FOOD SAFETY: Information for First Nations

CHEMICAL **CONTAMINANTS**

Land and marine wildlife are a very good source of nutrients, but can also be a source of contaminants for humans. Chemical contaminants can be found naturally in the environment. They can also be a result of human activities such as mining, clear cutting, industrial processes as well as burning of fossil fuels, garbage, and forest fires.

Pregnant and nursing mothers, infants, and those with weakened immune systems are more susceptible to the effects of contaminants.

Land Mammals

The level of some contaminants (like heavy metals), found in land mammals vary from region to region and depend on the age and type of animal. In general, younger animals have lower levels of contaminants as they have not been consuming and storing contaminants for as long as the older animals. Predators are more likely to have more contaminants because when they eat their prey, they consume all the contaminants the prey has stored in its body over its lifetime. The most common contaminant found in land mammals is cadmium, which accumulates at high concentrations in the liver and kidneys of older and larger animals. Organochlorine can also be found in the fatty tissues of land mammals. Lead is more commonly found in animals that have been shot with lead shots.

Marine Mammals

The levels of contaminants in marine mammals are usually higher than in land mammals, because they are part of a longer and more complex food chain, have more fat, and in general, live longer than land mammals. In marine mammals, such as ringed seal, narwhal, walrus and beluga whales, mercury accumulates in the intestines, liver, kidneys, and muscle tissues, while *Persistent Organic Pollutants* (POPs) are found primarily in the fatty tissues.

Fish

Fish accumulate contaminants mainly by eating foods that already contain contaminants, and to a lesser extent, from contaminated water passing through their gills. For example, because of their feeding habits, predatory fish and freshwater fish have higher levels of *Organochlorines*.

Plants

Contaminants are usually found in plants at low levels as a result of contamination from the air, snow, rain, or soil (where pesticides have been used). Some contaminants have also been found in algae.

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MINIMIZE THE RISK – PROTECT YOURSELF AND YOUR FAMILY

There are many things you can do to reduce your exposure to chemical contaminants.

- When hunting, choose younger animals, and those that do not migrate or live near known contaminated areas.
- It is recommended to use steel shot to hunt.
- Do not harvest fish or shellfish in areas designated as "closed."
- Eat smaller and younger fish.
- Remove skin and trim all visible fat from meat and fish prior to cooking.
- Cook meat and fish using methods that allow the fat to drain such as broiling, baking, boiling or grilling, and drain excess fat after cooking.
- Reduce consumption of charred meat or fish and/or cut away any charred portions of food.
- Avoid eating foods (e.g., berries) grown in areas where pesticides were used, or near construction sites, roads, factories and other sources of pollution.
- Wash fruits and vegetables in drinkable water to remove most of pesticides and dirt residue that might be on the surface.
- Eat a variety of foods from different sources and eat a balanced diet (Refer to *Canada's Food Guide* or *Eating Well with Canada's Food Guide - First Nations, Inuit and Métis*).

Did you know?

Exposure to contaminants like heavy metals or persistent POPs from food varies from one person to another, depending on the frequency and quantity eaten as well as the concentration of contaminants in the food consumed.

Certain contaminants tend to be highest in animals that are at the top of the food chain, such as marine mammals.

For more information talk to your local Environmental Health Officer or visit HealthyCanadians.gc.ca/FirstNationsFoodSafety.

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