

# San Mateo County Emergency Medical Services Pediatric Inhalation Injury

For any signs/symptoms related to inhaling a gas or substance other than smoke or carbon monoxide

## History

- Type of exposure (heat, gas, chemical)
- Duration of exposure
- Time of injury
- Past medical history
- Other trauma
- Loss of consciousness

## Signs and Symptoms

- Burns, swelling, pain
- Dizziness
- 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
- Upper Respiratory Infection
- Asthma exacerbation
- Anaphylaxis
- Cyanide poisoning
- Thermal injury
- Chemical/Electrical injury
- Radiation injury
- Blast injury

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

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 $SpO_2 \geq 92\%$
P	Cardiac monitor
	Consider, IV
	Consider, Albuterol or Albuterol MDI with spacer or Levalbuterol Use length-based tape; refer to dosing guide

E	Monitor and reassess
	<b>High flow Oxygen</b> Regardless of $SpO_2$
P	Cardiac monitor
	Consider, 12-Lead ECG
	Consider, IV/IO
	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 Inhalation Injury

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## Pearls

- Consider expedited transport for inhalation injury.
- 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.

