

Can It Safely



Boiling Water Bath Canning:

Boiling water bath canning is safe for preserving **high-acid** foods. **High-acid** foods have a pH of 4.6 or less. **High-acid** foods naturally prevent *C. botulinum* spore growth.

Unsafe Canning methods include open kettles, conventional or microwave ovens, steam canners, dishwashers, canning powders, or jars with wire bails and glass caps.

Pressure Canning:

Pressure canning is the only safe method for preserving **low-acid** foods. Low-acid foods have a pH greater than 4.6. The pH of **low-acid** foods is too high to prevent the growth of *Clostridium botulinum*, the organism responsible for botulism. *C. botulinum* produces spores that grow in the absence of oxygen and cannot be destroyed at the boiling point of water. Pressure canners can be used to increase the temperature of food to 240°F which is high enough to destroy *C. botulinum* spores.

Low acid foods include most vegetables, meats and poultry.

Pressure canners with dial gauges need to be checked each canning season to ensure dial gauge accuracy.

For detailed, step by step instructions and recipes refer to these other VCE publications:

Boiling Water Bath Canning

www.pubs.ext.vt.edu/348/348-594/348-594_pdf.pdf

Pressure Canning

www.pubs.ext.vt.edu/348/348-585/348-585_PDF.pdf

Planning and preparation is key! Always start with high quality produce and a clean kitchen (counter tops, sink, cutting boards and jars). Reading over the approved recipe before starting is crucial to successfully preserving your harvest!

Adjusting for Altitude

Increasing altitude lowers the boiling point of liquid, therefore adjustments must be made to the process when canning food at altitudes of 1,000 feet above sea level or higher. When using the boiling water bath method, processing time must be increased. When using a pressure canner, pressure must be increased.

Boiling water bath canner

1,000–3,000 ft	Increase time 5 minutes
3,001–6,000 ft	Increase time 10 minutes

Dial gauge pressure canner

2,001–4,000 ft.	Increase pressure 1 psi
4,000–6,000 ft.	Increase pressure 2 psi

Weighted gauge pressure canner

Above 1,000 ft.	Increase pressure 5 psi
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Examples of
high-acid foods:
(use boiling water
bath canner)

Apples	Milk
Applesauce	Meats
Apricots	Seafood
Berries	Poultry
Cherries	Potatoes
Most Jams & Jellies	Corn
Peaches	Beans
Pears	Peas
Pickles	Beets
Plums	Carrots
Rhubarb	Peppers
Acidified Tomatoes	Okra

Examples of
low-acid foods:
(use pressure
canner)

Remember!

- Have your dial gauge pressure canner tested each year to ensure gauge accuracy and safe canning.
- You can contact your local Extension agent for assistance!

Clostridium botulinum & Botulism

Most microorganisms are killed by the high cooking temperatures used during the canning process. *Clostridium botulinum* is an exception. This spore forming bacterium, produces a toxin that causes the illness, botulism. *C. botulinum* spores are resistant to extreme temperatures, drying, and UV light. Under the right conditions (those created during improper canning processes) spores grow into cells which produce a deadly toxin that you cannot smell or taste. Symptoms from the consumption of the toxin develop within 6 hours to 10 days and include double and blurred vision, drooping eyelids, slurred speech, difficulty swallowing, and muscle weakness.

Testing the Seal

Test the seal of jars within 12 to 24 hours of processing (jars should be completely cool), by pressing the center of the lid or tapping the lid with a spoon. The lid should stay down and give a clean ringing sound when tapped. If it makes a dull sound, the lid is not sealed. If a jar is not sealed, refrigerate and reprocess with 24 hours or refrigerate and consume within 3 days.

Reprocessing Unsealed Jars

Reprocessed within 24 hours. Repack food into a new container if necessary, using a new lid and process using the same method. Label as reprocessed and consume first.

Always Follow an Approved Recipe!

When canning foods at home ALWAYS follow an approved recipe with tested process times. Resources for tested recipes and in-depth instructions for canning can be found by:

- Virginia Cooperative Extension
 - Pressure Canning
 - Boiling Water Bath Canning
- The National Center for Home Food Preservation ([www. http://nchfp.uga.edu/](http://nchfp.uga.edu/))



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