



CASE DEFINITION

Mercury (Inorganic)

Clinical description

Ingestion is the most typical route of exposure to cause toxicity from inorganic mercury. Signs and symptoms might include profuse vomiting and diarrhea that is often bloody, followed by hypovolemic shock, oliguric renal failure, and possibly death. Survivors of acute poisoning or persons chronically exposed to inorganic mercury might develop neurologic, dermatologic, and renal manifestations that might include neuropsychiatric disturbances (e.g., memory loss, irritability, or depression), tremor, paresthesias, gingivostomatitis, flushing, discoloration and desquamation of the hands and feet, and hypertension (1-3).

Laboratory criteria for diagnosis

- *Biologic*: A case in which elevated urinary or whole blood mercury levels ($>10 \mu\text{g/L}$) (1) exist, as determined by a commercial laboratory. No definitive correlation exists between either blood or urine mercury levels and mercury toxicity.

-OR-

- *Environmental*: Detection of mercury 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 inorganic mercury 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. Sue Y-J Sue. Mercury. In: Goldfrank LR, Flomenbaum ME, Lewin NE, Howland MA, Hoffman RS, Nelson LS, eds. Goldfrank's toxicologic emergencies. 7th ed. New York, NY: McGraw-Hill; 2002:1239--

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2. Agency for Toxic Substances and Disease Registry. Toxicologic profile for mercury. Atlanta, GA: Agency for Toxic Substances and Disease Registry, Division of Toxicology; 1999. Available at www.atsdr.cdc.gov/toxprofiles/tp46.html.
3. Troen P, Kaufman SA, Katz KH. Mercuric bichloride poisoning. N Eng J Med 1951;244:459-63.

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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