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## Botulism

Botulism is a rare but serious illness caused by *Clostridium botulinum* bacteria. The bacteria may enter the body through wounds or by eating improperly canned or preserved food.

### Causes

*Clostridium botulinum* are found in soil and untreated water throughout the world. The bacteria produce protective spores to help them survive. In certain conditions, such as improperly preserved or canned food, these spores can grow and produce a toxin. When eaten, even tiny amounts of this toxin can lead to severe poisoning.

Foods that can be contaminated include:

- Home-canned vegetables
- Cured pork and ham
- Smoked or raw fish
- Honey or corn syrup
- Baked potatoes cooked in foil
- Carrot juice
- Chopped garlic in oil

Infant botulism occurs when a baby eats *Clostridium botulinum* spores and the bacteria grow in the baby's intestines. The most common cause of infant botulism is eating honey or corn syrup or using pacifiers that have been coated with honey.

*Clostridium botulinum* can be found normally in the stool of some infants. Infants develop botulism when the bacteria grow in their gut.

Botulism may also occur if the bacteria enter open wounds and produce toxins there.

About 110 cases of botulism are reported in the United States each year. Most of the cases are in infants.

### Symptoms

Symptoms often appear 8 to 36 hours after you eat food contaminated with the toxin. There is no fever with this infection.

In adults, symptoms may include:

- Abdominal cramps
- Breathing difficulty that may lead to respiratory failure
- Difficulty swallowing and speaking
- Double vision
- Nausea
- Vomiting
- Weakness with paralysis (equal on both sides of the body)

Symptoms in infants may include:

- Constipation
- Drooling
- Poor feeding and weak sucking
- Respiratory distress
- Weak cry
- Weakness, loss of muscle tone

## Exams and Tests

Your health care provider will perform a physical exam. The exam may find:

- Absent or decreased deep tendon reflexes
- Absent or decreased gag reflex
- Eyelid drooping
- Loss of muscle function, starting at the top of the body and moving down
- Paralyzed bowel
- Speech impairment
- Urine retention with inability to urinate
- Blurred vision
- No fever

Blood tests can be done to identify the toxin. A stool culture may also be ordered. Lab tests can be done on the suspected food to confirm botulism.

## Treatment

You will need medicine to fight the toxin produced by the bacteria. The medicine is called botulism antitoxin.

You will have to stay in the hospital if you have breathing trouble. A tube may be inserted through the nose or mouth into the windpipe to provide an airway for oxygen. You may need a breathing machine.

People who have trouble swallowing may be given fluids through a vein (by IV). A feeding tube may be inserted.

Providers must tell state health authorities or the Centers for Disease Control and Prevention about people with botulism, so that the contaminated food is removed from stores.

Some people are given antibiotics, but they may not always help.

## **Outlook (Prognosis)**

Prompt treatment greatly reduces the risk for death.

## **Possible Complications**

Health problems that may result from botulism include:

- Aspiration pneumonia and infection
- Long-lasting weakness
- Nervous system problems for up to 1 year
- Respiratory distress

## **When to Contact a Medical Professional**

Go to the emergency room or call 911 or the local emergency number if you suspect botulism.

## **Prevention**

NEVER give honey or corn syrup to infants younger than 1 year old. Never give even just a little taste on a pacifier.

Help prevent infant botulism by breastfeeding only, if possible.

Always throw away bulging cans or foul-smelling preserved foods. Sterilize home-canned foods by pressure cooking them at 250°F (121°C) for 30 minutes. This can reduce the risk for botulism.

See the Centers for Disease Control and Prevention website for more information on home canning safety at [www.cdc.gov/botulism/prevention/home-canned-foods.html](http://www.cdc.gov/botulism/prevention/home-canned-foods.html) [<https://www.cdc.gov/botulism/prevention/home-canned-foods.html>] .

Keep foil-wrapped baked potatoes hot or in the refrigerator. Do not store at room temperature. Carrot juice and oils with garlic or other herbs should also be refrigerated. Make sure to set the refrigerator temperature at 40°F (10°C) or lower.

## **Alternative Names**

Infant botulism

## **References**

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Updated by: Jatin M. Vyas, MD, PhD, Associate Professor in Medicine, Harvard Medical School; Associate in Medicine, Division of Infectious Disease, Department of Medicine, Massachusetts General Hospital, Boston, MA. Also reviewed by David C. Dugdale, MD, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.

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