

## Choose Healthful Seafood

Fish are heart healthy sources of high-quality protein, essential fatty acids, omega 3 fats and other nutrients. They are versatile, quick-to-fix and flavorful additions to any menu, and are fairly low in calories. Many are also low in cost. Savvy consumers can enjoy seafood meals and get all of the health benefits of eating fish. But be aware to avoid risks associated with too much mercury by following the national advisories issued by U.S. EPA and U.S. FDA, along with those of your state and local health authorities.

Eating smaller and younger fish, non-predator or pan fish, and non-fatty fish reduces your intake of possible pollutants. Additionally, trimming off the skin and fat before eating fish reduces some contaminant levels, but does not affect mercury levels. Some kinds of fish are known to have much lower than average levels of methyl mercury and can be safely eaten more frequently and in larger amounts, according to the FDA. Fish species that are lowest in mercury include pan fish (crappie, blue gill, sunfish, etc.), which eat bugs and small fish, such as minnows. Other fish that are low in mercury include: catfish (farmed), blue crab (mid-Atlantic), croaker, fish sticks, flounder (summer), haddock, trout (farmed), salmon (wild Pacific), and shrimp. Young predatory fish of those species that contain mercury have lower mercury levels than do older fish of the same species.

**Men, and women who do not intend to become pregnant**, should follow the recommendations of their state or local health department on the amount of fish caught by family and friends that is safe to eat. Federal, state or local health departments, or another appropriate food safety authority, can be contacted for specific consumption recommendations about fish caught or sold in your local area. For example, freshwater fish caught in Kansas rivers and lakes currently do not have consumption advisories for mercury, but may have harmful levels of other pollutants, such as the insecticide chlordane. They recommend limiting consumption of fish caught in any urban stream to one 5-ounce meal per month, or 12 per year. The Wisconsin and Minnesota Departments of Health recommend that women not intending to become pregnant, and men, limit their consumption of shark, swordfish, king mackerel or tilefish to one meal per month. Wisconsin recommends that this group limit their consumption of fresh tuna steak, halibut and orange roughy to one meal per week, and both states recommend eating large predatory freshwater fish, such as walleye, northern pike, smallmouth bass, largemouth bass, channel catfish, flathead catfish, white sucker, drum, burbot, sauger, carp, white bass, rock bass and other similar species no more frequently than one meal per week. Non-predator fish such as sunfish, crappie, yellow perch and bullheads have lower levels of methyl mercury, and have no precautions regarding consumption among men and women who do not intend to become pregnant.

**Women who are or could become pregnant, breastfeeding mothers, and young children less than 15 years of age** should be particularly careful in choosing the kind of fish they choose to eat most often. They are advised NOT to eat shark, swordfish, king mackerel, or tilefish, since these fish species contain high levels of harmful levels of the pollutant mercury. According to the FDA, pregnant women or women who may become pregnant, nursing mothers, and young children can safely eat up to 12 ounces per week of cooked fish purchased in restaurants and stores, if they choose a variety of different species, such as shellfish, canned fish, smaller ocean fish, or farm-raised fish. The FDA advice is that “there is no harm in eating more than 12 ounces of fish in one week as long as you don’t do it on a regular basis. One week’s consumption does not change the level of methyl mercury in the body much at all. If you eat lots of fish one week, you can cut back the next week or two and be just fine. Just make sure you average 12 ounces of fish a week, or less.”

Some states advise pregnant women or women intending to become pregnant, breastfeeding mothers, and children less than 15 years of age to limit their fish consumption more specifically. For instance, the Wisconsin and Minnesota Departments of Health advise this population group to avoid eating walleye larger than 30 inches, northern pike longer than 30 inches, and muskellunge. They also recommend this group eat no more than one meal per month of fresh tuna steak, halibut and orange roughy, or freshwater fish such as walleye shorter than 20 inches, northern pike shorter than 30 inches, smallmouth or largemouth bass, channel catfish, flathead catfish, white sucker, drum, burbot, sauger, carp, white bass, rock bass and other similar species; and no more than one meal a week of cod, pollock, haddock or canned tuna (6 oz.), or freshwater fish such as sunfish, crappie, yellow perch, bullheads; and no more than two or three meals per week of fresh or canned salmon, or shellfish.

For women who are pregnant or may become pregnant, and nursing mothers, eating freshwater fish caught by friends and family should be limited, too. The EPA recommends eating no more than 6 ounces of cooked freshwater fish per week, which is about 8 ounces before it is cooked. Young children should eat no more than 2 ounces of cooked freshwater fish per week, or about 3 ounces before it is cooked. Therefore, if in a given week you eat 12 ounces of cooked fish from a store or restaurant, then do not eat fish caught by your family or friends that week. This is important to keep the total level of methyl mercury contributed by all fish at a low level in your body.

The pollutant mercury can damage the developing nervous system of an unborn child or a young child and can lead to slow development, learning problems or brain damage, for instance. The developing nervous system of an unborn baby and young child is more sensitive to the harmful effects of eating mercury-contaminated fish frequently and in large amounts than the more fully developed nervous system of an older teen or adult. Long-term exposure to mercury can cause permanent damage to the brain and kidneys of frail persons of any age. The detrimental effects of low-level, long-term exposure may be irreversible, particularly to the brain and kidneys. Mercury has not been shown to cause cancer. Your body can eliminate mercury after you eat it, so limiting the number of meals you eat of certain fish each week or month reduces the amount of mercury that can accumulate in your body. Other pollutants that are present in fish living in certain rivers or lakes, such as PCB contaminants, cannot be eliminated from your body, however. There can be a risk of contamination in fresh waters from either natural or industrial causes. For instance, mercury occurs naturally in the environment and it can also be released into the air through industrial pollution. Mercury falls from the air and can get into surface water, accumulating in streams and oceans. Bacteria in the water cause chemical changes that transform mercury into methyl mercury, which can be toxic. Fish absorb methyl mercury from water as they feed on other aquatic organisms. Larger fish that feed on large fish accumulate the most methyl mercury.

For more information about healthy eating, contact your local extension office or log on to [www.ksre.ksu.edu/humannutrition](http://www.ksre.ksu.edu/humannutrition). The Kansas Food Assistance Program can help people of all ages with low income buy nutritious foods for a better diet. To find out more, call 1-888-369-4777. Information in this fact sheet is for educational purposes only. Follow the advice of your health care provider. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, credit Mary Meck Higgins, Ph.D., R.D., L.D., Associate Professor, Department of Human Nutrition, *Choose Healthful Seafood*, Kansas State University, Revised Feb. 2012. **Kansas State University Agricultural Experiment Station and Cooperative Extension Service, Manhattan, KS.** Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned. K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture cooperating. Gary Pierzynski, Interim Director.

