

## FOOD PRESERVATION

# Canning Meat, Fish and Poultry

Nutritional Sciences  
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**P**ressure canning is the only safe method for canning meat, fish and poultry. It is the only way you can destroy the bacterium that causes food poisoning (*Clostridium botulinum*).

**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 if you live 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.

### Quality for Keeps



### Caution

**Boil canned meat, poultry and fish before you taste it — even if it looks and smells alright — unless you are sure it was canned according to University of Missouri Extension publications printed after 1989 or according to other USDA-endorsed publications.**

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 publications GH1451, *Before you Start to Can*, 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. Soak dressed rabbits 1 hour in salt water (1 tablespoon of salt per quart of water) and then rinse. Remove excess fat. Cut the chicken or rabbit into suitable sized pieces for canning. Can with or without bones.

### 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, remove air bubbles and adjust headspace, if needed. Fill hot jars with meat pieces and hot broth. Leave a 1¼-inch headspace.

### Raw pack

Add 1 teaspoon salt per quart if desired. Fill jars loosely with raw meat pieces. Leave a 1¼-inch 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 a 1-inch 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.

### 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 a 1-inch headspace. Remove air bubbles, adjust headspace, if needed, 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 a 1-inch headspace. Do not add liquid. Adjust lids, and process as directed in Table 1.

## Meat stock (broth)

### Beef

Saw or crack freshly trimmed beef bones 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 and pick off meat. Chill broth, skim off fat and return meat to broth. Reheat meat and broth to boiling. Fill hot jars, leaving a 1-inch headspace. Remove air bubbles and adjust headspace, if needed. Adjust lids, and process as directed in Table 1.

### Chicken or turkey

Place carcass bones in a large stockpot, 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 and meat pieces. 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 a 1-inch headspace. Remove air bubbles and adjust headspace, if needed. Adjust lids and process as directed in Table 1.

## Fish

***Blue, mackerel, salmon, steelhead, trout and other fatty fish except tuna***

### Caution

**Immediately after catching fish, remove guts, put on ice and can within two days.**

### Note

Glass-like 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 vinegar to the water (2 tablespoons per quart) 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 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 a 1-inch 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.

**Table 1. Recommended processing times for meat, poultry and fish in pressure canners.**

Type of meat	Style pack	Jar size	Process time	Dial canner gauge pressures 0 to 2,000 feet	Weighted canner gauge pressures 0 to 1,000 feet	Weighted canner gauge pressures above 1,000 feet
<b>Chicken or rabbit without bones</b>	Hot and raw	Pints	75 minutes	11 pounds	10 pounds	15 pounds
		Quarts	90 minutes	11 pounds	10 pounds	15 pounds
<b>Chicken or rabbit with bones</b>	Hot and raw	Pints	65 minutes	11 pounds	10 pounds	15 pounds
		Quarts	75 minutes	11 pounds	10 pounds	15 pounds
<b>Ground or chopped meat</b>	Hot	Pints	75 minutes	11 pounds	10 pounds	15 pounds
		Quarts	90 minutes	11 pounds	10 pounds	15 pounds
<b>Strips, cubes or chunks of meat</b>	Hot and raw	Pints	75 minutes	11 pounds	10 pounds	15 pounds
		Quarts	90 minutes	11 pounds	10 pounds	15 pounds
<b>Meat stock</b>	Hot	Pints	20 minutes	11 pounds	10 pounds	15 pounds
		Quarts	25 minutes	11 pounds	10 pounds	15 pounds
<b>Fish</b>	Raw	Pints	100 minutes	11 pounds	10 pounds	15 pounds
		Quarts	160 minutes	11 pounds	10 pounds	15 pounds

### 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 a 1-inch headspace. If desired, run a plastic knife around the inside of the jar to align the product; this allows firm packing of fish. 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.

### Processing change for 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 critical 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 sized 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. Write down the time at the beginning of the process and the time when the process will be finished.**

For more information, visit MU Extension:

*<http://extension.missouri.edu>*



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