

Report to the Boards of Health

Jennifer Morse, MD, MPH, FAAFP, Medical Director


Mid-Michigan District Health Department, Wednesday, May 25, 2022
 Central Michigan District Health Department, Wednesday, May 25, 2022
 District Health Department 10, Friday, May 20, 2022



Eat Safe Fish


The American Heart Association recommends we get one to two meals per week of non-fried fish or shellfish, especially if it replaces a less health choice. This recommendation is based on large amounts of research that shows the benefit fish has on preventing heart disease, stroke, heart failure, sudden cardiac death, and congestive heart failure. Fish are also important during pregnancy, breastfeeding, and early childhood as it provides important nutrients that support a child's brain and spinal cord development and immune system. It is recommended that those who are pregnant or breastfeeding eat between 8 and 12 ounces per week of a variety of seafood from choices that are lower in mercury. Others that are not pregnant are recommended to have at least one serving per week, 8 oz for adults, less for children based on age. Commercial fish choices with lower mercury content and serving sizes for children are listed here:

What is a serving? As a guide, use the palm of your hand.



Pregnancy and breastfeeding:
1 serving is 4 ounces

Eat 2 to 3 servings a week from the "Best Choices" list
(OR 1 serving from the "Good Choices" list).



Childhood:
On average, a serving is about:

- 1 ounce at age 1 to 3
- 2 ounces at age 4 to 7
- 3 ounces at age 8 to 10
- 4 ounces at age 11

Eat 2 servings a week from the "Best Choices" list.

Best Choices	Good Choices																																																												
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What about fish caught by family or friends? Check for [fish and shellfish advisories](#) to tell you how often you can safely eat those fish. If there is no advisory, eat only one serving and no other fish that week. Some fish caught by family and friends, such as larger carp, catfish, trout and perch, are more likely to have fish advisories due to mercury or other contaminants.

www.FDA.gov/fishadvice
www.EPA.gov/fishadvice

FDA U.S. FOOD & DRUG ADMINISTRATION

EPA United States Environmental Protection Agency

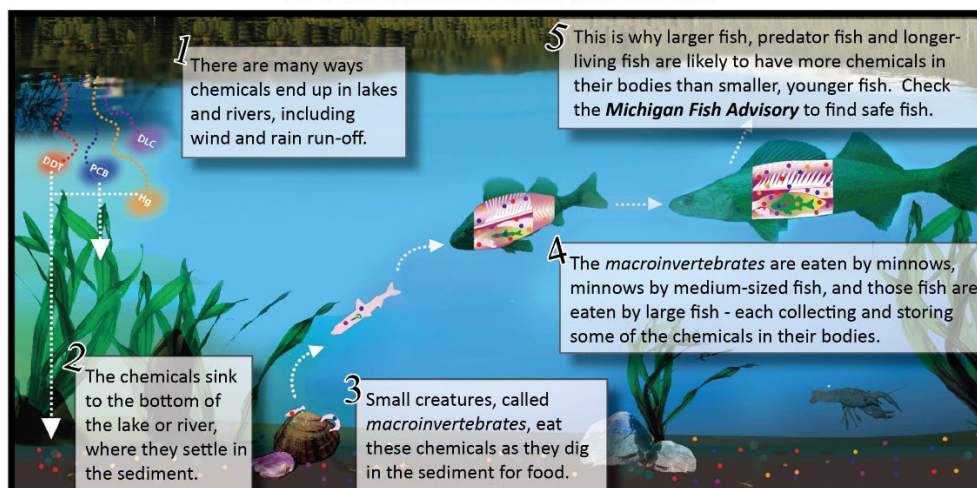
Fish caught locally may also contain chemicals such as mercury as well as PCBs, dioxins, and PFAS and should be chosen wisely to avoid any health risks.

The chemicals that cause Michigan's Eat Safe Fish guidelines

Chemical of Concern	What is it?	Potential Health Problems
DDT (dichlorodiphenyl-trichloroethane)	<ul style="list-style-type: none"> was one of the first modern insecticides was banned in 1972 	<ul style="list-style-type: none"> linked to the development of cancer linked to the development of diabetes
Dioxins	<ul style="list-style-type: none"> are not made on purpose are created when chlorine chemicals are made or used can be released when things that have chlorine in them - like paper or plastic - are burned also can be released from old or poorly contained waste sites or intentional dumping 	<ul style="list-style-type: none"> linked to the development of cancer can harm fertility can harm thyroid function
Mercury	<ul style="list-style-type: none"> is a natural element can be released from smokestacks of coal-fired power plants and other industry 	<ul style="list-style-type: none"> brain development can be harmed in fetuses and children heart function can be harmed in older adults immune system can be harmed
PCBs (polychlorinated biphenyls)	<ul style="list-style-type: none"> were used in electrical equipment - like transformers were found in hydraulic oils 	<ul style="list-style-type: none"> brain development can be harmed in fetuses and children linked to the development of cancer linked to the development of diabetes immune system can be harmed
PFOS (perfluoro octane sulfonate)	<ul style="list-style-type: none"> is used for waterproofing clothes, in fire-fighting foams, papers and packaging, cleaning products, and pesticides is now rarely used in the United States 	<ul style="list-style-type: none"> thyroid function can be harmed brain development can be harmed in fetuses and children
Selenium	<ul style="list-style-type: none"> is a natural element is needed for your body to function, but too much is harmful through mining activities, selenium-rich rock and water got into lakes and rivers 	<ul style="list-style-type: none"> hair loss loss of fingernails fatigue irritability mild nerve damage
Toxaphene	<ul style="list-style-type: none"> was an insecticide for cotton and vegetables and on livestock and poultry was sometimes added to lakes to kill unwanted fish was banned in 1990 	<ul style="list-style-type: none"> immune system can be harmed

These chemicals build up in fish by bioaccumulation. The chemicals polluting our waters build up through the food chain, as shown in the picture below. These chemicals are also persistent, meaning they are very stable and do not break down over time.

Bioaccumulation in Action

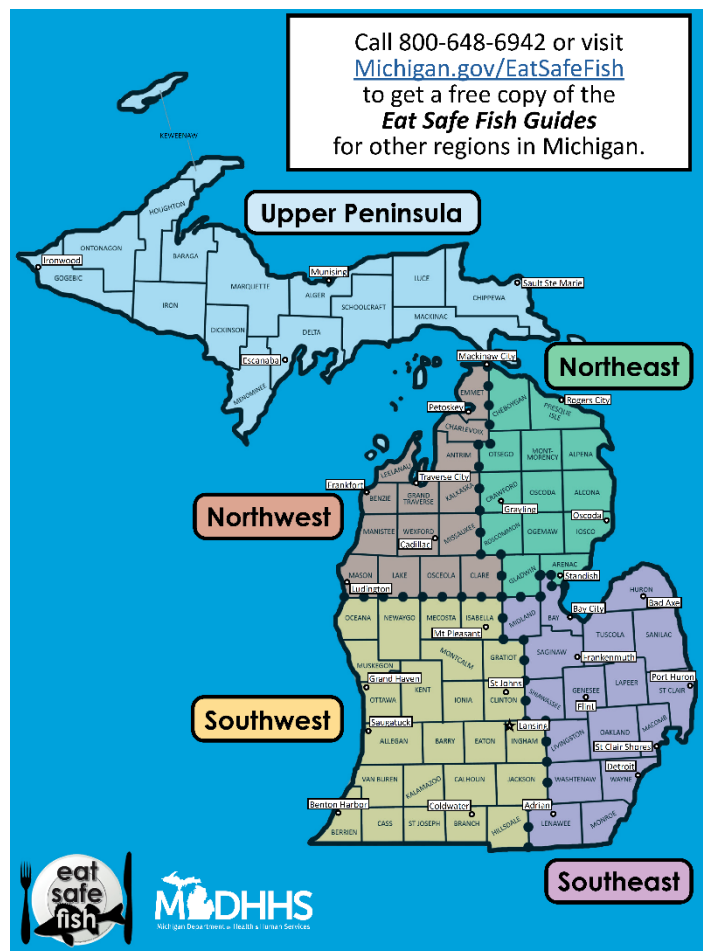


Michigan Department of Health and Human Services (MDHHS) recently updated their [MDHHS Eat Safe Fish Guides](#) which provide guidelines for eating locally caught fish. Test results from the MDHHS Bureau of Laboratories are used to determine what is safe for people to eat over the long-term.

If you are a healthy adult who is not planning on having children in the next several years and you don't fish in an area that has "Do Not Eat" signs posted by MDHHS, then it is usually OK to eat most Michigan fish one or two times a year without looking them up in the *Eat Safe Fish Guide* first. You can't tell if a fish is safe to eat by looking at it, so if you Michigan fish more often than this, you should check the *Eat Safe Fish Guide* to find the safest options from the lake or river that you're fishing. Not everyone will get sick from eating fish contaminated with chemicals and the chemicals in fish usually won't make you sick right away. It is difficult to know who might get sick from the chemicals in fish and how serious it may be so it is best to be safe now to prevent problems later.

Eat Safe Fish Guides can be found here: <https://www.michigan.gov/mdhhs/safety-injury-prev/environmental-health/topics/eatsafefish/find-your-area>

- [Southwest Michigan](#)
- [Southeast Michigan](#)
- [Northwest Michigan](#)
- [Northeast Michigan](#)
- [Upper Peninsula](#)



General safety tips include eating smaller, younger fish as they should have lower levels of chemicals than larger, older fish. Fish that feed on insects, such as bluegill, perch, stream trout, and smelt, should have lower levels of chemicals as they won't as involved in bioaccumulation. For the same reason, avoid fish that feed on the bottom, such as carp. Many of the chemicals in fish are found in the fat (important exception to this is mercury, which is found throughout the meat of the fish). Eat fewer fatty fish, such as lake trout, and remove the fat, as well as the skin and internal organs before you cook the fish. Cook the fish in a way that allows extra fat to drain away, such as broiling, grilling, or baking.

Recommendations:

1. Eat more unfried fish as part of a healthy diet.
2. Be aware of safe fish recommendations from FDA, EPA, and MDHHS to avoid excess mercury and other chemicals.

Sources

- American Heart Association News. 2018. Eating fish twice a week reduces heart stroke risk. <https://www.heart.org/en/news/2018/05/25/eating-fish-twice-a-week-reduces-heart-stroke-risk>
- FDA. 2022. Advice about Eating Fish. <https://www.fda.gov/food/consumers/advice-about-eating-fish/>
- MDHHS. 2014. Eat Safe Fish FAQs. https://www.michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/Folder2/Folder52/Folder1/Folder152/MDCH_EAT_SAFE_FISH_FAQs_WEB.pdf?rev=c266872a585b4fcf8c62adb58570bbff&hash=165F17C811F7337DA9FD4E071B9779E2
- EPA. 2014. Should I Eat the Fish I Catch? https://www.epa.gov/sites/default/files/2015-07/documents/english_updated_fishbrochure.pdf