

TREATMENT:

- A. Secure scene ensuring rescuer safety, then help victim.
- B. Stop the burning process.
 - a. Remove clothes, flood with water ONLY if flames or smoldering is present.
- C. Establish ABCs.
 - a. Consider CO poisoning if patient was in a confined space.
 - b. If in respiratory distress, administer Oxygen 100%, assist ventilations as needed, and intubate as needed.
 - c. Remove constricting/obstructing clothing and jewelry.
 - d. If shock is present, consider underlying causes.
- D. Transport ASAP to the most appropriate facility. Enter patient into Trauma System as per trauma system entry and guidelines protocol.
- E. Cool burned areas (less than 10 minutes for large burns) then cover with dry sterile dressings. Discontinue cooling if patient begins to shiver. Attempt to leave unbroken blisters intact.
- F. Treat pain per Pain Management protocol.
- G. Evaluate degree of burn and % of second and third degree burns
 - a. Use patient's palm as reference for 1% BSA.
- H. Critical burns are defined as:
 - 1. Any degree 25% or more of body surface area.
 - 2. Full thickness burn greater than 10% of body surface area.
 - 3. Burns with inhalation injuries.
 - 4. Electrical burns
 - 5. Burns to hands, feet, genitalia, facial or circumferential burns.
 - 6. Burns in high risk patients (pediatrics, elderly, significant cardiac or respiratory problems)
- I. Dress burns with dry dressings. Consider wet dressing if burn is 5% or less.
- J. Start 2 large bore IVs in unburned areas if possible and administer fluids per appropriate formula below.
- K. If chemical burn:
 - 1. Consider Haz-Mat response.
 - 2. Protect yourself from contamination. (See HazMat protocol)
 - 3. Flush contaminated areas with copious amounts of water.
 - 4. If chemical is dry, carefully brush off prior to flushing.
- L. If electrical burn:
 - 1. Make sure victim is de-energized.
 - 2. Apply sterile dressings to entry and exit wounds. Suspect internal injuries.
 - 3. Treat any dysrhythmias per appropriate Cardiac Dysrhythmia protocol.

PEDIATRIC PATIENTS:

- A. Treat pain per Pain Management protocol.
- B. Consider possibility of non-accidental cause in children.

FLUID RESUSITATION FORMULAS:

- 1. IV fluids should be warmed. Preferred fluid for burns is Lactated Ringers, Normal Saline is an acceptable alternative.

2. Less than 30 minute transport time:
 - a. Older than 14 years old
 - i. 500ml/hr
 - b. Older than 6 years old, younger than 13 years old
 - i. 250ml/hr
 - c. Less than 6 years old
 - i. 125ml/hr
3. Greater than 30 minute transport time:
 - a. Calculate percentage of second and third degree burns
 - b. **PARKLAND FORMULA:**
 - i. **4ml x patient weight in kg x % of 2nd and 3rd degree burns**
 - ii. Administer half the total fluid within 8 hours of the burn
 - iii. Administer the second half over the next 16 hours.
4. Electrical Burns:
 - a. 4ml x patients weight in kg x % of 2nd and 3rd degree burns

KEY CONSIDERATIONS:

Enclosed space, airway sounds, possibility of inhaled toxins, past medical history, CO/Cyanide poisoning, evidence of respiratory burns, extent of burns, explosion or trauma injuries. If airway burns are suspected, aggressively manage airway EARLY!

RULE OF NINES:

