



We can FAQ Answers

Food Preservation

General Canning

Can food be recanned if the lid does not seal?

Canned food can safely be recanned if the unsealed jar is discovered within 24 hours. To recan, remove the lid and check the jar sealing surface for tiny nicks. Change the jar; if necessary, add a new treated lid and reprocess using the same processing time.

If canned foods have been frozen during storage, are they safe to eat?

Freezing does not cause food spoilage unless the seal is damaged or the jar is broken. These often happen as the food expands during freezing. Frozen foods, however, may be less palatable than properly stored canned food. In an unheated storage place, protect canned foods by wrapping the jars in paper or covering them with a blanket.

If my recipe doesn't call for processing, do I need to do so?

Many recipes passed down through the years or found in older cookbooks do not include instructions for processing. The foods are usually canned by the open kettle method, sealed, and stored. Foods prepared in this manner present a serious health risk – particularly low-acid foods. To minimize the risk of food spoilage, all high-acid foods should be processed in a water bath canner or pressure canner and all low-acid foods in a pressure canner.

Do I really need to leave a certain amount of headspace in the jar?

Yes, leaving the specified amount of headspace in a jar is important to assure a vacuum seal. If too little headspace is allowed, the food may expand and bubble out when air is forced out from under the lid during processing. The bubbling food may leave a deposit on the rim of the jar or the seal of the lid and prevent the jar from sealing properly. If too much headspace is allowed, the food at the top is likely to discolor. Also, the jar may not seal properly because there will not be enough processing time to drive all the air out of the jar.

How long will canned food keep?

Properly canned food stored in a cool, dry place will retain optimum eating quality for at least one year. Canned food stored in a warm place near hot pipes, a range, a furnace, or in indirect sunlight may lose some of its eating quality in a few weeks or months, depending on the temperature. Dampness may corrode cans or metal lids and cause leakage so the food will spoil.

Is it necessary to sterilize jars before canning?	Jars do not need to be sterilized before canning if they will be filled with food and processed in a boiling water bath canner for 10 minutes or more or if they will be processed in a pressure canner. Filled jars that will be processed in a boiling water bath canner for less than 10 minutes need to be sterilized by boiling them in hot water for 10 minutes before they're filled.
Is it safe to process food in the oven?	No. This can be dangerous because the temperature will vary according to the accuracy of oven regulators and the circulation of heat. Dry heat is very slow in penetrating into jars of food. Also, jars explode easily in the oven.
Can two layers of jars be processed in a canner at one time?	Yes, two layers can be processed at one time in either the boiling water bath or pressure canner. Place a small wire rack between the layers so water or steam will circulate around each jar. Make certain that the water covers the tops of all jars by 1 inch in a boiling water bath canner. The pressure canner should have 2 to 3 inches of water in the bottom.
Is it necessary to exhaust a pressure canner?	Yes, it is very important to allow steam to escape for 10 minutes before closing the valve or placing the weight on the vent. If the canner is not exhausted, the inside temperature may not correspond to the pressure on the gauge.
Should liquid lost during processing be replaced?	No. Loss of liquid does not cause food to spoil but the food above the liquid may darken. If, however, the loss is excessive (for example, if at least half of the liquid is lost), refrigerate the jar(s) and use within two or three days.
Is it all right to reuse jar fittings (lids and bands)?	Lids should not be used a second time since the sealing compound becomes indented by the first use, preventing another airtight seal. Screw bands may be reused unless they are badly rusted or the top edge is pried up, which would prevent a proper seal.
Why is open kettle canning not recommended?	In open kettle canning, food is cooked in an ordinary kettle, then packed into hot jars and sealed without processing. The temperatures obtained in open kettle canning are not high enough to destroy all spoilage and food-poisoning organisms that may be in the food. Also, microorganisms can enter the food when it is transferred from the kettle to jar and cause spoilage.
Why do the undersides of metal lids sometimes discolor?	Natural compounds in some foods, particularly acids, corrode metal and make a dark deposit on the underside of jar lids. This deposit on lids of sealed, properly processed canned foods is harmless.
What causes jars to break in a canner?	Breakage can occur for several reasons: (1) using commercial food jars rather than jars manufactured for home canning; (2) using jars that have hairline cracks; (3) putting jars directly on bottom of canner instead of on a rack; (4) putting hot food in cold jars; or (5) putting jars of raw or unheated food directly into boiling water in the canner, rather than into hot water (sudden change in temperature – too much difference between temperature of filled jars and water in canner before processing).



If I find mold growing inside a jar of canned food, can I just scrape it off and eat the food?

Mold growth in foods can raise the pH of the food. In home-canned products, this could mean that the high-acid products could become low-acid and therefore run the risk of botulism or other bacterial spoilage. Thus, any home-canned product that shows signs of mold growth should be discarded. USDA scientists and microbiologists now recommend against even scooping out the mold on jams and jelly products and using the remaining jam or jelly even though that used to be suggested.

How can I remove scale/hard-water film?

Soak jars for several hours in a solution containing 1 cup of vinegar and 1 gallon of water.

What can I process in half-gallon canning jars?

At least one canning jar manufacturer is selling half-gallon canning jars. That manufacturer has a printed note on the top that says half-gallon jars are to be used only for some highly acidic foods in a boiling water canner, with instructions to call a toll-free number for the instructions. When we last called, the only choices were grape juice and apple juice, which we also recommend. The USDA, the National Center for Home Food Preservation, and the University of Georgia recommend that half-gallon jars be used only for very acidic fruit juices (and juice only): apple juice and grape juice (www.homefoodpreservation.com/how/can_02/apple_juice.html) and (www.homefoodpreservation.com/how/can_02/grape_juice.html)

This process time is not to be used for tomato juice, for example. There are no other research-tested processes for half-gallon jars. Boiling water processes for other foods for jars larger than those published with recipes (usually pints and/or quarts) cannot be extended by any formula for use with a larger jar. We are aware that there are historical recommendations for canning foods in half-gallon jars. However, these are not currently accepted or endorsed by the USDA, the Cooperative Extension System, or U.S. manufacturers of home canning jars.

Fruits and Vegetables

May I leave out salt?

Yes. Salt is used only for flavor and is not necessary to prevent spoilage.

May I can fruits without sugar?

Yes. Sugar is added to improve flavor, to help stabilize color, and to retain the shape of the fruit. It is not added as a preservative.

May I use aspirin in canning?

No. Aspirin should not be used in canning. It cannot be relied on to prevent spoilage or to give satisfactory products. Adequate heat treatment is the only safe procedure.

Is it safe to can green beans in a boiling water bath if vinegar is used?

No. Recommended processing methods must be used to ensure safety. Recommended processing times cannot be shortened if vinegar is used in canning fresh vegetables (this does not refer to pickled vegetables).

Should all vegetables be precooked?

For best quality, yes. However, some vegetables can be packed raw or cold into jars before being processed in the pressure canner.



What vegetables expand?

Corn, peas, and lima beans are starchy and expand during processing. They should be packed loosely.

What causes corn to turn brown?

This occurs most often when a too high temperature is used, causing caramelization of the sugar in the corn. It may also be caused by some minerals in the water used in canning.

Why is canning summer squash or zucchini not recommended?

Recommendations for canning summer squashes, including zucchini, that appeared in former editions of *So Easy to Preserve* or USDA bulletins have been withdrawn because of uncertainty about the determination of processing times. Squashes are low-acid vegetables and require pressure canning for a known period of time to destroy the bacteria that cause botulism. Documentation for the previous processing times cannot be found, and available reports do not support the old process. Slices or cubes of cooked summer squash will get quite soft and pack tightly into the jars. The amount of squash filled into a jar will affect the heating pattern in that jar. It is best to freeze summer squashes or pickle them for canning, but they may also be dried.

Is it OK to can my own salsa recipe?

Salsas are usually mixtures of acid and low-acid ingredients; they are an example of an acidified food. The specific recipe, and sometimes the preparation method, will determine if a salsa can be processed in a boiling water canner or a pressure canner. A process must be scientifically determined for each recipe. To can salsa at home, use our recipes for Hot Chile Salsa or Mexican Tomato Sauce. Your county Extension agent may have additional tested recipes for salsas.

Meats

Should giblets be canned with chicken?

No. Their flavor may permeate other pieces of the chicken in the jar.

Is it safe to can meat without salt?

Yes. Salt is used only for flavor and is not necessary for safe processing.

Why is it necessary to remove fat from meats before canning?

Any fat that gets on the rim of the canning jar can prevent an airtight seal. Excess fat in jars makes it easier for the fat to climb the sides of the jar and contaminate the seal.



Should I use directions for canning butter at home that I see on the Internet?

Indeed, there are some directions for “canning” butter circulating on the Internet. Most of what we have seen is not really canning because they do not have boiling water or pressure canning processes applied to the filled jar. Jars are preheated, the butter is melted down and poured into the jars, and the lids are put on the jars. Some directions say to put the jars in the refrigerator as they reharden, but to keep shaking them at regular intervals to keep the separating butter better mixed as it hardens. This is merely storing butter in canning jars, not “canning.” True home canning is when the food is heated enough to destroy or is sufficiently acid enough to prevent growth of all spores of *Clostridium botulinum* (that causes botulism) and other pathogens during room temperature storage.

In addition, when you consider the economics of the process (energy costs involved with heating, cost of jars and lids, etc.), even if the butter is bought on sale, it may not be economically viable to prepare butter to store for years in this manner. Good-quality butter is readily available at all times if butter is needed for fresh use. If the concern is about emergency food supplies, dry forms of butter can be purchased and stored, oils can be used in an emergency, or commercially canned butter in tins (although we have only seen this for sale from other countries) may be used. Melted and rehardened butter may not function the same as original butter in many types of baking anyway.

There are a few issues with the common directions that have circulated on the Internet:

- 1. Physical safety and food quality:** In the provided directions, the jars are preheated in an oven (dry heat), which is not recommended for canning jars. Manufacturers of canning jars do not recommend baking or oven canning in the jars. It is very risky and may cause jars to break. There is no guarantee that the jars heated in this manner are sufficiently heated to sterilize them. We do not have data on sterilizing jar surfaces by this dry-heat method.
- 2. The butter is not really being “canned”;** it is simply being melted, put in canning jars, and covered with lids. Due to some heat present from the hot melted butters and preheated jars, some degree of vacuum is pulled on the lids to develop a seal. It rarely is as strong a vacuum as that obtained in jars sealed through heat processing. The practice in these “canned” butter directions is referred to as “open-kettle” canning in our terminology, which is really no canning at all since the jar (with product in it) is not being heat processed before storage.
- 3. Although mostly fat, butter is a low-acid food.** Meat, vegetables, butter, cream, etc., are low-acid products that will support the outgrowth of *C. botulinum* and toxin formation in a sealed jar at room temperature. Low-acid products have to be pressure canned by tested processes to be kept in a sealed jar at room temperature. It is not clear what the botulism risk is from such a high-fat product, but to store a low-acid, moist food in a sealed jar at room temperature requires processing

to destroy spores. A normal salted butter has about 16% to 17% water, some salt, protein, vitamins, and minerals. Some butter-like spreads have varying amounts of water in them. We have no kind of database in the home canning/food processing field to know what the microbiological concerns would be in butter stored in a sealed jar at room temperature. In the absence of that, given that it is low-acid and that fats can protect spores from heat if they are in the product during a canning process, we cannot recommend storing butter produced by these methods under vacuum-sealed conditions at room temperature.

4. Some other directions do call for “canning” the filled jars of butter in a dry oven. This also is not “canning.” There is not sufficient, research-based documentation to support that “canning” any food in a dry oven as described on any web pages provides sufficient heating to destroy bacteria of concern, let alone enough to produce a proper seal with today's home canning lids.

In conclusion, with no testing having been conducted to validate these methods, we do NOT recommend or endorse them as a safe home-canning process, let alone for storing butter at room temperature for an extended period. We do know that the methods given for preheating empty or filled jars in a dry oven are not recommended by the jar manufacturers or by us for any food. Aside from the physical safety and quality issues and the fact that it is not really canning, if any spores of certain bacteria were in the product, these procedures would not destroy those spores and thus allow the product to be stored at room temperature.

Miscellaneous

Is it OK to can bread or cake in a jar?

These products are not recommended for canning; choose recipes that you can freeze. In fact, most of these products are not really “canned.” The directions call for baking in the jar and then closing with a canning lid. Many recipes for quick breads and cakes are low-acid and have the potential for supporting the growth of a bacteria like *Clostridium botulinum* if it is present inside the closed jar. One university's research showed a high potential for problems. You will see these products made commercially; however, additives, preservatives, and processing controls not available for home recipes are used. Canning jar manufacturers also do not endorse baking in their canning jars.

How do I can oil with herbs? Is it OK to can pesto?

Herbs and oils are both low-acid and together could support the growth of the disease-causing *Clostridium botulinum* bacteria. Oils may be flavored with herbs if they are made up for fresh use, stored in the refrigerator, and used within two or three days. There are no canning recommendations. Fresh herbs must be washed well and dried completely before storing in the oil. The very best sanitation and personal hygiene practices must be used. Pesto is an uncooked seasoning mixture of herbs, usually including fresh basil and some oil. It may be frozen for long-term storage; there are no home canning recommendations.



Is it safe to jar
already canned
food?

There are several
problems with these
practices:

Often, people think that they can save money by buying larger containers of canned food, transferring the contents (or leftovers from the first use) to smaller jars and reprocessing it. Others wonder if this is a way to save leftovers from any size can for a longer time than they will keep in the refrigerator.

1. We have no safe tested processes to do this. In some cases, the way the heat is distributed throughout the jar during canning will be very different if you start with already canned/cooked food than with fresh. Excessively softened foods will pack more tightly into a jar or arrange themselves differently and the process time recommended for fresh foods will not be enough for the previously canned foods. Underprocessing can lead to foodborne illness or at the very least, spoilage and loss of product. You definitely could not just transfer the food and "seal" the jar. You would need some heat treatment known to destroy any organisms transferred with the food.
2. The expense and time of recanning foods far exceed the cost savings of bulk or large-quantity packaged foods. To recan food, you must add the expense of a jar and lid as well as the energy cost.
3. Most likely the quality of the food will be greatly reduced in canning the food for a second time. The heat of canning does cause loss of some nutrients, and a second round of canning will further reduce the nutritional value. Textural changes from heating will be added to those already produced.

Without tested processes for recanning foods, there is no way to know how to reduce the canning process and the default (although not a recommendation) is to process for the full time and temperature as if starting from scratch. When you consider you are not even saving money and resources, it does not seem worth the loss of food quality to recan commercially canned food. Our recommendation is not to do this.

For more information contact Litha Sivanandan, WVU Extension Specialist – Food Safety and Preservation, Families and Health Programs, WVU Extension Service at Litha.Sivanandan@mail.wvu.edu or 304-293-7684 or contact your county WVU Extension Service or see WVU Extension canning information at http://ext.wvu.edu/food_health/canning.

Information in this fact sheet from The National Center for Home Food Preservation, <http://nchfp.uga.edu>.

This fact sheet was reviewed by Litha Sivanandan, WVU Extension Specialist – Food Safety Preservation; Cindy Fitch, Ph.D., R.D., Families and Health Programs Director; Janice Heavner, WVU Extension Agent – 4-H and Families and Health, Pendleton County; Patty Morrison, WVU Extension Agent – 4-H, Families and Health, and Ag. and Natural Resources, Wirt County; and Gina Taylor, WVU Extension Agent – Families and Health, Jackson County, 2012.

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