Botulism Fact Sheet

What is botulism?
Botulism is a rare but serious illness caused by a nerve toxin (poison) that affects the nervous system and causes paralysis. *Clostridium botulinum* (*C. botulinum*) bacteria produce this toxin, called botulinum toxin, and are found in soil and dust worldwide.

Botulism is a medical and public health emergency.

How do people get botulism?
There are three major ways people get botulism:

- **By eating food or drink that contains the botulinum toxin.** Any person can get foodborne botulism by eating foods that are not properly processed and contain the pre-formed botulism or botulinum toxin. The toxin has been found in homemade foods that have been improperly canned, preserved, or fermented. Less commonly, improperly prepared or stored commercial foods have been sources of botulism.

- **In babies, by swallowing the bacteria that produce the toxin.** Infants or babies under 12 months old can get infant botulism by swallowing spores of the *C. botulinum* bacteria that then grow in the large intestine to produce the botulinum toxin. Honey is known to contain the spores, so babies under 12 months old should not be given honey.

- **By a wound infected with the bacteria that produce the botulinum toxin.** Any person can get wound botulism after a wound becomes infected with the bacteria which then produce botulinum toxin. In California, a common cause of wound botulism is from an infected site where street or illicit drugs have been injected. Wound botulism has also occurred after a traumatic injury, such as from a fall.

Botulism is not transmitted from person to person.

How common is botulism?
Botulism is a rare disease, with the majority of reported cases in the U.S. being infant botulism. Foodborne botulism is especially rare, with only 0 to 3 cases reported per year in California during 2007 - 2016.

What are the symptoms of botulism?
Classic symptoms of botulism include:

- droopy eyelids
- double or blurred vision
- difficulty swallowing
- dry mouth
- loss of facial expression
- inability of the neck muscles to support the head
- slurred speech

If not treated quickly, paralysis can continue down both sides of the body causing:
• paralysis of the arms, legs, and trunk

• breathing problems

Death can result from respiratory failure or the consequences of long-term paralysis. About 5% of people die.

Babies with infant botulism appear tired, show little facial expression, feed poorly, have a weak cry, poor head control, decreased muscle tone, or constipation.

People with foodborne botulism typically experience symptoms 18 to 36 hours after eating contaminated food or drink, but symptoms can occur as early as 6 hours or as late as 10 days later.

People with wound botulism may not experience symptoms until several days after the wound is infected with the bacteria or after injecting drugs contaminated with the bacteria.

How is botulism diagnosed?
Botulism is diagnosed by the combination of a doctor suspecting botulism due to a patient’s symptoms and history, and by laboratory testing. Special laboratory tests need to be done to confirm a botulism diagnosis.

In California, laboratory testing to confirm foodborne and wound botulism is not a routine test, thus healthcare providers must report all suspected botulism cases to their local health department to arrange for special testing. For suspected infant botulism, healthcare providers should contact the Infant Botulism Treatment and Prevention Program at the California Department of Public Health (CDPH) directly to obtain authorization for testing (24/7/365 telephone: 510-231-7600).

How can botulism be treated?
Botulism is a very serious disease and can be deadly if not treated. The paralysis and respiratory failure that occur with severe botulism may require the person to be on a breathing machine (ventilator) for weeks with intensive medical care. If recognized early, botulism can be treated with botulinum antitoxin which blocks the action of toxin circulating in the blood; however, the muscle paralysis that had already occurred cannot be reversed with antitoxin and will take time to improve. This antitoxin is only available through the U.S. Centers for Disease Control and Prevention (CDC) for older children and adults, and healthcare providers can request the antitoxin through their local health department. For infant botulism, health care providers should directly contact the CDPH Infant Botulism Treatment and Prevention Program at 510-231-7600 (24/7/365) to obtain the licensed human botulism antitoxin, BabyBIG® which is available only for infants (generally under 12 months old).
How can I reduce my risk of botulism?

There are a number of steps that can be taken to reduce your risk of developing botulism.

- To reduce risk of **foodborne botulism**, persons who do home canning should follow strict hygienic procedures to reduce contamination of foods, and follow instructions on safe home canning: see the U.S. Department of Agriculture (USDA) Complete Guide to Home Canning.
- Because high temperatures destroy the botulinum toxin, persons who eat home-canned food should consider boiling the food for at least 10 minutes before eating to ensure safety.
- Oils infused with garlic or herbs should be refrigerated.
- Potatoes which have been baked while wrapped in aluminum foil should be kept hot until served or refrigerated.
- Keep unpasteurized foods such as juices refrigerated.
- Follow manufacturer’s storage and handling instructions of food products, such as “keep refrigerated.”
- Inspect store-bought or home-canned, jarred, or fermented food for contamination:
  - THROW out if the container is leaking, bulging or swollen
  - looks damaged or cracked
  - the container spurts liquid or foam when opened
  - THROW out if the food inside is moldy, discolored, or smells bad
- Because honey can contain the spores of bacteria that cause **infant botulism**, children less than 12 months old should not be given honey.
- **Wound botulism** can be prevented by seeking medical care promptly for infected wounds and avoiding injectable street drugs.
- If you experience symptoms of botulism, seek medical attention immediately.

What is California Department of Public Health (CDPH) doing to prevent and control botulism?

CDPH carefully monitors and follows up on all cases of botulism occurring in California. Healthcare providers are required to report all patients suspected to have botulism immediately to their local public health department. CDPH works closely with local health departments to determine if the patient has suspected infant, wound, or foodborne botulism. Suspected foodborne botulism is considered to be a medical and public health emergency, and requires quick and detailed investigation. CDPH works with the U.S. Centers for Disease Control and Prevention (CDC), local health departments, and regulatory agencies on all cases of foodborne botulism, and implements control measures, such as removal of food items, that are suspected to be the source of illness.

CDPH collaborates with local public health departments to educate the public about botulism prevention. Healthcare providers suspecting foodborne or wound botulism should consult with a neurologist and contact their local health department to request botulism antitoxin and botulism testing. For suspected **infant botulism** cases, healthcare
providers may contact an infant botulism subject matter expert at CDPH’s Infant Botulism Treatment and Prevention Program 24/7 at 510-231-7600. If antitoxin is needed to treat a patient with suspected botulism, it can be quickly provided to a hospital anywhere in the state.

**Where can I get more information on botulism?**


Additional information on infant botulism is available from the CDPH Infant Botulism Treatment and Prevention Program website (http://www.infantbotulism.org/) and Infant Botulism Treatment and Prevention Program page (https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/InfantBotulism.aspx).

Additional information on safe home canning can be found at the U.S. Department of Agriculture’s Complete Guide to Home Canning (http://nchfp.uga.edu/publications/usda/INTRO_HomeCanrev0715.pdf).

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