	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	9004.20
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	Pediatric Burns	Last Approval Date:	09/14/2023
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Signature on File	Signature on File
EMS Medical Director	EMS Administrator

## Purpose:

A. To establish a treatment standard for pediatric patients burned by caustic material, electricity, or heat.

## **Authority:**

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

#### Protocol:

A. The ability to maintain the temperature in prehospital settings is a significant problem with a dose-dependent increase in mortality for temperatures below 37°C or 98.6°F. Simple interventions to prevent hypothermia can reduce mortality. During transport, warm and maintain normal temperature, being careful to avoid hyperthermia.

### **BLS**

- 1. Remove the patient from the source of the burn, then remove burning or smoldering clothing and remove jewelry
- 2. Perform ABCs
- 3. Assess for inhalation injury (singed nasal hairs, hoarse voice or stridor, oral or facial burns) and administer supplemental O₂ as necessary to maintain SpO2 ≥ 94%. Be prepared to support ventilation with appropriate airway adjuncts.
- 4. Estimate the size of the burn (see below)
- 5. Stop the burning process by applying cool running water over the burn. The goal is cumulative (bystander and first responder) application of cool running water for 20 minutes
- 6. Caustic and Chemical Burns: Wear protective clothing and gloves and consider the presence of hazardous materials. Remove the patient's clothing. Apply cool running water over the burn for 20 minutes. Do not scrub.
- 7. Electrical Burns: Check for, and dress all entrance and exit wounds.
- 8. Avoid hypothermia by isolating and cooling only the burned area. Keep unaffected body parts warm by covering them as much as possible, and use the heater in the passenger compartment.
- 9. After cooling the burn, apply a covering to the burn (dry non-stick gauze, loose plastic wrap, etc.).
- 1. ABC' s/Routine Medical Care:
  - a. Stop the burning process. Remove the patient from the source of the burn. Remove burning or smoldering clothing and remove jewelry. Administer supplemental
    - O₂ as necessary to maintain SpO₂ ≥ 94%. Be prepared to support ventilation with

appropriate airway adjuncts. Check for associated injuries and apply dry sterile dressings to burned areas.

- 2. Inhalation Injury: Assess for:
  - a. Burns around face and neck.
  - b. Singed nasal hairs.
  - c. Soot around nose and mouth.
  - d. Chemical inhalation.
- 3. Caustic and Chemical Burns: Wear protective clothing and gloves and consider the presence of hazardous materials. Remove the source of the burn. Remove all clothing. Wash with copious amounts of water. Do not scrub.
- 4. Electrical Burns: Electrical burns are potentially severe injuries not apparently visible from the surface wound that require further treatment in the hospital. Check for, and dress all entrance and exit wounds.
- 5. Transport: Any patient with the following shall be transported to UCDMC Burn Center:
  - a. Partial thickness > 9% of the body surface.
  - b. Any electrical or chemical burn.
  - c. Evidence of possible inhalation injury.
  - d. Any burn to face, hands, feet, genitalia, perineum or major joints.
- 6. Transport.

**NOTE:** Check for associated injuries. Treat shock, if present.

Do not apply ice or creams to the burned area.

Fire in enclosed space suggests smoke inhalation or carbon monoxide poisoning.

#### ALS

- Initiate vascular access in patients with major burns
   (> 9%). For BSA > 9% or hypotension. Administer 20ml/kg NS fluid bolus.
  - When possible the preferred vascular access site is an unburned area.
- 2. Albuterol (if wheezes present)
  - 5 mg via HHN, mask or BVM.
- 3. Cardiac monitor with SpO<sub>2</sub>.
- 4. If partial thickness burn with severe pain and without evidence of or mechanism of internal head, chest or abdominal injury:
  - Consider administration of pain medication as per PD# 9018-Pediatric Pain Management.

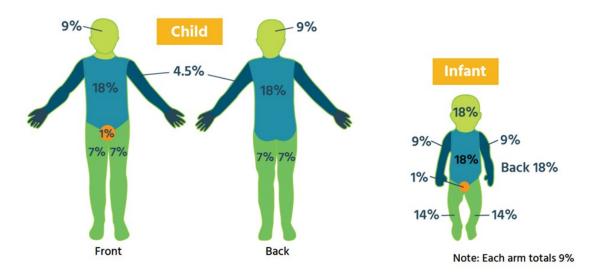
**NOTE**: Any patient with the following shall be transported to UCDMC Burn Center:

- Partial thickness >9% of body surface.
- Any electrical or any chemical burn.
- Evidence of possible Inhalation Injury.
- Any burn to the face, hands, feet, genitalia, perineum or major joints.
- Cardiac arrest shall go to the closest E.D.

### Estimating Burn Size (either method can be used):

**Rule of Palm:** The palm of the person who is burned (not the fingers or wrist area) is about 1% of the body. Use the person's palm to measure the body surface area burned.

# **Rule of Nines:**



**Cross Reference:** PD# 9018 – Pediatric Pain Management

PD# 8837 – Pediatric Airway Management