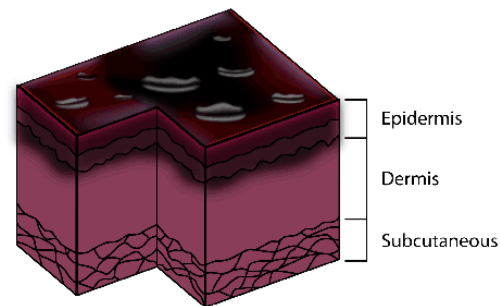
# Depth Classifications of Burn Injury

**Superficial partial-thickness (Similar to First Degree)**  
The epidermis is destroyed or injured and a portion of the dermis may be injured.



**Deep partial thickness (Similar to Second Degree)**  
A deep partial thickness burn involves the destruction of the epidermis and upper layers of the dermis and injury to the deeper portions of the dermis.

**Full thickness (Similar to Third Degree)**  
A full thickness burn involves total destruction of the epidermis and dermis and, in some cases, the destruction of the underlying tissue, muscle, and bone.



# Clinical Manifestations

- The changes that occur in burns include the following:
  - **Hypovolemia**. This is the immediate consequence of fluid loss and results in decreased perfusion and oxygen delivery.
  - **Decreased cardiac output**. Cardiac output decreases before any significant change in blood volume is evident.
  - **Edema**. Edema forms rapidly after burn injury.

# Clinical Manifestations

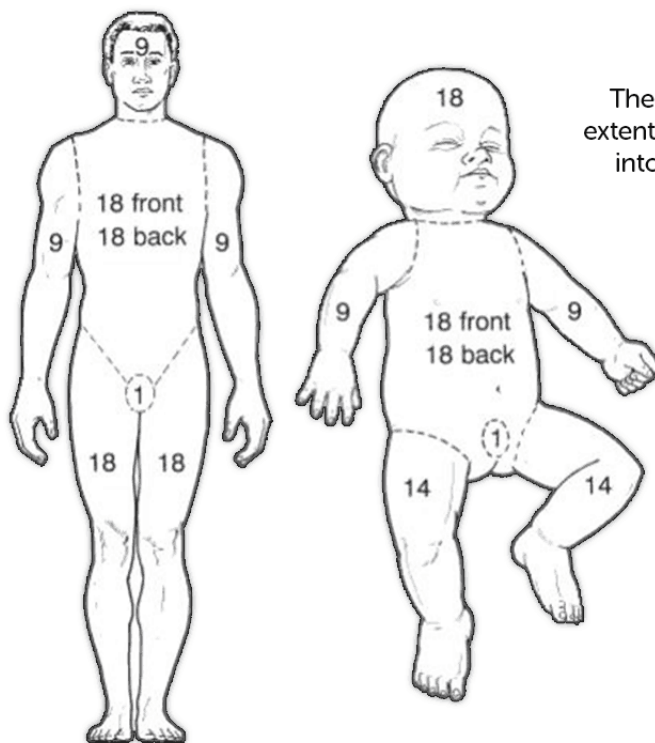
- **Decreased circulating blood volume.** Circulating blood volume decreases dramatically during burn shock.
- **Hyponatremia.** Hyponatremia is common during the first week of the acute phase, as water shifts from the interstitial space to the vascular space.
- **Hyperkalemia.** Immediately after burn injury hyperkalemia results from massive cell destruction.
- **Hypothermia.** Loss of skin results in an inability to regulate body temperature.

# Complications

- There are a lot of consequences involved in burn injuries that may progress without treatment.
- **Ischemia.** As edema increases, pressure on small blood vessels and nerves in the distal extremities causes an obstruction of blood flow.
- **Tissue hypoxia.** Tissue hypoxia is the result of carbon monoxide inhalation.
- **Respiratory failure.** Pulmonary complications are secondary to inhalational injuries.

# Assessment and Diagnostic Findings

## Rule of Nines



The **Rule of Nines** is a quick way to estimate the extent of burns in adults through dividing the body into multiples of nine and the sum total of these parts is equal to the total body surface area injured.

Image via: wikimedia.org

# Nursing Management

- **Focus on the major priorities of any trauma patient.** the burn wound is a secondary consideration, although aseptic management of the burn wounds and invasive lines continues.
- **Assess circumstances surrounding the injury.** Time of injury, mechanism of burn, whether the burn occurred in a closed space, the possibility of inhalation of noxious chemicals, and any related trauma.
- **Monitor vital signs frequently.** Monitor respiratory status closely; and evaluate apical, carotid, and femoral pulses particularly in areas of circumferential burn injury to an extremity.



# Nursing Management

- **Start cardiac monitoring if indicated.** If patient has history of cardiac or respiratory problems, electrical injury.
- **Check peripheral pulses on burned extremities hourly;** use Doppler as needed.
- **Monitor fluid intake (IV fluids) and output** (urinary catheter) and measure hourly. Note amount of urine obtained when catheter is inserted (indicates preburn renal function and fluid status).
- **Obtain history.** Assess body temperature, body weight, history of pre burn weight, allergies, tetanus immunization, past medical surgical problems, current illnesses, and use of medications.

## **Acute or intermediate phase begins 48 to 72 hours after the burn injury.**

- Focus on hemodynamic alterations, wound healing, pain and psychosocial responses, and early detection of complications.
- Measure vital signs frequently. Respiratory and fluid status remains highest priority.
- Assess peripheral pulses frequently for first few days after the burn for restricted blood flow.

# Rehabilitation Phase

Rehabilitation should begin immediately after the burn has occurred. Wound healing, psychosocial support, and restoring maximum functional activity remain priorities. Maintaining fluid and electrolyte balance and improving nutrition status continue to be important.



# Nursing Interventions

**Promoting Gas Exchange and Airway Clearance**

**Restoring fluid and Electrolyte Balance**

**Maintaining Normal Body Temperature**

**Minimizing Pain and Anxiety**

**Monitoring and Managing Potential Complications**



# **Nursing Interventions**

**Restoring Normal fluid Balance**

**Preventing Infection**

**Monitor culture results and white blood cell counts.**

**Maintaining Adequate Nutrition**

**Promoting Skin Integrity**

**Encourage the patient to use analgesic medications before painful procedures.**



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*Thank  
you!*