

Canning Meat, Fish and Poultry

Pressure canning is the only safe method for canning meat, fish and poultry. It is the only way you can destroy *Clostridium botulinum*, the bacterium that causes food poisoning. Be sure to process canned meats for the correct time at the correct temperature in a pressure canner. Canning low-acid foods, such as meats, in boiling-water canners is absolutely unsafe because the botulinum bacteria can survive this process. If *Clostridium botulinum* survive and grow inside a sealed jar of food, they can produce a poisonous toxin. Even a taste of food containing this toxin can be fatal. Boil foods 10 minutes at altitudes below 1,000 feet to destroy this poison. Boil foods 11 minutes at altitudes above 1,000 feet.

- Chill and can fresh, home-slaughtered meats and poultry without delay.
- Do not can meat from diseased animals.
- Remove guts immediately after catching fish, put on ice, and can within two days.

Caution

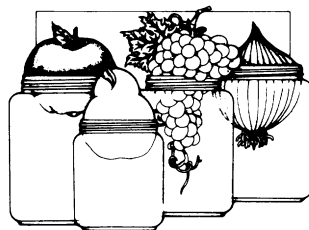
Boil canned meat, poultry and fish before you taste it — even if it looks and smells all right — unless you are sure it was canned according to University of Missouri Extension publications printed after 1989 or according to other publications endorsed by the U.S. Department of Agriculture.

All meats, poultry and fish canned according to current MU Extension publications may be eaten without boiling if you are sure you followed correct procedures. Please refer to MU Extension publications GH1451, *Before you Start to Can*, *Learn the Basics*, and GH1452, *Steps to Success in Home Canning*, for information on correct canning procedures and the steps to follow in pressure canning.

Chicken or rabbit

Procedure: Choose freshly killed and dressed healthy animals. Large chickens are more flavorful than fryers. Chill dressed chicken for 6 to 12 hours before canning.

Quality for Keeps



Soak dressed rabbits 1 hour in salt water (1 tablespoon of salt per quart of water). Rinse. Remove excess fat. Cut the chicken or rabbit into suitable sizes for canning. Can with or without bones.

The hot pack method is preferred for best liquid cover and quality during storage. Natural poultry fat and juices are usually not enough to cover the meat in raw packs.

Hot pack: Boil, steam or bake meat until medium-done (when cut at center, pieces show almost no pink color). Add 1 teaspoon salt per quart to each jar, if desired. Fill jars with meat pieces and hot broth. Leave 1/4 inches of headspace. Adjust lids, and process as directed in Table 1.

Raw pack: Add 1 teaspoon salt per quart if desired. Fill jars loosely with raw meat pieces. Leave 1/4 inches of headspace. Do not add liquid. Adjust lids, and process as directed in Table 1.

Ground or chopped meat

Bear, beef, lamb, pork, sausage, veal, venison

Procedure: Choose fresh, high-quality, chilled meat. With venison, add one-part high-quality pork fat to three- or four-parts venison before grinding.

Use freshly made sausage, seasoned with salt and cayenne pepper (sage may cause a bitter off-flavor). Shape chopped meat into patties or balls. Cut cased sausage into 3- to 4-inch links. Cook until lightly browned. Ground meat may be browned without shaping. Drain excess fat. Fill hot jars with pieces. Add boiling meat broth, tomato juice, or water. Leave 1 inch of headspace. Add 1 teaspoon of salt per quart to each jar, if desired. Remove air bubbles, and adjust headspace, if needed. Adjust lids, and process as directed in Table 1.

Strips, cubes or chunks of meat

Bear, beef, lamb, pork, veal, venison

Procedure: Choose high-quality, chilled meat. Remove excess fat. Soak strong-flavored wild meats for 1 hour in salt water (1 tablespoon of salt per quart of water). Rinse. Remove large bones.

Revised by
Susan Mills-Gray, State Nutrition Specialist

Table 1. Recommended processing times for meat, poultry and fish in a pressure canner.

Type of meat	Style of pack	Jar size	Process time (minutes)	Canner gauge pressure needed at different altitudes		
				Dial gauge (pounds)		Weighted gauge (pounds)
				0–2,000 feet	0–1,000 feet	
Chicken or rabbit without bones	Hot and raw	Pints	75	11	10	15
		Quarts	90	11	10	15
Chicken or rabbit with bones	Hot and raw	Pints	65	11	10	15
		Quarts	75	11	10	15
Ground or chopped meat	Hot	Pints	75	11	10	15
		Quarts	90	11	10	15
Strips, cubes or chunks of meat	Hot and raw	Pints	75	11	10	15
		Quarts	90	11	10	15
Meat stock	Hot	Pints	20	11	10	15
		Quarts	25	11	10	15
Fish	Raw	Pints	100	11	10	15
		Quarts	160	11	10	15

The hot pack method is preferred for best liquid cover and quality during storage. The natural amount of fat and juices in today's leaner cuts of meat are usually not enough to cover most of the meat in raw packs.

Hot pack: Cook meat until rare by roasting, stewing or browning in a small amount of fat. Add 1 teaspoon of salt per quart to each jar, if desired. Fill hot jars with pieces and add boiling broth, meat drippings, water, or tomato juice (tomato juice is especially good to use with wild game). Leave 1 inch of headspace. Remove air bubbles, and adjust headspace, if needed. Adjust lids, and process as directed in Table 1.

Raw pack: Add 1 teaspoon of salt per quart to each jar, if desired. Fill hot jars with raw meat pieces. Leave 1 inch of headspace. Do not add liquid. Adjust lids, and process as directed in Table 1.

Meat stock (broth)

Beef

Procedure: Saw or crack freshly trimmed beef bones, with meat removed, to help draw flavor from bones. Rinse bones and place in a large stockpot or kettle. Cover bones with water, cover pot, and simmer 3 to 4 hours. Remove bones; if desired, remove any tiny amount of meat still clinging to the bones and add it to the broth. Chill broth, skim off fat, and then return meat to broth. Reheat meat and broth to boiling. Fill hot jars, leaving 1 inch of headspace. Remove air bubbles, and adjust headspace, if needed. Adjust lids, and process as directed in Table 1.

Chicken or turkey

Procedure: Place carcass bones in a large stockpot, and add enough water to cover bones. Cover pot, and simmer 30 to 45 minutes, or until meat can be easily stripped from bones. Remove bones; if desired, remove any tiny amount

of meat still clinging to the bones and add it to the broth. Chill broth and skim off fat. Strip meat, discard excess skin and fat, and return meat to broth. Reheat to boiling, and fill hot jars. Leave 1 inch of headspace. Remove air bubbles, and adjust headspace, if needed. Adjust lids, and process as directed in Table 1.

Fish

These instructions are for blue, mackerel, salmon, steelhead, trout and other fatty fish, except tuna.

Caution: Immediately after catching fish, remove guts and put on ice. Can within two days.

Note: Glasslike crystals sometimes form in canned salmon (these are magnesium ammonium phosphate). There is no way for the home canner to prevent these crystals from forming, but they usually dissolve when heated and are safe to eat.

Procedure: If the fish is frozen, thaw before canning. Rinse the fish in cold water. You can add 2 tablespoons of vinegar per quart of water to help remove slime. Remove head, tail, fins and scales; it is not necessary to remove the skin. You can leave the bones in most fish because the bones become very soft and are a good source of calcium. Wash fish and remove all blood. Refrigerate all fish until you are ready to pack in jars.

Pint jars: Split fish lengthwise, if desired. Cut cleaned fish into 3½-inch lengths. If the skin has been left on the fish, pack the fish skin out for a nicer appearance, or skin in for easier jar cleaning. Fill hot jars, leaving 1 inch of headspace. Add 1 teaspoon of salt per pint, if desired. Do not add liquids. Carefully clean the jar rims and wipe dry to remove any fish oil. Adjust lids, and process as directed in Table 1.

Quart jars: Cut the fish into jar-length fillets or chunks of any size. If the skin has been left on the fish, pack the fish skin out for a nicer appearance, or skin in for easier jar cleaning. Pack solidly into hot jars, leaving 1 inch of

headspace. To allow for firm packing of fish, if desired, run a plastic knife around the inside of the jar to align the product. For most fish, no liquid, salt, or spices need to be added, although seasonings or salt may be added for flavor. Carefully clean the jar rims and wipe dry to remove any fish oil. Adjust lids, and process as directed in Table 1.

Note of caution for processing fish in quart jars

The directions for operating the pressure canner during processing of quart jars are different from those for processing pint jars, so please read the following carefully.

It is essential to product safety that the processing directions are followed exactly.

When you are ready to process your jars of fish, add 3 quarts of water to the pressure canner. Put the rack in the bottom of canner, and place closed jars on the rack. Fasten the canner cover securely, but do not close the lid vent. Heat the canner on high for 20 minutes. If steam comes through the open vent in a steady stream at the end of 20 minutes, allow it to escape for an additional 10 minutes. If steam does

not come through the open vent in a steady stream at the end of 20 minutes, keep heating the canner until it does. Then allow the steam to escape for an additional 10 minutes to vent the canner. This step removes air from inside the canner so the temperature is the same throughout the canner. The total time it takes to heat and vent the canner should never be less than 30 minutes. The total time may be more than 30 minutes if you have tightly packed jars, cold fish or larger-size canners. For safety's sake, you must have a complete, uninterrupted 160 minutes (2 hours and 40 minutes) at a minimum pressure required for your altitude. At the beginning of the process, write down the time it began and the time the process will be finished.

References

White, Athalie, Ann Ford, Elizabeth L. Andress, and Judy A. Harrison. 2014. *So Easy To Preserve*, 6th ed. University of Georgia Cooperative Extension Service.

ALSO FROM MU EXTENSION PUBLICATIONS

- GH1451 *Quality for Keeps: Before You Start to Can, Learn the Basics*
- GH1452 *Quality for Keeps: Steps to Success in Home Canning*
- GH1454 *Quality for Keeps: Preserve Your Garden Delights — How to Can Fresh Vegetables*
- GH1455 *Quality for Keeps: Fruitful Canning*

extension.missouri.edu | 800-292-0969