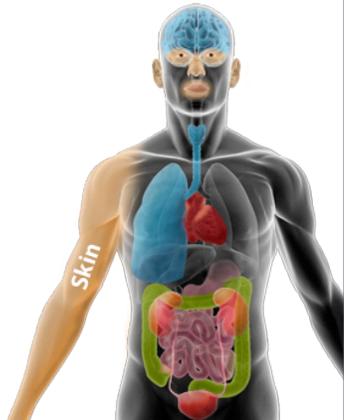


Affected Areas

Upper pulmonary:
Upper respiratory tract
(including airway/bronchi)

Lower pulmonary:
Air space/alveoli



Immediate Symptoms

Respiratory distress
Increased respiratory rate
(shallow and/or rapid)
Shortness of breath
Plus or minus secretions
(e.g. drooling, mucus)
Coughing
Use of accessory muscles for
breathing (tri-pod position)
Upper pulmonary:
Wheezing
Stridor
Nasal and oral secretions
Excessive eye tearing or
lacrimation

Ongoing Symptoms

Upper Respiratory:
Bronchial spasm
Respiratory failure

Lower Respiratory:
Air space disease
Absent breath sounds
Rhonchi
Rales

Potential respiratory failure
(e.g. cyanotic, apnea)

Examples

Chemical Warfare Agents

Phosgene*

Toxic Industrial Chemicals/Toxic Industrial Materials

Ammonia
Chlorine
Phosgene*
Riot control agents

*May be weaponized

Common Treatment Protocols

Oxygen
Bronchodilators
Corticosteroid
Mechanical Ventilation
Suction
Sodium Bicarbonate

Sensitive Populations

No particularly sensitive populations

Concerns About This Syndrome

Lower pulmonary agents will, in their ideal presentation, be noted by the absence of upper pulmonary and mucus membrane signs and symptoms. Odor may be used for specific agent recognition. Hydrofluoric acid (HF)-specific antidote (calcium) may cause systemic (cardiac) effects after absorption.