



## Airway Respiratory Irritants

### Aliases

Airway injury	Chemical respiratory	Injury
Respiratory injury	Respiratory irritant	Toxic inhalation

### Patient Care Goals

Rapid recognition of the signs and symptoms of confirmed or suspected airway respiratory irritants

### Patient Presentation

#### Inclusion Criteria

1. Inhalation of a variety of gases, mists, fumes, aerosols, or dusts may cause irritation or injury to the airways, pharynx, lung, asphyxiation, or other systemic effects
2. Inhaled airway/respiratory irritant agents will interact with the mucous membranes, upper and lower airways based on solubility, concentration, particle size, and duration of exposure
3. The less soluble and smaller the particle size of the agent the deeper it will travel into the airway and respiratory systems the inhaled toxic agent will go before reacting with adjoining tissues thus causing a greater delay in symptom onset

#### Signs and Symptoms

1. As the type, severity and rapidity of signs and symptom onset depends on agent, water solubility, concentration, particle size, and duration of exposure, the below signs and symptoms are often overlapping and escalating in severity
2. Many airways and respiratory irritant agents have "warning properties" such as identifiable or unpleasant smells or irritation to eyes or airways
3. Some agents do not have clear warning properties and will often have delayed onset of any sign or symptom:
  - a. Unusual odor/smell
  - b. Tearing or itchy eyes
  - c. Burning sensation and burns to the nose, pharynx, and respiratory tract
  - d. Sneezing
  - e. General excitation
  - f. Cough
  - g. Chest tightness
  - h. Nausea
  - i. Shortness of breath/dyspnea
  - j. Wheezing
  - k. Stridor
  - l. Dyspnea on exertion
  - m. Dizziness Upper
  - n. Change in voice
  - o. Airway obstructions include laryngospasm and laryngeal edema
  - p. Pulmonary edema (non-cardiogenic)
  - q. Seizures
  - r. Cardiopulmonary arrest
4. High water solubility/highly irritating (oral/nasal and pharynx, particle size greater than