Seafood Safety

Fish and shellfish contain high quality protein and other essential nutrients and are an important part of a healthful diet. In fact, a well-balanced diet that includes a variety of fish and shellfish can contribute to heart health and aid in children's proper growth and development. As with any type of food, however, it is important to handle seafood safely in order to reduce the risk of foodborne illness, often called "food poisoning." Follow these basic food safety tips for buying, preparing, and storing fish and shellfish — and you and your family can safely enjoy the fine taste and good nutrition of seafood.

Buy Right

Fresh Fish and Shrimp

Only buy fish that is refrigerated or displayed on a thick bed of fresh ice that is not melting (preferably in a case or under some type of cover).

- Fish should smell fresh and mild, not fishy, sour, or ammonia-like.
- A fish's eyes should be clear and bulge a little.
- Whole fish and fillets should have firm, shiny flesh and bright red gills free from milky slime.
- The flesh should spring back when pressed.
- Fish fillets should display no discoloration, darkening or drying around the edges.
- Shrimp flesh should be translucent and shiny with little or no odor.
- Some refrigerated seafood may have time/temperature indicators on their packaging, which show if the product has been stored at the proper temperature. Always check the indicators when they are present and only buy the seafood if the indicator shows that the product is safe to eat.

Selecting Shellfish

Follow these general guidelines for safely selecting shellfish:

Look for the label: Look for tags on sacks or containers of live shellfish (in the shell) and labels on containers or packages of shucked shellfish. These tags and labels contain specific information about the product, including the processor's certification number. This means that the shellfish were harvested and processed in accordance with national shellfish safety controls.

Discard Cracked/Broken Ones: Throw away clams, oysters, and mussels if their shells are cracked or broken.

Do a "Tap Test": Live clams, oysters, and mussels will close up when the shell is tapped. If they don't close when tapped, do not select them.

Check for Leg Movement: Live crabs and lobsters should show some leg movement. They spoil rapidly after death, so only live crabs and lobsters should be selected and prepared.

Frozen Seafood

Frozen seafood can spoil if the fish thaws during transport and is left at warm temperatures for too long.

- Don't buy frozen seafood if its package is open, torn, or crushed on the edges.
- Avoid packages that are positioned above the "frost line" or top of the freezer case.
- Avoid packages with signs of frost or ice crystals, which may mean the fish has been stored a long time or thawed and refrozen.

Store Properly

Put seafood on ice or in the refrigerator or freezer soon after buying it. If seafood will be used within 2 days after purchase, store it in the refrigerator. Otherwise, wrap it tightly in plastic, foil, or moisture-proof paper and store it in the freezer.

Separate for Safety

When preparing fresh or thawed seafood, it's important to prevent bacteria from the raw seafood from spreading to ready-to-eat food. Take these steps to avoid cross-contamination:

- When buying unpackaged cooked seafood, make sure it is physically separated from raw seafood. It should be in its own display case or separated from raw product by dividers.
- Wash your hands for at least 20 seconds with soap and warm water *before* and *after* handling any raw food.
- Wash cutting boards, dishes, utensils, and counter tops with soap and hot water between the preparation of raw foods, such as seafood, and the preparation of cooked or ready-to-eat foods.

- For added protection, kitchen sanitizers can be used on cutting boards and counter tops after use. Or use a solution of one tablespoon of unscented, liquid chlorine bleach to one gallon of water.
- If you use plastic or other non-porous cutting boards, run them through the dishwasher after use.

Picnic Tip: A Clean Cooler Is Critical
Be sure to clean coolers with hot soapy water before packing cooked seafood. Cleaning is especially important if the cooler was previously used to transport raw seafood. A clean cooler prevents harmful bacteria from the raw fish from contaminating cooked seafood or other foods.

Prepare Safely

Thawing
Thaw frozen seafood gradually by placing it in the refrigerator overnight. If you have to thaw seafood quickly, either seal it in a plastic bag and immerse it in cold water or — if the food will be cooked immediately thereafter — microwave it on the "defrost" setting and stop the defrost cycle while the fish is still icy but pliable.

Cooking
Most seafood should be cooked to an internal temperature of 145ºF. If you don't have a food thermometer, there are other ways to determine whether seafood is done.

Fish: The flesh should be opaque and separate easily with a fork

Shrimp and Lobster: The flesh becomes pearly and opaque

Scallops: The flesh turns opaque and firm

Clams, Mussels, and Oysters: The shells open during cooking — throw out ones that don't open

Uncooked spoiled seafood can have an ammonia odor. This odor becomes stronger after cooking. If you smell an ammonia odor in raw or cooked seafood, do not eat it.

Serving
Follow these serving guidelines once your seafood is cooked and ready to be enjoyed.

- Never leave seafood or other perishable food out of the refrigerator for more than 2 hours or for more than 1 hour when temperatures are above 90ºF. Bacteria that can cause illness grow quickly at warm temperatures (between 40ºF and 140ºF).
- Carry picnic seafood in a cooler with a cold pack or ice. When possible, put the cooler in the shade and keep the lid closed as much of the time as you can.
- When it's party time, keep hot seafood hot and cold seafood cold:
    - Divide hot party dishes containing seafood into smaller serving platters. Keep platters refrigerated until time to reheat them for serving.
    - Keep cold seafood on ice or serve it throughout the gathering from platters kept in the refrigerator.

Eating Raw Seafood -What You Need To Know

It's always best to cook seafood thoroughly to minimize the risk of foodborne illness. However, if you choose to eat raw fish anyway, one rule of thumb is to eat fish that has been previously frozen.

- Some species of fish can contain parasites, and freezing will kill any parasites that may be present.
- However, be aware that freezing doesn't kill *all* harmful microorganisms. That's why the safest route is to cook your seafood.

An Important Note About Oysters:
Some oysters are treated for safety after they are harvested. That information may or may not be on the label. However, these oysters should still **not be eaten raw by people at risk** for foodborne illness. The post-harvest treatment eliminates some naturally occurring pathogens, but it does not remove all pathogens that can cause illness.

Special Health Notes

Keep in mind that some people are at greater risk for foodborne illness, and should not eat raw or partially cooked fish or shellfish. These susceptible groups include:

- Pregnant women
- Young children
- Older adults
- Persons whose immune systems are compromised
- Persons who have decreased stomach acidity

If you are unsure of your risk, ask your healthcare provider.

Smoked Seafood: *Avoiding Listeriosis*

Pregnant women, older adults, and people with weakened immune systems have an increased chance of getting a foodborne illness called listeriosis. If you are in one of these groups, there is a simple step you can take to reduce your chance of contracting the listeriosis disease from seafood:

- Avoid refrigerated types of smoked seafood except in a cooked recipe, such as a casserole. Refrigerated smoked seafood, such as salmon, trout, whitefish, cod, tuna, or mackerel, is usually labeled as "nova-style," "lox," "kippered," "smoked," or "jerky" and can be found in the refrigerated section of grocery stores and delicatessens. They should be avoided.
- You needn't worry about getting listeriosis from canned or shelf-stable smoked seafood.

Special Health Notes For Moms and Moms-to-Be

If you are pregnant, nursing your child, or thinking about becoming pregnant, it is important that you avoid consuming too much methylmercury. This substance can be found in certain fish, and it can harm an unborn child's developing nervous system if eaten regularly.

Don't Eat . . .

Avoid these four fish species:

- Shark
- Swordfish
- King mackerel
- Tilefish

However, don't deny yourself or your unborn baby the nutritional benefits of fish - you can eat 12 ounces (2 average meals) a week of other types of cooked fish, as long as you eat a variety of kinds that are lower in mercury. This same advice should be followed when you're feeding fish and shellfish to your young child, but serve smaller portions.

Do Eat . . .

Five of the most commonly eaten fish that are low in mercury are:

- Shrimp
- Canned light tuna *
- Salmon

- Pollock
- Catfish

"Local Catch" Alert:

Be sure and check local advisories about the safety of fish caught by family and friends in your local lakes, rivers, and coastal areas.

* Another commonly-eaten fish, albacore ("White") tuna, has more mercury than canned light tuna. So, when choosing your two meals of fish and shellfish, you may eat up to 6 ounces (one average meal) of albacore tuna per week.