



## WHAT IS FOODBORNE BOTULISM?



Foodborne botulism is a true food poisoning, caused by the ingestion of food containing the neurotoxin produced by the bacterium, *Clostridium botulinum*. *C. botulinum* spores are commonly found in nature (soil, the environment, and certain foods we eat) and are harmless under most conditions. However, in the right environment, *C. botulinum* spores will germinate into vegetative cells and toxin is produced when the bacteria multiply.

Conditions that favor *C. botulinum* growth and toxin formation in food include: air-tight containers (hermetically sealed); low-acid (pH greater than 4.6), relatively high-moisture (water activity >0.85), low-salt content, and ambient temperatures (non-refrigerated, above 38°F or 3.3°C).

Botulism toxin is one of the most deadly toxins known and is responsible for causing botulism. Botulism is a serious and potentially deadly disease. It is characterized by symmetric, descending, flaccid paralysis of motor and autonomic nerves, usually beginning with the cranial nerves. Blurred vision, dysphagia (difficulty swallowing), and dysarthria (weakness or difficulty controlling the muscles used to speak) are common initial symptoms. If not treated immediately, death or permanent injury may result.

The commercial food industry uses a variety of physical and chemical treatments to either destroy *C. botulinum* spores during processing, or control the food conditions to prevent the growth and subsequent production of deadly neurotoxins.