



# Clostridium botulinum (*C.botulinum*)

## What is it?

- Botulism is a paralysing illness caused by a nerve toxin, produced by the bacterium *Clostridium botulinum*. The organism is common in the soil and can survive in the form of a resistant spore.
- Spore-forming bacteria are able to survive when there is a lack of food or moisture, or when temperatures are too hot or too cold for them to multiply.

## Where is it found?

- *C. botulinum* and its spores are widely distributed in nature and occur in soils and sediments and in the intestinal tracts of fish and mammals.
- The organism can be found in foods that have been incorrectly or minimally processed, including home-canned foods with low acid content, such as asparagus, green beans, beets and corn.
- *C. botulinum* has been identified as a potential hazard in vacuum packed ready-to-eat seafood products.

## Why is it a problem?

- Botulism is a rare but serious illness caused by ingestion of the botulinum toxin.
- Symptoms include double vision and drooping eyelids, slurred speech, a dry mouth, difficulty swallowing and weak muscles.

- Symptoms usually begin within 18-36 hours after eating contaminated food.
- If left untreated, botulism can cause paralysis resulting in respiratory difficulties and potentially death.

## Who is at risk?

Everyone is susceptible to botulism. Botulinum toxin is one of the most potent toxins known in nature and a very small amount can cause illness.

## How can the risk be reduced?

To prevent the growth of *C. botulinum* and toxin production, home canning should follow steps such as:

- applying heat treatments to destroy spores,
- storing product at appropriate temperatures throughout the cold chain,
- acidifying product to inhibit the growth of *C. botulinum*, and
- reducing the amount of water available to the organism by drying product to be preserved.