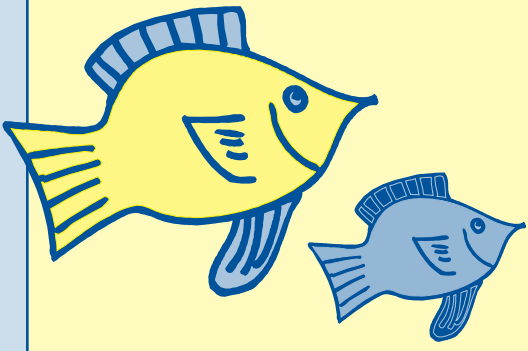
A Family Guide to Eating Fish



Safe eating guidelines for fish from Minnesota lakes and rivers, and for fish bought in restaurants and stores.

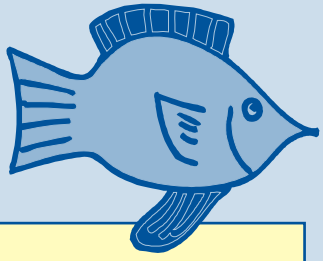
MINNESOTA
MDH
DEPARTMENT OF HEALTH

Fish are an excellent low-fat food. Eat a variety of fish as part of your balanced food choices.

There are many reasons to enjoy a variety of fish often:

- Fish are a great source of protein, vitamins and minerals.
- The oils found in fish are important for unborn and breast-fed babies.
- Eating fish may play a role in the prevention of heart disease in adults.

However, fish may contain contaminants that could harm you or your family if you eat certain types of fish or eat fish too often.



If you are pregnant, planning to be pregnant, breastfeeding or have young children, read on to learn how to include fish as part of healthy, balanced food choices.

This brochure will help you to:

- decide *which fish* to eat
- determine *how often* to eat fish
- identify fish high in contaminants

Do you eat...

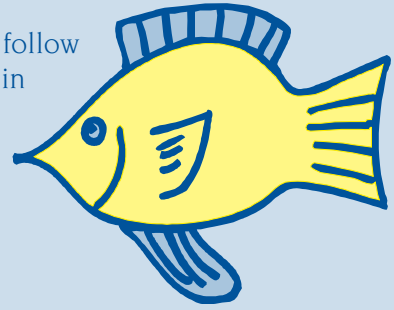
- **large walleyes or northern pike?**
- **canned "white" tuna, fresh tuna or halibut more than once a month?**
- **swordfish or shark?**

If so, you may need to change the *kinds of fish* you eat or *how often* you eat fish.

Your body can handle some exposure to contaminants. However, a developing child or unborn baby can handle less than an adult. If you are pregnant, planning to be pregnant or breastfeeding, you need to be more careful.

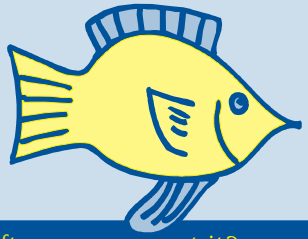
Should I just stop eating fish?

NO ...
just be sure to follow the guidelines in this brochure.



This brochure was produced as a collaborative effort between the Minnesota Department of Health and dietitians from HealthPartners, Inc.

What kinds and how much fish should I eat?



The following guidelines are for women of child-bearing age and children under 15 years of age.

Kind of fish	How often can you eat it?
Catfish (farm-raised), cod, crab, flatfish, herring, oysters, pollock, salmon*, sardines, scallops, shrimp, tilapia, and other purchased fish low in mercury *salmon - farm raised or wild, Pacific and Atlantic - not Great Lakes	2 meals per week
OR	
Canned "light" tuna **Minnesota caught:** Sunfish, crappie, yellow perch, bullheads	1 meal per week
AND	
Canned "white" tuna, chilean seabass, grouper, halibut, marlin, orange roughy, tuna steak **Minnesota caught:** Bass, catfish, walleye shorter than 20 inches, northern pike shorter than 30 inches, and other MN gamefish	1 meal per month

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 one-half pound/8 ounces of fish in a meal (precooked weight) to stay within the MDH fish consumption guidelines.

How to Follow the Consumption Guidelines -- Example of fish choices for one month:

1 meal of halibut
AND
Week 1: 1 meal of catfish (farm-raised) and 1 meal of tilapia
Week 2: 1 meal of MN-caught Bluegill
Week 3: 2 meals of salmon
Week 4: 1 meal of canned light tuna

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:

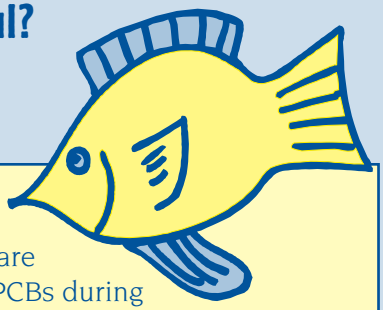
- 7 ounces for a 130-pound person, and
- 9 ounces for a 170-pound person.

Be sure to space out meals thoughout the month. For example, don't eat all of your fish meals for the entire month within a few days. Give your body time to handle the contaminants in-between fish meals.

Don't eat:
Shark, swordfish, tile fish, king mackerel
Minnesota caught: walleye longer than 20 inches, northern pike longer than 30 inches, muskellunge

How can contaminants in fish be harmful?

Fish advisories in Minnesota are based on levels of mercury, PCBs and PFOS in the fish.



Mercury

Small amounts of mercury can damage a brain that is just starting to form or grow. That's why young children, unborn and breast-fed babies are at most risk. Too much mercury may affect a child's behavior and lead to learning problems later in life.

Mercury can also harm older children and adults, but it takes larger amounts. It may cause tingling, prickling or numbness in hands and feet or changes in vision.

PCBs

Babies who are exposed to PCBs during pregnancy may have lower birth weight, reduced head size and delayed physical development. Exposure to PCBs may also cause cancer.

PFOS

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. The concern about PFOS is with long-term exposure: Consuming larger amounts of fish over a long period of time.

By following the guidelines in this brochure, you can reduce your exposure to the contaminants in fish and help reduce your health risks.

Methods for cleaning and cooking fish:

Mercury and PFOS are not removed through cooking or cleaning. However, by removing fat when you clean and cook fish, you *can* help to reduce the amount of other contaminants like PCBs.

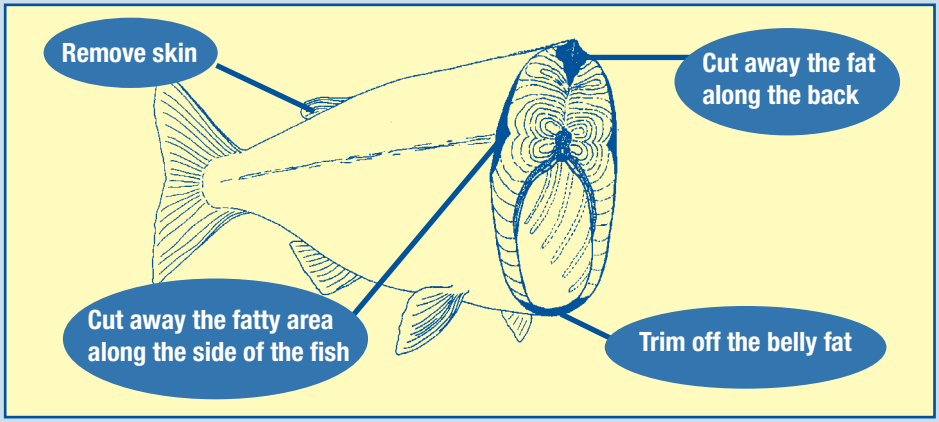


Diagram from Wisconsin Fish Advisory

Where do the contaminants in fish come from?

Mercury in Minnesota's lakes and rivers comes from air pollution. 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. All fish have some mercury.

PCBs are man-made substances that were once used in electrical transformers, carbonless papers, cutting oils and hydraulic fluids. PCBs were banned in 1976. Although levels have declined, PCBs are still found in the environment. They are found mainly in the Great Lakes and major rivers such as the Mississippi River.

PFOS (Perfluorooctane sulfonate), a chemical in the perfluorochemical (PFC) group, has been measured in fillets of several species of fish from the Mississippi River and metro lakes. PFCs are a family of manmade chemicals that have been used for decades to make products that resist heat, oil, stains, grease and water. The Pollution Control Agency is leading an investigation into environmental contamination from perfluorochemicals.

For more information on fish consumption guidelines call 651/201-4911 or 1-800-657-3908 or visit our Web site at www.health.state.mn.us

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IC #141-0709
March 2009