EMERGENCY TREATMENT OF BURN PATIENTS

1 IMMEDIATE EMERGENCY BURN CARE

Treat according to CPR protocol (ABCs)
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
   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 10-30 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

BODY SURFACE AREA IN PERCENT

4 FLUID RESUSCITATION

Calculate Fluids: Parkland Formula
Adults: Ringer lactate: 4ml x weight in kg x %TBSA burn.
Give first half of fluids over first 8 hours. Give remaining fluids over next 24 hours.

5 INJURIES

Burns are classified by depth:
1. 1st Degree (partial thickness) - reddened, painful, warm to touch without blistering or skin sloughing, e.g. sunburn
2. 2nd Degree (partial thickness) - reddened, blistered, painful, warm to touch, blanches to touch, when blister detaches, weeps fluid from wound. Regularly reassess second degree burns to ensure the injury has not converted to third degree.
3. 3rd Degree (full thickness) - black, brown, white, or leathery wound, firm in appearance, does not blanch and is not painful to touch
4. 4th Degree (full thickness) - Charred appearance, burns that extend below the dermis and subcutaneous fat into the muscle bone or tendon

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 without blistering or skin sloughing, e.g. sunburn
2nd Degree: (partial thickness) - reddened, blistered, painful, warm to touch, blanches to touch, when blister detaches, weeps fluid from wound. Regularly reassess 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 opiate-intolerant in the following proportions):
  - Adults: 3-5 mg q 10 minutes or prn
  - Children:
    - Divide IV Morphine Sulfate by body weight (0.1mg/kg/dose) or consult Burn Center
    - Do NOT use ice or cold saline to comfort

9 WOUND CARE MEASURES

Record the following information:
- Burned clothing or foreign debris
- Wound debridement is not usually necessary at the referring facility. Discuss with local Surgeon/Burn Center. Surgeon need for excisions 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

Lab: Urine: RBC, WBC, 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:
- Do NOT apply ice, ointments or creams

FOR PATIENT REFERRALS AND BURN CARE QUESTIONS:
855.863.9595
coburncare.com

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

The following injuries require referral to burn centers for initial evaluation and treatment at an emergency department:

1. Partial thickness burns >20% TBSA
2. Burns that involve the 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 in which the burn injury poses the greatest risk of morbidity or mortality
8. Any patient with burns and concomitant trauma (such as skull fracture) in which the burn injury presents the greatest risk of morbidity or mortality
9. Any patient with burn injuries, in any age group, that extend below the dermis and subcutaneous fat into the muscle bone or tendon
10. Burns injury in patients with preexisting medical disorders that could complicate management, prolong recovery or emotional/long term rehabilitative intervention

BURN AND RECONSTRUCTIVE CENTERS OF COLORADO

At Swedish Medical Center