Fluid resuscitation may be indicated. Initiate fluid resuscitation regardless of burn size. These guidelines are given to assist emergency personnel in the initial management of a burn patient prior to transfer to the Burn Center.

**Primary Survey:** Use ABCDE to check the patient’s status:
- A: Airway/C-spine immobilization
- B: Breathing and ventilation
- C: Circulation
- D: Disability, neurologic deficit
- E: Expose (remove all clothing and jewelry)

Environmental control (keep warm)

**Secondary Assessment:** Use head-to-toe approach
- Remove all clothing and jewelry
- Quickly assess percentage of skin involved and depth of burn
- Cover patient with clean, dry sheet

Keep warm: Hypothermia occurs rapidly

Avoid use of ice or ointments
- If material is stuck to the skin, do no attempt to remove
- For circumferential burns, elevate burn extremity above the level of the heart
- May consider Saran Wrap to reduce heat loss

**Wound Management**

- First Degree Burn/Superficial
  - These burns are not included in the percentage of total body surface
  - Only epidermis is involved
  - Skin is pink, red and dry with no blistering
  - Heals in 3-5 days, usually does not scar
  - Minimal risk of infection

- Second Degree Burn/Partial Thickness
  - Epidermis and dermis involved
  - Skin is bright red, pearl, pink, painful and moist
  - May have small to large blisters
  - Rapid fluid loss may occur with large burns
  - Heals in 10 days - 2 weeks
  - Pain control indicated
  - Fluid resuscitation may be indicated
  - Capillary refill present

- Third Degree Burn/Full Thickness
  - Epidermis and dermis destroyed
  - Fascia and muscle may be involved
  - Appears tan, leathery, charred or white and may be depressed below surrounding tissue
  - Painful at edge of burn, otherwise insensate
  - Pain control indicated
  - Fluid resuscitation may be indicated
  - Capillary refill absent

**Burn Injury Depth Classifications**

- **First Degree Burn/Superficial**
- **Second Degree Burn/Partial Thickness**
- **Third Degree Burn/Full Thickness**

**Special Types of Burn Management**

- **Chemical Burns**
  - Remove contaminated clothing
  - Brush off powder and solid chemicals from clothing
  - Irrigate involved skin with water or saline for at least 20 minutes or until the burning sensation is relieved
  - Avoid use of ice or ointments

- **Electrical Burns**
  - The danger from an electrical shock depends on voltage, current, pathway and co-morbidities
  - Initiate fluid resuscitation regardless of burn size
  - Assess for associated injuries:
    - Cardiac arrest
    - Dyshyrmthmias – treat per ACLS protocol
    - Respiratory failure
    - Muscle pain and contractions
    - Seizures
    - Numbness and tingling
    - Unconsciousness
  - Special Circumstances: High-voltage electrical injuries require trauma immobilization and evaluation

- **Flame/Scald/Contact Burns**
  - Remove all clothing and items such as jewelry
  - Cover the burned area loosely with a dry dressing or clean sheets/blankets
  - Do not apply ice or ointments
  - May need to initiate fluid resuscitation

- **Smoke Inhalation**
  - Administer 100% oxygen
  - Monitor patency of airway closely

- **Burn Prevention and Awareness**
  - Burn prevention and awareness resources
  - Outpatient Burn and Wound Care Clinic
  - School re-entry program
  - Occupational and physical therapy/hand rehabilitation
  - Family and burn survivor support
  - Outpatient Burn and Wound Care Clinic
  - Burn prevention and awareness resources

**American Burn Association**

- The Gene and Barbara Burnett Burn Center is the only adult burn center in the greater Kansas City area that is accredited by the American Burn Association and the American College of Surgeons.

- The multidisciplinary burn team provides long-term continuity of care for adult and pediatric patients whose injuries require specialized treatment and rehabilitation.

- We treat all types of burns and wounds including:
  - Chemical, electrical, flame and scald burns
  - Large areas of skin loss from accidents or disease processes (e.g., toxic epidermal necrolysis, severe dermatitis or necrotizing fasciitis), which can result in extensive chronic wounds that are difficult to heal.

The Burnett Burn Center offers state-of-the-art equipment, an on-site operating room, hydrotherapy, and complete rehab and support services for adults and children.

- Plastic surgery and reconstruction
- Occupational and physical therapy/hand rehabilitation
- School re-entry program
- Family and burn survivor support
- Outpatient Burn and Wound Care Clinic
- Burn prevention and awareness resources

**Contact the Burnett Burn Center**

For information regarding small burn management or to make a referral, call the Outpatient Burn and Wound Clinic at 913-588-5475.

**Begin Fluid Resuscitation**

If burn size is greater than 10% pediatric or greater than 15% adult, initiate fluid resuscitation.

Start 2 large-bore IVs (may be inserted through burned skin if necessary). Note: If IVs are started through burn tissue, a tape alternative may be required to ensure securement.

- **Adults:** Start LR at 500mL/hr.
  - Do not exceed 500mL IVF without discussing ongoing resuscitation needs with a burn attending
  - Caution: Start IVF at 250 mL/hr for patients who have pre-existing cardiac or pulmonary disease or those more than 70 years old.

- **Pediatric:** Start LR at 20 mL/kg/hr up to 500mL/hr.

Avoid: Fluid challenge unless patient is hypotensive due to trauma

**About the Burnett Burn Center**

The University of Kansas Hospital

Burnett Burn Center

The University of Kansas Hospital

Burnett Burn Center

Accredited by the American Burn Association and the American College of Surgeons

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