

PUBLIC HEALTH FACT SHEET

Ricin



Burlington County Health Department

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Public Health
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Burlington County Health Department
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What is Ricin?

Ricin is a poison found naturally in castor beans. If castor beans are chewed or swallowed, the released ricin can cause a person to become ill. It can be in the form of a powder, mist, pellet, or can be dissolved in water. Ricin works by invading a person's cells and preventing the cells from making the necessary proteins for the cells to work. Without the proteins, the cell will eventually die.

Where is ricin found and how is it used?

Ricin is found in the waste "mash" produced in the process of making castor oil (the oil itself is not poisonous).

There are no commercial uses for ricin.

How is ricin spread?

It would take a planned act to make ricin and use it to poison people. Accidental exposure to ricin is highly unlikely. Ricin can be spread in several ways. People can breathe in the mist or powder and be poisoned. Ricin can also get into the water or food and be swallowed. Finally, ricin can be injected into a person's body.

Ricin poisoning is not contagious. It cannot be spread from person to person through casual contact.

Can ricin be used for bioterrorism?

Yes. The Centers for Disease Control and Prevention lists ricin as a possible chemical agent that may be used for bioterrorism. It is easy to remove ricin from castor beans, but difficult to process into a weaponized form.

What are the symptoms of ricin poisoning?

Symptoms depend on how much exposure occurred and how the person was exposed. Inhaled (breathing in) ricin is much more toxic than swallowing or injecting ricin. Symptoms would begin anywhere from 3 hours to several days later.

- Breathing in ricin initially causes flu-like symptoms such as cough, weakness, nausea, muscle aches and difficulty in breathing.
- If someone swallows ricin it could cause nausea, vomiting, bloody diarrhea, fever, and abdominal pain.
- If ricin is injected into the body, it can cause the muscles and cells near the injection site to die.

How is ricin poisoning diagnosed and treated?

There are no tests available that confirm a person has been exposed to ricin. No cure exists for ricin poisoning. Ricin poisoning is treated by giving victims supportive medical care to minimize the effects of the poisoning. The types of supportive medical care would depend on several factors, such as the route by which victims were poisoned (that is, whether poisoning was by inhalation, ingestion, or skin or eye exposure). Care could include such measures as helping victims breathe, giving them intravenous fluids (fluids given through a needle inserted into a vein), giving them medications to treat conditions such as seizure and low blood pressure, flushing their stomachs with activated charcoal (if the ricin has been very recently ingested), or washing out their eyes with water if their eyes are irritated.

How can I protect myself from ricin?

Do not grow the castor bean plant indoors or in areas where people may come in contact with the beans. Castor beans have been described as very attractive due to their unique mottling patterns and are used in gardens and sometimes as a houseplant. Do not eat unidentified seeds or beans. Do not drink Castor Oil for medicinal purposes. If you notice any of the symptoms or signs of illness described above, seek medical help immediately.

Where can I get more information?

- Your doctor, nurse, or clinic
- The Centers for Disease Control and Prevention (CDC) website at: <http://www.cdc.gov/>
- The Burlington County Department of Health at (609)-265-5548.
- The New Jersey Department of Health website www.nj.gov/health