

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 intestinal botulism); or contamination of wounds by ground-in soil or gravel or from improperly treated open fractures (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. Intestinal botulism, formerly known as 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 2012. The most recent case in Virginia occurred in 2007 in an adult female. The five-year average is less than one case per year.

Non-Foodborne (including intestinal and wound botulism)

Two cases of non-foodborne botulism were reported in Virginia during 2012, matching the previous five-year average of 2.0 cases per year. Both of the 2012 cases occurred in female infants and were classified as intestinal botulism. One case was reported from the central region and the other from the southwest region. No risk factors were identified for either infant. While type A or type B neurotoxin account for the majority of all intestinal botulism cases, one of the 2012 cases was the first recognized case caused by toxin type F in Virginia. Infant formula was the suspected source of toxin in this case but was never definitively proven.