Burns: Thermal

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
- Singed facial or nasal hair
- Hoarseness / wheezing

Differential
- Superficial (1st Degree) red and painful
- Partial Thickness (2nd Degree) blistering
- Full Thickness (3rd Degree) painless/charred or leathery skin
- Thermal
- Chemical
- Electrical
- Radiation

Legend
- B
- EMT
- I
- P
- M
- Medical Control

Universal Patient Care Protocol

Critical (Red)
- >15% TBSA 2nd/3rd Degree Burn
- Burns with Multiple Trauma
- Burns with definitive airway compromise
- (When reasonable accessible, transport to a Burn Center)
- Remove Rings, Bracelets, and other Constricting Items
- Airway Protocol
- Cover Burn with Dry sterile sheet or dressings
- IV Normal Saline, 2 large bore IVs, infuse total of 0.25 x kg body wt. x % TBSA per hour for up to the first 8 hrs. (More info below)
- Pain Control Protocol
- Notify Destination or Contact Medical Control

Serious (Yellow)
- 5-15% TBSA 2nd/3rd Degree Burn
- Suspected Inhalation injury or requiring intubation for airway stabilization
- Hypotension or GCS < 14
- (When reasonable accessible, transport to either a Level I Burn Center or a Trauma Center)

Minor (Green)
- < 5% TBSA 2nd/3rd Degree Burn
- No inhalation injury, Not Intubated, Normotensive GCS>14
- (Transport to the Local Hospital)
- Cool Down the Wound with Normal Saline
- Cover Burn with Dry sterile sheet or dressings
- IV Normal Saline, infuse total of 0.25 x kg body wt. x % TBSA per hour for up to the first 8 hours. (More info below)

Protocol 50

1. The IV solution should be changed to Lactated Ringers if it is available. It is preferred over Normal Saline.
2. Formula example and a rule of thumb is: an 80 kg patient with 50% TBSA will need 1000 cc of fluid per hour.

Pearls
- Critical or Serious Burns
  - > 5-15% total body surface area (TBSA); 2nd or 3rd degree burns, or 3rd degree burns > 5% TBSA for any age group, or circumferential burns of extremities, or electrical or lightning injuries, or suspicion of abuse or neglect, or inhalation injury, or chemical burns, or burns of face, hands, perineum, or feet, or any burn requiring hospitalization.
  (These burns will require direct transport to a burn center, or transfer once seen at a local facility where the patient can be stabilized with interventions such as airway management or pain relief if this is not available in the field or the distance to a Burn Center is significant.)

- Burn patients are Trauma Patients, evaluate for multisystem trauma.
- Assure whatever has caused the burn, is no longer contacting the injury. (Stop the burning process!)
- Recommended Exam: Mental Status, HEENT, Neck, Heart, Lungs, Abdomen, Extremities, Back, and Neuro
- Early intubation is required when the patient experiences significant inhalation injuries.
- Potential CO exposure should be treated with 100% oxygen. (For patients with the primary event is CO inhalation, transport to a hospital equipped with a hyperbaric chamber is indicated when reasonably accessible.)
- Circumferential burns to extremities are dangerous due to potential vascular compromise secondary to soft tissue swelling.
- Burn patients are prone to hypothermia - never apply ice or cold burns, must maintain normal body temperature.
- Evaluate the possibility of child abuse with children and burn injuries.

Any local EMS System changes to this document must follow the NC OEMS Protocol Change Policy and be approved by OEMS

2009