

Botulism Antitoxin Information Sheet

What is botulism?

Botulism is a rare, serious illness caused by a toxin produced by bacteria called *Clostridium botulinum*. These bacteria are commonly found as spores in soil or dust, water, animals and contaminated food or agricultural products worldwide. The toxin affects the nervous system and can cause paralysis. There are seven types of *Clostridium botulinum* (*C. botulinum*) toxin. Most human cases are caused by types A, B and E.

How is botulism spread?

Botulism is not spread from person to person. Instead, botulism occurs when the *C. botulinum* spores or the toxins get in to the body through:

- eating food contaminated with toxin (foodborne botulism). Some examples of possible food sources are honey and poorly preserved home-canned foods. Outbreaks have occurred in poorly handled or stored restaurant-prepared food.
- getting spores in an open cut or wound (wound botulism). *C. botulinum* spores are everywhere in soils and dust worldwide.
- breathing in particles of toxin in the air.
- eating foods containing *C. botulinum* spores which multiply and produce *C. botulinum* toxin in the intestine (gut). This can occur in adults after intestinal surgery, or more commonly in infants (infant botulism). Non-human milk is the most common source for infant botulism, while honey is another potential source. Infant botulism is generally the most common form of botulism, with the majority of cases occurring from 6 weeks to 6 months of age.

What are the symptoms of botulism?

Symptoms of botulism can include the following:

- for toxin in foods, gastrointestinal symptoms such as nausea, vomiting, abdominal cramps, diarrhea initially, followed by neurological symptoms
- neurological symptoms:
 - dry mouth
 - double or blurred vision
 - difficulty with speaking
 - loss of voice
 - difficulty swallowing
 - tongue weakness
 - numbness, weakness and/or loss of muscle tone affecting the face, head, throat, chest and extremities (paralysis)

Symptoms can occur quickly, within hours for foodborne botulism or can develop gradually over several days.

Fever is not typically present. Death can occur due to respiratory failure.

How can botulism be prevented?

Botulism can be prevented by good hygiene practices when handling foods and by proper storage and preparation of foods, especially home-canned foods, oils infused with garlic or herbs and foods that are sealed and not refrigerated.

How is botulism treated?

Botulism must be diagnosed and treated quickly with an antitoxin to stop the progression of paralysis. Antibiotics are not effective against toxins.

What is botulism antitoxin?

Botulism antitoxin is a blood product containing equine (horse) protein, *C. botulinum* antitoxin Type A, Type B and Type E. The antitoxins bind to the toxin produced by *C. botulinum* and stop further nerve damage, but do not reverse existing nerve damage.

Is botulism antitoxin safe?

Immediate administration of antitoxin is very important in order to stop the toxin from causing further nerve damage. As with any medication there are potential side effects, however the risks of serious illness from botulism outweigh the risks of these potential side effects.

Who should get botulism antitoxin?

Botulism antitoxin is given once a diagnosis of botulism caused by Types A, B or E is made. The attending physician must get the botulism antitoxin through the local Medical Officer of Health.

Who should not have botulism antitoxin?

There are no contraindications to botulism antitoxin as botulism is a life-threatening condition. If you have had any of the following, speak to your health care provider:

- a history of severe allergic reaction (anaphylaxis) to botulism antitoxin or any of its components
- previous allergic reaction to equine protein

What are the possible side effects to botulism antitoxin?

Reactions may include fever, chills, and high blood pressure. Late reactions including rash, itchiness, fever, pain and swelling of the joints (serum sickness) can occur 5 to 24 days after receiving botulism antitoxin. As with any injection, unexpected or unusual side effects can occur. This includes severe allergic reaction (anaphylaxis).

What should you do if you have a reaction to botulism antitoxin?

Individuals receiving botulism antitoxin are hospitalized and under the direct care of a physician where reactions to this product are monitored and reported appropriately. If a delayed allergic reaction occurs after discharge, seek medical care as necessary and then report the reaction to Health Link at 811.

For 24/7 nurse advice and general health information, call Health Link at 811. Or visit www.MyHealth.Alberta.ca for health information online.

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