

Pediatric Smoke Inhalation Injury

For patients with smoke inhalation

History

- Number and severity of other victims
- Industrial or residential fire
- Duration of inhalation
- Social history - smoking
- Past medical history
- Other trauma
- Odor

Signs and Symptoms

- Facial burns, pain, and/or swelling
- Cherry red skin
- Loss of consciousness
- Hypotension/shock
- Airway compromise/distress could be indicated by hoarseness/wheezing
- Seizure/AMS after industrial or closed space fire consider cyanide poisoning

Differential

- Foreign Body Aspiration
- Asthma exacerbation
- Cyanide poisoning
- Carbon monoxide poisoning
- Thermal injury
- Heart failure
- Acute respiratory distress syndrome

Scene safety. Quantify and triage patients. Load and go with assessment and treatment enroute to hospital

Approved Burn Receiving Centers
 St. Francis – San Francisco
 Valley Med. Center – San Jose
 UC Davis – Sacramento

Assess Airway

No or Mild Airway Involvement
 Airway patent, no signs of edema, no stridor or change in voice, nasal hairs intact, low likelihood of airway involvement

Moderate Airway Involvement
 Suspected inhalation injury with only one of the following: Wheezing, change in voice, increased work of breathing/ tachypnea.

Severe Airway Involvement
 Accessory muscle use or altered breath sounds
 OR
 Any combination of the following: Airway edema, stridor, change in voice, increased work of breathing/tachypnea.

If oxygen saturation $\geq 92\%$
Routine Medical Care

E	Monitor and reassess
	Apply Oxygen to maintain goal $SpO_2 \geq 92\%$
	Cardiac monitor
	Consider, IV
P	Consider, Albuterol or Albuterol MDI with spacer or Levalbuterol Use length-based tape; refer to dosing guide

E	Monitor and reassess
	High flow Oxygen Regardless of SpO_2
	Cardiac monitor
	Consider, 12-Lead ECG
	Consider, IV/IO
P	Albuterol or Albuterol MDI with spacer or Levalbuterol Use length-based tape; refer to dosing guide
	Epinephrine 1:1,000 nebulized for stridor Use length-based tape; refer to dosing guide
	CPAP

Notify receiving facility. Consider Base Hospital for medical direction

Closest receiving facility for definitive airway. Consider Base Hospital for medical direction

- Head Trauma
- Pain
- Burns
- Carbon Monoxide/ Cyanide
- Hazmat
- Hypotension
- Eye Injury

Pediatric Respiratory Distress Treatment Protocols

Pediatric Smoke Inhalation Injury

For patients with smoke inhalation



Pearls

- Ensure patient is properly decontaminated before placing in ambulance and transport to hospital.
- Contact Hazmat or Poison Control Center with questions about chemical or guidance on immediate treatment.
- If able, obtain the name of chemical(s) patient was exposed to pass information along to receiving hospital staff.
- If able, remove patient's clothing before placing in ambulance and transport to hospital.

