

# Revisiting Botulism

Although botulism is most often associated with improperly home canned foods, improperly stored commercial or home-preserved products have the potential for causing botulism. Botulism is caused by a potent toxin produced by *Clostridium botulinum* bacteria. Symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, and muscle weakness. If untreated, symptoms will progress to paralysis and death. In foodborne botulism, symptoms usually begin 18 to 36 hours after eating contaminated food but can occur after 6 hours and as late as 10 days.

On May 18, 2011, Howard Seltzer of the FDA's Center for Food Safety and Applied Nutrition contributed the following article to food safety.gov blog ([http://www.foodsafety.gov/blog/food\\_labels.html](http://www.foodsafety.gov/blog/food_labels.html)).

## Food Labels Are Serious Business

Taking the handling instructions on food labels seriously can go a long way toward keeping you and your family healthy. By contrast, ignoring the labels can lead to very serious illnesses. Here are some recent examples.

### Unrefrigerated Soup Tied to Botulism Cases

Recently, a consumer in the South bought a plastic container of soup from a salad bar in a supermarket. It was sold cold and clearly labeled: HEAT & SERVE / KEEP REFRIGERATED

The soup sat unrefrigerated for a day or two before it was heated. The consumer tasted it and threw it out because it was "sour." Despite having eaten very little of the soup, the consumer ended up in the hospital with botulism.

A similar case occurred in the Midwest last February. The consumer bought soup in a pack of two-plastic containers. It also was sold cold, and the labels also said to keep it refrigerated. One container was consumed immediately, with no ill effects. But the consumer left the other container unrefrigerated for a week. Again, the consumer heated it, tasted it, and threw it out. And, again, that consumer also was hospitalized with botulism.

Botulism is as serious as food poisoning gets. It can result in respiratory failure and death. Even when patients survive, they may be hospitalized and on a ventilator for months, and they may suffer permanent neurological damage. So, when a label says KEEP REFRIGERATED, keep the product refrigerated!

The bottom line for safety:

- Read labels and refrigerate products that need to be refrigerated.
- Freezing does not kill bacteria. So refrigerate thawed frozen products.

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- Use tested recipes to pressure can low acid foods (e.g., beans and other vegetables, meat, poultry, fish).
- Don't taste or use canned foods that show any sign of spoilage! Look closely at all jars before opening them. A bulging lid or leaking jar is a sign of spoilage. When you open the jar, look for other signs such as spurting liquid and off-odor or mold. Spoiled canned foods should be discarded in a place where they will not be eaten by humans or pets.

For more information see [\*\*HGIC Fact Sheet 3040 Canning Foods at Home.\*\*](#)

All suspect containers of spoiled, low-acid foods, including vegetables, meat, seafood and tomatoes, must be treated as having produced botulinum toxin and handled carefully in one of two ways:

- If the jars or cans are still sealed, place them in a heavy garbage bag. Close and place the bag in a regular trash container or bury it in a nearby landfill.
- If the jars or cans are unsealed, open or leaking, they should be detoxified before disposal.

Improperly canned, low-acid foods can contain the toxin that causes botulism without showing signs of spoilage. Jars of foods that have not been properly processed must also be discarded, or if they are unsealed, open or leaking they must be detoxified and discarded as directed above even if there are no signs of spoilage. Low-acid foods are considered improperly canned if any of the following are true:

- The food was not processed in a pressure canner.
- The gauge of the canner was inaccurate.
- Up-to-date researched processing times and pressures were not used for the size of the jar, style of pack or kind of food processed.
- Proportions of ingredients were changed from the original approved recipe.
- The processing time and pressure were not correct for the altitude at which the food was canned.

### How to Detoxify Canned, Low-Acid Foods

Contact with botulinum toxin can be fatal whether it is ingested or enters through the skin. Be extremely careful not to splash or come in contact with the suspect food or liquid. Wear disposable rubber or heavy plastic gloves. Wear clothes and aprons that can be bleached or thrown out if contaminated.

### Step-by-Step Instructions for Detoxification:

- Carefully place the jars, with their lids, on their sides in an 8-quart, or larger pot or canner.
- Wash your gloved hands thoroughly.
- Carefully, without splashing, add enough hot water to the pot to completely cover the jars with at least 1 inch of water above the containers.
- Place a lid on the pot and heat the water to boiling.
- Boil for 30 minutes to make sure the food and containers are detoxified.
- Cool and discard the containers, their lids and food in the trash or dispose in a nearby landfill.

### How to Clean Up Contaminated Surfaces:

- Wear rubber or heavy plastic gloves to clean up contaminated work surfaces and equipment, including can openers and clothing that may have come in contact with suspect foods or liquids.

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- Use a fresh solution of 1 part unscented, liquid, household chlorine bleach (5 to 6% sodium hypochlorite) to 5 parts clean water.
- Spray or wet contaminated surfaces with the bleach solution and let stand for 30 minutes. Avoid inhaling bleach or contact with skin.
- Wipe treated spills with paper towels and place paper towels in a plastic bag before putting them in the trash.
- Apply the bleach solution to all surfaces and equipment again and let stand for 30 minutes and rinse.
- Wash all detoxified counters, containers, equipment, clothing, etc.
- Discard gloves when cleaning process is complete.