



## CASE DEFINITION

### Arsine or Stibine Poisoning

#### Clinical description

Inhalation of arsine gas causes no immediate symptoms. Signs and symptoms occur 2 to 24 hours after exposure and result from massive hemolysis. These signs and symptoms include generalized weakness, dark urine, jaundice, and dyspnea. Oliguria and renal failure often occur 1 to 3 days after exposure (1-3).

#### Laboratory criteria for diagnosis

- *Biologic:* No specific test is available for arsine exposure; however, exposure to arsine might be indicated by detection of elevated arsenic levels in urine ( $>50 \mu\text{g/L}$  for a spot or  $>50 \mu\text{g}$  for a 24-hour urine) and signs of hemolysis (e.g., hemoglobinuria, anemia, or low haptoglobin).
- *Environmental:* Detection of arsine 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 arsine 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. Fowler BA, Weissberg JB. Arsine poisoning. *N Engl J Med* 1974;291:1171-4.
2. Hatlelid KM, Brailsford C, Carter DE. Reactions of arsine with hemoglobin. *J Toxicol Environ Health* 1996;47:145-57.
3. Pinto SS. Arsine poisoning: evaluation of the acute phase. *J Occup Med* 1976;18: 633-5.

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](http://www.bt.cdc.gov/chemical), or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).