Is Home-canned Food Safe?

Just because a jar is sealed does not guarantee the food is safe. A sealed jar just means the lid sealed! Some reasons why home-canned food can become unsafe include:

- Produce was of poor quality, unwashed, unpeeled or bad areas not trimmed which can result in high numbers of microorganisms.
- Food packed too tightly in jars and heat did not penetrate into the center of the jar and did not get hot enough to kill microorganisms.
- If lids are not immediately placed on jars and processing does not start soon after filling jars, microorganisms may multiply inside jars.
- Under-processing may occur due to inaccurate heat-processing time or if the processing was interrupted (i.e. power failure, fluctuation in pressure, not enough water in water-bath or pressure canner, etc.).
- Improper processing equipment (i.e. open kettle canning, microwave canning, oven canning) does not get the food hot enough or for long enough to kill microorganisms.
- Jars are not cooled properly after processing (i.e. left in the canner too long or were cooled too quickly by a fan or refrigerator) which can interfere with the seal formation.
- Paraffin is used to seal jelly jars and mold can send “roots” down along the edge of the paraffin and produce mycotoxins (toxic substance) in the jelly or jam.
- Improper storage:
  - Jars stored at temperatures over 95°F where microorganisms can grow if they are in the jar.
  - Canned goods stored in sunlight where food gets hot inside and allows air in the headspace to expand and breaks open the seal and allows microorganisms to grow.
  - If acid foods (pickled or fermented products or juices) are kept a long time, acid may eat away at the lid creating small holes where microorganisms get into jar.
  - Lids may rust in a damp environment and create small holes where microorganisms can get into jar.

As a safety precaution for properly canned foods, boil low-acid foods (i.e. vegetables, meats, fish) 10-11 minutes before eating to destroy any botulism toxin that might be present. If food looks spoiled, foams, or has a strange odor during heating, throw it out.
Freezing Tomatoes

A young women called the extension office asking if you can freeze tomatoes. Yes, you can. She was glad to hear that as she thought it will be nice to enjoy a bacon, lettuce and tomato sandwich in the winter. Well, tomatoes do freeze well – but not quite that well!

The freezing of tomatoes can be a great option when you are short of time and energy – or – you’re at the end of the gardening season, when you may simply be “tomatoed-out”.

To freeze tomatoes, dip them in boiling water for 30 seconds to 1 minute to easily remove the skins. Core and peel. You can quarter, chop, or puree the tomatoes in a food processor. Put into a freezer bag or container, leave 1 inch headspace, seal and freeze. Remember that your freezer, to maintain quality frozen food, should be at 0°F or lower.

Frozen tomatoes, may not work as a sandwich ingredient, but freezing tomatoes is a quick, easy preservation method. More importantly, they are a tasty addition to winter soups, stews, chili, or casseroles, and can be cooked down to make a sauce at a later time – a real time saver.

Apple Cider

Apple cider should be pasteurized and kept refrigerated to prevent growth of spoilage yeasts and molds. Although pasteurization (heat treatment) kills many spoilage microorganisms, there is a good chance there are still spoilage organisms that may grow rapidly at room temperature. To be safe, it is a good idea to buy cider that is refrigerated.

Drying Tomatoes

Even if we can’t “sun-dry” in Minnesota’s humid summers, we can dry tomatoes in a food dehydrator or oven to add a wonderful concentrated tomato flavor to pasta dishes, soups, breads, or pizza.

“Plum” or meaty tomato varieties like Roma, or Viva Italian, work the best. Slice ripe, colorful tomatoes, with no blemishes, about ½ inch thick and dry until leathery but still pliable and not sticky. Tomatoes can be dried with skins on or removed.

Dried fruits, stored in a glass jar in a cool (60°F), dry, dark area can be stored for one year.

Apple Varieties

It is apple season! Prairie Spy for cooking? Honeycrisp for fresh eating? Fireside for baking? How do you know which local apple to use for which purpose?

[Apples for Minnesota and Their Culinary Uses](#) is the University of Minnesota Extension publication to answer your apple questions. It will help you with the selection of quality apples, which variety to use for cooking, baking, eating fresh, or salads and how to store apples for winter use. Canning, freezing and drying apple instructions are also found in this publication. Enjoy the crisp, juicy apples of the season!
Dealing with Green Tomatoes

The best tomatoes for preserving are slightly under ripe and ripened on healthy vines. At this time of year, we are hoping for a late-season frost to give slow-ripening tomatoes a chance to ripen naturally. If your weatherman is predicting frost, you have some options for dealing with green tomatoes:

- Ripen green tomatoes by pulling plants and hanging them in a warm garage or laying out tomatoes in a 60°F environment. NOTE: Do not use indoor-ripened tomatoes for canning because the acid level may not develop enough for a safe product.
- Cook green tomatoes by frying, sautéing or adding to sauces or meat stews. They can also be made into bread, cake or pie.
- Some of the many preserving options for green tomatoes include:
  - Canning – use same methods as you would for ripe tomatoes
  - Sweet Pickles – [http://www.uga.edu/nchfp/how/can_06/sweet_green_tomato.html](http://www.uga.edu/nchfp/how/can_06/sweet_green_tomato.html)
  - Spiced Pickles – [http://www.uga.edu/nchfp/how/can_06/spiced_green_tomatoes.html](http://www.uga.edu/nchfp/how/can_06/spiced_green_tomatoes.html)
  - Kosher Dill Pickles – [http://www.uga.edu/nchfp/how/can_06/kosher_green_tomato.html](http://www.uga.edu/nchfp/how/can_06/kosher_green_tomato.html)
  - Relish – [http://www.uga.edu/nchfp/how/can_06/green_tomato_relish.html](http://www.uga.edu/nchfp/how/can_06/green_tomato_relish.html)
  - Piccalilli – [http://www.uga.edu/nchfp/how/can_06/piccalilli.html](http://www.uga.edu/nchfp/how/can_06/piccalilli.html)
  - Green Tomato Pie Filling – [http://www.uga.edu/nchfp/how/can_02/can_pie/green_tomato_filling.html](http://www.uga.edu/nchfp/how/can_02/can_pie/green_tomato_filling.html)

Preserving Pumpkin or Winter Squash

Canning is not recommended for pumpkin butter or mashed or pureed pumpkin or winter squash. The density of the product prevents adequate heat transfer to the center of the jar and might allow harmful bacteria to survive.

The only safe instructions for canning pumpkin and winter squash are for cubed flesh in a pressure canner. For canning, freezing, pickling and drying pumpkin and seeds see Home Preserving Pumpkins.

Freezing is the only safe method for preserving pumpkin purees, butters and preserves. Select full-colored mature pumpkin with fine texture. Wash, cut into cooking-size sections and remove seeds. Cook until soft in boiling water, in steam, or in an oven. When soft, remove pulp from rind and mash. To cool, place pan containing pumpkin in cold water and stir occasionally. Pack into rigid containers leaving 1/2- inch headspace, and freeze. Small pumpkins (sugar or pie pumpkins) make better products.
Can Potatoes be Frozen?

Yes, potatoes can be frozen. The question is in which form: cubed, mashed, French fries or hashbrowns. Potatoes can be frozen in any of these forms, yet the quality will vary.

Hashbrows seem to be the method that home preservers are most pleased with. Simply boil potatoes in their jackets until a fork can pierce, drain, cool, peel and shred. To freeze, spread on cookie sheet and package when frozen, or shape into patties and package. Another suggestion is to freeze shredded potatoes in an aluminum pie plate to have a round shape to fit in your frying pan when ready to prepare.

Frequently Asked Questions

What do I do if there's mold on my jelly?

Discard jams and jellies with mold on them. The mold could be producing a mycotoxin (toxic substance that can make you sick). Toxins produced by many types of common molds can easily spread throughout the entire jar, making the jam or jelly unfit to eat. USDA and microbiologists recommend against scooping out the mold and using the remaining jam or jelly.

Can all water-bath recipes be canned in the pressure canner?

A pressure canner is required for all low-acid foods (vegetables, meats, fish, etc.) while high acid foods are usually processed in a water-bath canner. Fruits can be processed in a pressure canner although the quality may be unacceptable (i.e. mushy, an “overcooked” flavor, color change) and may take more overall time. If you do choose to process fruit in a pressure canner, use good quality fruit with a hot-pack method for better results. Do not process pickled products, jams or jellies in a pressure canner because the quality is not acceptable!

I’ve used ClearJel® as a thickener for home-canned pie fillings. Can I also use PermaFlo® and ThermFlo® for home-canned pie fillings?

PermaFlo® and ThermFlo® are other forms of modified starches and are available for commercial use. Because there is no available research on the use of these products for home food preservation, we recommend you continue to use ClearJel® which has been tested for adequate heat penetration in the water-bath canner and provides excellent pie filling quality.

Why do pickle recipes say to cut off the blossom end of the cucumber?

The blossom end contains enzymes that can cause softening. Remove at least 1/16th inch from the blossom end.

Photos from The National Center for Home Food Preservation

www.uga.edu/nchfp/

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For more food safety information visit our website: extension.umn.edu/foodsafety/.