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

If oxygen saturation ≥ 94%
Routine Medical Care

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 ≥ 94%
Cardiac monitor
Consider, IV
Consider, 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
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
Pediatric Inhalation Injury

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

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.