

## **Botulism**

Agent: Neurotoxin produced by *Clostridium botulinum* (spore-forming, anaerobic bacteria)

Mode of Transmission: For foodborne botulism, ingestion of food that contains toxin and has not been sufficiently heated to inactivate the toxin. For non-foodborne botulism, ingestion of food contaminated with spores that then germinate, multiply, and produce toxin in the intestine (also known as infant botulism or adult intestinal botulism, depending on the age of the patient); or contamination of wounds or open fractures with soil or gravel that contain *C. botulinum* spores (also known as wound botulism). *C. botulinum* is not transmitted from person to person.

Signs/Symptoms: Both foodborne and non-foodborne botulism can result in descending, flaccid paralysis which can lead to cessation of breathing and death unless respiration is aided. Additional distinguishing symptoms of foodborne botulism, which usually begin 12-36 hours after the toxin is ingested, but might be delayed for up to several days after exposure, include fatigue, weakness, vertigo, and sometimes diarrhea and vomiting. Infant botulism is characterized by constipation, weakness, loss of appetite, poor feeding or sucking, an altered cry and loss of head control. Symptoms of wound botulism are similar to those associated with foodborne botulism.

Prevention: For prevention of foodborne botulism, all canned and preserved food should be properly processed and prepared. Boiling food for 10 minutes will destroy the toxin. To prevent non-foodborne botulism, honey and corn syrup should not be given to children younger than 12 months of age because *C. botulinum* spores have been identified in these foods. Also, all wounds should be maintained properly and medical attention should be sought when wounds become infected.

Other Important Information: Botulism is a condition that requires rapid reporting to the local health department. Botulism antitoxin, released by public health authorities, is effective in reducing the severity of symptoms if administered early. Botulism is listed by CDC as a potential bioweapon because an aerosolized or foodborne botulinum-toxin weapon could cause widespread, severe disease and would require rapid public health response to control.

## **Foodborne**

No cases of foodborne botulism were reported in Virginia during 2016. The last reported case in Virginia occurred in 2007 in an adult female.

## **Non-Foodborne (including infant, intestinal and wound botulism)**

Five cases of non-foodborne botulism were reported in Virginia during 2016, with all five being infant botulism. Among the five infants, two were female and three were male. All five were reported from the white population. Three were from the northwest region, and one each from the central and eastern regions. All were caused by type B neurotoxin. The five infants survived and no risk factors were identified. The five-year average for non-foodborne botulism cases in Virginia is 2.2 cases per year.