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.**

**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

- If oxygen saturation ≥ 92%
  - Routine Medical Care

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

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

- Monitor and reassess
- Apply Oxygen to maintain goal SpO₂ ≥ 92%
- Cardiac monitor
- Consider, IV
  - Albuterol
  - Use Broselow Tape; refer to dosing guide

- Notify receiving facility. Consider Base Hospital for medical direction

**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.

- Monitor and reassess
- High flow Oxygen Regardless of SpO₂
- Cardiac monitor
- Consider, 12-Lead ECG
- Consider, IV/IO
  - Albuterol
  - Use Broselow Tape; refer to dosing guide
  - Epinephrine 1:1,000 nebulized for stridor
  - Use Broselow Tape; refer to dosing guide
  - CPAP

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