



Avian Botulism



What is avian botulism?

Avian botulism is caused by a toxin produced by the bacterium *Clostridium botulinum*. This is a significant disease of waterfowl and shorebirds in North America.

Where is it found?

Avian botulism occurs throughout the globe including the U.S. and Canada. Two strain types are associated with avian botulism, Type E and Type C. Type E is associated with outbreaks in the upper Midwest and eastern U.S. while Type C is associated with cases in western and Midwest U.S.

How is it spread?

Avian botulism is transmitted by the consumption of the botulism exotoxin produced by *Clostridium botulinum* bacteria. *Clostridium botulinum* bacteria form a spore that can survive in the environment for years. Spores can also be found in tissues of many invertebrates and some vertebrates. Certain environmental conditions can promote the growth of these spores which lead to disease outbreaks. Invertebrates such as maggots can concentrate this toxin in the environment. When a bird dies of botulism maggots will feed on the carcass, other birds will feed on the maggots and consume high concentrations of the toxin leading to death. Avian botulism is known to affect many species of birds, waterfowl and shorebirds being the most common. Several species of fish and mammals can also be affected by avian botulism.

What are some clinical signs of disease?

This is an acute disease with most birds being found dead. Birds found dead along the waterline or among aquatic vegetation in bodies of water are common in a botulism outbreak. Botulism toxin causes paralysis, birds initially exhibit weakness with difficulty flying or walking. As the disease progresses paralysis of legs, wings and neck will occur, commonly referred to as "limberneck", birds will no longer be able to hold their heads up. Paralysis can also be seen in the nictitating membrane of the eye.

How does this disease affect me?

Avian botulism has not been associated with human disease. Animals that die from avian botulism are not suitable for consumption.

Information for outdoor recreationists:

If avian botulism is suspected contact your local biologist. Successful management of this disease depends on early detection and prompt control measures.

For additional information on avian botulism or any other wildlife disease, please contact the WGFD Wildlife Health Laboratory at 307-745-5865.