

# EMERGENCY TREATMENT OF BURN PATIENTS

## 1 IMMEDIATE EMERGENCY BURN CARE

Treat according to CPR protocol (ABC's)  
Use airway and C-Spine precautions  
Stop the burning process. Remove clothing and jewelry

## 2 EMERGENCY BURN MANAGEMENT

### Airway Management

- A.** Administer 100% oxygen to all burn patients; be prepared to suction and support ventilation if necessary
- B.** Assess for potential inhalation injury using the following risk factors:
1. Burned in an enclosed space
  2. Darkened or reddened oral and/or nasal mucosa
  3. Burns to the face, lips, nares/singed eye brows, singed nasal hairs
  4. Carbon or soot on teeth, tongue or throat
  5. Raspy, hoarse voice or cough
  6. Stridor or inability to clear secretions may indicate impending airway occlusion
  7. Circumferential burns to neck C. Elevate HOB 30-90 degrees to decrease facial or airway edema once C spine cleared
- C.** If inhalation injury is suspected, intubate immediately
- D.** Insert Two Large Bore IV Catheters (in non-burned area if possible)

## 3 TOTAL BODY SURFACE AREA

## 4 FLUID RESUSCITATION

### Calculate Fluids: Parkland Formula

**Adults:** Ringer lactate:  $4\text{ml} \times \text{weight in kg} \times \% \text{TBSA burn}$ . Give first half of fluids over first 8 hours. Give remaining fluid over next 16 hours. Children over 10 years old: use same formula as above

**Children Under 10 Years Old:** Use the same formula with addition of maintenance fluid of D5W to maintain glucose levels. Consult Burn Center Surgeon

Consider High Dose Vitamin C Therapy for TBSA > 30%. Call the burn center at **855.863.9595** for more information.

## 5 INJURIES

Treat burn patient as trauma patient, check for:

1. Head Injury (Note: Make it read burns do not cause altered consciousness; if patient has limited response to stimuli, look for another cause, e.g. head injury, anoxia, severe inhalation injury)
2. Fractures
3. Spinal Injuries
4. Soft Tissue Damage
5. Foreign Bodies (especially in explosions)

Proceed with emergency treatment of any concurrent injuries and prevent further injuries.

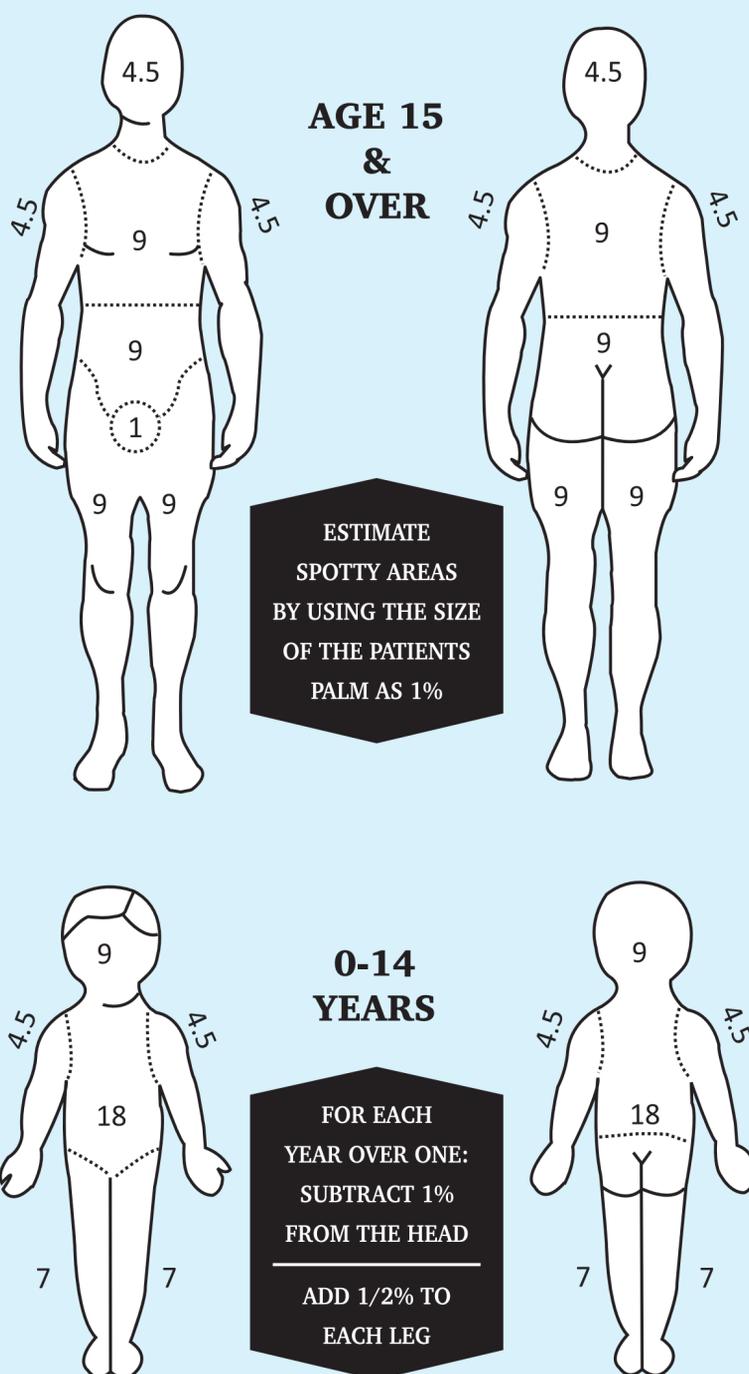
## FOR PATIENT REFERRALS AND BURN CARE QUESTIONS:

**855.863.9595**  
**burncenters.com**



## JOSEPH M. STILL BURN CENTERS, INC.

### BODY SURFACE AREA IN PERCENT



## 6 ESTIMATE DEPTH OF BURN INJURY

Determine the probable depth of the burn injury using these guidelines:

- 1st Degree (partial thickness)** Reddened, painful, warm to touch; no blisters or skin sloughing, e.g. sunburn
- 2nd Degree (partial thickness)** Reddened, blistered, painful to touch, blanches to touch; when blister debrided, weeps fluid from wound. Regularly re-assess second degree burns to ensure the injury has not converted to third degree.
- 3rd Degree (full thickness)** Black, brown, white, or leathery wound, firm in appearance; does not blanch and is not painful to touch
- 4th Degree (full thickness)** Charred appearance; burns that extend below the dermis and subcutaneous fat into the muscle bone or tendon

## 7 OBTAIN PATIENT HISTORY

Record the following information:

- How the Victim was burned
- Concomitant injuries
- Allergies
- Medical/Surgical history
- Current medications

## 8 PAIN RELIEF MEASURES

Give all medications via IV route:

**Morphine Sulfate**  
(if not contraindicated) in the following proportions:  
**Adults:**  
3-5 mg Q 10 minutes or prn

**Children:**  
Titrate IV Morphine Sulfate by body weight (0.1 mg/Kg/dose) or consult Burn Center

**-Do NOT use ice or iced saline to comfort-**

## 9 WOUND CARE MEASURES

Record the following information:

- Remove burned clothing or foreign debris
  - Wound debridement is not usually necessary at the referring facility: discuss with local Surgeon/Burn Center Surgeon need for escharotomies in circumferential burns
  - Wrap burned areas with clean/sterile gauze or sheets
  - Elevate HOB and burned extremities to decrease swelling
- Do NOT apply ice, ointments or creams-**

## 10 OTHER INTERVENTIONS

Labs: Rainbow, ABG, Carboxyhemoglobin

X-ray: CXR, and Areas of Suspected Trauma

Insert NG tube and decompress stomach if nausea and vomiting are present; if TBSA is greater than 20% or if patient is intubated

Keep patient NPO

Monitor patient's blood pressure, breath sounds, apical and peripheral pulses every 15 minutes

For urine that is black/brown/red or <30 cc/hr consult Burn Center

## AMERICAN BURN ASSOCIATION CRITERIA FOR INJURIES REQUIRING REFERRAL TO A BURN CENTER

The following injuries require referral to a burn center after initial assessment and treatment at an emergency department.

1. Partial thickness burns >10% TBSA
2. Burns that involve the face, hands, feet, genitalia, perineum or major joints
3. Third degree burns in any age group
4. Electrical burns, including lightning injury
5. Chemical burns
6. Inhalation injury
7. Burn injury in patients with preexisting medical disorders that could complicate management, prolong recovery or affect mortality
8. Any patients with burns and concomitant trauma (such as fractures) in which the burn injury poses the greatest risk of morbidity or mortality
9. Burned children in hospitals without qualified personnel or equipment for the care of children
10. Burn injury in patients who require special social, emotional/long term rehabilitative intervention