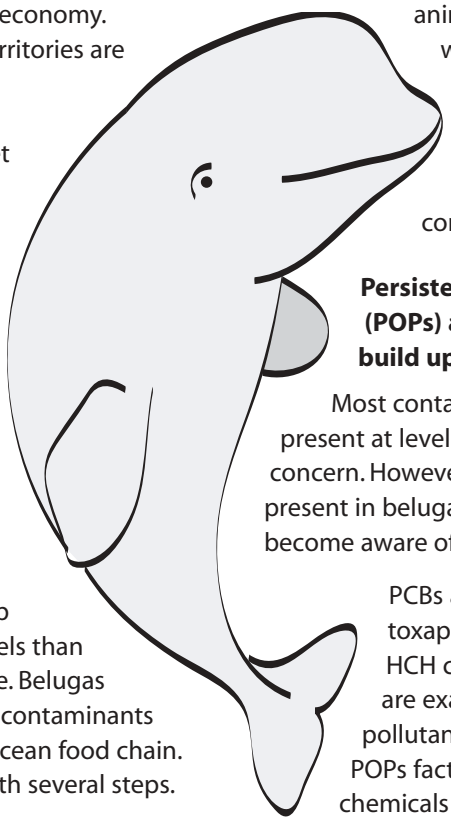
Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

NORTHWEST TERRITORIES CONTAMINANTS FACT SHEETS

# Beluga Whale

The beluga whale is included in the traditional diet of the Inuvialuit, and is 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 beluga, how they get there, and what this means to the health of the people who eat them.



**Contaminants in belugas come mostly from the fish they eat.**

For a variety of reasons, belugas are able to build up contaminants at higher levels than many other types of wildlife. Belugas are more exposed to some contaminants since they are high in the ocean food chain. This is a long food chain with several steps.

In the ocean, tiny plants and animals take up contaminants from their environment. Over their lifetimes, fish eat millions of these small plants and animals, and build up their contaminants. Beluga then eat the fish, and build up the contaminants even more. This process, where levels of contaminants increase when animals (predators) eat other animals (prey), is called biomagnification.

Also, contaminant levels in an animal can slowly build up over time, if the animal continues to eat foods with contaminants. This is called bioaccumulation. Since belugas can live quite long lives, they can build up elevated levels of contaminants over time.

**Persistent organic pollutants (POPs) are contaminants that can build up in beluga.**

Most contaminants in beluga are not present at levels high enough to cause concern. However, a few contaminants are present in beluga at levels that people should become aware of.

PCBs and the pesticides DDT, toxaphene, chlordane, HCB and HCH can be found in beluga. These are examples of persistent organic pollutants (POPs) (see PCBs, DDT and POPs fact sheets). They are long-lasting chemicals made by humans, and they can build up in animal fat.

PCBs, and pesticides like DDT, HCB, HCH, chlordane and toxaphene, build up through the food chain and concentrate mostly in fatty tissues like blubber. Since belugas have a lot of fat, they tend to have higher levels of PCBs than land animals. These POPs generally come from other countries or southern locations through air currents. There are also a small

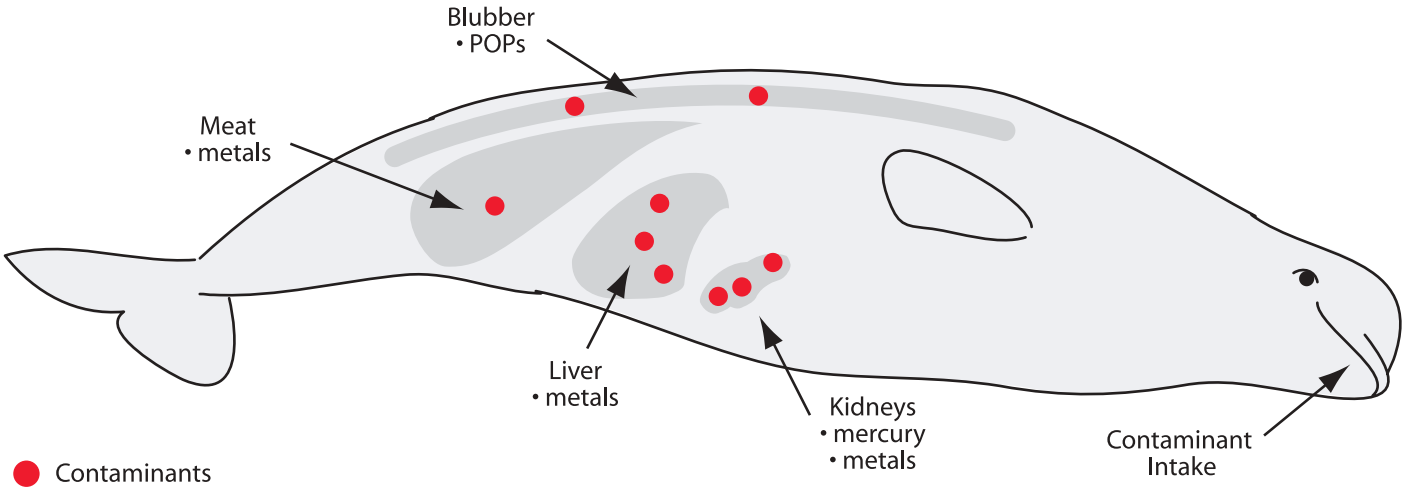
## Did you know...

- Polychlorinated biphenyls are PCBs
- Dichloro-diphenyl-trichloroethane is DDT
- Hexachlorobenzene is HCB
- Hexachlorocyclohexane is HCH

**Biomagnification**

● Contaminants

Canada




through air currents. There are also a small number of contaminated sites in the Northwest Territories that release PCBs.

Some POPs, such as PCBs, dieldrin and HCHs, are declining in beluga. However levels of POPs such as chlordane have not declined. This could be due to the long life spans of beluga, or due to differences in how they get rid of chemicals from their bodies.

**Heavy metals are contaminants that can build up in beluga.**

Mercury (see heavy metals fact sheet) is a metal that can build up in beluga meat, liver and kidneys. Unlike POPs it does not build up in fatty tissues. Heavy metals can come from natural sources, such as weathering of rocks, but human activities in other countries can add to the natural levels. Mercury is naturally high in parts of the Northwest Territories. Mercury concentrations have increased in beluga over the past 10 to 25 years. Cadmium (see metals fact sheet) can also be found in beluga but unlike mercury, levels are much lower in the Northwest Territories than in European countries.

**Exposure to contaminants when eating beluga varies.**

The levels of contaminants people are exposed to when eating beluga depend on many things. Different parts of belugas may have different levels and types of contaminants. For example:

- Meat, kidneys and liver have less PCBs and pesticides than blubber.
- Blubber has less mercury and cadmium than kidneys and liver.
- Muktuk generally has lower levels of PCBs and pesticides than blubber.

## Good News...

**Beluga is a healthy and nutritious food to eat!**

All living things including belugas do contain some contaminants. Health advisories however, have never been issued as the benefits of eating beluga are greater than potential risks from contaminants.

- Beluga muktuk is a good source of protein.
- Blubber contains omega-3-fatty acids.
- The meat of beluga is also a good source of protein, and an excellent source of iron.
- Beluga is a delicious and affordable food that is good for you in many ways. Eating it helps keep people connected with the land and their cultures. Hunting for beluga helps keep people fit and healthy too.

### For more information please contact:

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QS-Y223-001-EE-A1