



Ricin

(PUBLIC HANDOUT)

What is Ricin?

Ricin is a poison found naturally in castor beans. If castor beans are chewed and swallowed, the released Ricin can cause injury. Ricin can be made from the waste material left over from processing castor beans. It can be made in the form of a powder, a mist, or a pellet, or it can be dissolved in water or weak acid.

Is Ricin poisonous? How does it make people sick?

Ricin is a highly poisonous protein made from castor beans. Human cells need proteins to live. Ricin gets inside the cells of a person's body and prevent the cells from making proteins.

Ricin powder can be inhaled like anthrax. But as far as we know, no human cases of Ricin inhalation have ever been reported. Most Ricin poisonings have occurred when the Ricin was injected or swallowed.

What are the symptoms of Ricin poisoning?

The symptoms depend on the route (inhalation, injection, ingestion), the amount and the length of exposure.

Inhalation (breathing in) of Ricin may lead to symptoms within eight hours of exposure. Within a few hours of inhaling Ricin, likely symptoms would be difficulty breathing, cough, nausea and tightness in the chest. Heavy sweating may follow as well as fluid building up in the lungs. Fluid in the lungs would make breathing even more difficult, and the skin might turn blue. Finally, low blood pressure and respiratory failure may occur, leading to death. People who have inhaled Ricin should seek medical attention. Symptoms are very unlikely to being more than 24 hours after exposure.

Ingestion (swallowing) of Ricin would typically cause symptoms to occur in less than six hours. If someone swallows a significant amount of Ricin, he or she would develop vomiting and diarrhea that may become bloody. Severe dehydration may result, followed by low blood pressure. Other signs or symptoms may include hallucinations, seizures and blood in the urine. Within several days, the person's liver, spleen and kidneys might stop working, and the person could die.

Skin or eye exposure can occur when a person comes in contact with Ricin in powder or mist form. Symptoms include redness and pain of the skin and the eyes.

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Is Ricin poisoning contagious?

No, Ricin poisoning is not contagious. It cannot spread from person to person.

Is it true there is no antidote for Ricin? What can be done to help people who have been exposed to Ricin? Are treatments available?

Because no antidote exists for Ricin, it is important to avoid Ricin exposure in the first place. If exposure cannot be avoided, it is important to get the Ricin off or out of the body as quickly as possible.

Ricin poisoning is treated by giving victims supportive medical care. Medical care for people who have been exposed to Ricin include:

- Helping with breathing
- Administering intravenous fluids (fluids that are given through a needle inserted into a vein)
- Prescribing medications to treat conditions such as seizure and low blood pressure
- Flushing the stomach with activated charcoal
- Washing the eyes with water.

Where can I get more information?

- Your healthcare provider
- Your local department of health
- The New Jersey Department of Health and Senior Services
 - Website – www.nj.gov/health
 - DHSS Communicable Disease Service at (609) 588-7500
- CDC
 - www.bt.cdc.gov/agent/Ricin
 - 1-800-CDC-INFO (4636) for assistance in English and Spanish – TTY 1-888-232-6348
 - E-mail: cdcinfo@cdc.gov