

For Health Professionals

Health Alerts

Health Advisory #63 - Ricin Advisory (From the NYSDOH) - February 4, 2004

Background

Federal authorities are investigating two (2) possible ricin incidents in Washington, DC (Dirksen Office Building of the US Senate) and Wallingford, CT (USPS mail sorting facility).

Health Effects

Ricin is a naturally occurring toxin derived from castor beans, which are also the source of castor oil. Ricin disrupts ribosomal function and blocks protein synthesis. Exposure to ricin toxin occurs via ingestion, inhalation, or injection. Symptoms following ingestion typically begin in about 6 hours and include vomiting and diarrhea that may become bloody. Symptoms following inhalation usually begin in 8 hours and include difficulty breathing, fever, cough, nausea, and tightness in the chest. Pellets of ricin, or ricin dissolved in a liquid, can be injected, resulting in pain at the injection site, followed by fever, weakness, nausea, and vomiting. Depending on the route and quantity of exposure, death may occur in 36-72 hours, however death will probably not occur if the patient lives longer than 5 days without complications. Treatment is essentially supportive. There is no antidote. Ricin poisoning is not contagious.

Patient Evaluation

Residual amounts of ricin may be present on the patient or the patient's clothing. Washing exposed skin with soap and water and placing the patient's clothing into a plastic bag will reduce any potential contamination. Clinical features that may aid in patient evaluation of suspected ricin poisoning include bilateral infiltrates on chest radiographs, arterial hypoxemia, neutrophilic leukocytosis, and a bronchial aspirate characteristic of high permeability pulmonary edema (i.e., aspirate is high in protein compared to plasma). No vaccine or specific therapeutic agents are currently available. Treatment is supportive and may include IV fluids and vasopressors. Acute and convalescent sera should be collected on suspected cases for specific ELISA testing.

Providers should immediately report any suspected human or animal cases of ricin poisoning to the Erie County Department of Health (716-858-7697 8:30 AM - 4:30 PM Monday - Friday or 716-898-4225 evenings and weekends).

For Additional Information

If you have questions or comments please contact the NYSDOH Bureau of Toxic Substance Assessment 8:30 am-4:45 pm, M-F at 800-458-1158, extension 27820, or the Duty Officer on evenings, weekends, and holidays at 866-881-2809.

Additional information on ricin is available from CDC at:

<http://www.bt.cdc.gov/agent/ricin/facts.asp>

Additional information regarding sample collection is available on the NYS HIN:

https://commerce.health.state.ny.us/hpn/hanweb/lab/environmental_samples.pdf