

Assessment and Initial Care of Burn Patients



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by Richard L. Gamelli, MD, FACS
Prepared in conjunction with the American Burn Association

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Stop Further Injury

- Remove victim from source
- Extinguish or remove burning clothing
- Chemical burns
 - Continuous, copious water lavage
 - Prolonged eye irrigation
 - Remove all contaminated clothing
 - Avoid self-injury; wear gloves and protective clothing

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Maintain Ventilation

- Administer humidified 100% oxygen by mask to treat possible carbon monoxide poisoning
- Examine airway for signs of inhalation injury
 - Singed vibrissae
 - Carbonaceous material in upper airway
 - Edema or inflammatory change in oral pharynx/upper airway

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CPR if No Pulse or Heart Action Is Detectable

- Maintain airway
 - Endotracheal intubation
 - Associated neck trauma
 - Associated significant chest wall injury (ie, flail chest)
 - Acute airway edema/severe inhalation injury
 - Mechanical ventilation if intubated

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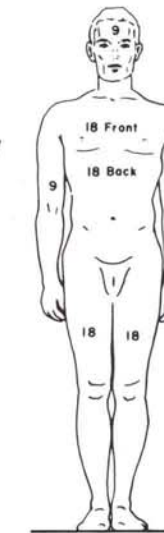
History

- Circumstances of injury
- Pre-existing illnesses
- Medications
- Allergies
- History of enclosed space fire
- History of alcohol/drug use

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Physical Examination

- Check for associated injuries
- Estimate extent and depth of burn (Rule of Nines—child's head is disproportionately larger than adult head)
- Weigh the patient



Rule of Nines

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Intravenous Fluid Therapy

- Required by patients with burns greater than 20% of total body surface
- Secure a large-bore IV cannula in adequate vein
- Place indwelling urethral catheter and attach to closed drainage system
- Estimate fluid needs for first 24 hours postburn
 - Adults: 2–4 mL lactated Ringer's solution/kg body weight/percent burn

- Children less than 3 years old: 4 mL lactated Ringer's solution/kg body weight percent of burn plus normal maintenance fluid
- Plan on administering one-half of calculated volume in first 8 hours postburn, but adjust infusion rate to obtain:
 - 30–50 mL of urine per hour in patients weighing more than 30 kg
 - 1 mL urine per hour/kg body weight in patients weighing less than 30 kg

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Maintenance of Peripheral Circulation in Patients with Circumferential Extremity Burns

- Remove rings and bracelets
- Clinical signs of impaired circulation include:
 - Cyanosis
 - Impaired capillary refilling
 - Progressive neurologic signs (ie, paresthesias and deep tissue pain)
 - Doppler determination of peripheral pulses

- Escharotomy
 - No anesthesia needed
 - Place incision in midlateral and/or midmedial line of limb
 - Must carry incision across involved joints
 - Incise only to depth that allows cut edges of eschar to separate
- Fasciotomy is usually indicated only when injury involves subfascial tissues (recommended as an operating room procedure)

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Nasogastric Tube

Place tube and attach to suction if there is nausea, vomiting, or distension, or if burns involve more than 25% of total body surface

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Analgesic Medication

Give only intravenously and in small doses

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Tetanus Prophylaxis as Dictated by Patient's Immunization Status

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Initial Burn Wound Care

- Cleanse and debride loose tissue
- Cover burns with dry sterile dressing or cover with a clean sheet
- If patient is to be retained, begin topical therapy

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Burn Size

Burn Size	Criteria for Burn Center Referral
Total	>20%; >10% in patients <10 or >50 yrs
Third degree	>5%
Age	<10 or >50 yrs
Airway or inhalation injury	Present (CO Hb >15%)
Electrical/lightning injury	Present
Significant associated injury or pre-existing disease	Present
Deep burns of face, hands, feet, perineum, or major joints	Present
Suspected child abuse	Present
Chemical burns	Present

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Guidelines, Admission, and Transfer Criteria

Criteria should be modified according to the judgment, interest, and experience of the attending physician and the burn care resources available at the institution involved

Regional Burn Facilities

Phone
