



Eating Fish is Healthy: Keeping Environmental and Health Concerns in Perspective

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Being Savvy about Seafood

Seafood can be a safe and nutritious food and should be part of a healthy diet. To gain the disease prevention benefits of seafood, consumers need to make informed choices on the amount, types, and preparation of fish. Recent statistics from the Food and Drug Administration (FDA) indicate that less than 1 % of all food borne illnesses are related to seafood. Certain at-risk groups such as pregnant women, small children and women of child-bearing age need to be more careful on the amount, type, and preparation of the fish they choose to eat. Read on to learn more about choosing, preparing, and storing seafood.

Benefits of Eating Fish

The U.S. Department of Agriculture, U.S. Department of Health and Human Services, the American Dietetic Association, and the American Heart Association recommend eating 2 to 3 fish meals per week. Fish is a low-fat source of protein that may help to lower blood cholesterol. In addition, fatty, cold water fish like tuna, salmon, sardines, mackerel and lake trout provide essential nutrients known as omega-3 fatty acids. Omega 3 fatty acids found in fish are essential nutrients for normal development. They are needed for brain and blood vessel and heart development of infants and newborns. In adults, omega 3 fatty acids help to make the blood less likely

to form clots that can lead to heart attack or stroke. In addition, recent research has shown that omega 3 fatty acids may help to improve inflammatory and autoimmune diseases and ease the pain of arthritis by reducing inflammation.

Should Eating Fish Be Avoided Because of Methyl Mercury?

No, eliminating an entire type of food or food group from the diet is generally not recommended from a nutritional standpoint. There are key ways to decrease the risk of methyl mercury without denying consumption, good taste, and health benefits of eating fish. Nearly all fish contain some methyl mercury. The levels vary greatly based upon the species, size, and age of the fish. Large predatory, salt water fish such as shark and swordfish, contain the most. Fresh water fish, such as pike and walleye, sometimes have high methyl mercury levels if they swim in polluted waters. In general, the larger and older a fish is, the more likely it will contain methyl mercury because this compound accumulates in the fish over time.

According to the FDA, methyl mercury levels for most fish range from less than 0.01 parts per million (ppm) to 0.5 ppm. In a few species, methyl mercury levels can reach 1 ppm which is the limit allowed by the FDA for fish intended for human consumption. This level is found most often in large fish including shark and swordfish. The FDA is conservative in



protecting the health of Americans and has set its consumption advice 10 times lower than the lowest level associated with mercury poisoning. This conservative level allows for greater protection of everyone at all ages. Both the FDA and the Environmental Protection Agency (EPA) recommend consuming many different types of fish including: shellfish, canned fish, smaller ocean fish, or farm-raised fish.

How Does Methyl Mercury Enter Our Food Supply?

Methyl mercury finds its way into the food chain when naturally occurring mercury from either water or air is deposited into rivers and lakes. Industrial pollution dumped into waterways is another way mercury enters the food supply. Once in the water, bacteria transform the air-borne mercury into methyl mercury. Fish such as shark and swordfish absorb the methyl mercury from the water and also ingest it when they consume algae and other smaller fish.

Who Regulates Methyl Mercury in the Air and Water?

In the U.S. the responsibility for regulating mercury is shared by the EPA and the FDA. The FDA regulates commercially sold fish and seafood and provides consumption advice for consumers, while the EPA regulates the amount of industrial and other forms of mercury released into the environment. The EPA also works with state governments to develop fresh water fish advisories that reveal where the levels of methyl mercury and other toxins are too great to make fish safe to eat. Check the local advisories before going fishing!

Fish Recommendations for Pregnant Women, Young Women & Children

Pregnant women and women who may become pregnant, nursing mothers, and young children

should avoid eating large quantities of predatory fish including shark, swordfish, tilefish, tuna, and king mackerel. For pregnant and nursing women, a safe intake of these fish (according to the EPA) is about 6 ounces of cooked fish for adults and 2 ounces for young children per week. The FDA and EPA both recommend consuming many different types of fish.

Fish Recommendations for the General Population

The general public can eat “safe” fish from non-polluted water 2 to 3 times weekly. Try seafood purchased in the food store like salmon, haddock, sole, shrimp, or fish sticks. Varieties may be fresh, frozen or canned. Adults can eat up to 12 ounces of safe fish per week. A serving of safe cooked fish for adults is about 3 to 6 ounces and for children is about 2 ounces.

Choosing Fresh Seafood

Buy only fresh seafood and from reputable sources. The freshest, safest seafood is sold at markets that look and smell clean and are free of insects. Be wary, for example, of vendors selling fish out of the back of trucks.



Fresh fish should be refrigerated or placed on a bed of ice, preferably in a refrigerated case. The fish should be placed belly down so the melting ice

drains away from the fish. For the freshest fish, look for fish that:

- have a fresh, mild smell; no fishy or ammonia-like odor.
- are glistening and injury-free with bright, clear shiny eyes.
- are firm having shiny flesh and bright red gills.
- have flesh that springs back when pressed and no mushy texture.
- have no brown or yellow discoloration and no darkening around cut edges.
- have moist flesh that is not dry in any area.
- have a “sell by” or “use by” date that is current.

Look for shellfish, such as oysters, clams, and mussels that are tightly closed or that close up when the shell is tapped. Avoid those with cracked or broken shells. Discard shellfish that were purchased alive if they died during storage.

After purchasing fresh seafood, store it in the coldest part of your refrigerator for up to 2 days after purchase. Place seafood on a loosely covered plate to let air circulate freely around it. If freezing the fish, wrap and then place in a plastic freezer bag to keep it fresh. Keep live shellfish in containers covered with water or damp cloths, not airtight lids. Recreational fishers who plan to eat their catch should follow state and local government advisories about fishing in safe waters.

Choosing Frozen Fish

Here are some guidelines to ensure the quality of frozen fish:

- frozen fish packages should be clean and tightly sealed. Do not buy frozen seafood if the packages are open, torn, crushed, or water stained.
- avoid packages of fish in the store’s freezer unit that are above the frost line.

- check for ice crystals inside the package. This could mean the fish has thawed or has been refrozen and is not of highest quality.
- avoid fish that has white or dark spots, is discolored or faded, or has freezer burn which dries out the fish.

Preparing Seafood

Follow these steps when thawing and preparing seafood to avoid cross-contamination between raw and cooked foods:

- gradually defrost in the refrigerator overnight for best results in maintaining quality. If you must thaw fish quickly, seal it in a plastic bag and immerse in cold water for about an hour. Or, microwave on the “defrost” setting, but stop the defrost cycle while the fish is still icy but pliable.
- marinate seafood in the refrigerator NOT on the kitchen counter. Throw away the marinade after use because the raw juices may contain bacteria.
- wash hands thoroughly with hot, soapy water for 20 seconds before and after handling any raw fish.
- after using a cutting board for raw fish, wash with hot, soapy water and a scrub brush to remove food particles. Sanitize the board by putting it through the automatic dishwasher or rinse cycle with a solution of 1 teaspoon (5 milliliters) of chlorine bleach to one quart of water.

Cooking fish is a must for those at-risk. The young and old, along with persons with liver disease, diabetes, stomach problems, cancer, immune disorders including HIV infection and lupus should not eat raw seafood. The FDA recommends cooking most seafood to an internal temperature of 145 degrees Fahrenheit (63 degrees Celsius) for 15 seconds. Check the internal temperature of cooked fish using an instant read thermometer.

In summary, the 3 important messages when eating fish are: (1) to eat a variety of fish rather than concentrating on one species, (2) recreational fishers should follow state and local advisories about where it is safe to catch fish, (3) handle fish safely before preparing and eating it because it could be harmful instead of healthful.



References:

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