

Botulism

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

Mode of Transmission: Ingestion of food that contains toxin and has not been sufficiently heated to inactivate the toxin (foodborne botulism); ingestion of food contaminated with spores that then germinate, multiply, and produce toxin in the intestine (intestinal botulism, formerly known as infant botulism); and contamination of wounds by ground-in soil or gravel or from improperly treated open fractures (wound botulism). *C. botulinum* is not transmitted from person to person.

Signs/Symptoms: 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 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. All three forms can result in descending, flaccid paralysis which can lead to cessation of breathing and death unless respiration is aided.

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, but much higher temperatures are required to kill the spores. To prevent intestinal 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. Wound botulism can be prevented by maintaining proper wound care and seeking medical care 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 2009. The only case in the preceding 5 years in Virginia occurred in 2007 in an adult female from the southwest region. The five-year average is 0.2 cases per year.

Intestinal

Four cases of intestinal botulism were reported in Virginia during 2009. This is higher than the three cases reported in 2008, and nearly three times the five-year average of 1.4 cases per year. Among the cases reported in 2009, two were in males and two were in females. Two cases were reported from the northwest region, one from the northern region, and one from the eastern region. One case was associated with ingestion of corn syrup.