

# toxtidbits

THE MARYLAND POISON CENTER'S MONTHLY UPDATE.  
NEWS. ADVANCES. INFORMATION.

## Ricin

Ricin is a toxalbumin derived from the beans of the castor plant, the same plant used to make castor oil. Ricin has a long history of research and use as a biological warfare agent dating back to World War I. It can be in the form of a powder, a pellet, a mist or dissolved in water or weak acid. It is a potent toxin that produces its toxicity by inhibiting protein synthesis. The clinical effects of ricin poisoning and onset of effects depend on the route of exposure and the dose; however, death can result from microgram amounts within 36-72 hours of an exposure.

**Ingestion** of ricin results in profuse vomiting and bloody diarrhea within 10 hours. Gastrointestinal hemorrhage, dehydration, hypotension, and electrolyte abnormalities may occur. Patients with severe toxicity may develop multisystem organ damage: elevated liver enzymes, hepatic failure, renal damage, fever, hallucinations, coma and seizures.

**Inhalation** of ricin produces symptoms within 4-12 hours. Coughing, dyspnea, bronchoconstriction, pulmonary edema and cyanosis may develop. Other effects such as nausea, diaphoresis, weakness, fever, arthralgias and hypotension may be observed. Death results from respiratory failure and multisystem organ failure.

Data is limited with the **injection** of ricin, but the following effects might be expected based on a small number of cases: pain at injection site, nausea, weakness, dizziness, hypotension, fever and multisystem organ failure.

There is no antidote available for ricin poisoning. Treatment consists of prompt decontamination and supportive care. Immunologic testing for ricin in patient samples is not readily available in health care facilities nor of any clinical benefit. If ricin poisoning is suspected, urine testing for ricinine (an alkaloid in the castor plant) to aid in confirming the exposure is available by contacting the Centers for Disease Control and Prevention.

*Call the Maryland Poison Center for assistance in the assessment and diagnosis of ricin poisoning: 1-800-222-1222.*



## Did you know?

### National Prescription Drug Take-Back Day is April 27<sup>th</sup>.

The Drug Enforcement Administration and local law enforcement agencies will collect unused prescription drugs for safe disposal from 10am to 2pm on Saturday April 27<sup>th</sup>. This will be the DEA's sixth event in three years to prevent prescription drug abuse and theft by removing unwanted, unused, and expired medications from homes. In the previous five events, more than 2 million pounds of medicines were collected! To read more information on the event and to find collection sites, visit [www.dea.gov](http://www.dea.gov).

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