



BOTULISM

What is botulism?

Botulism is a rare but serious muscle-paralyzing disease caused by a nerve toxin that is produced by the *Clostridium botulinum* bacterium, a soil-dwelling organism whose spores are found in nature. There are three main kinds of botulism:

- **foodborne**
- **infant**
- **wound**

All forms of botulism can be fatal and are considered medical emergencies. Foodborne botulism is a public health emergency and is especially dangerous because many people can be poisoned by eating contaminated food. In the U.S. an average of 110 cases of botulism are reported each year. Of these, approximately 25 percent are foodborne, 72 percent are infant botulism, and the rest are wound botulism. Outbreaks of foodborne botulism involving two or more people occur and are usually caused by eating home-canned foods. The number of cases of foodborne and infant botulism has changed little in recent years, but wound botulism has increased because of the use of black-tar heroin, especially in California.

What are the symptoms?

Symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth and muscle weakness in a descending fashion starting with the shoulders, then upper arms, lower arms, thighs, calves, etc. Infants with botulism appear lethargic, feed poorly, are constipated, and have poor muscle tone and a weak cry. Paralysis of breathing muscles can cause a person to die unless assistance with breathing (mechanical ventilation) is provided. With foodborne botulism, symptoms begin within hours to weeks (most commonly between 18 and 36 hours) after eating toxin-contaminated food. Foodborne botulism can occur in all age groups. Botulism is not spread from person to person.

How is it spread?

Foodborne botulism is caused by eating contaminated foods. Infant botulism occurs when the child consumes the spores of the botulinum bacteria (some foods naturally contain a few spores), which then grow in the intestines and release toxin. Wound botulism occurs when wounds are infected with toxin-producing *C. botulinum* bacteria.

How is it treated?

Supportive hospital care is the main therapy for all forms of botulism. If diagnosed early, foodborne and wound botulism can be treated with an antitoxin. This can prevent patients from becoming worse, but recovery still takes weeks to months. The antitoxin is effective in reducing the severity of symptoms if administered early in the course of the disease. A supply of antitoxin is maintained by the Centers for Disease Control and Prevention (CDC). Physicians may try to remove contaminated food still in the stomach by inducing vomiting or by using enemas. Wounds should be surgically treated to remove the source of the toxin-producing bacteria. Respiratory failure and paralysis that occurs with severe botulism may require a patient to be on a breathing machine (ventilator) for months, plus intensive medical and nursing care. Most people eventually recover.

Those who survive an episode of botulism poisoning may have fatigue and shortness of breath for years; long-term therapy may be needed to aid recovery.

What should I do if I think I have botulism?

If you think you or any of your family members have botulism, seek medical attention immediately. If you are unable to reach your doctor, contact the emergency room of the nearest hospital.

What is Tarrant County doing about it?

Tarrant County Public Health (TCPH) conducts an ongoing effort to educate the public in general, and food handlers in particular, about potential foodborne diseases and what can be done to prevent these diseases through proper handling, preparation, serving and storing of food. The department also conducts ongoing inspections of restaurants and other food-handling establishments to ensure compliance with relevant laws and procedures. Suspected outbreaks of botulism are quickly investigated, and if they involve a commercial product, the appropriate control measures are coordinated through public health and regulatory agencies such as the Department of Agriculture, the CDC and the Texas Department of Health as appropriate. TCPH also works with physicians throughout the county. Physicians are required by law to report suspected cases of botulism.

What can I do to protect myself and my family?

Botulism can be prevented through good food-handling practices. People who do home canning should follow strict food handling procedures to reduce contamination of foods. Because the botulism toxin is destroyed by high temperatures, people who eat home-canned foods should heat the food for 10 minutes before eating to ensure safety. Because honey can contain *Clostridium botulinum* spores and this has been a source of infection for infants, children less than 12 months old should not be fed honey. Honey is safe for healthy people one year of age and older. Wound botulism can be prevented by promptly seeking medical care for dirty wounds. Using injectable street drugs can lead to wound botulism.

Where can I get more information?

Visit TCPH online (<http://health.tarrantcounty.com>) for more information. Instructions on safe home canning can be obtained from county cooperative extension services (817-884-1945) or from the U.S. Department of Agriculture. You can also call our Epidemiology and Health Information office at 817-321-5350 or contact the CDC: 1-888-246-2675 (www.bt.cdc.gov).