

Effective Date : November 18, 2018

Last Review: New Policy

Next Review: November 2020

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**Authority:** Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9

**DEFINITION:** Burns are injuries to tissues caused by energy, (heat, cold, electricity, radiation, or chemicals).

**BLS TREATMENT:**

**SCENE SAFETY:** assure scene safety for all providers and patients; move patient to a safe environment; for electrical burns turn off power source and remove patient once it is safe.

**STOP THE BURNING PROCESS:** for **THERMAL and LIQUID CHEMICAL BURNS** use copious amount of tepid water; for **POWDER BASED CHEMICAL BURNS** brush powder off skin and then flush with copious amount of tepid water.

**EXPOSE:** remove clothing and jewelry quickly, but gently; **DO NOT** remove adherent material and/or clothing; cool effected area with tepid water.

**ASSESS:** assess patient for possible airway burns and any associated trauma.

**OXYGEN:** as appropriate, goal to maintain SPO2 at least 94%, assist ventilations as necessary.

**VITALS:** assess vitals

**BLOOD SUGAR CHECK:** test blood sugar treat as appropriate.

**CHECK TEMPERATURE:** assess temperature and keep patient warm to prevent hypothermia

**APPLY DRESSING:** Apply dry sterile dressing for any burn involving greater than 10% TBSA (Total Body Surface Area); moist sterile dressings are appropriate for smaller bums (less than10% TBSA).

**ELEVATE:** if possible elevate the effective body part to 30 degrees to prevent swelling.

**ALS TREATMENT:**

**OXYGEN:** assess airway for possible burns, use appropriate advanced airway as needed, goal to maintain SPO2 of 94%, utilize nasal capnography for patients meeting **BURN TRIAGE CRITERIA**.

***IF UNABLE TO EFFECTIVELY VENTILATE PATIENT TRANSPORT TO CLOSEST RECEIVING FACILITY***

**MONITOR:** treat rhythm as appropriate, 12 lead for **ELECTRICAL BURNS**.

**IV/IO ACCESS:** establish 2 large bore IV/IO access for patients meeting **BURN TRIAGE CRITERIA** and start fluid resuscitation per **Parkland Fluid Resuscitation Formula** (listed below); for all others TKO

**PAIN MANAGEMENT:** treat pain as appropriate to **PEDIATRIC M2 Pain Management Protocol**.

**ALBUTEROL:** 5 mg (2x2.5 mg doses) via nebulizer as needed; max 30 mg total dose.

**DOCUMENT THE SEVERITY OF THE BURN:** Estimate the severity of the burns using "Rule of Nines", an individual palm equals ~1% of BSA and can be used to estimate scattered irregular burns.

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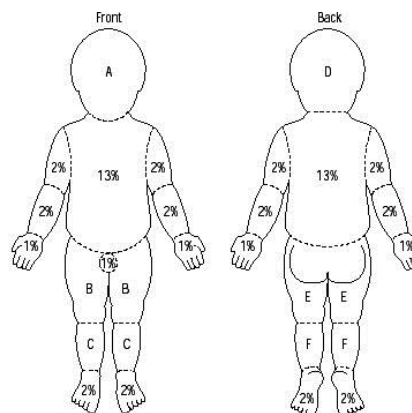
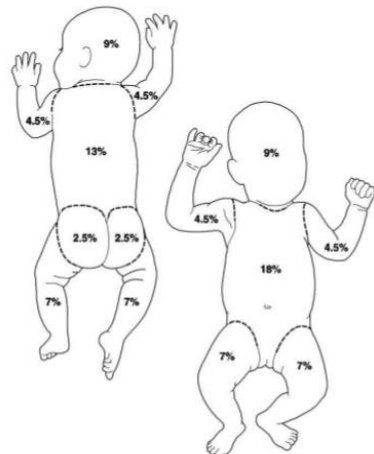
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**RULE OF NINES;**

**Infant Rule of Nines Chart**



Area	By age in years			
	0	1	5	10
Head (A/D)	10%	9%	7%	6%
Thigh (B/E)	3%	3%	4%	5%
Leg (C/F)	2%	3%	3%	3%

**PARKLAND FLUID RESUSCITATION FORMULA:**

Fluid for the first 24 hours = [4 x Weight (Kg)] x % TBSA; Give half of the total amount in the first 8 hours.

Pre-hospital Fluid Formula = [Weight (Kg) X TBSA (%)] divided by 4 = rate (ml/hr.)

**BURN TRIAGE CRITERIA:**

**A patient (adult or pediatric) whose primary injuries are burns may be transported directly to a Burn Center from the field. These injuries include:**

- A. Partial/full thickness (2nd or 3rd degree) burns involving greater than 15% TBSA without airway compromise
- B. Patients with partial/full thickness (2nd or 3rd degree) burns greater than 10% TBSA without airway compromise with the following:
  - 1) Greater than 60 years of age
  - 2) Associated trauma meeting Trauma Triage Criteria (and if transport can be completed within 60 minutes)
  - 3) Significant co-morbidities (e.g. COPD, major medical disorder, bleeding disorder or anticoagulant therapy, dialysis patients)



## POLICY PEDIATRIC T4 BURNS

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- C. Partial/full thickness (2nd or 3rd degree) burns of face, perineum or circumferential burn to any body part
- D. Significant electrical injuries with loss of consciousness, voltage in excess of 220, and/or open wounds
- E. Electrical injuries resulting in a loss of distal pulses
- F. Significant inhalation injury
- G. Chemical burns with wounds >5% TBSA 2.

**ALL BURNS WITH AIRWAY COMPROMISE (wheezing, stridor, carbonaceous sputum nasal singeing, or significant facial edema) AND THE PATIENT CANNOT BE EFFECTIVELY VENTILATED, MUST BE TRANSPORTED TO CLOSEST RECEIVING FACILITY.**