Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

NORTHWEST TERRITORIES CONTAMINANTS FACT SHEETS

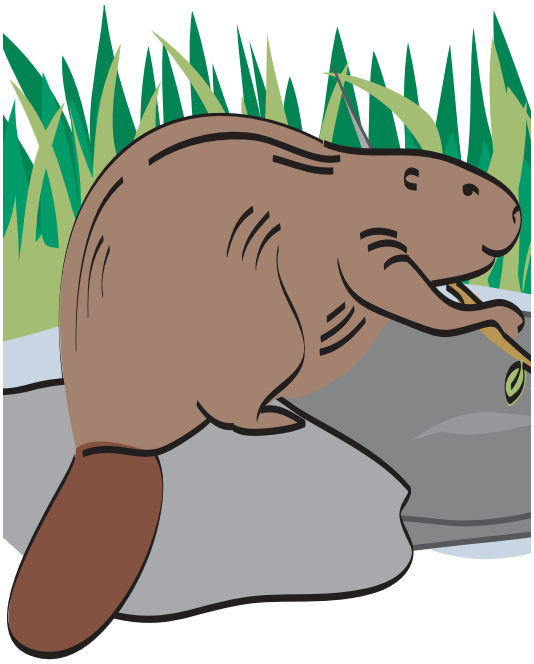
Beaver and Muskrat

Beaver and muskrat are included in the traditional diets of Aboriginal peoples in the Northwest Territories. They are an important part of their health, culture and economy. People in the Northwest Territories are becoming more aware of contaminants in the environment.

This fact sheet will describe what types of contaminants are in beaver and muskrat, how they get there, and what this means to the health of people who eat them.

Beaver and muskrat, like many other land based animals, are less likely to build up elevated levels of contaminants compared to marine animals.

Since beaver and muskrat are plant eaters, they are low on the food chain. Contaminants become more concentrated when animals (predators) eat other animals (prey). This process is called biomagnification. Since beaver and muskrat do not eat other animals, this helps them avoid building up elevated levels of contaminants.



Contaminant levels in an animal can slowly build up over time, if the animal continues to eat foods with contaminants. This is called bioaccumulation. Beaver and muskrat do not live as long as many larger animals, so contaminants do not have the chance to build up.

Contaminants are grouped into major types which build up in the fat or in the organs of animals. Contaminants such as persistent organic pollutants (POPs) build up in fat. (See POPs fact sheet.) They are low in land animals such as beaver and muskrat. Contaminants such as heavy metals (see heavy metals fact sheet) and radionuclides (see radionuclides fact sheet) can build up in organs of certain land animals. This is because the organs act as filters for the body.

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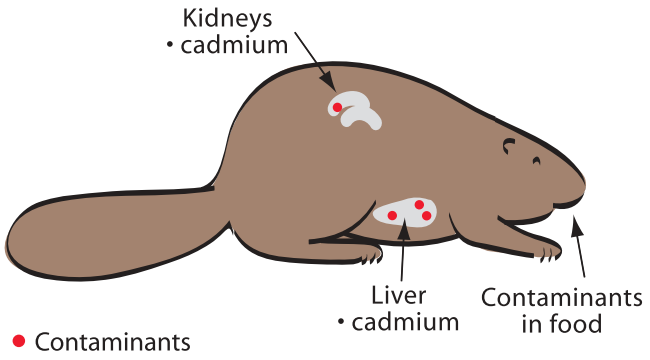

Since these animals are less likely to build up elevated levels of contaminants, there have been fewer studies done on them to date. Two studies on contaminants in muskrat and beaver were conducted in the Northwest Territories, one in the Slave River Delta and the other in the Mackenzie River Delta. They found that most contaminants are present at such low levels that they are not considered health risks to beaver or muskrat or to the people who eat them. The only contaminant found in slightly higher levels in beavers was the heavy metal called cadmium, which concentrates in the kidneys and livers.

Cadmium in beaver comes from the plants they eat.

Cadmium is naturally present in the Northwest Territories, through the weathering of rocks. But it can also come from human activities such as burning fuel and garbage. Some is also believed to come from industrial sources through air currents. The tree bark and plants that beaver eat can absorb cadmium from the water or soil around them. Although these are very low levels, the cadmium can build up in the beaver organs.

Beaver and muskrat are safe to eat!

Concentrations of cadmium found in beaver and muskrat are extremely low. Since it does not build up in meat, you can eat as much beaver or muskrat meat as you want without worrying about contaminants.

Good News...

Beaver and muskrat are very healthy foods!

All living things, including beaver and muskrat contain some contaminants, but they are still very healthy and nutritious.

- Beaver and muskrat meat are excellent sources of iron, protein and vitamin B.
- Beaver livers are excellent sources of iron, protein and vitamin A.
- Beaver tails are also high in protein, as well as an important source of fat.
- Beaver and muskrat are delicious and affordable foods that are good for you in many ways. Eating them helps keep people connected to the land and their cultures. Trapping for beaver and muskrat helps keep people fit and healthy too.

Did you know...

Smokers are exposed to 20 to 30 times more cadmium then non-smokers! Smokers could consider quitting smoking, rather than avoid eating beaver organs, to lower their risk of cadmium exposure.

For more information please contact:

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