

BOTULISM Fact Sheet



The Disease

Botulism is a muscle-paralyzing disease caused by a toxin made by a bacterium called **Clostridium botulinum**. Bacteria are germs that can make you sick. Many bacteria can cause disease.

There are three types of botulism:

- Foodborne botulism occurs when a person eats, drinks, or swallows pre-formed toxin (something that can make sick) that leads to illness within a few hours to days. Foodborne botulism is a public health emergency because the contaminated food may still be available to other persons besides the patient.
- Infant botulism occurs in a small number of at risk infants each year who have **C. botulinum** in their digestive tract.
- Wound botulism occurs when wounds are infected with **C. botulinum** that releases the toxin.

All forms of botulism can be fatal and are considered medical emergencies. Foodborne botulism can be especially dangerous because many people can be poisoned by eating food that has been contaminated.

Transmission

Foodborne botulism is caused by eating foods that contain the botulism toxin. A toxin is a harmful substance that can make you sick. Wound botulism is caused by toxin produced from a wound infected with **Clostridium botulinum**. Infant botulism is caused by consuming the spores of the botulinum bacteria, which then grow in the intestines and release toxin.

Symptoms

Symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, and muscle weakness. Infants with botulism appear lethargic, feed poorly, are constipated, and have a weak cry and poor muscle tone. These are all symptoms of the muscle paralysis caused by the bacterial toxin. If untreated, these symptoms may cause paralysis of the arms, legs, trunk and respiratory muscles. In foodborne botulism, symptoms generally start 18 to 36 hours after eating a contaminated food, but they can occur as early as 6 hours or as late as 10 days.

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Treatment

The respiratory failure and paralysis that occur with severe botulism may mean that a patient has to be on a breathing machine (ventilator) for weeks, plus intensive medical and nursing care. After several weeks, the paralysis slowly improves. If found early, foodborne and wound botulism can be treated with an antitoxin which blocks the action of toxin circulating in the blood. Antitoxins can prevent patients from worsening, but it will still take many weeks to get better.

Doctors may try to remove contaminated food still in the gut by inducing vomiting or by using enemas. Wounds should be treated, usually surgically, to remove the source of the toxin-producing bacteria. Good supportive care in a hospital is the basis of therapy for all forms of botulism. Currently, antitoxin is not routinely given for treatment of infant botulism.

Prevention

Foodborne botulism has often resulted from home-canned foods with low acid content, such as asparagus, green beans, beets and corn. However, there have been outbreaks of botulism from more unusual sources such as chopped garlic in oil, chile peppers, tomatoes, improperly handled baked potatoes wrapped in aluminum foil, and home-canned or fermented fish.

People who do home canning should follow strict sanitary procedures to reduce contamination of foods. Oils with garlic or herbs should be refrigerated. Potatoes which have been baked while wrapped in aluminum foil should be kept hot until served or refrigerated. Because the botulism toxin is destroyed by high temperatures, people who eat home-canned foods should consider boiling the food for 10 minutes before eating it to make sure it is safe. You can get instructions on safe home canning from the US Department of Agriculture at http://www.uga.edu/nchfp/publications/publications_usda.html.

Since honey can contain spores of **Clostridium botulinum** and has been a source of infection for infants, children less than 12 months old should not be fed honey. Honey is safe for people who are 1 year of age and older. Wound botulism can be prevented by promptly seeking medical care for infected wounds and by not using injectable street drugs.