BOTULISM
(Foodborne, Infant/Intestinal and Wound Botulism)

What is BOTULISM?
Botulism is a rare but serious illness caused by a toxin produced by the bacterium, **Clostridium botulinum**. This illness can result in paralysis and death. *Clostridium botulinum* is commonly found in soil and can be carried in dust. There are three main kinds of botulism. Foodborne botulism is caused by eating foods that contain the botulism toxin and is especially dangerous because several people can be poisoned by a single contaminated food. Infant botulism is the most common form of botulism in the United States and mainly affects infants under 1 year of age. It is caused when spores of the bacteria are consumed. Once spores are consumed, they grow in the intestines and release the botulism toxin. Wound botulism is caused by toxin produced from a wound infected with *Clostridium botulinum*.

Who gets botulism?
Any person who eats food that contains the botulism toxin can become ill with botulism. It often involves improperly processed home-canned foods. Botulism in infants under one year of age has been associated with the ingestion of *Clostridium botulinum* spores from the environment or specific foods such as contaminated honey. Wound botulism often results from contamination of the wound by ground-in soil or gravel from an improperly treated compound fracture.

How is botulism spread?
Botulism is spread by eating food with the toxin present or a food item containing bacterial spores. Person to person spread does not occur.

What are the symptoms of botulism?
Both foodborne and infant botulism affect the nervous system. The symptoms of foodborne botulism include blurred or double vision, drooping eyelids, slurred speech, difficulty swallowing, muscle weakness and paralysis (that starts from the head and spreads downward), and sometimes death. Infant botulism has a wide range of symptoms generally starting with constipation and followed by sluggishness and poor feeding to difficulty in swallowing, loss of head control and poor reflexes (floppy baby).

How soon do symptoms appear?
Symptoms of foodborne botulism usually appear 12-36 hours after ingestion, but may take several days. The time between exposure and onset of symptoms is unknown for infant/intestinal botulism.

What is the treatment of botulism?
Good supportive care in a hospital is necessary for all forms of botulism. Some patients have trouble breathing, muscle weakness or paralysis, which may require a person to be on a breathing machine (ventilator/respirator). Antitoxin is given in certain cases of foodborne botulism, but not in cases of infant botulism. Antitoxin prevents patients from worsening, but recovery still takes many weeks. Infant botulism cases are given botulinic immune globulin (BIG) which prevents the infection from worsening, but recovery still takes many weeks. Untreated botulism may result in death.

How can botulism be prevented?
Botulism can be prevented. Persons who do home canning should follow strict sanitary practices. Oils infused in garlic or herbs should be refrigerated. Potatoes baked while wrapped in aluminum foil should be kept hot until served or refrigerated. Because high temperatures destroy the botulism toxin, persons who eat home-canned foods should consider boiling the food for 10 minutes before eating it. Children less than 12 months of age should not be fed honey or items sweetened with honey.