	<b>COUNTY OF SACRAMENTO</b> EMERGENCY MEDICAL SERVICES AGENCY	Document #	8025.21
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EMS Medical Director

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EMS Administrator

### Purpose:

- A. To establish the treatment standard for 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:

BLS
<ol style="list-style-type: none"> <li>1. Remove the patient from the source of the burn, then remove burning or smoldering clothing and remove jewelry.</li> <li>2. Perform ABCs.</li> <li>3. Assess for inhalation injury (singled nasal hairs, hoarse voice or stridor, oral or facial burns) and administer supplemental O<sub>2</sub> as necessary to maintain SpO<sub>2</sub> ≥ 94%. Be prepared to support ventilation with appropriate airway adjuncts.</li> <li>4. Estimate the size of the burn (see below).</li> <li>5. For burns &lt; 30% TBSA AND no inhalation injury, stop the burning process by applying COOL RUNNING WATER (CRW) over the burn. The goal is cumulative (bystander and first responder) application of CRW for 20 minutes. <i>Whenever possible, this should be completed prior to transport.</i> <ol style="list-style-type: none"> <li>a. It is critical that providers remain on scene to complete a full 20 minutes of continuous cooling with running water before initiating transport unless the scene becomes unsafe or the patient's condition necessitates immediate transport.</li> <li>b. Early cessation of cooling may lead to worsened burn severity and increased tissue damage. If transport is initiated before 20 minutes of cooling is completed, cooling should continue en route whenever feasible.</li> </ol> </li> <li>6. After cooling the burn, apply a covering to the burn (dry non-stick gauze, loose plastic wrap, etc.)</li> <li>7. 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.</li> <li>8. Caustic and Chemical Burns: Wear protective clothing and gloves and consider the presence of hazardous materials. Remove the patient's clothing. Apply CRW over the burn for 20 minutes. Do not scrub.</li> <li>9. Electrical Burns: Check for, and dress all entrance and exit wounds.</li> </ol>

10. ~~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.~~
11. ~~After cooling the burn, apply a covering to the burn (dry non-stick gauze, loose plastic wrap, etc.~~

**NOTE:** Check for associated injuries. Treat shock if present. Do not apply ice or creams to the area. Fire in enclosed spaces suggests smoke inhalation or carbon monoxide poisoning.

#### ALS

1. Advanced Airway: Consider early if evidence of airway burns.
2. Cardiac Monitoring, SpO<sub>2</sub> monitoring, and ETCO<sub>2</sub> monitoring for intubated patients.
3. Initiate large bore vascular access in patients with major burns (>9%).
  - Titrate to systolic blood pressure of  $\geq 90$  mmHg.
  - Administer 500 ml normal saline fluid bolus to all adult patients with a Total Body Surface Area (TBSA) of burns  $\geq 50\%$
  - When possible the preferred vascular access site is an unburned area.
4. ~~Pain Management: If partial or full thickness burn with moderate to severe pain and without evidence of or mechanism of internal head, chest, or abdominal injury,~~ Consider administration of pain medication per PD# 8066 – Pain Management.

**NOTE:** Any patient with the following shall be transported to the University of CA Davis Medical Center Burn Center:

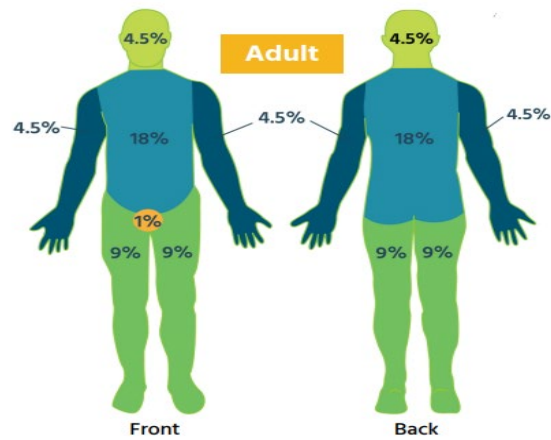
- Partial thickness >9% of the body surface.
- Any electrical or chemical burn.
- Evidence of possible inhalation injury.
- Any burn to the face, hands, feet, genitalia, perineum, or major joints.

**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:

### Adult



**Cross Reference:** PD# 8066 – Pain Management  
PD# 8026 – Respiratory Distress  
PD# 8020 – Respiratory Distress – Airway Management  
PD# 8031 – Cardiac Arrest