



BURNS AND SMOKE INHALATION



Escambia County, Florida – 1st Responder Medical Protocol

Burns can be caused by thermal, chemical, and electrical sources.

Remember that burn patients are volume depleted. However, burns do not bleed; therefore, look for other sources of bleeding.

Many burn injuries are associated with inhalation injury. The signs and symptoms of inhalation injury include: nasal and oropharyngeal burns, charring of the tongue or teeth, sooty (blackened), sputum, singed nasal and facial hair, abnormal breath sounds (e.g. stridor, rhonchi, wheezing, etc.), and respiratory distress. In cases of inhalation injury, attention should be given to the patency of the airway. Acute swelling can cause an airway obstruction.

ASSESSMENT - Burn

- A. Assess scene for safety.
- B. Stop the burning process.
- C. Initial Assessment and treatment of life threatening events:
(As in [General Supportive Care Protocol](#))
 - (1) ABC's
 - (2) Determine type and location of burns.
 - (3) Look for burns in or near mouth, nose, throat or airway.
 - (4) Look for soot on tongue.
 - (5) Look for singed nasal hairs or soot in nose.
- D. Determine type and location of burns:
 - (1) Superficial
 - (2) Partial Thickness



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Charles Neal, D.O. Medical Director



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- (3) Full Thickness

If patient has partial thickness or full thickness burns or 15% or greater Body Surface Area notify EMS immediately. (See [Rule of Nines](#)).

ASSESSMENT - Chemical

Ensure scene safety first and foremost.

- A. ABC's (As in [General Supportive Care Protocol](#)),
- B. Determine chemical and it's precautions
- (1) Contact dispatch for information on chemical if necessary.
 - (2) Determine if special precautions are necessary for patient/yourself/other rescuers with this chemical.
- C. If chemical splash is to the eyes, determine if vision is impaired

TREATMENT - Immediate Treatment

- A. Remove patient from smoldering clothes, unless it has melted to the skin. Remove any constricting jewelry.

(If jewelry removed have witnessed, document quantity and disposition.)

- B. Maintain body warmth in the patient with extensive burns. Cover burned area with a sterile sheet, if possible.

1. Tar:

Cool with water or normal saline **(Do not attempt to remove tar).**



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2. Chemical:

Brush off dry chemicals unless otherwise indicated by information obtained.

Flush with copious amounts of water or normal saline.

If chemical is splashed onto clothing, remove contaminated clothing.

Continue flushing with water.

3. Electrical:

Look for any secondary fractures and exit wounds.

Cool by flushing with sterile water if area of the burn is smaller than the palm of the patient's hand (area of patient's palm = 1% of Body Surface Area). In larger burns, do not flush with water.

Oxygen via non-rebreather mask at 15 LPM in preparation if:

1. Respirations labored, short of breath or coughing.
2. Exposed to smoke for lengthy period of time

Note: Via Bag-Valve-Mask device with 100% O₂ if respirations inadequate

3. If significant partial thickness or full thickness burns:

Reassess vitals every 3-5 minutes.

Perform detailed physical exam and reassess vital signs and patient every 3-5 minutes.

When treating a patient with large surface area burns, prevent heat loss.



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REPORT - Report to EMS Crew

- A. Report as indicated in [*General Supportive Care Protocol*](#), with the addition of information.

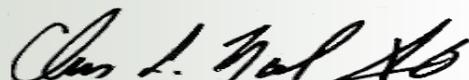
- B. Include the following information:
 - 1. Age of patient
 - 2. Location and degree of burns.
 - 3. Was the patient in an enclosed space during the fire?
 - 4. Did patient experience loss of consciousness during event?
 - 5. What type of chemical?



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Burn Classification	Characteristics
Minor burn injury	<p>1° burn</p> <p>2° burn < 15% BSA in adults</p> <p>2° burn < 5% BSA in children/aged</p> <p>3° burn < 2% BSA</p>
Moderate burn injury	<p>2° burn 16-25% BSA in adults</p> <p>2° burn 5-20% BSA in children/aged</p> <p>3° burn 2-10% BSA</p>
Major burn injury	<p>2° burn > 25% BSA in adults</p> <p>2° burn > 20% BSA in children/aged</p> <p>3° burn > 10% BSA</p> <p>Burns involving the hands, face, eyes, ears, feet, or perineum</p> <p>Most patients with inhalation injury, electrical injury, concomitant major trauma, or significant pre-existing diseases</p>



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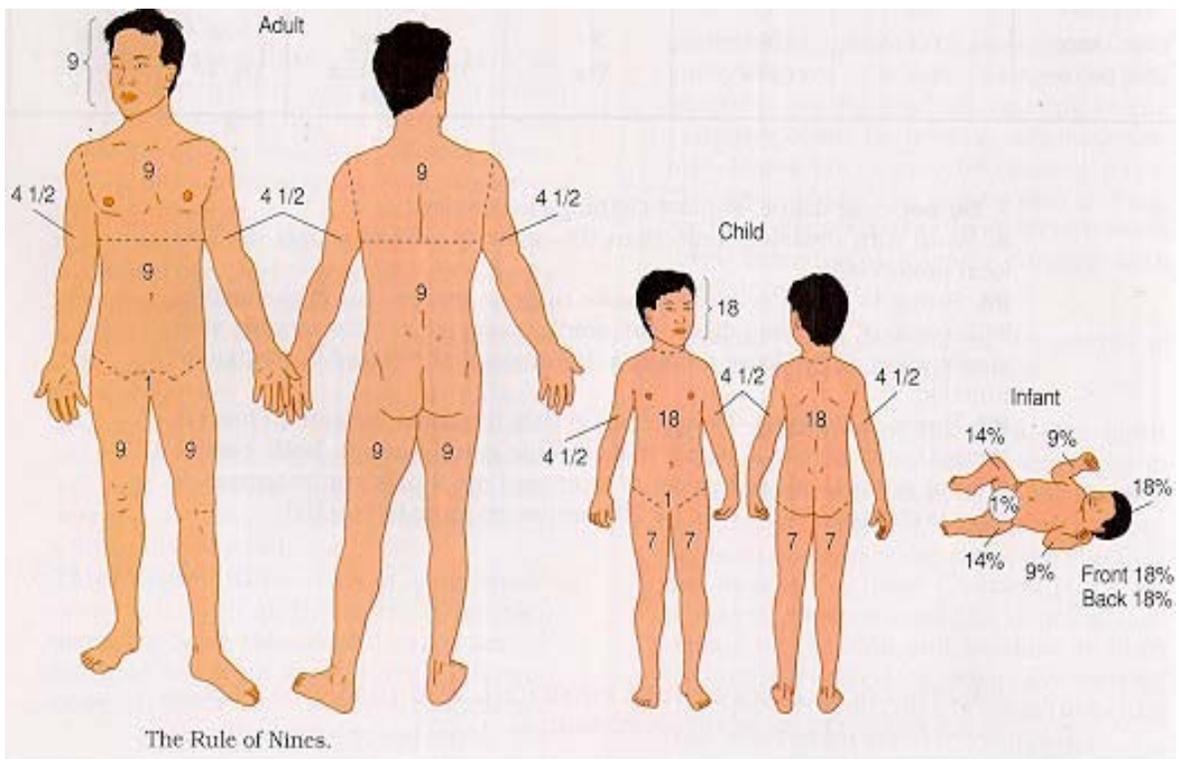
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Rule of Nines

Reference: American Burn Association - Burn Severity Categorization.



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