

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 $SpO_2 \geq 92\%$ |
| | Cardiac monitor |
| P | Consider, IV |
| | 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 |
| P | 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 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.

