

About...Botulism

What is botulism?

Botulism (boch-uh-liz-uhm) is a very serious disease caused by a nerve toxin (poison) produced by the *Clostridium botulinum* bacterium, which lives in the soil and grows best with very little oxygen. These bacteria form spores, which allow them to survive harsh environments. The toxin can cause muscle paralysis, which can result in death if the breathing muscles become paralyzed. Botulism is considered a medical emergency. On average, one case of botulism is reported in Indiana every two years.

How is botulism spread?

Botulism is **not** spread from person to person. There are three types of botulism:

- Foodborne botulism results from eating foods, especially improperly home-canned foods, that contain botulism toxin.
- Intestinal botulism (formerly infant botulism) results from eating certain foods, e.g., honey or natural syrups, that contain spores of botulism bacteria. These spores grow in the body and produce toxin in babies and people with gastrointestinal disorders.
- Wound botulism results from wounds becoming contaminated with *Clostridium botulinum*.

What are the symptoms of botulism?

- Diarrhea
- Vomiting
- Constipation
- Urinary retention
- Double vision or blurred vision
- Drooping eyelids
- Difficulty speaking or swallowing
- Dry mouth
- Muscle weakness
- Muscle paralysis that begins in the upper body and progresses downward (“descending paralysis”)

Symptoms typically begin within 12-36 hours (range of 6 hours to 10 days) after consuming contaminated food or after a wound has become infected with the bacteria. Muscle weakness and paralysis involve both sides of the body at the same time, starting at the head and moving towards the feet. These symptoms, which are the result of the bacterial toxin paralyzing the muscles of the body, quickly worsen over a short period of time. Babies with botulism appear tired, do not feed well, are constipated, and have a weak cry and limp muscles.

Are there complications from botulism?

People can die from botulism poisoning because of breathing failure and infection in the lungs. Death occurs in 5-10% of cases. Someone with severe botulism may need assistance from a breathing machine and medical care for several months. The paralysis slowly improves after several weeks. Those who survive botulism poisoning may experience tiredness and shortness of breath for years.

How do I know if I have botulism?

A person with symptoms involving eyesight or speech should see a health care provider immediately. Other illnesses may produce symptoms that resemble botulism. The health care provider may order tests to rule out other diseases and may collect a stool or blood sample. It is important to note that laboratory tests will not always come back positive for a person with botulism.

How is botulism treated?

If discovered early, botulism caused by contaminated food or an infected wound can be treated with an antitoxin. While the antitoxin keeps the illness from becoming worse, it does not speed recovery. Antitoxin is rarely used to treat babies with botulism. Because the antitoxin can cause severe allergic reactions in some patients, the health care provider must rule out other possibilities for the illness before giving antitoxin.

Is botulism a reportable disease?

Yes. Health care providers or laboratories must immediately report any suspect cases of botulism to the Indiana State Department of Health (ISDH). The local health department will contact all suspect botulism cases so a possible exposure can be determined to help prevent others from becoming ill.

How can botulism be prevented?

- Foodborne:
 - All home-canned foods must be properly processed and prepared. Instructions for safe home canning are available from county extension services or from the United States Department of Agriculture (USDA) at http://www.uga.edu/nchfp/publications/publications_usda.html
 - Since the bacterial toxin is destroyed by heat, as a safety precaution, home-canned foods should be boiled for 10 minutes before eating it.
 - Never eat foods from cans or jars that are bulging, discolored, have a bad taste or smell, or have swollen lids or caps.
 - Potatoes that have been baked while wrapped in aluminum foil should be kept hot until they are eaten or refrigerated. If leftover potatoes are stored overnight, remove the foil before refrigerating.
 - Oils that contain garlic or herbs should be refrigerated.
 - Outbreaks have occurred following the consumption of uneviscerated fish, fermented fish, and improperly processed foods (sautéed onions, chili peppers, and canned chili).
- Intestinal (including infants):
 - Do not feed honey to babies less than 12 months of age. Honey can contain spores of the bacteria, which can easily grow in infants.
- Wound care:
 - Carefully clean and disinfect all cuts and wounds. See your doctor immediately if the wound becomes infected.
 - Do not use injectable street drugs.

Where can I find more information on botulism?

To search Indiana data and statistics:
www.in.gov/isdh/dataandstats/disease/diseases_index.htm

To search the Indiana Food Protection Program:
<http://www.in.gov/isdh/regsvcs/foodprot/index.htm>

To search disease information:
http://www.cdc.gov/ncidod/dbmd/diseaseinfo/botulism_g.htm
<http://www.cfsan.fda.gov/~mow/chap2.html>

To search for national data, statistics, and outbreaks:
www.cdc.gov/mmwr/

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