Pediatric Thermal Burn

History
- Type of exposure (heat, gas, chemical)
- Inhalation injury
- Time of injury
- Past medical history and Medications
- Other trauma
- Loss of Consciousness
- Tetanus/Immunization status

Signs and Symptoms
- Burns, pain, swelling
- Dizziness
- Loss of consciousness
- Hypotension/shock
- Airway compromise/distress could be indicated by hoarseness/wheeze

Differential
- Superficial (1st Degree) red - painful (Don’t include in TBSA)
- Partial Thickness (2nd Degree) blistering
- Full Thickness (3rd Degree) painless/charred or leathery skin
- Thermal
- Chemical – Electrical

Assess Burn / Concomitant Injury Severity

Minor Burn
- < 5% TBSA 2nd/3rd Degree Burn
  - No inhalation injury, Not Intubated, Normotensive
  - GCS 14 or Greater

Serious Burn
- 5-15% TBSA 2nd/3rd Degree Burn
  - Suspected inhalation injury or requiring intubation for airway stabilization
  - Hypotension or GCS 13 or Less
  - (When reasonably accessible, transport to a Burn Center)

Critical Burn
- >15% TBSA 2nd/3rd Degree Burn
  - Burns with Multiple Trauma
  - Burns with definitive airway compromise
  - (When reasonably accessible, transport to a Burn Center)

Remove Rings, Bracelets / Constricting Items
Dry Clean Sheet or Dressings
Pediatric Multiple Trauma Protocol if indicated
Pediatric Airway Protocol(s) as indicated
IV Procedure if indicated
Normal Saline 0.25 mL / kg (x % TBSA) / hr
for up to the first 8 hours.
(More info below)
Lactated Ringers if available
Pediatric Pain Control Protocol if indicated

Carbon Monoxide / Cyanide Exposure
YES
Transport Facility of Choice

Carbon Monoxide / Cyanide Protocol

NO

Carbon Monoxide / Cyanide Exposure

Rapid Transport to appropriate destination using
Trauma and Burn: EMS Triage and Destination Plan

Notify Destination or Contact Medical Control

Normal Saline 0.25 mL / kg (x % TBSA) / hr
for up to the first 8 hours.
(More info below)
Lactated Ringers if available
IO Procedure if indicated

Pediatric Pain Control Protocol if indicated

Pediatric Multiple Trauma Protocol if indicated
Pediatric Airway Protocol(s) as indicated
Consider 2 IV sites if greater than 15 % TBSA

1. Lactated Ringers preferred over Normal Saline. Use if available, if not change over once available.
2. Formula example: an 80 kg (196 lbs.) patient with 50% TBSA will need 1000 cc of fluid per hour.
Rule of Nines

- Seldom do you find a complete isolated body part that is injured as described in the Rule of Nines.
- More likely, it will be portions of one area, portions of another, and an approximation will be needed.
- For the purpose of determining the extent of serious injury, differentiate the area with minimal or 1st degree burn from those of partial (2nd) or full (3rd) thickness burns.
- For the purpose of determining Total Body Surface Area (TBSA) of burn, include only Partial and Full Thickness burns. Report the observation of other superficial (1st degree) burns but do not include those burns in your TBSA estimate.
- Some texts will refer to 4th, 5th, and 6th degree burns. There is significant debate regarding the actual value of identifying a burn injury beyond that of the superficial, partial and full thickness burn at least at the level of emergent and primary care. For our work, all are included in Full Thickness burns.

- Other burn classifications in general include:
  - 4th referring to a burn that destroys the dermis and involves muscle tissue.
  - 5th referring to a burn that destroys dermis, penetrates muscle tissue, and involves tissue around the bone.
  - 6th referring to a burn that destroys dermis, destroys muscle tissue, and penetrates or destroys bone tissue.

Estimate spotty areas of burn by using the size of the patient’s palm as 1%