

Hydrogen Cyanide Inhalation Hydroxocobalamin Treatment Guideline

Inclusion

Suspected hydrogen cyanide inhalation with severe* signs & symptoms

Exclusion

- Suspected hydrogen cyanide inhalation with mild** signs & symptoms
- Do not enter a confined space to rescue an unresponsive person without wearing an SCBA or testing to confirm there is a nontoxic atmosphere with sufficient oxygen.

BLS

Pre-Decon

- High flow O₂ via non-rebreather, reservoir mask
- BVM ventilation, if needed.

Decon

- Hydrogen cyanide is a gas above 78°F (26°C).
- Removing the victim from the source will usually be the only decon required.

ALS

Post-Decon

Supportive Care

- High flow O₂ via non-rebreather reservoir mask, consider airway management
- Vital signs, primary & secondary survey, cardiac monitor, insert peripheral IV/IO
- Dysrhythmias: Treat per ACLS guidelines

Age ≥ 10 Years	
Tox-Medic™	Hydroxocobalamin Antidote
	• Reconstitute with normal saline
	• Administer 5 g, using IV tubing included
	• Repeat 1x, if initial response is inadequate

Age < 10 Years	
Tox-Medic™	Hydroxocobalamin Antidote
	• Reconstitute with normal saline
	• Administer 70 mg/kg, using IV tubing included
	• Repeat 1x, if initial response is inadequate

Special Notes:

- **Severe* signs & symptoms:** Dyspnea, respiratory failure, hypotension, dysrhythmias, chest pain, altered mental status, seizure, coma, etc.
- **Mild** signs & symptoms:** Headache, nausea, tachypnea, etc.
- Hydroxocobalamin must be infused in a dedicated IV/IO line using the supplied tubing.
- Obtain lab blood samples when placing IV because hydroxocobalamin interferes with many diagnostic tests.

AHLS for Tox-Medics™ Hydrogen Cyanide Inhalation Nitrites & Sodium Thiosulfate Treatment Guideline

Inclusion

Suspected hydrogen cyanide inhalation with **severe*** signs & symptoms

Exclusion

Suspected hydrogen cyanide inhalation with **mild*** signs & symptoms.
Do not enter a confined space to rescue an unresponsive person without air testing or SCBA.

Pre-Decon

Tox-Medic™

Supportive Care

- High flow O₂ via non-rebreather, reservoir mask
- BVM ventilation, if necessary

Antidote

- Amyl nitrite ampule: break & inhale 1 ampule for 15 seconds, alternating with O₂ for 15 seconds, until IV/IO is placed

Decon

Hydrogen cyanide is a gas above 78°F (26°C).
Removing the victim from the source will usually be the only decon required.

Post-Decon

- Supportive care with high flow O₂ via non-rebreather reservoir mask, consider airway management
- Vital signs, primary & secondary surveys, cardiac monitor, insert peripheral IV/IO
- Dysrhythmias: Treat per ACLS guidelines.

ALS

Age ≥ 10 years

Tox-Medic™

Antidotes

- Sodium nitrite, 300 mg, IV/IO, over 5 minutes
- Sodium thiosulfate, 12.5 g, IV/IO, over 10 minutes

Age < 10 years

Tox-Medic™

Antidotes

- Sodium nitrite, 6 mg/kg to max of 300 mg, IV/IO, over 5 minutes
- Sodium thiosulfate, 250 mg/kg to a max of 12.5 g, IV/IO, over 10 minutes

Special Notes:

- Amyl nitrite & sodium nitrite convert hemoglobin to methemoglobin. Because this significantly impairs O₂ transport to tissue, avoid these antidotes in patients likely to have high level of carboxyhemoglobin, such as house fire victims. Amyl & sodium nitrite can cause life-threatening hypotension due to vasodilation.
- **Severe*** signs & symptoms: dyspnea, respiratory failure, hypotension, dysrhythmias, chest pain, altered mental status, seizure, coma, etc.
- **Mild*** signs & symptoms: headache, nausea, tachypnea, etc.