

Fresh-Caught Fish

MAINTAINING QUALITY IN THE CATCH

Fresh-caught fish from either freshwater or saltwater must be handled properly to avoid spoilage and to maintain a delicate flavor, firm texture and a pleasing odor.

Handling: Proper handling should begin when landing the fish. Always try to minimize bruising caused by contact with hard surfaces (decks, gunwales, etc.). The fish should be washed immediately, either by hosing down or by bucket rinses to remove slime and spoilage bacteria. The wash water can be clean lake, stream or seawater. If natural water is used, however, do not use water from close proximity to marinas, municipal, industrial or agricultural discharges. When in doubt, use potable water.

Exposure to the sun and summertime temperatures can cause quality problems in less than an hour. However, simply chilling fish can prevent quality deterioration and reduce health risks that can result from elevated temperatures. Proper icing can be accomplished with a little advance planning and some relatively inexpensive equipment.

The most effective chilling method available to recreational anglers in saltwater areas is the use of a brine slush-ice mixture. This is simply made by adding clean seawater to ice (equal portions of each) in a waterproof container. Immediately after washing, the fish (alive or dead) should be immersed in the brine slush and kept there until ready to dress at the end of the trip. Care should be taken when making up the brine slush to avoid seawater contaminated with oil, fuel, or dirt and slime. In freshwater areas a slush mixture can also be used, but will not be as effective as one made with saltwater. In either case, make sure to check the slush periodically for adequate ice.

Cleaning: Clean fish as soon as possible after catching them. Fish tissue is almost sterile, but the skin surface and viscera contain many types of bacteria. The skin slime and viscera also provide food for bacterial growth. Avoid rough treatment while cleaning the fish. Gouges or wounds in the flesh are openings that may allow the spread of bacteria. Gut the fish with a smooth, not excessively long, belly cut and leave no blood or viscera in the body cavity. Thoroughly wash all cleaned fish and ice immediately with fresh, clean ice. Do not dip cleaned fish in the original brine slush. Do not immerse cleaned fillets in a prolonged freshwater soak that could dilute and reduce meat flavor and texture.

Icing: Both crushed or flaked ice are good for rapid chilling of cleaned fish. Fish stored in crushed or flaked ice remains moist and glossy and does not dry out as fast as fish placed in refrigerated storage without ice.

The fisherman should decide how much ice is needed for each fishing trip by taking into account the length of the trip, water and air temperatures, and nearly as possible, the size of catch expected. It is better to throw out ice than fish at the end of a trip.

In general, fish stored in coolers will be well-chilled when:

- Three (3) inches of ice cover the bottom of the cooler;
- Fish are laid in the cooler and mixed with ice, and the contents are covered with another layer of ice 3 inches deep;
- The cooler contains a pound of ice for each pound of fish.

Back home, discard any remaining ice in the cooler to prevent bacterial buildup between fishing trips. To kill bacteria and prevent contamination of new ice, thoroughly wash and rinse the inside of the cooler, then do a final rinse with chlorinated water or a solution of 1 teaspoon liquid chlorine bleach per quart of water.

CARE IN PREPARATION AND PRESERVATION

Cook or preserve the fish as soon as possible. Properly cleaned and iced fish keep four to five days with little loss of eating quality and nutritional value.

You are now ready to cook or preserve your fish. Handle the fish as you would any raw product. Wash your hands before and after touching the fish. Be sure to clean and sanitize all surfaces that come in contact with the raw fish or fish juices.

Refrigeration of Fish: Fish should be washed under cold, running water and patted dry with an absorbent paper towel. The fish should then be wrapped in moisture- and vapor-proof paper or plastic wrap and placed in a plastic bag or stored in a closed, rigid container until ready for cooking. Store fish in the coldest part of the refrigerator at a temperature as close to 32 °F as possible. The shelf life depends upon the type of fish and how well it was taken care of prior to getting it home. Fish should be used quickly, usually within one or two days of refrigerator storage.

Freezing of Fish: Freezing is the safest method of storing fresh fish. Bacteria that can cause illness do not grow at freezer temperatures. You may leave the skin on fish you freeze at home (this can help retain moisture and prevent freezer burn) but never attempt to freeze whole, ungutted fish.

— Divide fish into family-size servings and use a plastic cling-type wrap as an inner covering and moisture- and vapor-proof freezer wrap as an outer covering. Bread bags, waxed paper and cellophane wraps are poor freezer wraps.

— Remember to press air from the package to help prevent off-flavor or odors characteristic of rancidity.

— If freezer space is available, smaller fish may be placed in water in plastic containers or in clean wax- or plastic-lined milk containers and then frozen.

— Label each package with the contents and date (for best quality, plan to use within three to six months).

— The temperature of the freezer should be 0 °F or lower. When freezing large amounts of food, scatter the packages throughout the freezer so the food freezes quickly.

Thawing of Fish: Thaw fillets in the refrigerator, in the microwave or under cold running water. Food defrosted in the microwave should be cooked immediately. Other thawed fish should be used within one to two days.

Cooking Fish Properly: Cook the fish according to your favorite recipe. Thorough cooking destroys harmful bacteria and parasites. The United States Department of Agriculture recommends using a meat thermometer and checking to make sure that fish is cooked to an internal temperature of 145 °F. A good rule of thumb to follow is to cook fish 10 minutes for every inch of thickness. Small, thin fillets will cook in just a few minutes. Fish is done when the flesh has just begun to turn from translucent to opaque or white and is firm but still moist. Overcooked fish is tough and dry.

Once fish is cooked, keep it hot or chill it. Refrigerate leftovers within two hours of serving. Cooked fish keeps another day in the refrigerator before its quality deteriorates. Avoid freezing leftover cooked fish as quality is poor.

Avoid Contamination: Pesticides or other substances may contaminate some waters, and these toxins are concentrated in the fatty parts of the fish. As a precaution, remove the skin and fat deposits when cleaning fish, or cook fillets instead of whole fish. Choose a cooking method that allows fat to drip away from the fish, such as baking on a rack, broiling or grilling.

For Information on the Safety of Fishing Waters and Fish Advisories, Contact: The South Carolina Department of Health and Environmental Control (S.C. DHEC) at 1 (803) 898-4399 or 1 (888) 849-7241, or at <http://www.scdhec.net/eqc/admin/html/fishadv.html> For information on fish advisories for pregnant women, request HGIC 3640, *Food Safety for Mothers and Babies*.

Source: Otwell, Steven and Frank Lawlor. *Recreational Seafood Safety*. Florida Cooperative Extension Service.

This information has been reviewed and adapted for use in South Carolina by David C. Smith, Seafood Industry Specialist; P.H. Schmutz, HGIC Information Specialist; and E.H. Hoyle, Extension Food Safety Specialist, Clemson University.

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