

## What is Botulism?

Botulism is a muscle-paralyzing disease caused by a toxin made by a bacterium called *Clostridium botulinum*. Botulinum toxins block nerve functions and can lead to respiratory and muscular paralysis. Botulism poisoning cannot be transmitted from person to person.

## How Can You Get Botulism Poisoning?

Although botulism poisoning is rare, it can be contracted in 3 different ways.

1. Foodborne botulism occurs when a person ingests pre-formed toxin 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.
2. Infant botulism occurs in a small number of susceptible infants each year who harbor *C. botulinum* in their intestinal tract.
3. Wound botulism occurs when wounds are infected with *C. botulinum* that secretes the toxin.

## What Are the Symptoms of Botulism Poisoning?

Symptoms usually occur within 12-36 hours after exposure to *Clostridium botulinum* spores, and can take form in the following:

- Double vision
- Blurred vision
- Drooping eyelids
- Slurred speech
- Difficulty swallowing
- Dry mouth
- Muscle weakness that moves down the body, usually affecting the shoulders first, then the upper arms, lower arms, thighs, calves, etc
- Vomiting
- Diarrhea
- Paralysis of breathing muscles

## How to Prevent Botulism Poisoning?

Prevention of food borne botulism is based on good practice in food preparation particularly preservation and hygiene. Botulism may be prevented by the inactivation of the bacterial spores in heat-sterilized (e.g. retorted) or canned products or by inhibiting bacterial growth in other products. Commercial heat pasteurization (vacuum packed pasteurized products, hot smoked products) may not be sufficient to kill all spores and therefore the safety of these products must be based on preventing bacterial growth and toxin production. Refrigeration temperatures combined with salt content and/or acidic conditions will prevent the growth of the bacteria and formation of toxin.

If you have any questions, please contact Allen County Public Health at 419-228-4457. Health Department staff members are available to answer your questions Monday to Friday from 8:00 a.m. to 4:30 p.m. You can also visit [www.allencountypublichealth.org](http://www.allencountypublichealth.org), the Centers for Disease Control and Prevention's website at [www.cdc.gov](http://www.cdc.gov), and the World Health Organization at [www.who.int](http://www.who.int) for additional information.

The WHO Five Keys to Safer Food serve as the basis for educational programs to train food handlers and educate the consumers. They are especially important in preventing food poisoning. The Five Keys are:

1. Keep clean
2. Separate raw and cooked
3. Cook thoroughly
4. Keep food at safe temperatures
5. Use safe water and raw materials

### **How is Botulism Poisoning Diagnosed and Treated?**

Samples must be taken, and clinical tests run in order to confirm the presence of *Clostridium botulinum* toxin. Antitoxins are the most common treatment method upon a confirmed case, and antibiotics for wound infections. However, more severe cases may require special treatments. A vaccination has been developed against botulism, but its effectiveness is still under evaluation.

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