

Storing low-acid foods in a jar and sealing them without either acidifying or processing using pressure creates the ideal conditions for toxin formation.

Tested recipes and directions for safe canning can be found at the National Center for Home Food Preservation: nchfp.uga.edu.

In 1977, 59 patrons of a Detroit Mexican restaurant became ill with botulism after consuming improperly canned peppers after restaurant staff put lightly-cooked peppers and water in jars and sealed them.

Home-canned beets in Oregon linked to three botulism hospitalizations



Three attendees at a private gathering in Oregon were hospitalized in July 2012 after eating foods that contained the botulism toxin. The ill individuals shared beets that had not been canned properly.

The beets had been placed into jars, heated in a boiling water bath and then stored at room temperature. The lack of oxygen, low-acid environment and room temperature creates ideal conditions for *Clostridium botulinum* spores to germinate and create the toxin.

While boiling water bath temperatures will kill many foodborne pathogens, *Clostridium botulinum* spores are tough and require higher heat to be inactivated. The only way to do this in a home kitchen is through the use of a pressure canner.

- Low acid foods (pH greater than 4.6) like beets cannot be safely canned using a boiling water bath unless acidified according to a tested recipe.
- *Clostridium botulinum* occur in soil and foods that come from the soil. After heating the spores can germinate into cells create a toxin leading to botulism in oxygen-free environment (like canned foods).
- A pint of beets needs to be processed for 30 min at 11 psi if using a dial gauge (or 10 psi using a weighted gauge) pressure canner at sea level.
- Required pressure will increase at higher altitudes; time will increase for larger containers (quarts).
- Consult the National Center for Home Food Preservation, <http://www.uga.edu/nchfp/> for altitude adjustments and tested recipes.