

# Just The Facts: Equipping Your Kitchen For Two

Samara Deary FCS Agent

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## Equip your kitchen

### Pantry Must Haves

Microorganisms are all around us, some are beneficial some are harmful. All foods contain microorganisms which is the major cause of spoilage. Following proper canning procedures stops spoilage by heating the product and destroying microorganisms. During the canning process air is pushed out of the jar. As the jars cool they seal and a vacuum is created preventing microorganisms from entering the food.

Water boils at 212 degrees (f), it doesn't take long to reach this temperature, seal the jar and create a vacuum, however to kill certain bacteria it does take a certain amount of heat for a certain amount of time.

### Acidic Foods

The acidity of a food or the PH level determines how that food should be processed. Foods that have a PH of 4.6 or lower are High Acid foods. These foods can be processed in a boiling water canner. Low acidic foods have a PH above 4.6 and need a higher temperature to destroy microorganisms. These foods must be processed in a pressure canner.

### Low Acid Food

Low acid foods such as vegetables, meat, poultry and fish must be pressure canned at recommended time and temperature to destroy *Clostridium Botulinum*. This is the bacteria that causes **Botulism**. Botulism is a food illness that has no taste or smell. The only way you can be sure to avoid botulism is to follow instructions exactly. Canning low acid food in boiling water canners is unsafe and not recommended. The highest temperature a boiling water canner can reach is 212 which is not high enough to kill botulism.

## **High Acid Foods**

Acidic foods such as pickles, most, fruits, jams and jellies have a PH below 4.6. Acidic foods contain enough acidity to stop the growth of botulinum or can destroy it at a high cooking temperature. Acidic foods can be safely processed in a boiling water canner.

### ***A Note About Tomatoes***

Tomatoes used to be considered an acidic food. Some are known to have a PH of just above 4.6 which would make them low acid foods. In order to can them safely in a boiling water canner you must add citric acid or lemon juice. Follow the instructions of the recipe being used to guide you as to when more acid is needed.

## **Unsafe Canning Methods**

Never open-kettle can or process jars in a microwave, conventional oven or dishwasher. These do not prevent all risk of spoilage.

Steam canners and electric water bath canners are not recommended because safe processing times have not been researched. Canning powders are useless as a preservative and do not replace the need for proper heat processing.

### **Lids and Jars**

The lid consists of two pieces a flat metal lid which is held in place by a metal screw band. The flat lid

## **Boiling Water Canners**

Boiling water canners are made of aluminum but they can also be purchased in porcelain-covered steel. They have removable racks and fitted lids. Any type of tall pot could be utilized just be sure that it is deep enough so that at least one inch of briskly boiling water will cover the top of the jars. Some boiling water canners also have groves in the bottom. A grooved bottom pot is more energy efficient on a gas top. If you have an electric range try to utilize a flat bottomed canner. In order to ensure uniform canning with an electric range the canner should be no more than 4 inches wider in diameter than the element that it is heated on. Always check the manufacturers recommendations before boiling water processing especially if your range is a ceramic range top.

## **Boiling Water Canning Steps**

1. Fill canner halfway with water
2. Preheat water to 140 degrees (F) for raw-packed and 180 degrees (F) for hot packed foods..
3. Load filled jars, fitted with lids into the canner rack and use the handles to lower the rack into the water.
4. If needed add more so that water covers at least 1 inch above jar tops. Cover with canner lid.
5. Turn heat up to highest point until water boils vigorously.
6. Set timer for the minutes required for processing food.
7. Lower the heat setting to maintain a gentle boil throughout the processing schedule.
8. Add more boiling water if needed to keep water level above jars.
9. When processed for recommended time turn off heat and remove lid.
10. Using jar lifter remove jars and place on a towel, leave 1 inch space between jars.

## Pressure Canner

The pressure canner is used to process foods under pressure at temperatures higher than boiling. The temperature used most often is 240 degrees ( F). The pressure canner is the only safe method for canning low acid foods. The canner supplies enough heat to destroy botulism as well as other spores that cause food born illnesses. Failure to properly process low acid foods in a pressure canner can result in botulism which is often fatal. Always read manufactures instructions on the use of your pressure canner.

### Pressure Canner Steps

1. Put 2 to 3 inches of hot water into the canner. Using a jar lifter place filled jars on the rack. Fasten Canner Lid securely.
2. Leave weight off vent port or open peacock. Heat at the highest setting until steam comes out of the petcock or vent port.
3. While maintaining high heat setting, vent the canner by allowing steam to escape for 10 minutes. Place weight on vent port of petcock. The canner will pressurize during the next 3 to 5 minutes.
4. Start timing the process when the pressure is reading on the dial gauge indicated that the recommended pressure has been reached, or when the weighted gauge begins to jiggle or rock.
5. Regulate heat under canner to maintain steady pressure. Check manufacturer's instructions on how the weighted gauge for that pressure canner should rock.
6. When timed process is complete turn off heat remove canner and allow to depressurize. Do not force-cool. This could cause liquid to seep from jars and may result in spoilage In newer canners when the vent lock piston drops it is depressurized. In older caners it could take up to 30 minutes.
7. After canner is depressurized, remove the weight from vent port or open the petcock. Wait two minutes, unfasten the lid, and remove it carefully. Lift the lid away from you so that the steam does not burn your face.
8. Remove jars with a lifter and place on towel away from drafts, leaving 1 inch space between jars during cooling.