

## Overview

In 2010-2011, the Washington Department of Ecology did a study to find background levels of chemical contaminants in sediments and fish from Washington lakes and rivers located in Ferry, Stevens, and Pend Oreille Counties. The waterbodies chosen were relatively free from direct human impact.

Fifteen different fish species were collected from 16 different waterbodies and analyzed for a variety of contaminants including mercury, polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and polybrominated diphenylethers (PBDEs). All of these contaminants are persistent bioaccumulative (they stay in the environment a long time and build up in fish and humans that ingest them) and toxic, and pose a hazard for fish and other aquatic life, wildlife, and human health.

The Washington Department of Health analyzed the fish tissue from this study to see if any of the species of fish had high enough levels of chemicals to issue new advice about how much fish people should eat. Because mercury levels in northern pike were much higher than other fish species in the river an advisory was needed.

## Pend Oreille River Fish Consumption Advisory

Due to high mercury levels a fish consumption advisory for northern pike from the Pend Oreille River has been issued. Women who are or might become pregnant, nursing mothers, and young children should not eat northern pike bigger than 24 inches and should limit northern pike smaller than 24 inches to two meals a month.

There is also an existing statewide fish advisory for mercury that affects the Pend Oreille River. Women of childbearing age and young children should not eat northern pikeminnow, and limit largemouth and smallmouth bass to two meals per month.

## What is mercury and how does it get into fish?

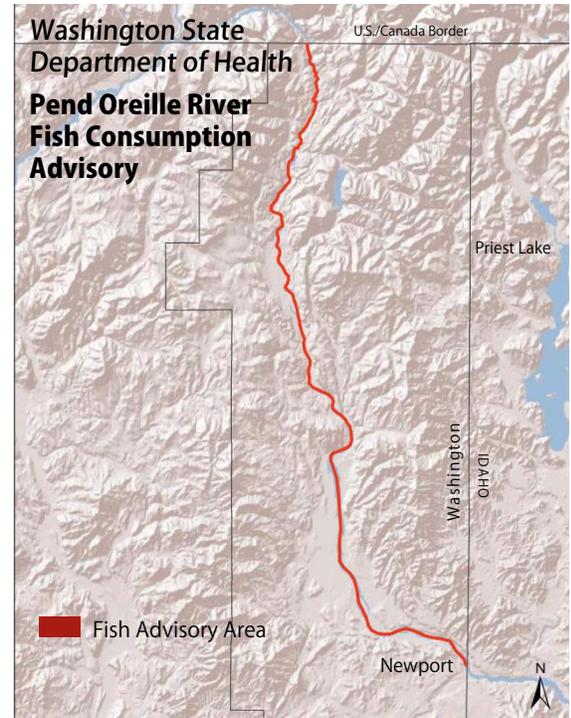
Mercury is an element found in rocks and soil. It can be released into the environment from industrial air pollution and mining operations, and through improper disposal of products that contain mercury such as transformers, thermostats, electrical switches, and fluorescent bulbs.

Mercury enters rivers, lakes, and streams through rain or snow and is directly released from industrial or natural sources. Once it gets into the water, it settles into the sediment. Bacteria in the sediment convert mercury into methylmercury, a more toxic form.

When fish eat smaller organisms contaminated with methylmercury it builds up in the fish's muscles (fillet) and is added to any mercury that was already there. The bigger and older a fish is, the more likely it is to have eaten lots of smaller, contaminated fish. People are exposed to mercury when they eat fish.

## What are the health impacts of mercury?

Mercury can harm the central nervous (brain) and immune systems. If a baby or fetus is exposed to high levels of mercury the child may develop learning and behavioral difficulties. If a person is exposed to high doses over time it can harm organs, including the kidneys and heart. A developing fetus or growing child is more sensitive to mercury than an adult.



## Eat fish, Be Smart, Choose Wisely.

The American Heart Association recommends eating fish at least two times a week as part of a healthy diet. To get the health benefits of eating fish, make smart choices and choose fish low in chemical contaminants.

Removing fish from your diet won't eliminate your exposure to contaminants. Other foods have chemical contaminants in them, too, but mercury and PCBs are mainly found in fish.

Washington State Department of Health is evaluating contaminants in additional fish samples to decide if other fish species should be added to the advisory. Find the most updated fish advisories on our website.

**See the back of this technical summary for more information.**

## Health Benefits of Fish

The American Heart Association recommends eating fish at least two times per week as part of a healthy diet.

- **Fish is nutritious.**

Fish is low in saturated fat and a good source of protein, vitamins, minerals, and omega-3 fatty acids.

- **Fish is good for your heart.**

Omega-3s found in fish help prevent heart disease and stroke by reducing blood pressure, inflammation, and blood clotting.

- **Fish is brain food.**

Omega-3s may help relieve depression and may decrease the risk of Alzheimer's disease.

- Omega-3s during pregnancy may help with the healthy development of a child's brain, retina, and nerve tissue.

To get the health benefits of eating fish, choose fish low in contaminants.

More healthy choices are on our website [www.doh.wa.gov/fish](http://www.doh.wa.gov/fish).

## Contact Information

### Fish Advisory

Department of Health  
Fish Advisories Program  
Toll Free: 1-877-485-7316  
<http://www.doh.wa.gov/fish>

### Contaminant Study

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Fish illustrations © Joseph R. Tomelleri, Duanne Raver USFWS.

# Pend Oreille River Fish Consumption Advisory



Certain types of fish from the Pend Oreille River contain the toxic chemical mercury at levels that may harm your health, depending on how much you eat. If you eat fish from this area follow these recommendations.

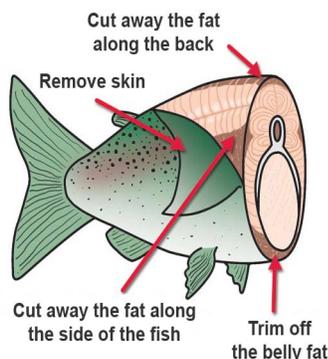
**This is very important for women who are or might become pregnant, nursing mothers, and young children because they are especially at risk for health problems that mercury may cause.**

CAUTION		Meals Per Month*
Northern Pike		Smaller than 24 inches 2 meals per month
Largemouth Bass		2 meals per month
Smallmouth Bass		2 meals per month
DO NOT EAT		
Northern Pike		Bigger than 24 inches DO NOT EAT
Northern Pikeminnow		DO NOT EAT

\* One meal is 8 ounces of uncooked fish for a 160 lb person. If you weigh more or less than 160 lbs, add or subtract 1 ounce for every 20 lbs of body weight.

## Preparing Fish the Healthy Way

Fish are part of a healthy diet. You can make it even healthier if you follow these tips. Some chemicals build up in the fat of fish and can be reduced if you prepare and cook fish correctly. Mercury can't be reduced because it builds up in fish muscle (the fillet).



- When cleaning fish, remove the skin, fat, and internal organs before cooking.
- Grill, bake, or broil fish so that the fat drips off while cooking.
- Eat younger and smaller fish (within legal limits).