



STATE OF HAWAII DEPARTMENT OF HEALTH

Botulism: Frequently Asked Questions

What is botulism?

Botulism is a rare but serious paralytic illness caused by a nerve toxin that is produced by the bacterium *Clostridium botulinum*. There are three main kinds of botulism. Foodborne botulism is caused by eating foods that contain the botulism toxin. 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. 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 a contaminated food.

Is botulism contagious?

No. Botulism does not spread from person to person.

How do you know if you were exposed?

There are no warning signs to help you avoid this toxin. It is not easily detected in foods or in the air because you cannot see, smell, or taste it. You wouldn't know you were exposed until symptoms develop 12-36 hours after you've eaten the contaminated food or breathed the toxin in the air.

If you were exposed, will you get the disease?

If you ate the contaminated food or breathed the toxin in the air, you will probably get botulism. If you did not eat the contaminated food or were not present when it was released into the air, you will not get the disease because botulism is not spread from person to person.

How common is botulism?

In the United States an average of 110 cases of botulism are reported each year. Of these, approximately 25% are foodborne, 72% are infant botulism, and the rest are wound botulism. Outbreaks of foodborne botulism involving two or more persons occur most years and usually caused by eating contaminated home-canned foods. The number of cases of foodborne and infant botulism has changed little in recent years, but wound botulism has increased because of the use of black-tar heroin, especially in California.

What are the symptoms of botulism?

The classic 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 progress to cause paralysis of the arms, legs, trunk and respiratory muscles. In foodborne botulism, symptoms generally begin 12 to 36 hours after eating a contaminated food, but they can occur as early as six hours or as late as two weeks.

How can botulism be treated?

The respiratory failure and paralysis that occur with severe botulism may require a patient to be on a breathing machine (ventilator) for weeks, plus intensive medical and nursing care. After several weeks, the paralysis slowly improves. If diagnosed early, foodborne and wound botulism can be treated with an antitoxin which blocks the action of toxin circulating in the blood. This can prevent patients from worsening, but recovery still takes many weeks. Physicians 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 mainstay of therapy for all forms of botulism. Currently, antitoxin is not routinely given for treatment of infant botulism.

Are there complications from botulism?

Botulism can result in death due to respiratory failure. However, in the past 50 years the proportion of patients with botulism who die has fallen from about 50% to 8%. A patient with severe botulism may require a breathing machine as well as intensive medical and nursing care for several months. Patients who survive an episode of botulism poisoning may have fatigue and shortness of breath for years and long-term therapy may be needed to aid recovery.

What are public health agencies doing to prevent or control botulism?

The Department of Health and the Centers for Disease Control and Prevention (CDC) have persons knowledgeable about botulism available to consult with physicians 24 hours a day. If antitoxin is needed to treat a patient, it can be quickly delivered to a physician in Hawaii. Suspected outbreaks of botulism are quickly investigated, and if they involve a commercial product, the appropriate control measures are coordinated among public health and regulatory agencies. Physicians should report suspected cases of botulism to the Department of Health.

Why is there concern about botulism as a bioterrorist weapon?

Botulism is a very serious illness. The bacteria that cause the disease are readily available and could be used to contaminate food or water supplies. Terrorists have already attempted to use botulinum toxin as a bioweapon. Aerosols were dispersed at multiple sites in downtown Tokyo, Japan, and at US military installations in Japan on at least three occasions between 1990 and 1995 by the Japanese cult Aum Shinrikyo. These attacks failed, apparently because of faulty microbiological technique, deficient aerosol-generating equipment, or internal sabotage. The perpetrators obtained their C botulinum from soil that they had collected in northern Japan. Four of the countries listed by the US government as “state sponsors of terrorism” – Iran, Iraq, North Korea, and Syria – have developed, or are believed to be developing, botulinum toxin as a weapon.