



CASE DEFINITION

Mercury (Organic)

Clinical description

Although ingestion of organic mercury is the most typical route of organic mercury toxicity, toxicity might also result from inhalation and dermal exposures, particularly with dimethylmercury. Symptoms of toxicity are typically delayed for ≥ 1 month after organic mercury exposure and usually involve the central nervous system. These symptoms might include paresthesias, headaches, ataxia, dysarthria, visual field constriction, blindness, and hearing impairment (1-5).

Laboratory criteria for diagnosis

- *Biologic*: A case in which whole blood mercury levels ($>10 \mu\text{g/L}$) (1) are detected, as determined by a commercial laboratory. Urine mercury levels are not useful in evaluating organic mercury poisoning.
- 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 organic 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 resource

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-
2. Hill WH. A report on two deaths from exposure to the fumes of a di-ethyl mercury. Can J Pub Health 1943;34:158-60.
3. Hook O, Lundgren KD, Swensson A. On alkyl mercury poisoning with ad description of two cases. Acta Med Scand 1954;150:131-7.

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4. Nierenberg DW, Nordgren RE, Chang MB, et al. Delayed cerebellar disease and death after accidental exposure to dimethylmercury. *N Eng J Med* 1998;338:1672-76.
5. Bakir F., Damluji SF, Amin-Zaki L. Methylmercury poisoning in Iraq. *Science* 1973;181: 230-41.

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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