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Eat fish often?



**A Minnesota Guide
to Eating Fish**

You already know that Minnesota is the Land of 10,000 Lakes and some excellent fishing. But how much do you know about the fish that you eat?

Fish are an excellent food — they're a great source of protein, vitamins and minerals, and are low in saturated fat. Studies have shown that eating fish may help prevent heart disease in adults. **And most fish are healthy to eat.**

However, *any fish* (store-bought or sport-caught) could contain contaminants such as mercury or PCBs that could harm human health — especially the development of children and fetuses.

What should you do?

There's no need to stop eating fish. **But if you wish to reduce your exposure to contaminants, you need to make wise choices about the kinds of fish you eat and how often you eat fish.** Begin by checking the Safe Eating Guidelines in this brochure to see if you and your family need to make changes. By following these guidelines, you can reduce your exposure to the contaminants in fish, help reduce your health risks, and still get the benefits of eating fish.

Tips for reducing contaminants in fish

You can't see, smell or taste the mercury or PCBs in fish. That's why it's important to know which fish are safer than others to eat. Larger fish, older fish and fatty fish have higher amounts of contaminants. Fish that feed on other fish — such as walleyes, northern pike and bass — have the highest amounts of mercury in their meat.

Remember the following tips when eating fish:

- 1 Eat smaller, younger fish.
- 2 Eat more panfish (sunfish, crappie) and fewer predator fish (walleyes, northern pike, lake trout).
- 3 Trim skin and fat, especially belly fat. Also, eat fewer fatty fish such as carp, catfish and lake trout. PCBs build up in fish fat. For instructions on cleaning and cooking fish properly, see page 4 in this brochure.



Meal Size and Preparation

What is a meal of fish?

The amount of fish in a meal depends on your body weight. A person's weight is important, because body size affects how the body processes contaminants.

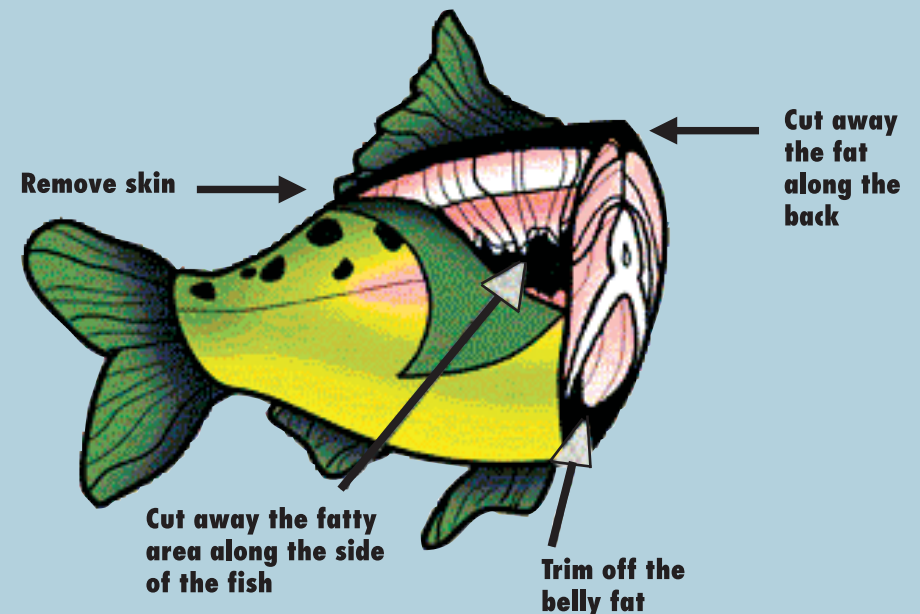
If you weigh 150-pounds, you could safely eat 8 ounces of fish in a meal (precooked weight) to stay within the MDH fish consumption guidelines.

To adjust the meal size for a lighter or heavier weight - subtract or add 1 ounce of fish for every 20 pounds of body weight. For example, one meal would be:

- 7 ounces for a 130-pound person, and
- 9 ounces for a 170-pound person.

Clean and cook fish properly to deal with contaminants

Mercury cannot be removed through cooking or cleaning — it gets into the flesh of the fish. However, you can reduce the amount of other contaminants like PCBs by removing fat when you clean and cook fish.



Safe Eating Guidelines

The following Safe Eating Guidelines (provided in the two tables on pages 2 and 3) are based on mercury or PCB levels measured in fish throughout Minnesota and on levels of mercury found in commercial fish. Not all waters in Minnesota have been tested for contaminants in fish. But the Safe Eating Guidelines can be used for *both* tested and untested waters.

In addition to these general Safe Eating Guidelines, the Minnesota Department of Health also provides specific advice for lakes and rivers that have been tested.

➤ For specific lake and river advice, contact the Minnesota Department of Health at the phone numbers or Web site listed on the back of this brochure.

Guidelines for men, and for women not planning to become pregnant

Kind of fish you eat	How often can you eat it?*
Fish caught in Minnesota:	
Sunfish, crappie, yellow perch, bullheads	➔ unrestricted
Walleyes, northern pike, smallmouth bass, largemouth bass, channel catfish, flathead catfish, white sucker, drum, burbot, sauger, carp, lake trout, white bass, rock bass, whitefish, other species	➔ 1 meal a week
Commercial fish:	
Limit the following species: shark, swordfish, tile fish, king mackerel	➔ 1 meal a month

* In general, adults who eat fish just during vacation or one season can eat fish twice as often as recommended in these guidelines.

Pregnant women, women planning to become pregnant and children under age 15

If you are pregnant, planning to become pregnant, breastfeeding or have children under age 15, you and your children are more sensitive to contaminants. You need to be more careful about the kinds of fish you eat and how often you eat fish.

➤ Fish from some Minnesota lakes and rivers have been found to have higher levels of mercury or PCBs. If you eat certain fish from these waters, you should eat it *less often* than the guidelines below. For further information on restrictions for eating fish from specific Minnesota lakes and rivers, contact the Minnesota Department of Health at the phone numbers or Web site listed on the back of this brochure.

Guidelines for pregnant women, women planning to become pregnant and children under age 15

Kind of fish you eat	How often can you eat it?*
Fish caught in Minnesota:	
Sunfish, crappie, yellow perch, bullheads	➔ 1 meal a week
AND	
Walleyes shorter than 20 inches, northern pike shorter than 30 inches, smallmouth bass, largemouth bass, channel catfish, flathead catfish, white sucker, drum, burbot, sauger, carp, lake trout, white bass, rock bass, whitefish, other species	➔ 1 meal a month
Walleyes longer than 20 inches, northern pike longer than 30 inches, muskellunge	➔ Do not eat.
Commercial fish:	
• Shark, swordfish, tile fish, king mackerel	➔ Do not eat.
• Other commercial species, including canned tuna	➔ See MDH's brochure, "A Family Guide to Eating Fish."

* These guidelines apply even if eating fish just during a vacation or for just one season.

Q. What are the contaminants found in fish and where do they come from?

A. In Minnesota, mercury is the contaminant in fish that causes the most concern. Air pollution is the major source of mercury that contaminates the fish in Minnesota's lakes and rivers. About 70 percent of the mercury in the air is the result of emissions from coal combustion, mining, incineration of mercury-containing products and other human sources. Over time, fish can accumulate relatively high mercury concentrations. That's why it's important to make wise choices about the fish you eat and how often you eat it.

There are also other contaminants in fish, including PCBs and PFCs. PCBs are man-made substances that were banned in 1976.

Levels have declined, but PCBs are still found in the environment. Perfluorochemicals (PFCs) are a family of manmade chemicals that have been used for decades to make products that resist heat, oil, stains, grease and water.

Q. Which lakes and rivers have fish with contaminants?

A. All fish contain some mercury. It may seem surprising, but fish from lakes in the northeastern portion of Minnesota generally have higher levels of mercury. Although many of these lakes are relatively pristine, airborne contaminants still fall on them. Unfortunately, the sensitive natural water chemistry in these lakes efficiently turns non-harmful forms of mercury into a potentially harmful form. As a result, fish in these lakes accumulate more mercury.

PCBs are found mainly in Lake Superior and major rivers such as the Mississippi River. PFOS (Perfluorooctane sulfonate), a chemical in the PFC group, has been measured in fillets of several species of fish from the Mississippi river and metro lakes. The Minnesota Pollution Control Agency is leading an investigation into environmental contamination from perfluorochemicals.

Q. How can mercury, PCBs and PFOS in fish harm me?

A. In adults, prolonged exposure to mercury can damage your kidney and nervous system. It may cause tingling, prickling or numbness in hands and feet or changes in vision. Exposure to PCBs may increase the risk of cancer. Studies of laboratory animals exposed to low levels of PFOS show decreases in high-density lipoprotein (HDL or good cholesterol) and changes in thyroid hormone levels.

Q. How can they harm children and babies?

A. Young children, developing fetuses and breast-fed babies are at most risk, because small amounts of mercury can damage a brain that is just starting to form or grow. Too much mercury may affect a child's behavior and lead to learning problems later in life. Babies who are exposed to PCBs during pregnancy may have lower birth weight, reduced head size and delayed physical development.

► For more information, and a copy of the brochure, "A Family Guide to Eating Fish," contact the Minnesota Department of Health at the phone numbers or Web site listed on the back of this brochure.

Q. What can be done to reduce the amount of mercury in fish?

A. Mercury is found in many common household items, such as fever and cooking thermometers, thermostats and fluorescent lamps. One of the best ways to keep mercury out of the home and the environment is to avoid purchasing mercury-containing products and use mercury-free alternatives. When discarding products containing mercury, it is important to dispose of them properly. Using less energy and supporting alternative energy sources also reduces mercury in the environment.

► For more information about preventing and reducing pollution, contact the Minnesota Pollution Control Agency at the phone numbers or Web site listed on the back of this brochure.



For More Information

Call or visit us on the Web:

Minnesota Department of Health
www.health.state.mn.us/divs/eh/fish/index.html

651/201-4911

1-800-657-3908

TDD: 651/201-5797

Minnesota Department of Natural Resources
www.dnr.state.mn.us

651/296-6157

1-800-MINNDNR

TTY: 651/296-5484 or 1-800-657-3929

Minnesota Pollution Control Agency
www.pca.state.mn.us (search for mercury, PCBs or PFOS)

651/296-6300

1-800-657-3864

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