

Why Canning?

Basic food canning used to be an art that just about every family knew. Back in the days before we were able to rely on grocery stores and food trucked in from other continents, stored food was all we had to get us through the winter months.

These days, though, the art of canning and preserving food seems to have gone the way of many old time values—not precisely vanished, but practiced by only a few.

Still, it's an art well worth learning for anyone wanting to be self-reliant and/ or prepared in case of emergency. Not only is the food quality superior when you preserve your own, but it also allows you to stock up on fresh, highly nutritious food without relying on big business or the government.



Another reason to learn canning is for moments when the power to goes out and you're worried you'll lose the contents of your freezer or refrigerator. The canning process doesn't need electricity and can allow you to hold onto many of these foods that would have otherwise spoiled. Basic food canning is an easy skill to learn, and as you get more advanced, the more diverse foods you'll be able to confidently put away for that rainy day. You'll also eat better overall.



What is Canning?

Put most simply, home canning is the art of putting food in jars and then using water or steam to heat the food to a temperature that removes the oxygen from the "can" (i.e. jar).

The heating process removes oxygen and kills the bacteria and microbes that cause food to go bad, as well as preventing the growth of yeasts and molds. During frontier days it was one of the key ways that folks preserved their harvest through the winter months, allowing them to eat a balanced diet throughout the entire year.

The simplest method of canning is using a boiling water bath. In this process one simply fill jars with foods high in acid, places canning lids on them, and then boils them in a water bath until a seal forms under the lid. This process forces the oxygen out of both the food and the jar and seals in the low pH environment, one in which bacteria cannot live.

Simply put, a good seal keeps the liquid in and the air and microorganisms out. With water bath canning you can preserve everything from jams and jellies to whole tomatoes and even pickles. It's simple and needs no specialized equipment and is therefore a great place for beginning canners to start.



For low-acid foods (i.e. vegetables, soups, stews, stocks, meats, poultry and seafood) a more advanced method of canning is used—pressure canning. Pressure canning allows you to move beyond mere fruit and condiments and start putting away the main ingredients of meals. It requires a little more skill and a few pieces of specialized equipment, but it's well worth the investment for any serious prepper wanting to build up a serious cache.

Average Shelf Life of Canned Goods

Home canned foods are best eaten within a year or so of having been preserved. This doesn't mean that you can't eat them days, months, or even years later. It's just the benchmark for the best flavor, color, texture, nutritional value and overall quality of the food. Of course, you do need to store your preserves properly—both light and heat can degrade your canned food prematurely.

But assuming you've stored everything correctly, that jam you canned three years ago will probably still taste better than anything you could buy at a store.

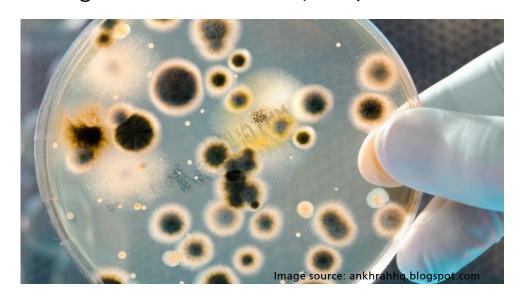


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Safety

If done properly, home food canning is entirely safe. The main threat occurs when canning low-acid foods. If the food isn't heated enough, bacteria called Clostridium botulium can cause botulism, a largely odorless and colorless food poisoning that can be deadly.

Heating your foods properly, however, is actually quite easy. The key is to choose modern, well-tested recipes from a reliable source and follow their directions closely and in the manners prescribes (pressure canning for low-acid foods, etc.).



Also, only cook foods that are specified in tested home canning recipes. Many foods found in commercial cans cannot be canned at home (i.e. refried beans, pumpkin puree, bacon, butter, lard, or bread). They're too thick to be adequately heated or contain fats that can shelter Clostridium botulium toxins. Again, just follow the recipes and only use foods specified in them.

In all honesty, instances of food poisoning or botulism from home canned foods these days are extremely rare, and modern canning recipes are designed to provide a wide margin of safety. Still there are a few added precautions you can take to make sure that everything goes well.



Image source: www.gcastd.org

Canning Steps



First, make sure to use jars that are quart size or smaller. The equipment used in home canning can't effectively heat anything larger than that, as the food on the outside will tend to overcook, while the food on the inside won't get hot enough for food safety. It's also important to make sure that each jar has a full pack and the proper headspace (again, follow your recipe instructions on this). Use only modern jars and lids (Ball or Kerr or the most widely used) and check everything before using them.

Another key is to be vigilant about your processing time. If using the water-bath method, begin counting the processing time only after the water in the canner comes to a rolling boil. When doing pressure canning, do not begin counting until after steam has vented for 10 minutes AND the pressure gauge has risen to the recommended pressure after placing the weight on the vent pipe.

Also, make sure you adjust your processing time to your altitude —the higher the altitude the more time you'll need to add on. (An altitude adjustment chart is provided in the next section.)

Lastly, each time you get a jar of preserves out to eat, fully inspect the lid and contents. Is the seal still firm? Is the lid swollen in any way or are there streaks of dried food that seem to originate from the lid? Lids with concave centers have good seals. Inside the jar, are there air bubbles or unnatural coloring?



A little discoloration on the top of the contents is normal, but if there's substantial discoloration throughout the contents of the jar, that's a big warning sign.

Overall, home food canning is very a safe endeavor—all it really takes is a little attention to detail and trusted recipes to follow. If you've followed the instructions and your jar looks clean and the lid has a good seal, you're good to go. But if in doubt, throw it out. It's that simple.

Altitude

If you're canning at an elevation greater than 1,000 feet above sea level, you'll need to adjust your processing time and pressure pounds as indicated.

Water Bath Canning

Altitude Feet	Increased Processing Time	
1,001 - 3,000	5 minutes	
3,001 - 6,000	10 minutes	
6,000 - 8,000	15 minutes	
8,001 - 10,000	20 minutes	

Pressure Canning

Altitude Feet	Weighted Gauge	Dial Gauge
0- 1,000	10	11
1,000 - 2,000	15	11
2,001 - 4,000	15	12
4,001 - 6,000	15	13
6,001 - 8,000	15	14
8,001 - 10,000	15	15





Getting the best out of your canning endeavors goes a little beyond merely following directions. You'll also want to use the finest quality food you can lay your hands on. Fruits and vegetables should be used just before the height of their greatest ripeness.

If you're growing your own food, keep the time between harvesting and canning as short as possible. This will ensure that the highest nutrient content and freshness remains in the plant. Also, avoid using fruits or vegetables with bruises or signs of rot.

Water Bath Canning

If you're new to the world of canning, it's easier to start with water bath canning. As mentioned before, water bath canning is used with high acid foods. No special equipment is needed and the instructions are quite simple. High acid foods you can preserve with water bath canning include:





Equipment Needed

- Tested preserving recipes from a trusted source.
- Something to serve as your water bath canner. This can be a store-bought water bath canner or simply a deep sauce pot with a lid and a rack to keep the jars from touching the bottom. You'll also need a lid. The pot should be big enough to house the rack, the jars, and at least 1-2 inches of space above the jars for the water to fully boil and a lid to be placed over it. If you don't have a rack designed for home preserving, use a cake cooling rack or extra bands tied together.
- Glass preserving jars, lids and bands. (You'll need to start with new lids each time, as the soft seal can be damaged after using them.)
- A wooden spoon, ladle, and funnel. (A special stainless steel funnel designed especially for working with canning jars is ideal.)
- Although not strictly necessary, a jar lifter is particularly helpful when removing the jars from the water bath.



Instructions

- 1. Read through the instructions of your recipe and get all the ingredients together. Make sure to wash all produce thoroughly. choosing only the best specimens for preserving.
- 2. Examine all the jars, lids and bands, making sure that they're all sound and ready to be used. Check jars for cracks, nicks, uneven rims or sharp edges, any of which could prevent a sealing or even cause the jar to break.

Lids need to be free of any scratches and should have even sealing compound all the way around. Make sure that the bands fit on the iars (since bands are often reused they can occasionally get bent just a little out of shape, causing them not to fit well).



image source: http://www.thekitchn.com/

Wash everything in hot, soapy water. Rinse well and dry the bands.

3. Heat the jars in hot water (not boiling) until ready to use. This

can be done in pot half full of warm water or in a dishwasher. Keeping the jars warm will prevent them from breaking when hot food is added. (The lids and bands can stay at room temperature.)

4. Fill your water bath canner with water. The water should be high enough to stand a full two inches above the

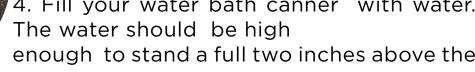


image source: frugalupstate.com jars when they're placed on the rack. Heat the water to a simmer and place a lid over the canner.

5. Follow your recipe and prepare your preserves accordingly.

- 6. Fill a warm jar with the prepared food, leaving the amount of headspace at the top that the recipe recommends. (1/2 inch for fruits, salsa, sauces, tomatoes and pickles; 1/4 inch for fruit juices and soft spreads such as jellies and jams.)
- 7. If the recipe calls for removing air bubbles, slide a rubber spatula between the jar and food to release any trapped air. Repeat image source: oldworldgardenfarms.com aroundthe jar 2 to 3 times.



8. Use a clean, damp cloth to clean the jar rim and threads. Place the lid on the rim so that the sealant is in contact and then screw the band on finger tight. Place jars into the canner until the canner

> is full and/or you've used the entire recipe. Make sure that the water is covering the tops of the jars by a full 1-2 inches.

> 9. Bring the water to a boil and place the lid on top. Once your water begins to boil you can now start your timer.

image source: www.food-skillsfor-self-sufficiency.com/

10. Leave the jars in the canner for the amount of time called for in your recipe (not even a minute less!). Make sure you adjust your time according to your altitude.

11. When the processing time is complete, turn off the heat and remove the lid of the canner. Allow the jars to stand in the lidless canner for around 5 minutes or so to get acclimated to the outside temperature.

image source: wiredparent.blogspot.com

- 12. Carefully remove the jars from the canner, setting them upright on a towel where they won't be disturbed. (Without a towel the jars can break from temperature differences.) Leave the jars untouched for 12-24 hours. Do not retighten the bands as this can disturb the sealing process.
- 13. After 12-24 hours, check the seals. The lids should be firm in the middle, not flexing up and down when the center is pressed. Try lifting the lids off the jars with your fingertips—they shouldn't move. If a jar doesn't have a good seal you can either immediately reprocess the food inside of it or put it in the refrigerator and eat the contents fresh.
- 14. Thoroughly wash and dry the jars, removing the rings. Label and then store in a cool, dark place.





Pressure canning is for preserving low acid foods like meats and vegetables. Low acid foods need a considerably higher processing temperature (240°F) than is provided by simple boiling (212°F). This higher temperature prevents the bacterium Clostridium botulium from getting infecting your food stores.

Clostridium botulinum cannot grow in the presence of acid, so pressure canning is not needed with high-acid foods like fruits and tomatoes.

Low acid foods suitable for pressure canning include:

- Vegetables
- Soups
- Stews
- Stocks
- Meats
- Poultry
- Seafood

Please note: recipes that combine high acid foods (i.e.

tomatoes) with low acid foods are still considered "low acid" and will need to be pressure canned.



Equipment Needed

- Tested preserving recipes from a trusted source.
- Pressure canner
- Glass preserving jars, lids and bands. (You'll need to start with new lids each time, as the soft seal can be damaged after using them.)



• A wooden spoon, ladle, and funnel. (A special stainless steel

funnel designed especially for working with canning jars is ideal.)

• Although not strictly necessary, a jar lifter is particularly helpful when removing the jars from the water bath.

Instructions

- 1. Read through the instructions of your recipe and get all the ingredients together. Make sure to wash all produce thoroughly, choosing only the best specimens for preserving.
- 2. Examine all the jars, lids and bands, making sure that they're all sound and ready to be used. Check jars for cracks, nicks, uneven rims or sharp edges, any of which could prevent a sealing or even cause the jar to break. Lids need to be free of any scratches and should



have even sealing compound all the way around.

Make sure that the bands fit on the jars (since bands are often reused they can occasionally get bent just a little out of shape, causing them not to fit well). Wash everything in hot, soapy water. Rinse well and dry the bands.



- 3. Heat the jars in hot water (not boiling) until ready to use. This can be done in pot half full of warm water or in a dishwasher. Keeping the jars warm will prevent them from breaking when hot food is added. (The lids and bands can stay at room temperature.)
- 4. Prepare your pressure canner by filling it with 2-3 inches of water. Place over medium high heat and bring to a simmer.
- 5. Follow your recipe and prepare your preserves accordingly.
- 6. Fill a warm jar with the prepared food, leaving the amount of headspace at the top that the recipe recommends. (1/2 inch for fruits, salsa, sauces, tomatoes and pickles; 1/4 inch for fruit juices and soft spreads such as jellies and jams.)
- 7. If the recipe calls for removing air bubbles, slide a rubber spatula between the jar and food to release any trapped air. Repeat around the jar 2 to 3 times.

- 8. Use a clean, damp cloth to clean the jar rim and threads. Place the lid on the rim so that the sealant is in contact and then screw the band on finger tight. Place filled jars into the canner until the canner is full and/or you've used up the entire recipe. Make sure that the water is 2-3 inches high (or follow the manufacturer's instructions if different).
- 9. Lock the canner lid in place, making sure to leave the vent pipe open. Adjust heat to medium-high, allowing the steam to escape through vent pipe. Once there is a steady stream of steam escaping, vent for a full 10 minutes to ensure there is only steam (no air) left in canner.

Close vent using the method described in your canner's instructions. Gradually adjust your stove's heat to achieve and maintain recommended pounds of pressure.



10. Leave the jars in the canner for the amount of time called for in your recipe (not even a minute less!). Make sure you adjust your time according to your altitude.





- 11. Remove the pressure canner from the heat source, allowing it to cool. (Do not remove the weighted gauge.) Leave the canner undisturbed for the time it takes to allow the pressure to return to zero naturally.
- 12. Wait 10 minutes. Remove weight and unlock lid, tilting it away from yourself. Allow the jars to cool for 10 more minutes. (Make sure to follow manufacturer's instructions.)
- 13. Carefully remove the jars from the canner, setting them upright on a towel where they won't be disturbed. (Without a towel the jars can break from temperature differences.) Leave the jars untouched for 12-24 hours. Do not retighten the bands as this can disturb the sealing process.
- 14. After 12-24 hours, check the seals. The lids should be firm in the middle, not flexing up and down when the center is pressed. Try lifting the lids off the jars with your fingertips—they shouldn't move. If a jar doesn't have a good seal you can either immediately reprocess the food inside of it or put it in the refrigerator and eat the contents fresh.
- 15. Thoroughly wash and dry the jars, removing the rings. Label and then store in a cool, dark place.

Storing Your Home Canned Goods

It's important to store your home canned goods in a clean, cool, dark and dry place. Light and heat especially can affect food quality. Dampness can corrode the metal lids and eventually compromise the effectiveness of the seals. A cupboard or pantry where the temperature stays between 50F and 70F is ideal. Just make sure you store them well away from hot pipes, hot water heaters, furnaces, and your cooking stove.

Accidental freezing won't hurt the integrity of your food stores, but it may change the texture of your food, causing it to become mushy once it's thawed. If you're storing jars where they may freeze give them a little insulation by wrapping them in newspapers, blankets, or placing them in heavy cartons.

In the end, you'll want to store them away where they're safe, yet accessible. This way you'll be able to enjoy them at need.

All in all, home food canning is one of the main methods of food preservation that can set you and your family on the path to food self-reliance. It puts you in charge of your winter foods and allows you full control of ingredients and food quality. It's also critical when faced with losing your freezer stores. Truly, home canning is a skill worthy of both learning and passing onto to your children.





So there you have it, the secrets to preserving food through canning and how you can protect your family.

Would you like more information on food storage or do you want to start you food storage plan but don't know how to get started?

Contact us below and we will be happy to help you.

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