

### **What is botulism?**

Botulism is a rare but serious muscle-paralyzing illness caused by a nerve toxin (botulinum toxin) produced by the bacterium *Clostridium botulinum*. There are three forms of the disease—foodborne, infant, and wound botulism.

### **Who is at risk?**

Foodborne botulism can affect anyone who eats food containing the toxin. Infant botulism almost exclusively affects children under 1 year of age, but can rarely affect adults. Wound botulism, although rare, can affect anyone.

### **How do you get botulism?**

Foodborne botulism is acquired by eating foods in which toxin has formed, usually after inadequate heating during canning or cooking at the time they are eaten. Other less common sources of spread have been reported, including mixing minced garlic with oil, improperly handled baked potatoes wrapped in aluminum foil, and home-canning or fermenting fish.

Infant botulism occurs when a baby ingests botulinum spores that then grow in the intestine and produce toxin. Possible sources of spores include foods (especially honey), and dust.

Wound botulism is often acquired from dirt in wounds, but can also be due to injection drug use.

### **Can botulism be spread from person-to-person?**

There have been no reports of person-to-person spread of botulism. Identifying botulism in food is considered a public health emergency because the contaminated food may still be available to infect others besides the person with the disease.

### **What are the symptoms of botulism?**

Symptoms are caused by the toxin, and may include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, and muscle weakness. These symptoms may progress to include paralysis, respiratory failure and death.

Foodborne botulism: symptoms usually appear 12 - 36 hours after eating contaminated food, but they can occur as early as 6 hours or as late as 10 days after the food is eaten.

Wound botulism: symptoms usually appear within 7 days after the bacteria get into the wound, but symptoms can occur within 4 - 14 days.

Infant botulism: The incubation period is unknown since the date when the baby ingested the spores is usually uncertain.

### **How is botulism diagnosed?**

Foodborne is diagnosed by finding botulinum toxin in blood, stool, stomach contents or food, or by growing *Clostridium botulinum* from stomach contents or stool.

Infant is diagnosed by finding the organisms and/or toxin in patient's stool.

Wound is diagnosed by finding toxin in the patient's blood or by growing the organisms from wound tissue.

**How is botulism treated?**

Good supportive care in a hospital is the best treatment for all forms of botulism. Specific treatment includes giving botulinum antitoxin. In foodborne botulism, other treatment may be needed, including the removing foods still in the gut by inducing vomiting or using enemas. In wound botulism, the wound is treated, usually with surgery, to remove the source of the bacteria.

**How can botulism be prevented?**

People who do home canning or other food preservation should learn and use proper canning techniques. People who eat home-canned foods should boil them for at least 10 minutes before eating, to destroy the toxin. Because it can contain spores of *Clostridium botulinum*, and has been a source of infection for infants, honey should not be fed to children less than 12 months old. Honey is safe for persons 1 year of age and older. Wound botulism can be prevented by promptly seeking medical care for infected wounds.