

# 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
- COPD exacerbation
- 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 and definitive airway felt necessary  
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, 12-Lead ECG
	Consider, 2 IV/IO sites
	Consider, Albuterol

**Airway Field Procedure**  
*if indicated*

E	Monitor and reassess
	<b>High flow Oxygen</b> Regardless of $SpO_2$
P	Cardiac monitor
	Consider, 12-Lead ECG
	Consider, 2 IV/IO sites
	<b>Albuterol</b>
	<b>Epinephrine 1:1,000 nebulized</b> for stridor
	CPAP

**Notify receiving facility.**  
**Consider Base Hospital**  
for medical direction

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

- Trauma *if indicated*
- Pain *if indicated*
- Burn *if indicated*
- Carbon Monoxide/ Cyanide *if indicated*
- Hazmat *if indicated*
- Hypotension *if indicated*
- Eye Injury *if indicated*



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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.

