

# Common questions about methylmercury levels in Alberta fish

## What is methylmercury?

Mercury is a naturally-occurring element found in rocks, soils, water and air. Mercury is released into the air naturally and from household and industrial wastes such as burning coal. Mercury in the air returns to the ground and water with the rain and snow. Mercury in fish found in water bodies in Alberta likely originates from natural sources. Once in a lake, mercury is converted to methylmercury by bacteria or chemical reactions.

## How does methylmercury get into fish?

Fish absorb methylmercury from water as it passes through their gills, or from the prey they eat. It is likely that all fish contain small amounts of mercury because mercury is a naturally occurring element. However, large predatory fish, like walleye and northern pike, accumulate more methylmercury as they consume smaller fish. This is why we often find high levels of methylmercury in large walleye and northern pike caught in the water bodies of Alberta.

Methylmercury is found in all fish tissues, including its flesh. Methylmercury is easily absorbed by humans when eating fish. There is no method of cooking or cleaning fish which reduces the amount of methylmercury in a meal.

## What are the potential health risks of eating mercury-contaminated fish?

Methylmercury builds up in your body over time. Small amounts of mercury can be safely eliminated, but large amounts of mercury in the body may damage the nervous system. An unborn baby is more sensitive to mercury poisoning due to rapid brain development during this period.

## What levels of methylmercury are safe to eat?

People generally benefit from eating fish, but young children and women of child-bearing age or pregnant women may be harmed if they eat too much fish containing high levels of mercury. It is important to know the safe amount of fish you can eat.

Health Canada has set a guideline of 0.5 parts per million (ppm) mercury for retail fish and seafood for people who infrequently eat commercially-produced fish and seafood. For safe consumption amounts of retail fish and seafood, please check the Health Canada website: [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca).

For those who eat fish on a regular day-to-day basis, such as First Nations, Métis and Inuit people, Health Canada recommends limiting fish consumption if the mercury levels in fish are more than 0.2 ppm and under 0.5 ppm.

## Why issue the fish consumption advisory?

The Government of Alberta is responsible for issuing and reviewing fish consumption advisories for fish caught from local water bodies. Fish consumption advisories enable people to make informed decisions about what is a safe amount of fish that can be consumed, while balancing the potential health risks and known health benefits of eating fish. Fish consumption advisories can tell the public which fish should be eaten less or should not be eaten at all depending on the mercury levels in particular species, fish size and water bodies.

## **Who should consider restricting the amount of fish consumption?**

In order to balance the benefits and risk of eating fish, consumption limits in the advisories are recommended for Albertans who eat fish caught from local water bodies on a regular day-to-day basis for their entire life time. These fish consumers, also called a “high intake group,” may include First Nations people and recreational anglers in Alberta.

Different fish consumption limits are provided to four consumer groups: children one to four years old; children five to 11 years old; women of child-bearing age (15 to 49 years old) and pregnant women; and adults, plus children over 12 years old. Because women of child-bearing age and young children are more susceptible to potential health risk posed by exposure to high levels of mercury, they should eat less fish.

## **How much fish can I eat as posted in fish consumption advisories?**

You have to check the recommended fish consumption limit tables. If mercury levels are over 0.5 ppm, you will see an “avoid” indicator for women of child-bearing age and pregnant women, and young children. Adults and children over 12 years old can eat the recommended amount of fish as posted in the tables.

You can eat certain amounts of fish having mercury levels under 0.5 ppm. Please check carefully the location of water bodies, fish species and fish size. For example, if you catch northern pike over three pounds from the Red Deer River (downstream at the mouth of the Blindman River), women of child-bearing age and pregnant women can eat four servings per week, children aged five to 11 years can safely consume two servings per week, and children aged one to four years can eat one per week. Adults and child over 12 years old can eat northern pike without restricting the serving size.

If you catch northern pike less than three pounds from the Red Deer River (downstream at the mouth of the Blindman River), you can eat more servings than the amounts posted in the tables. If you catch other types of fish (not walleye, northern pike and mountain whitefish) from the Red Deer River (downstream at the mouth of the Blindman River), you can eat fish without restricting the serving size.

## **How do you estimate the amount of fish being eaten?**

One serving equals 75 grams, ½ cup, 2.5 ounces, or a piece of cooked fish that fits into the palm of your hand.

## **Are there other rivers and lakes in Alberta that contain fish consumption advisories for mercury?**

Currently there are mercury advisories posted in Alberta Guide to Sportfishing Regulation and at: <http://www.albertaregulations.ca/fishingregs/> under “helpful information.”