



CASE DEFINITION

Cyanide

Clinical description

Inhalation of cyanide gas or ingestion of cyanide salts typically leads to lethargy or coma (possibly sudden collapse), dyspnea, tachypnea, tachycardia, and hypotension. Severe poisoning results in bradypnea, bradycardia, cardiovascular collapse, and death. Nonspecific laboratory findings include metabolic and lactic acidosis (1-3).

Laboratory criteria for diagnosis

Biologic: A case in which cyanide concentration is higher than the normal reference range (0.02--0.05 $\mu\text{g/mL}$) in whole blood (3), as determined by a commercial laboratory.

-OR-

Environmental: Detection of cyanide in environmental samples, as determined by NIOSH or FDA.

Case classification

- *Suspected:* A case in which a potentially exposed person is being evaluated by health-care workers or public health officials for poisoning by a particular chemical agent, but no specific credible threat exists.
- *Probable:* A clinically compatible case in which a high index of suspicion (credible threat or patient history regarding location and time) exists for cyanide exposure, or an epidemiologic link exists between this case and a laboratory-confirmed case.
- *Confirmed:* A clinically compatible case in which laboratory tests have confirmed exposure.

The case can be confirmed if laboratory testing was not performed because either a predominant amount of clinical and nonspecific laboratory evidence of a particular chemical was present or a 100% certainty of the etiology of the agent is known.

Additional resources

1. Curry SC. Hydrogen cyanide and inorganic cyanide salts. In: Sullivan JB, Krieger GR, eds. Hazardous materials toxicology: clinical principles of environmental health. Baltimore, MD: Williams & Wilkins; 1992:698-710.
2. Baskin SI, Brewer TG. Cyanide poisoning. In: Zajtchuk R, Bellamy RF, eds. Textbook of military medicine: medical aspects of chemical and biological warfare. Washington, DC: Office of the Surgeon General at TMM Publications, Borden Institute, Walter Reed Army Medical Center; 1997:271-86.
3. Kerns W II, Isom G, Kirk MA. Cyanide and hydrogen sulfide. In: Goldfrank LR, Flomenbaum NE, Lewin NA, Howland MA, Hoffman RS, Nelson LS, eds. Goldfrank's toxicologic emergencies. 7th ed. New York, NY: McGraw-Hill; 2002:1498-514.

This document is based on CDC's best current information. It may be updated as new information becomes available.

For more information, visit www.bt.cdc.gov/chemical, or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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