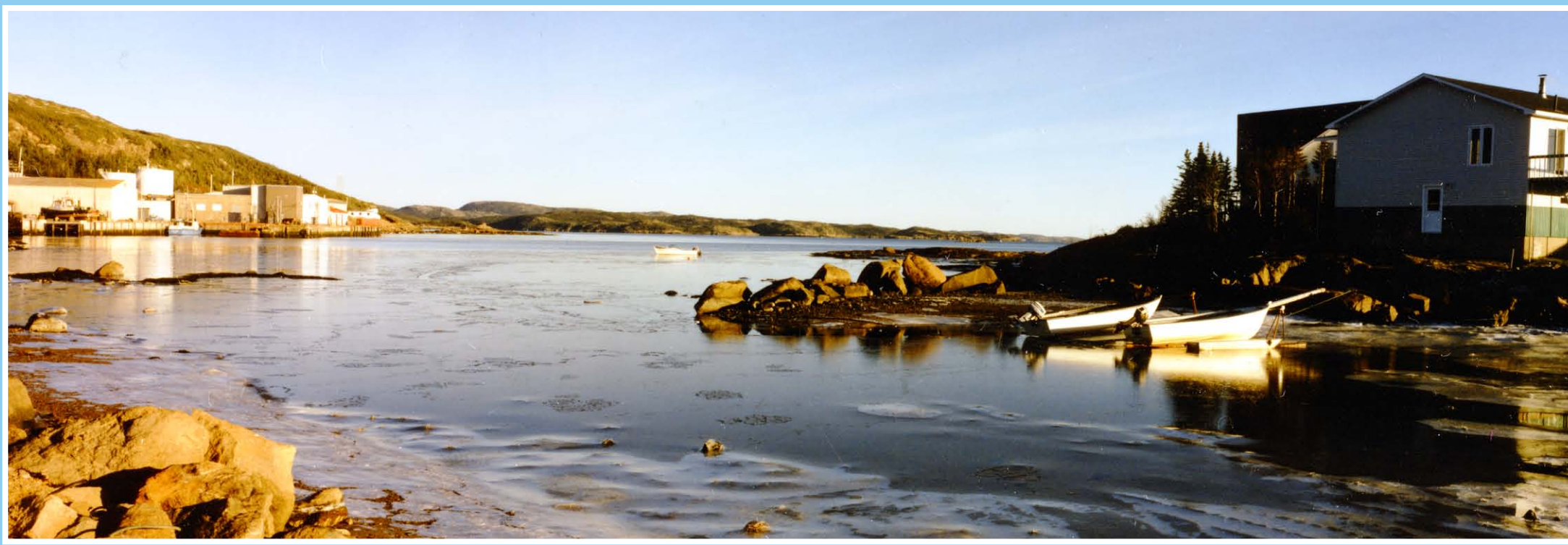


# Eating Fish... A Healthy Choice

## Once is Good, Twice is Better

Eating fish is good for the heart! Studies show that eating fish at least twice a week reduces the risk of heart disease by 25% to 30%.

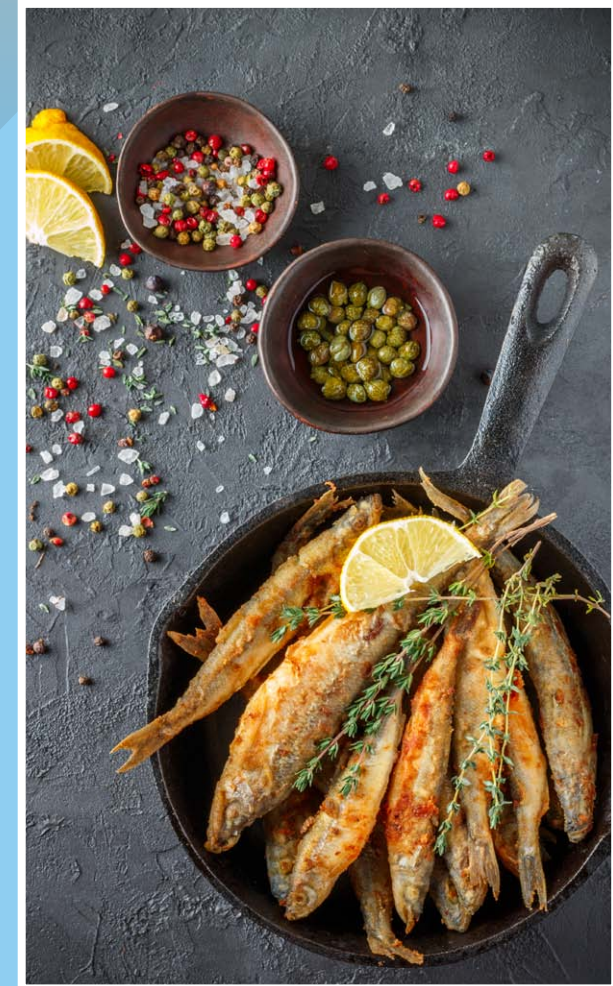
In addition, regular fish consumption could help reduce the incidence of brain tumors and other types of cancer.



## Mercury and Fish

All fish naturally contain a small amount of mercury. The creation of new bodies of water, such as reservoirs, causes an increase in the level of mercury in fish.

This phenomenon is temporary; fish mercury levels return to natural levels after several years.



## Pregnant women, women intending to become pregnant, and children under 13 years of age

If you are pregnant or breastfeeding, the food you eat nourishes your baby. The healthy fat (omega-3) contained in fish is good for the development of your baby's brain and eyes.

Public health authorities in Québec recommend that women who are pregnant, breastfeeding or likely to become pregnant, and children under 13 years of age eat at least two meals per week of low-mercury fish, which is identified by a green dot in this guide (maximum of six 230-g meals per month).

For fish identified by a dot other than green, the consumption guidelines should be halved. For example, the recommendation made for brook trout caught in the Robertson reservoir is four meals per month. The recommended maximum for a pregnant woman would therefore be only two meals per month for this species.



## Consumption guidelines for fish from the region

If you eat fish caught in the region, this guide will help you enjoy the health benefits of fish while avoiding the mercury-related effects.

### For adults

This consumption guide recommends the maximum number of meals per month considered safe by the Centre intégré de santé et de services sociaux de la Côte-Nord. The recommended number of meals will remain valid for several years.

## Benefits of Fish Consumption

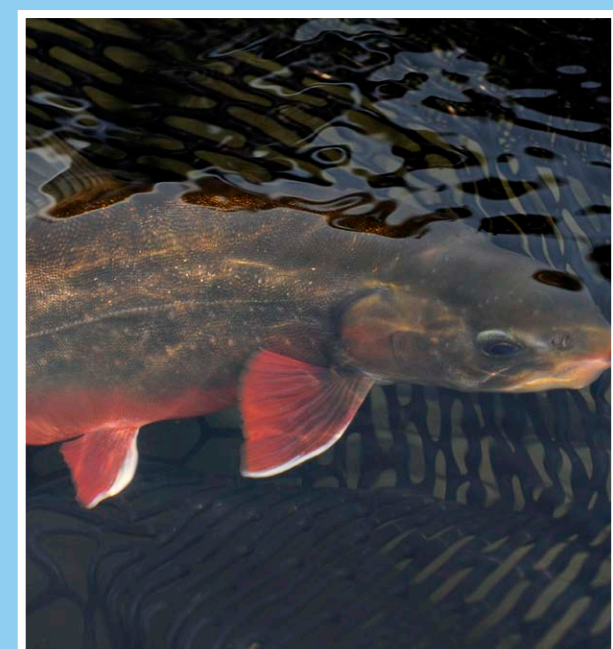
Fish is a good source of omega-3 fatty acids, protein, vitamin D and selenium (antioxidant), while being generally low in fat and saturated fat.

Eating fish helps reduce the risk of heart disease. It is also good for the development of fetuses and children. *Canada's Food Guide* recommends eating at least two servings of fish per week.



## Fishing Trips

Consuming fish every day over a short period of time (e.g., during fishing trips) is not dangerous since it would take several months for the body to accumulate a significant quantity of mercury.



### Fatty Acids in the Fish of Gros-Mécatina

Species	Nutrition facts: omega-3 fatty acids (EPA + DHA)	
	Content*	% of recommended daily value
Landlocked salmon	970 mg	149%
Arctic char	725 mg	111%
Brook trout	550 mg	84%

\* Per 230-g meal

Like vitamins, omega-3 fatty acids are essential nutrients that the human body needs but cannot create on its own. This means that our source of omega-3s is our food. Fish is one of the richest sources of omega-3 fatty acids.



## As Time Goes by...

Monitoring of fish mercury levels in reservoirs elsewhere in Québec has shown that mercury levels in non-predatory fish return to the same levels as those in natural lakes after 10 to 20 years.

In predatory fish, which feed on other fish, this return takes longer (20 to 35 years).

## Did You Know?

Tree clearing has very little impact on the mercury levels in reservoir fish since the trunks and branches of submerged trees do not really decompose.

What does decompose is the newly submerged vegetation, such as the groundcover, plants, leaves and mosses.

During this decomposition, part of the mercury contained in the vegetation enters the food chain and accumulates up to the fish.

## Always Remember

The mercury levels in the water of rivers, lakes or reservoirs are always very low. However, public health authorities recommend not drinking water that comes directly from Québec's rivers, lakes or reservoirs.

This is not because of mercury, but because of the bacteria that may be present in the water.

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### Lac Monger (Up to the first natural barrier)

- UR** Rainbow smelt 200 mm (8 in)
- 4** Arctic char 350 mm (14 in)
- UR** Brook trout 350 mm (14 in)
- 8** Landlocked salmon 350 mm (14 in)

### Robertson Reservoir

- 8** Rainbow smelt 200 mm (8 in)
- 2** Arctic char 350 mm (14 in)
- 4** Brook trout (speckled trout) 350 mm (14 in)
- 4** Landlocked salmon 350 mm (14 in)

### Downstream of Reservoir (Lakes Soulier and Cuillère)

- 2** Brook trout (speckled trout) 350 mm (14 in)

### Marine Habitat

- UR** Rainbow smelt 200 mm (8 in)
- UR** Arctic char 350 mm (14 in)
- UR** Anadromous brook trout (sea trout) 350 mm (14 in)
- UR** Atlantic salmon 350 mm (14 in)
- UR** Cod
- UR** Atlantic halibut
- UR** Atlantic mackerel
- UR** Capelin
- UR** Plaice

### Natural Lakes

- UR** Rainbow smelt 200 mm (8 in)
- 4** Arctic char 350 mm (14 in)
- 8** Brook trout 350 mm (14 in)
- 8** Landlocked salmon 350 mm (14 in)

### Marine Habitat

- UR** Soft-shell clam
- UR** Blue mussel
- UR** Sea scallop
- UR** Snow crab
- UR** Northern shrimp
- UR** Lobster

### TERRITORY ACCESS

- Main road
- Other road
- Snowmobile trail (La route Blanche)
- Boat ramp (2003)
- Floating wharf (2003)

### INFRASTRUCTURE

- Powerhouse
- Dam
- Substation and transmission line

0 0.85 1.7 2.55 km  
MTM, Zone 3, NAD83 (SCRS)  
151-06310-00\_guide\_poisson\_wsp\_170906a.indd



Centre intégré de santé et de services sociaux de la Côte-Nord  
**Québec**  
Hydro Québec

### Fish: How to Eat It Safely

Fish is rich in protein, vitamin D and healthy fats, such as omega-3s. Health organizations suggest eating fish every week. The Centre intégré de santé et de services sociaux de la Côte-Nord invites fish consumers to follow the recommendations in this guide. By doing so, consumers can benefit from the nutritional value of fish, while taking into account the increase in fish mercury levels that follows the filling of reservoirs. The number of meals recommended per month is specified on the map for each species and fishing area. **Restrictions apply for pregnant women and children.**

### FISH CONSUMPTION GUIDE

Based on the World Health Organization guidelines

MERCURY CONTENT In mg per kg of fish flesh	MAXIMUM NUMBER OF MEALS PER MONTH
<b>UR</b> 0.00 to 0.29	Unrestricted consumption
<b>8</b> 0.30 to 0.49	8 meals per month or
<b>4</b> 0.50 to 0.99	4 meals per month or
<b>2</b> 1.00 to 1.99	2 meals per month or
<b>1</b> 2.00 to 3.75	1 meal per month

The maximum number of meals recommended for fish of each colour category cannot be added. For example, you could eat 8 meals of yellow-coloured species or 4 meals of orange-coloured species per month, but not the sum of both.

A meal is considered equivalent to 230 g (8 oz) of fish flesh, before cooking.

Since mercury levels increase with fish length, the number of meals per month should be reduced by half if the catches are significantly longer than the values indicated.

The reverse is also true if the catches are significantly smaller than the lengths provided on the map.

It is not dangerous to eat fish every day for short periods of time (e.g., during fishing trips) given that it takes several months for the body to accumulate a substantial quantity of mercury. It is therefore acceptable to exceed the monthly consumption recommendations, but over a short period of time.

### Precautions for Pregnant Women and Children

Women who are pregnant, breastfeeding or likely to become pregnant, and children under 13 years of age should eat only the species identified by a green dot on the map (maximum of 6 meals of 230 g per month).

The best option for pregnant women and children is to select fish caught in marine habitats. These fish have low mercury concentrations and can be enjoyed without restriction.

## Biology of Fish Species

<h3>Brook Trout</h3> <p>Ombre de fontaine <i>Salvelinus fontinalis</i></p>	<p><b>Habitat</b> Cool (&lt; 20°C), clear and well-oxygenated water. Streams, rivers and lakes. Anadromous brook trout (sea trout): estuaries and coastal marine waters.</p> <p><b>Fishing Season</b> Lake fishing is best during the months of May and June until the beginning of July when the water temperature is cool. In July, when the water is warmer, brook trout dive deeper (15 to 20 m) which makes them harder to catch.</p> <p><b>Feed</b> The carnivorous diet of brook trout varies greatly depending on the prey available: worms, leeches, mollusks, crustaceans, insects, spiders and small fish. Even frogs, salamanders, snakes and mice can sometimes be part of their diet. Cannibalism (eggs, fry) can also occur.</p> <p><b>Catch Record</b> 86 cm (33.9 in.) – 6.6 kg (14 lb 8 oz) caught in 1916 in the Nipigon River in Ontario.</p> <p><b>Lures</b> Worms, corn, pieces of flesh (beef heart, pork rind, etc.).</p>
<h3>Rainbow Smelt</h3> <p>Éperlan arc-en-ciel <i>Osmerus mordax</i></p>	<p><b>Habitat</b> Rainbow smelt live in schools in the mid-water portion of lakes, estuaries or coastal marine areas. They swim upstream along small streams and fast-flowing rivers during spawning season. They are sensitive to light and tend to keep to greater depths during the day (&gt; 25 m).</p> <p><b>Fishing Season</b> Year-round.</p> <p><b>Feed</b> Carnivorous fish that feed on a great variety of invertebrates (crustaceans, insects, worms) and small fish (sculpin, smelt, whitefish, chub, yellow perch, tomcod, etc.). Rainbow smelt tend to be more piscivorous during winter.</p> <p><b>Catch Record</b> 35.6 cm (14 in) caught in coastal marine waters.</p> <p><b>Lures</b> Worms, corn, pieces of flesh (beef heart, pork rind, etc.).</p>
<h3>Arctic Char</h3> <p>Ombre chevalier <i>Salvelinus alpinus</i></p>	<p><b>Habitat</b> Anadromous arctic char: estuaries and coastal marine waters close to the mouth of rivers in spring and summer; lakes and rivers in autumn and winter. Fresh water arctic char: cold water of deep lakes.</p> <p><b>Fishing Season</b> Near the surface during spring. In summer, when the water is warmer, they dive towards deeper areas of lakes (under the thermocline) which makes them harder to catch.</p> <p><b>Feed</b> Carnivorous species with a greatly varied diet depending on the availability of prey, which include crustaceans, insects and several species of fish (including its own species).</p> <p><b>Catch Record</b> 14.8 kg (32 lb 9 oz) caught in 1981 in Northwest Territories.</p> <p><b>Lures</b> Spoons, flies, crankbaits, worms, jiggling lures.</p>
<h3>Landlocked Atlantic Salmon / Ouananiche</h3> <p>Ouananiche <i>Salmo salar</i></p>	<p><b>Habitat</b> Large lakes with cold and clear waters, whose tributaries have gravel beds (spawning). In summer, landlocked salmon are found in the deeper cold waters of lakes, but stay closer to the surface the rest of the year.</p> <p><b>Fishing Season</b> Near the surface during spring. In summer, when water is warmer, they dive towards deeper areas (under the thermocline) which makes them harder to catch.</p> <p><b>Feed</b> Landlocked salmon feed on fish, mainly rainbow smelt. Juveniles mostly eat insects. During spawning, while they are in rivers (and until they return to lakes), mature fish stop feeding, except for some insects which they catch close to the surface.</p> <p><b>Catch Record</b> 10.31 kg (22 lb 11 oz) caught in 1982 in Newfoundland, and 66 cm (26 in) in 1995 in New York State.</p> <p><b>Lures</b> Spoons, flies, crankbaits, worms, jiggling lures.</p>