

Mercury in Yukon Fish

Yukon fish are safe to eat, and as part of a balanced diet offer many health benefits.

Benefits of eating Yukon fish

Fish is an excellent source of protein, omega-3 fatty acids, and vitamins that are important for good health. A balanced diet that includes fish at least twice per week can also lower the risk of heart disease, stroke and diabetes. In addition to health benefits the social, cultural and economic benefits of harvesting fish are well known. Yukon fish make a very healthy food choice. However, just as in fish available in stores and supermarkets, fish caught in the Yukon may contain trace or small amounts of mercury. In some circumstances, certain people may have to limit their intake to avoid adverse health effects.

Why is mercury in Yukon lakes and rivers?

The most common source of mercury in Yukon lakes and rivers is from natural events such as volcanoes, erosion and forest fires. Mercury is also released from industrial sources and fuel burning. Mercury gets absorbed by plants and animals, and then gets passed on to humans when we eat the plants and animals. Mercury can be found in many of the foods we eat, both those found in grocery stores or in wild harvests of meats, berries, and fish.

What is known about the effects of mercury?

Trace amounts of mercury are not harmful. Toxicity from exposure to very high levels of mercury, such as in industrial spills, have been shown to cause damage to the brain, kidneys, and the development of unborn babies. The effect of exposure to low levels of mercury over long periods of time is less well known. Because their brains are still developing, children up to 12 years old are more susceptible to effects of mercury. Some studies show that mercury exposure may also affect the cardiovascular and immune system. Thus, most guidelines such as Health Canada's guideline for fish consumption, take a cautious approach in avoiding or reducing mercury exposure.

How much mercury is in Yukon fish?

Fish have different levels of mercury depending on the size, location, and type of lake they live in. Mercury levels also vary with the age and eating habits of the fish. Usually younger fish contain less mercury, as do fish that eat insects, such as whitefish. Larger fish, and fish that eat other fish, such as lake trout and burbot, tend to have higher levels of mercury.

Fish in a number of Yukon's larger lakes have been tested for mercury, and most have levels that are below Health Canada's guideline of 0.5ppm (parts per million). However, certain species and sizes of fish have been found to have levels approaching the Health Canada guideline limit.

Is it safe to eat lake trout or burbot?

In general, Yukon adults do not need to limit their intake of lake trout or burbot. However, consuming lake trout and burbot that are less than 65 cm (26 inch) in length would give an extra degree of safety in limiting mercury exposure, and would help to conserve Yukon's fish stocks.



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Women of child-bearing age and children under 12 should limit their consumption of large **Yukon lake trout and burbot** to the levels listed below:

- Less than 40 cm
(or less than 2 lbs) = Unlimited consumption.
- Between 40 and 60 cm
(or between 2-6 lbs): limit to 3 to 4 meals per week.
- Greater than 60 cm
(or more than 6 lbs): limit to 1 or 2 meals per week.

If you are not a female of child-bearing age or you are not under the age of 12, you can eat as much lake trout and burbot as you like.

Women of child-bearing age and children under the age of 12 should also limit their consumption of commercially available swordfish, fresh or frozen tuna and shark. They should only have one serving per month. The general population may have one serving per week.

Is it safe to eat fish other than lake trout or burbot?

All other commonly targeted species of fish, including Arctic grayling, lake whitefish, inconnu, sucker, salmon, and northern pike, have levels well below the guideline. Women who are finding that they are cutting down on consumption of lake trout and burbot should replace those kinds of fish with other fish such as salmon, whitefish and grayling, in order to maintain a healthy level of fish intake.

For women of child-bearing age and children under 12:

- 2 servings of fish per week is an optimum amount.
- Should limit consumption of certain commercially available fish like tuna (see box).
- There are no limits to consumption of whitefish, salmon, grayling, and most other Yukon fish.

Are some lakes safer than others?

Because of earlier concerns about other contaminants, most fish that were sampled were from Lake Laberge and Kusawa Lake. In the absence of definitive data from other lakes, the above guidelines should be followed for fish taken from all Yukon lakes and rivers.

What can I do to minimize my exposure to mercury in fish?

Again, most people do not have to limit consumption of any Yukon fish. However, if you do wish to minimize your exposure to mercury while still enjoying fish, here are a few simple steps:

- Eat smaller, younger fish which tend not to have accumulated significant amounts of mercury.
- Eat fewer amounts of large fish, especially lake trout and burbot. When you do eat large fish, eat smaller meals. Divide up and freeze your catch to make it last.

What about other contaminants apart from mercury?

Persistent organic pollutants, like toxaphene, were previously found to be at levels of concern in Lake Laberge, and for this reason a consumption advisory was issued for that lake. However, toxaphene levels have since decreased and are no longer at levels that pose a risk to the public. No other contaminants of concern have been found in Yukon fish.



photo credit: Mark Connor

A Yukon grayling exploring its natural environment.

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