



CASE DEFINITION

Methyl Bromide

Clinical description

Methyl bromide poisoning primarily occurs after inhalational exposure, but concurrent dermal exposure might also occur. Methyl bromide is an ocular, dermal, and mucous membrane irritant. Onset of symptoms might be delayed 1 to 48 hours. Symptoms of inhalational exposure are typically cough and dyspnea, which can develop into pneumonitis and pulmonary edema but might be delayed up to 4-5 days. Severe poisoning can result in seizures, coma, and death (1-5).

Laboratory criteria for diagnosis

- *Biologic*: No specific test for methyl bromide is available; however, detection of elevated bromide levels in serum (reference level: 50-100 mg/L) might indicate that an exposure has occurred. Detection of bromide below toxic levels does not rule out methyl bromide poisoning.
- OR-
- *Environmental*: Detection of methyl bromide in environmental samples, as determined by NIOSH.

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 methyl bromide exposure, or an epidemiologic link exists between this case and a laboratory-confirmed case.
- *Confirmed*: A clinically compatible case in which laboratory tests on environmental samples are confirmatory.

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.

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Additional resources

1. Reigart JR, Roberts JR, eds. Fumigants. In: Recognition and management of pesticide poisonings. 5th ed. Washington, DC: Environmental Protection Agency, Office of Pesticide Programs; 1999:156-68. Available at <http://www.epa.gov/pesticides/safety/healthcare>.
2. Calvert GM, Mueller CA, Fajen JM, et al. Health effects associated with sulfuryl fluoride and methyl bromide exposure among structural fumigation workers. *Am J Public Health* 1998;88:1774-80.
3. Deschamps FJ, Turpin JC. Methyl bromide intoxication during grain store fumigation. *Occup Med* 1996;46:89-90.
4. Marraccini JV, Thomas GE, Ongley JP, Pfaffenberger CD, Davis JH, Bednarczyk LR. Death and injury caused by methyl bromide--an insecticide fumigant. *J Forensic Sci* 1983;28:601-7.
5. Harbison RD, Sleeman RZ. Methyl bromide. In: Harbison RD, ed. *Hamilton and Hardy's industrial toxicology*. 5th ed. St Louis, MO: Mosby-Year Book; 1998:305-7.

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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