

SECTION: T-3

PROTOCOL TITLE: Burn Trauma

REVISED: January 27, 2010

GENERAL COMMENTS: Burns should be evaluated by the depth of burn, the presence of co-morbid factors, location of burns, and BSA using the rule of 9's. In addition to normal burn care, many problems may be anticipated by assessing for the presence of co-morbid factors.

BLS SPECIFIC CARE: See General Trauma Care Protocol T-1

Basic Burn Care

- Patients with burns to the trunk, face, any airway passage involvement whatsoever or the presence of any co-morbid factors, should receive supplemental oxygen regardless of oxygen saturation. Assist ventilations as needed
- If the total BSA involvement is less than 10%, cooling of area with sterile water/saline or burn gel may be performed
- Keep burned area as clean as possible (aseptic)
- Prevent hypothermia
- Facial burns: Raise patient's head 30 degrees when possible to decrease swelling
- Extremity burns: Remove all jewelry; elevate extremity if possible

Assess Burns

- Assess for abuse, attempted suicide, etc.
- Toxic / HazMat exposure
- In the presence of blast injury, electrical burns or other major trauma mechanism, provide C-spine immobilization
- Stop the burning process
- Maintain patent airway as necessary
 - Severe burns to the face and neck may be indicative of imminent airway occlusion
- Supplemental high flow oxygen as tolerated
- Assisted ventilations if necessary to maintain adequate SpO₂
- Cover burns with dry sterile dressings
- Burns less than 10% TBSA may be cooled with water or saline
- Conserve body heat; burns covering a large percentage of body surface area can predispose patients to developing hypothermia
- Facial burns: raise patient's head 30° when possible to decrease swelling
- Extremity burns: remove all jewelry and elevate extremity if possible
- Assess total body surface area (TBSA) burned
 - See, "Estimating Burn Area (Using Rule of 9's)," charts under, "Key Considerations"
 - Use pediatric Rule of 9's for patients < 4 years of age

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BURN TRAUMA

ILS SPECIFIC CARE: See General Trauma Care Protocol T-1

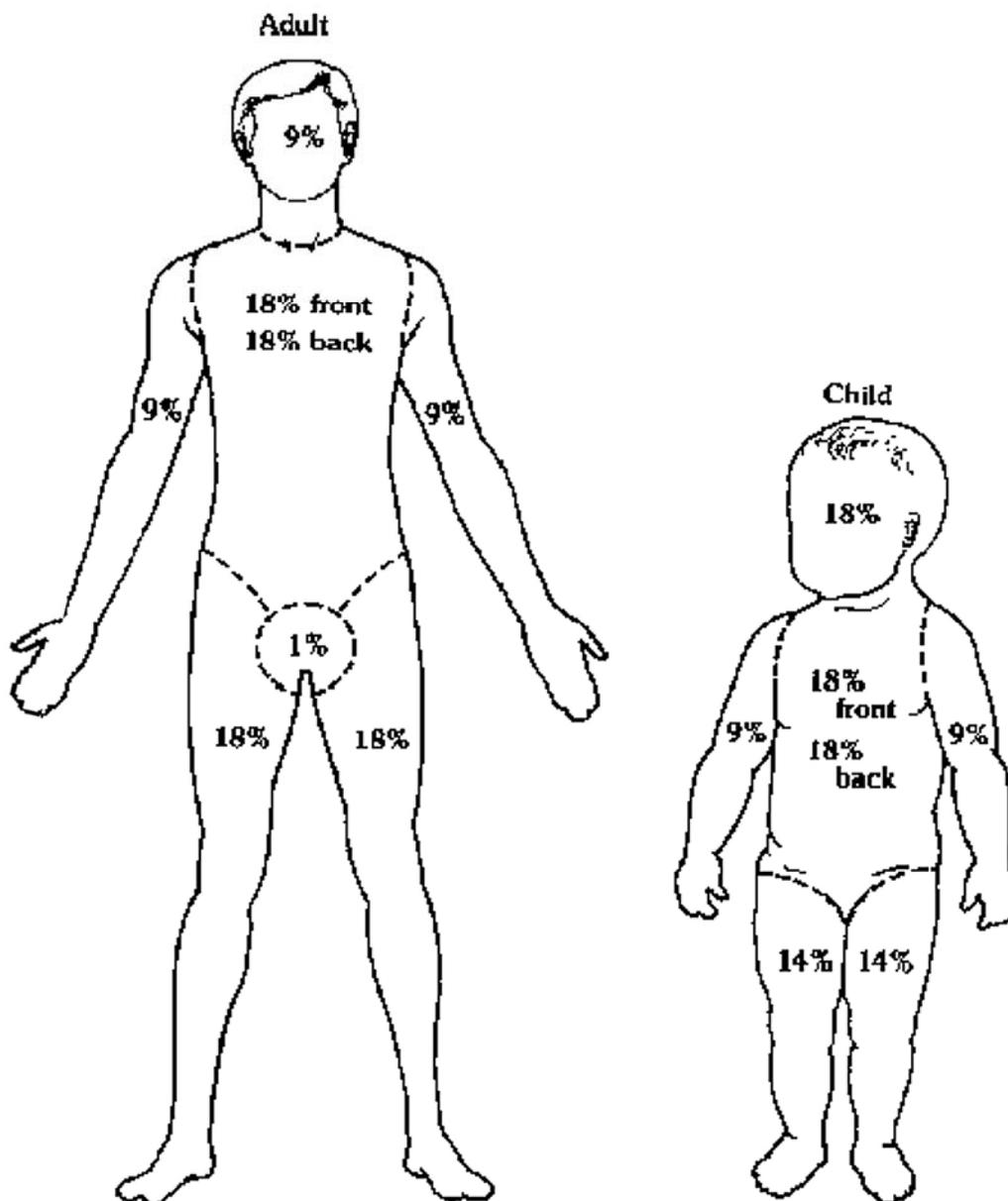
- Parkland formula for fluid resuscitation (initiate as feasible) using a crystalloid solution

(2-4cc crystalloid X Pt Weight KG) X BSA = 24 hour requirement.
Administer ½ of 24 hour requirement over first 8 hours

ALS SPECIFIC CARE: See General Trauma Care Protocol T-1

- Have a high index of suspicion and a low intubation threshold when treating burn patients with possible airway involvement
- Burns are extremely painful! Strongly consider sedation and pain management
- See (M-11) protocol for Analgesics, sedatives

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Rules of Nine	Patient > 14 yrs	5-14 yrs	Infants to 5 yrs
Head	9%	14%	18%
Each arm (front & back)	9%	9%	9%
Each leg (front & back)	18%	16%	14%
Chest and Abdomen	18%	18%	18%
Back	18%	18%	18%
Groin	1%	1%	1%

BURN TRAUMA

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BURN TRAUMA

PHYSICIAN PEARLS:

Co-Morbid Factor	Considerations
Hypotension	Transport to trauma center. Hypotension is rare in acute burns, assess for hidden cause such as toxic exposure, occult hemorrhage, MI, or other cause
Age (<12, >55)	Transport to trauma center. Due to generally thinner skin in these age groups, it is easy to underestimate severity of burns
Circumferential	Transport to trauma center
High risk areas	Burns to genitalia, hands, feet, or face should be transported to trauma center
Suspected inhalation injuries	Singed nasal hairs, stridor, sooty airways, hoarse voice or history of enclosed space indicate a potential for CO poisoning or airway injury, Transport to trauma center, consider aggressive and early airway management
Co existing major trauma	Transport to trauma center
Electricity (lightning)	While arrest is common, many patients will restore organized cardiac activity even with simple CPR, but will require prolonged respiratory support. Does not require a trauma center.
Electricity (other)	Transport to trauma center. Cardiac monitoring and 12 lead evaluation as available. Consider path of damage
Hx of renal failure or burns older than 36 hours	Do not use Succinylcholine (Anectine)
Blast injury	Immobilize, assess for baro-trauma, and watch for secondary devices