



BOTULISM

What is botulism?

Botulism is a rare, serious illness that can be deadly if not treated. It is caused by bacteria called *Clostridium botulinum* (*C. botulinum*), a toxin (poison) that attacks the nervous system and causes paralysis. The bacteria are found naturally in soil and dust but usually do not make people sick until they grow under certain conditions.

Who gets botulism?

Botulism occurs in different ways, depending on exposure to the botulinum toxin.

What are the different types of botulism?

The different types of botulism are:

1. **Foodborne Botulism** is caused by eating foods contaminated by botulinum toxin. A person can get foodborne botulism by eating or drinking something that is not properly cooked, processed, preserved, or stored. The *C. botulinum* bacteria produce the toxin in food, especially in unrefrigerated, low-oxygen, low-acid, and low-sugar environments, as well as in some commercially produced food and drink that are not properly refrigerated.
2. **Wound Botulism** is caused by a wound infected with *C. botulinum* bacteria that then produces the toxin. People who inject street drugs such as black tar heroin are at a much higher risk of botulism.
3. **Infant Botulism** occurs when a baby, especially those under 15 months old, swallows *C. botulinum* bacteria, which then produce the botulinum toxin in the baby's intestine (gut). Honey can contain *C. botulinum* bacteria and is not safe for babies under 15 months old to eat.
4. **Adult Intestinal Toxemia** (also known as adult intestinal colonization) occurs when an adult swallows *C. botulinum* bacteria, which then produce the botulinum toxin in the intestine (gut). This rare condition occurs in individuals over 15 months old. People with severe gut illnesses or previous intestinal surgery are more at risk for this type of botulism.
5. **Iatrogenic Botulism** is caused by the injection of too much botulinum toxin for cosmetic reasons such as wrinkle treatment or medical reasons, such as headaches. It is a rare condition.



What are the symptoms of foodborne botulism?

The most common symptoms of botulism include:

- droopy eyelids
- double or blurred vision
- difficulty swallowing
- dry mouth
- thick feeling tongue
- loss of facial expression or muscle weakness in the face
- inability of the neck muscles to support the head
- slurred speech.

If not treated quickly, paralysis can continue down both sides of the body, causing:

- paralysis of the arms, legs, and trunk
- breathing problems
- death.

Botulism can paralyze the muscles that control breathing, and the patient can require the use of a breathing machine (ventilator) to breathe. About one in 20 people who get botulism die from respiratory failure or the result of long-term paralysis.

How soon do symptoms appear?

Foodborne botulism symptoms generally begin 18 to 36 hours after eating a contaminated food, but symptoms can occur as early as six hours or as late as 10 days.

Wound botulism symptoms may not occur until several days after the wound is infected with the bacteria or after injecting drugs contaminated with bacteria. People with wound botulism caused by injecting drugs may not always have a visible wound.

Should an infected person be excluded from work or school?

No, a person with botulism should not be excluded from work or school. Botulism is not contagious and cannot spread from person to person.

What is the treatment for botulism?

If caught early, botulism can be treated with botulinum antitoxin, which blocks the toxin from causing more harm in the body. But the antitoxin cannot undo or heal any muscle paralysis that has already happened, and so it can take time for a person to recover. Botulinum antitoxin for patients 15 months of age and older in Delaware is available by working with the Division of Public Health's Office of Infectious Disease Epidemiology and the U.S. Centers for Disease Control and Prevention (CDC).



What can a person or community do to prevent the spread of botulism?

Many cases of botulism are preventable. The following recommendations reduce the chances of getting botulism:

To reduce your risk of foodborne botulism:

- Properly prepare, store, and preserve food to help prevent botulism bacteria from growing and making the deadly toxin.

To reduce the risk of infant botulism:

- Do not give babies younger than 15 months old honey because honey can contain the *C. botulinum* bacteria. Honey is safe for people 1 year of age and older.

To reduce your risk of wound botulism:

- Do not inject street drugs like black tar heroin.

To reduce your risk of iatrogenic botulism from cosmetic or medical injections:

- Only get injections of commercial botulinum toxin (like Botox®) from licensed practitioners or health care providers who are trained to safely administer botulinum toxin.

Resources

Botulism Fact Sheet, Iowa Department of Health,

<https://wiki.idph.iowa.gov/Portals/3/userfiles/79/A-B/Botulism%20Fact%20Sheet.pdf>

Centers for Disease Control and Prevention,

https://www.cdc.gov/botulism/prevention.html#anchor_1491857381171