CALHOUN COUNTY
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Fact Sheet

Botulism

What is botulism?

Botulism is a rare, muscle-paralyzing disease caused by nerve toxin spores made by the bacterium *Clostridium botulinum*. Although the bacteria that make botulism toxins are found naturally in many places, they rarely make people sick.

The spores are found in soil worldwide. Spores act like a protective coating that helps bacteria survive extreme conditions such as low oxygen, no oxygen, low acid, low sugar, low salt, certain temperature ranges, and a certain amount of water. Therefore, spores causing botulism can be found in improperly home-canned, preserved, or fermented foods.

There are five main kinds of botulism:

1. Foodborne botulism
2. Infant botulism
3. Iatrogenic botulism
4. Adult intestinal toxemia
5. Wound botulism

Botulism toxin can also be used in a bioterrorist attack, released into the air, or contaminate the food and water supply.

What are the symptoms of botulism?

General symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, difficulty moving eyes, and muscle weakness which usually moves down the body from the shoulders to the feet. The symptoms all result from muscle paralysis caused by the toxin. Paralysis of breathing muscles can cause a person to stop breathing and die, unless assisted by a ventilator.

For foodborne botulism, symptoms begin from six hours to 10 days after eating toxin-containing foods. Most commonly the delay is about 18-36 hours.

Signs and symptoms in an infant with botulism may include constipation, poor eating, drooping eyelids, pupils that are slow to react to light, face showing less expression than usual, weak cry that sounds different than usual, and/or difficulty breathing.

How is botulism spread?

Foodborne botulism is usually due to incorrectly prepared or home canned foods. Outbreaks from commercial products and foods prepared improperly in restaurants have also occurred. Foodborne botulism is especially dangerous because many people can be infected by eating contaminated food.

Infant botulism occurs in a small number of at-risk infants each year. The bacteria can be found on common home surfaces, even after cleaning. For unknown reasons, *C. botulinum* can enter, grow, and produce the toxin in some infants' intestines.

Iatrogenic botulism is spread through the wrong dose of medically injected botulinum toxin.

Wound botulism is caused by the growth of living botulism bacteria in a wound, with the ongoing secretion of toxin that causes the paralytic illness. In the United States, this syndrome is seen almost exclusively in injecting drug users.

Botulism is not spread person-to-person.

How common is botulism?

In 2018, health departments reported 242 cases of botulism to CDC. The cases were of the following types: 67% infant, 25% wound, 7% foodborne, and less than 1% diagnosed as probable adult intestinal colonization.

What is the treatment for botulism?

Botulism can be treated with an antitoxin which blocks the action of toxins circulating in the blood. This antitoxin stops further development of the disease but cannot reverse paralysis that is already present. The antitoxin is effective in reducing the severity of symptoms if administered early in the course of the disease. The CDC maintains the nation's supply of antitoxin. A physician diagnosing a case of botulism must contact the CDC through their state health department to get the antitoxin. Public health officials must be contacted immediately about potential cases of botulism.

The respiratory failure and paralysis that occur with severe botulism may require patients to be on a ventilator, plus intensive medical and nursing care. After several weeks or months, the paralysis slowly improves.

Are there complications from botulism?

Botulism can result in death due to respiratory failure; however, the number of deaths has decreased dramatically in past years due to improved medical knowledge. Patients who survive an episode of botulism may have fatigue and shortness of breath for years and long-term therapy may be needed to aid recovery.

How can botulism be prevented?

Foodborne botulism can be prevented by practicing safe home canning and food handling. The most common sources of home-canning-related botulism cases are asparagus, green beans, beets, corn, and potatoes. Children less than 12 months old should not be given honey since it can contain spores from the bacteria.

Iatrogenic botulism can be prevented by getting the safest dose of botulinum toxin only by licensed practitioners.

More research needs to be conducted to better understand how to prevent adult intestinal toxemia.

Wound botulism can be prevented by promptly seeking medical care for infected wounds or traumatic injuries and avoiding injection of illicit drugs.

How do I get more information on botulism?

Calhoun County Public Health Department
Phone: 269-969-6383
www.facebook.com/CCPublicHealthDepartment/

Centers for Disease Control and Prevention
Phone: 800-232-4636 (800-CDC-INFO)
Website: https://www.cdc.gov/botulism/
Spanish: https://www.cdc.gov/botulism/index-es.html

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