

Botulism

What is botulism and what causes it?

Botulism is a severe illness caused by potent toxins produced by the bacteria, ***Clostridium botulinum*** (clos-trid-E-um botch-YOU-lie-num). The bacteria grow in low oxygen (anaerobic) environments. Botulinum toxins are the most potent known. Illness occurs either by ingesting the toxin or the bacteria (which grows and then produces toxin). Botulism affects many species, including humans. The signs of illness are the same in all. The onset is rapid and can be fatal without treatment.

What animals get botulism?

Animals that can be affected by botulism toxin include cattle, sheep, horses, mink, and ferrets. Outbreaks in waterfowl are common. Dogs and pigs rarely get botulism and illness in cats has not been reported.

How can my animal get botulism?

C. botulinum is found worldwide within the intestinal tracts of mammals and fish, and can also be found in soil or sediment. Animals become infected by **ingesting** vegetation that is contaminated with the botulinum toxin (such as decaying hay or grain) or through **direct contact** with soil that contains the bacteria. Cattle or sheep that are phosphorus (a mineral) deficient are prone to chew on bones, increasing their chance of ingesting botulinum bacteria or its toxin from the environment.

How does botulism affect my animal?

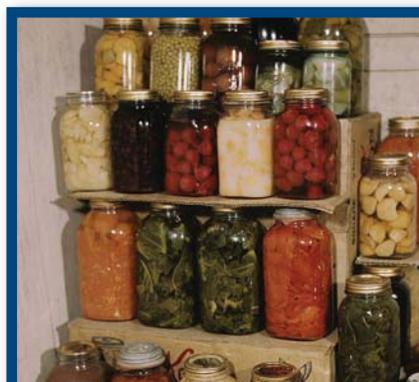
Botulism causes progressive paralysis, weakness, difficulty swallowing or chewing, and vision problems. Signs of illness can be seen as soon as 2 hours and up to 2 weeks after toxin exposure. Severe complications involve paralysis of the heart and respiratory muscles, leading to death.

Can I get botulism?

Yes. People can get botulism, but not by direct contact with other people or animals.

People are infected by ingesting (**oral**) food containing the toxins or the bacteria itself. Reported outbreaks have occurred most commonly from home-canned vegetables and fish, sausage, and honey. Exposure can occur by **direct contact** of wounds or cuts with contaminated soil, but this is rare.

Botulism in humans has a rapid onset (18 to 36 hours). Initially, you may have nausea, vomiting and abdominal pain.



Botulism

may occur from eating improperly canned foods.

Photo from the Library of Congress

This rapidly develops to paralysis starting in the head and neck region and moves down the body to the arms, legs and chest. This can lead to difficulty breathing and possibly death.

Who should I contact, if I suspect botulism?

In Animals – Contact your veterinarian immediately.

In Humans – Contact your physician immediately.

How can I protect my animal from botulism?

In areas where botulism is common, vaccines are available for animals. Cattle and sheep should be fed balanced diets to minimize chewing of bones. Carnivores should not be allowed to eat animal carcasses.

How can I protect myself from botulism?

Proper food preparation methods can greatly reduce the risk of botulism. Boil home canned foods for at least 10 minutes to destroy any toxin that might be present. Keep hot foods hot, keep cold foods cold and promptly refrigerate food to reduce bacterial growth and prevent toxin formation. Use proper home canning methods. Instructions can be obtained from your county extension agent.

For More Information

CFSPH Technical Fact Sheets. Botulism at <http://www.cfsph.iastate.edu/DiseaseInfo/>

CDC website. Botulism at <http://www.bt.cdc.gov/agent/botulism/factsheet.pdf>