



TIME CRITICAL DIAGNOSIS MANUAL

Missouri Department of Health and Senior Services

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SUBJECT: Burn Protocol for Emergency Medical Services	Chapter: 2. Trauma
	Item: 2.3
REFERENCE: 190.200 RSMo	Page 1 of 3
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DISTRIBUTION: All Emergency Medical Services

PURPOSE: To provide guidance for the care of burn patients by emergency medical personnel when they first arrive on the scene and during transport.

1. Ensure that Airway, Breathing, and Circulation are addressed. **Protect Airway**
2. Treatment
 - a) Eliminate source of burn.
 - b) Determine percent of body surface area (BSA) and depth.
 - c) Treat associated trauma.
 - d) Dress wounds appropriately:
 - i. Dry, sterile dressings
 - ii. Moist dressings for burns less than 9% BSA
3. DO NOT GIVE ANYTHING BY MOUTH.
4. DO NOT PLACE ICE OR ICE PACKS ON ANY PATIENT WITH BURNS GREATER THAN 5% TOTAL BODY SURFACE AREA.
5. Indications for Transport to a Burn Center
 - a. Second and third degree burns greater than 10% body surface area (BSA) in patients under 10 or over 50 years of age
 - b. Second and third degree burns greater than 20% body surface area (BSA) in any patient
 - c. Burns of the face, hands, feet, or perineum
 - d. Electrical burns, including lightning or contact with high voltage (200 volts or greater) - to field triage protocol?
 - e. Chemical burns
 - f. Suspected inhalation injury when carbon monoxide is not suspected.
(Assess airway for direct thermal injury as noted by singed nasal hairs, facial burns, and soot in mouth.) Patients with suspected inhalation injury may need emergent airway management- in field triage protocol.
 - g. Circumferential burns
 - h. Burn injury in patients with preexisting medical conditions that could complicate management, prolong recovery, or affect mortality (COT)

2.3 Burn Protocol, continued

6. Patients with burns and trauma should be referred to the nearest appropriate trauma center, not a burn center.
7. Children who meet burn inclusive criteria who have not reached their 15th birthday should be transported to a pediatric burn center.
8. **Patients presenting with altered mental status or nausea with vomiting, seizures, loss of consciousness or marked dyspnea in the face of suspected carbon monoxide or toxic inhalation with or without minor burns should be considered for transport to the hyperbaric specialty center. Patients in closed space incidents are more likely to manifest these symptoms.**
9. Consider utilizing aero medical resource if patient is more than 30 minutes from a burn center /hyperbaric medicine specialty center by ground.
10. Initiate IV LR fluid therapy 20 mL/kg bolus in unburned area, if possible.
11. Titrate to a systolic pressure of 100 mm Hg.
12. Obtain medical consultation to initiate an IV in an area of burn, if unable to obtain an IV in unburned area. Secure IV.
13. Consider additional fluid administration
 - a. Maximum dose 2,000 mL without medical consultation
14. If age-related vital signs and patient's condition indicate hypo perfusion, administer initial fluid bolus of 20 mL/kg LR IV/IO in unburned area, if possible. If patient's condition does not improve, administer the second bolus of fluid at 20 mL/kg LR IV/IO.
15. Third and subsequent fluid boluses at 20 mL/kg LR IV/IO. **(NEW '09)**
16. Consider morphine sulfate 0.5 - 0.1 mg/kg slow IV/IO/IM; Administer 1-2 mg/min; Maximum dose 5 mg
17. Continue general patient care.

Note: Adapted from *the Maryland Medical Protocols for Emergency Medical Services Providers, Effective July 1, 2009* Maryland Institute for Emergency Medical Services Systems and *Pre-Hospital Treatment Protocols, Seventh Edition, Effective 6/6/08, Massachusetts Department of Public Health-Emergency Medical Services.*

Burn Center Guidelines

The committee on Trauma of the American College of Surgeons (ACS) and the American Burn Association (ABA) have identified that **the following injuries generally require referral to a burn center.**

1. Partial thickness burns greater than 10% total body surface area (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 Burns in any patients with concomitant trauma (such as fractures) in which the burn injury poses the greatest risk of morbidity or mortality. In such cases, if the trauma poses a greater immediate risk than the burns, it may be necessary to stabilize the patient in a trauma center before being transferred to a burn unit. Physician judgment is necessary in such situations and should be in concert with established triage protocols.
8. Burns in children being cared for in hospitals without qualified personnel or equipment for the care of children
9. Burn injury in patients who will require special social, emotional, or long-term rehabilitative intervention.

American Burn Association Categorization of Burns

MAJOR BURN

- 25% of BSA or greater
- Functionally significant involvement of hands, face, feet, or perineum
- Electrical or Inhalation Injury
- Concomitant Injury or severe pre-existing medical problems

MODERATE BURN

- 15-25% BSA
- No complications or involvement of hands, face, feet, or perineum
- No electrical injury, inhalation injury, concomitant injury
- No severe pre-existing medical problem

MINOR BURN

- 5% or less BSA
- No involvement of hands, face, feet, or perineum.
- No electrical burns, inhalation injury, severe pre-existing medical problems, or complications