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.

If oxygen saturation ≥ 92%
Routine Medical Care

Monitor and reassess
Apply Oxygen to maintain goal
SpO2 ≥ 92%
Cardiac monitor
Consider, IV
Consider, Albuterol or Albuterol MDI with spacer or Levalbuterol
Use length-based tape; refer to dosing guide
Notify receiving facility. Consider Base Hospital for medical direction

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.

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

P - Pain
Burns
Carbon Monoxide/ Cianide
Head Trauma
Hypotension
Eye Injury

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

Cardiac monitor
Consider, IV
Albuterol or Albuterol MDI with spacer or Levalbuterol
Use length-based tape; refer to dosing guide
CPAP

High flow Oxygen
Regardless of SpO2
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

Effective November 2018
Treatment Protocol PR06
Effective April 2023
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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.