

Burns/Electrocution/Lightning Adult & Pediatric

4.0

Trauma Protocol 4.0

EMT STANDING ORDERS

- Routine Patient Care.
- Assess for evidence of smoke inhalation or burns; soot around mouth or nostrils, singed hair, carbonaceous sputum.
- If the patient has respiratory difficulty, altered level of consciousness and /or hemodynamic compromise, see [Airway Management Protocols 5.1](#) and [Smoke Inhalation Protocols 2.20](#).

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Thermal

- Stop burning process with water or normal saline
- Remove non-adherent clothing and jewelry. Do not remove skin or tissue.
- To protect from infection, cover burns with clean dry sterile dressing or sheets.
- Keep patient warm and prevent hypothermia due to large thermal injuries.

Chemical

- Identify agent(s) and consider HAZMAT intervention, if indicated. See [Hazardous Material Exposure Protocol 9.0](#)
- Consider contacting Poison Control at 800-222-1222.
- Decontaminate the patient as appropriate.
 - Brush off dry powders if present, before washing.
 - Scrape viscous material off with rigid device, e.g., tongue depressor
 - Flush with copious amounts of clean water or sterile saline for 10 – 15 minutes, unless contraindicated by type of chemical agent (e.g., sodium, potassium or dry lime and/or phenols).

Electrical/Lightning

- Ensure your own safety; disconnect power source, if feasible.
- Place patient on a cardiac monitor.
- Consider spinal motion restriction for burns due to electric flow across the body.

Assess Extent of Burn

- Determine extent of the burn using Rules of Nine (see next page).
- Determine depth of injury.
- Do not include 1st degree burns in burn surface area (BSA) percentage.

Pain Control

- If a partial thickness burn, 2nd degree is < 10% body surface area:
- Apply room-temperature water or room-temperature wet towels to burned area of a maximum of 15 minutes. Prolonged cooling may result in hypothermia.

ADVANCED EMT STANDING ORDER - ADULT

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- Transport time less than 1 hour:
 - Administer warm 0.9% NaCl* at 500 mL/Hour.
- Transport time greater than 1 hour:
 - Administer warm 0.9% NaCl* at $1 - 2 \text{ mL/kg} \times \% \text{ burn} / 8 = \text{hourly rate} \times \text{first 8 hours}$.

ADVANCED EMT STANDING ORDERS - PEDIATRIC

- Transport time less than 1 hour:
 - BSA > 20%: 20 mL/kg IV warm 0.9% NaCl*, over 10 – 30 minutes.(Does not need to be on a pump)
 - BSA < 20%: 10 mL/kg warm IV 0.9% NaCl*, over 10 – 30 minutes.
- Consult **Medical Control**:
 - Transport time greater than 1 hour and/or
 - Patient has signs of shock



* An IO device can be inserted through burned skin as long as the underlying bone has not been compromised.

Protocol Continues 

4.0

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PARAMEDIC STANDING ORDERS

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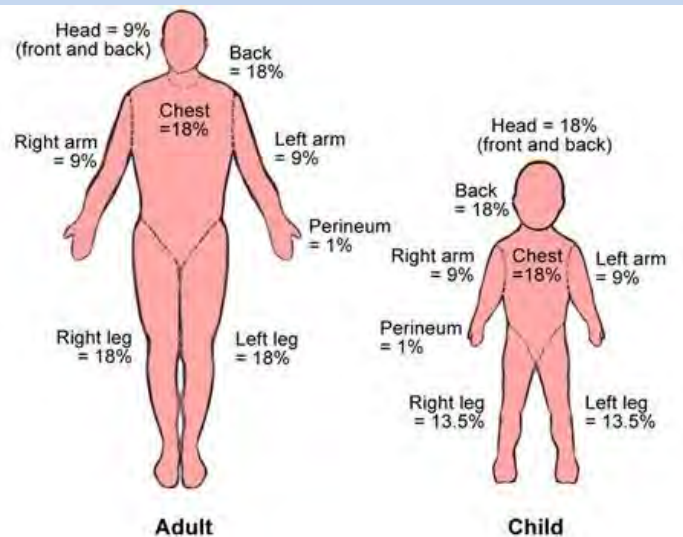
- Refer to [Pain Management Protocol 2.15](#).

Transport Decision:

- Consider air medical transport for major burns with greater than 20% BSA and/or inhalation injury with risk of airway compromise.

Rule of Nines

	Adult	Pediatric
Head & Neck	9%	18%
Left arm	9%	9%
Right arm	9%	9%
Chest	9%	9%
Abdomen	9%	9%
Upper back	9%	9%
Lower back	9%	9%
Left leg	18%	13.5%
Right leg	18%	13.5%
Genital region	1%	1%



PEARLS:

- Electrocution/Lightning burns can occur anywhere along the path a current travels through the body. Evident surface burns may only comprise a small portion of the overall burn injury, and an injury's full extent may not be immediately apparent.
- Chemical burns: If 0.9% NaCl or sterile water is not readily available, do not delay, use tap water for flushing the affected area. Flush the area as soon as possible with the cleanest readily available water using copious amounts of water.