

CANNING AND FREEZING FISH AT HOME

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By canning or freezing fresh fish — purchased or caught — you can enjoy fresh fish throughout the year.

Fish is an important addition to family meals and you can serve it in many different ways to provide variety in meals. Some fish is low in fat, and all fish is a good source of protein and many of the essential vitamins and minerals.

Can or freeze fish as soon as possible after catching or purchasing it. When you catch fish, immediately clean the fish and chill it, either on ice or in the refrigerator, until you are ready to preserve it. If it is not possible to chill the fish immediately, rub it with a salt mixture or cover with a wet sack or cloth.

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Division of Agricultural Sciences
UNIVERSITY OF CALIFORNIA

REPRINTED APRIL 1980

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Leaflet

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To Can Fish

If you plan to use a pressure cooker for canning fish, refer to *Home Canning of Vegetables*, L 2270, for information. Be sure that the gauge on your pressure cooker has been tested for accuracy. Do not process for less than the prescribed time.

Use pint or smaller jars for canning fish. Wide mouth jars are easiest to fill. Or you can use small enamel-lined $\frac{1}{2}$ -pound or 1-pound tin cans.

Raw, Brine Pack

1. Use a knife that has a dull blade to scale salmon and other large-scaled fish. Scrape from tail to head. Skin tuna.
2. Remove fins and clean fish thoroughly. Cut off head and tail. Wash the body cavities thoroughly.
3. Split fish lengthwise along the backbone. Remove the backbone, leaving as little flesh on the bone as possible.
4. Cut fish into pieces the length of the jar or can. Soak pieces for 1 hour in a brine made of $\frac{1}{2}$ pound ($\frac{3}{4}$ cup) salt mixed in 1 gallon of water. (One gallon of brine is enough for about 25 pounds of cleaned fish.) Place a plate on the fish to keep it in the brine. Only use the brine once. Let the brined fish drain for several minutes.

Alternate method. Fill the containers with pieces of fish as described in step 5. Add at least 1 teaspoon of salt and fill the jar or can with water.

5. Fill the jars or cans flush with the rim. Pack containers as full as possible with fish. Place the skin side of the fish next to the side of the container. Alternate head and tail ends if you are packing small fish. Do not add water if you soaked the fish in brine.
6. Seal jars. If you use cans, exhaust them in steam or in the oven because they are too shallow to set in hot water. If you use steam, leave the lids on. Seal after exhausting.
7. Process at 10 pounds pressure, 240° F. for 1 hour and 50 minutes.

Precooked Pack, Tuna Style

1. Rub all surfaces of cleaned fish, including the belly cavity, with a bland-flavored cooking oil.
2. Precook fish by steaming 2 to 4 hours, depending on the size, or cook in a moderate oven (350° F.) for about 1 hour. Cook until the blood along the backbone has set and is no longer pink.
3. Cool fish until it is firm enough to handle easily. Refrigerate to cool. Or spray with cold water, either under the faucet or with a hose, and let cool overnight at room temperature.
4. Split the cooked fish lengthwise. Remove the backbone.
5. Skin fish and break into quarters lengthwise. Scrape away all dark meat.
6. Cut pieces into lengths $\frac{3}{8}$ inch shorter than the jar or can. Pack fish into containers; fill any spaces with broken pieces of fish.
7. Add $\frac{1}{2}$ teaspoon salt to pint jars; $\frac{1}{4}$ teaspoon salt to $\frac{1}{2}$ -pint jars.
8. Heat bland cooking oil (or use boiling water). Be sure to keep the oil below the smoking temperature. Add 2 to 4 table-spoons of hot oil (or boiling water) to each pint; 1 or 2 table-spoons to each $\frac{1}{2}$ pint.
9. Seal jars. If you use cans, exhaust the cans in steam or in the oven because they are too shallow to set in hot water. If you steam them, leave the lids on. Seal after exhausting.
10. Process at 10 pounds pressure, 240° F. for 2 hours.

To Can Smoked Fish

1. Can smoked fish immediately after smoking and cooling it. Cut fish into pieces the length of the jars or cans. Pack carefully.
2. Seal and process according to directions for canning raw fish. Process 2 hours at 10 pounds pressure, 240° F.

To Can Crab

Unless you shell crabs before cooking, it is difficult to prevent discoloration of the meat.

To Shell

1. Dip crabs in ice water for 1 or 2 minutes. Then grasp the body between the back legs and break off the claws and legs.
2. To remove the back shell, insert fingers in the leg holes and pull the shell apart. Break the crabs in half for easier cleaning, cooking, and handling.
3. Remove the gills or "finger," crab butter, and other viscera. Wash the bodies in a heavy spray of fresh water or in tubs if running water is not available. Use a stiff brush to scrub them. Change the water frequently. Rinse the crabs thoroughly after washing.
4. Bring water to a boil. Use a large kettle of water and add $\frac{1}{4}$ cup distilled white vinegar or $\frac{1}{4}$ cup sodium citrate.* If desired, you can also add whole black peppers and bay leaves.
5. Boil crabs for 20 minutes. Count the time from when the water returns to a boil.

6. Pick meat out of shells as soon as possible after cooking. Break the claw and leg shells with a small mallet and peel off the broken pieces.

Use a sharp knife to cut the body in two. Then pound the shell against the pan in which the meat is to be picked. This loosens and releases the meat in large pieces. Keep the body meat separate from the leg and claw meat.

7. Make a brine using 1 cup white distilled vinegar (or 1 cup sodium citrate* or $\frac{1}{4}$ cup citric acid) and 1 cup salt in each gallon of water. Immerse the picked meat in this brine for 2 minutes. Save brine.

*Sodium citrate keeps canned crab more tender and a better color than vinegar does.

8. Press meat with your hands to remove excess moisture. Drain well.

9. Use $\frac{1}{2}$ -pint jars or $\frac{1}{2}$ -pound or smaller enamel-lined cans. Line the cans with vegetable parchment paper, if available.

Place a layer of leg meat on the bottom and around the sides of the container. Fill the center with body meat. Or place a layer of leg meat on the bottom, then a layer of body meat, with another layer of leg meat on top. Add 1 tablespoon brine (from step 7) to each jar or can.

10. Seal jars. If you use cans, exhaust them in steam or in the oven because they are too shallow to set in hot water. If you steam them, leave the lids on. Seal after exhausting.

11. Process at 10 pounds pressure, 240° F. for 65 minutes.

To Freeze Fish

If you plan to freeze fish, keep it cold. Clean and freeze it as soon as possible.

1. Clean, wash, and drain fish well. Pat dry.
2. Freeze small fish whole. Cut large fish into steaks, fillets, or boned strips for freezing.
3. To prevent darkening and rancidity in fatty fish, such as tuna and salmon, treat with an ascorbic acid dip (2 tablespoons ascorbic acid to 1 quart of water) for 20 seconds. Or coat fish with a bland vegetable oil (cottonseed or corn oil).
4. Use moisture-vapor proof paper to wrap fish. Wrap in meal-size packages. Separate the pieces with two layers of freezing paper, polyethylene wrap, or foil.
5. Freeze quickly and store at 0° F. or lower. The lower the temperature the longer the storage life of the frozen fish.

To Freeze Smoked Fish

1. Freeze smoked fish as soon as you remove it from the smoking room.
2. Brush pieces with salad oil. Use moisture-vapor proof paper to wrap fish. Wrap in meal-size packages. Separate the pieces with two layers of freezing paper, polyethylene wrap, or foil.
3. Freeze quickly and store at 0° F. or below.

To Freeze Crab

Separate legs and body as recommended for canning. Clean and cook as described on page 3. You can either freeze the crab meat in the shell or as picked meat. Wrap the whole crab well in moisture-proof paper or place the meat in a freezer container and pack it tightly.

If you plan to store crab meat for more than 4 months, cover it with a brine made of 3 tablespoons salt in 1 gallon of water. Be sure to leave space in the container for expansion. Seal and freeze. The meat from a whole frozen crab is not as white after storage as frozen pieces of crab meat.

To Store Fish and Shellfish at 0° F.

	Months
Fatty fish—mackerel, salmon, swordfish, etc.	6
Lean fish—haddock, cod, etc.	9 - 12
Shellfish	
lobsters and crabs	6 - 8
shrimp	6 - 8
oysters	6 - 8
scallops	6 - 8
clams	6 - 8

To Thaw Fish

It is easier to cook partially thawed fish. Thaw a 1-pound package in the refrigerator for 3 to 4 hours.

Beware of Botulism

If you do not carefully and completely follow the directions given in this publication, or if you have any doubts about the contents of a jar or can, do not taste the food. Boil home-canned products for at least 10 minutes. This applies to all home-canned, low-acid foods—vegetables (including those canned in acid), meats, poultry, and fish. Acid foods, such as fruits, tomatoes, rhubarb, and pickles, may become low acid through the growth of mold.

A form of food poisoning called botulism is caused by the toxin produced when botulinum bacteria are present. These bacteria grow in the absence of air in foods that are low in acid or that have become low acid. The toxin is one of the most poisonous substances known. However, it can be completely destroyed by boiling. Never taste food that appears to be spoiled. For further information, see *Home Canning of Vegetables*, L 2270.

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The authors wish to acknowledge Dr. Lionel Farber, Research Biochemist, Seafood and Nutrition Research Laboratory, and the George Williams Hooper Foundation, University of California Medical Center, San Francisco, for assistance in preparing the section on the canning of fish.

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture, James B. Kendrick, Jr., Director, Cooperative Extension, University of California.