

RICIN

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I. IDENTIFICATION

CLINICAL DESCRIPTION: Inhalation of ricin toxin results in symptoms such as fever, cough, dyspnea, weakness, nausea, and chest tightness. Death due to pulmonary failure may follow without intensive supportive care. Dust containing ricin can also cause irritation of the eyes and eyelids, nasal congestion, sore throat and lung irritation. Ingestion of ricin toxin results in diarrhea, vomiting, abdominal cramps and rapid pulse. Castor beans are the source of ricin and the degree of poisoning increases as the beans are chewed. Within days of ingestion dehydration and decreased blood pressure can occur. Death may follow without supportive care.

A. **REPORTING CRITERIA:** Laboratory confirmation of ricin or a diagnosis without laboratory confirmation if the clinical and epidemiological evidence is overwhelming.

B. **LABORATORY CRITERIA FOR CONFIRMATION:**

Detection of ricin toxin in environmental samples (*i.e.*, suspect food, water or environmental samples)

C. **WISCONSIN CASE DEFINITION:**

A clinically compatible illness that is laboratory-confirmed or that occurs among persons who ingested laboratory-confirmed ricin-containing food/water or were exposed to airborne ricin.

II. ACTIONS REQUIRED / PREVENTION MEASURES

A. **WISCONSIN DISEASE SURVEILLANCE CATEGORY I:**

Report **IMMEDIATELY BY TELEPHONE** to the patient's local health department upon identification of a confirmed or suspected case. The local health department shall then notify the state epidemiologist **immediately** of any confirmed or suspected cases. Within 24 hours submit a case report electronically through the Wisconsin Electronic Disease Surveillance System (WEDSS; <https://wedss.wisconsin.gov/webvcmr/pages/login/login.aspx>), or by mail or fax using an Acute and Communicable Disease Case Report ([F-44151](#)).

B. **EPIDEMIOLOGY REPORTS REQUIRED:**

- *Electronically* – Report through WEDSS, including appropriate disease-specific tabs
- OR
- *Paper Copy* – Acute and Communicable Diseases Case Report ([F-44151](#))

C. **PUBLIC HEALTH INTERVENTIONS:**

Ricin is most often thought of as an agent of bioterrorism. Ingestion or inhalation can kill a person quickly. No exposure should be assumed to be accidental.

- Immediate hospital treatment required for case patients and any others who may have been exposed. Inform ER personnel that patient and contacts are thought to have ingested/inhaled (as appropriate) ricin.
- Immediately contact local law enforcement and the FBI (414-276-4684).
- Isolate the area(s) where the exposure was reported to have occurred and do not enter the area except to remove the patient.

Wisconsin Division of Public Health Communicable Disease Surveillance Guideline

- Determine if others consumed suspect food/water items or were exposed to suspect dust or airborne particles.
- Source investigation will be undertaken by the FBI.

D. **BIOTERRORISM MEASURES:** Ricin toxin can be easily used by terrorists. Although the greatest threat may be via aerosol use, the more common threat may be via its use in food or drink. The occurrence of even a single case of ricin inhalation, ingestion or ingestion should raise the possibility of deliberate use of ricin toxin. All such cases should be reported immediately so that appropriate investigations can be initiated without delay.

III. CONTACTS FOR CONSULTATION

- A. Immediately contact local law enforcement and the FBI (414-276-4684).
- B. Contact the DHFS 24-hour on-call service and request that the environmental/chemical and preparedness on-call staff be alerted.
- C. For non-emergency information contact a Bureau of Environmental and Occupational Health toxicologist at (608) 266-9337.

IV. RELATED REFERENCES

- The CDC Emergency website <http://emergency.cdc.gov/agent/ricin/> is the most up-to-date reference on ricin emergencies.