



First Nations Health Authority
Health through wellness

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Metals and Fish Uptake - FAQ

The FNHA fish sampling project is intended to provide information to support First Nations decision-making about the safety to consume salmon in the Fraser River following the Mount Polley Mine tailings spill. Salmon tissue samples and Fraser River surface water quality will be assessed for parameters which relate to the mine tailings and which are of health concern. It is not expected that a short term (2 week) exposure to a pulse of contaminant will be sufficient to accumulate the metals or compounds of interest.

The following are answers to some questions we have been receiving:

How do fish accumulate metals in their body?

Metal accumulation in fish happens when fish eat other organisms which are high in metals. Fish need to be living in water with metals for a significant period of time, as well as eating other organisms which have accumulated the metals. This is called bioaccumulation. Fish such as trout, which live in Quesnel Lake long term, have a higher chance to accumulate metals. Accumulation will often take several months to years depending on the metal and the fish species.

What is the impact on Salmon?

Salmon spend majority of their life in the marine environment, and because they do not feed during their migration, it is unlikely that the migratory time period will be enough for metals to accumulate. Previous studies show very low levels of metals in salmon tissue (arsenic, mercury, lead, cadmium, etc), despite other sources of man-made contaminants entering the Fraser River watershed. Metals found in adult migrating salmon are said to be an indication of marine exposure where they feed for most of their lifetime.

How will we know if the 2014 salmon have normal levels?

The FNHA has received donations of salmon from First Nations Fisheries departments of both 2013 and 2014 salmon runs. The salmon from 2013 will support a good baseline which we can evaluate the 2014 fish from. Additionally, there has been a fair amount of study to determine contaminant levels in Fraser River salmon. A comparison to previously found levels will be made.

If the salmon were to have high levels, would it affect me immediately?

No. Depending on how much the level exceed acceptable daily intakes; a person would need to eat fish with high levels daily for a lifetime before it would have impacts to human health.

If the salmon were to have high levels, would the fish look ill?

No, salmon would not appear to be visibly ill following a brief or longer term exposure to metals.

Some dead fish were reported, why else might this be caused?

During the debris flow, fish that were in the path of trees and rocks would likely have been damaged. Department of Fisheries and Oceans has also reported that river temperatures have been higher this year, and may be affecting fish health.