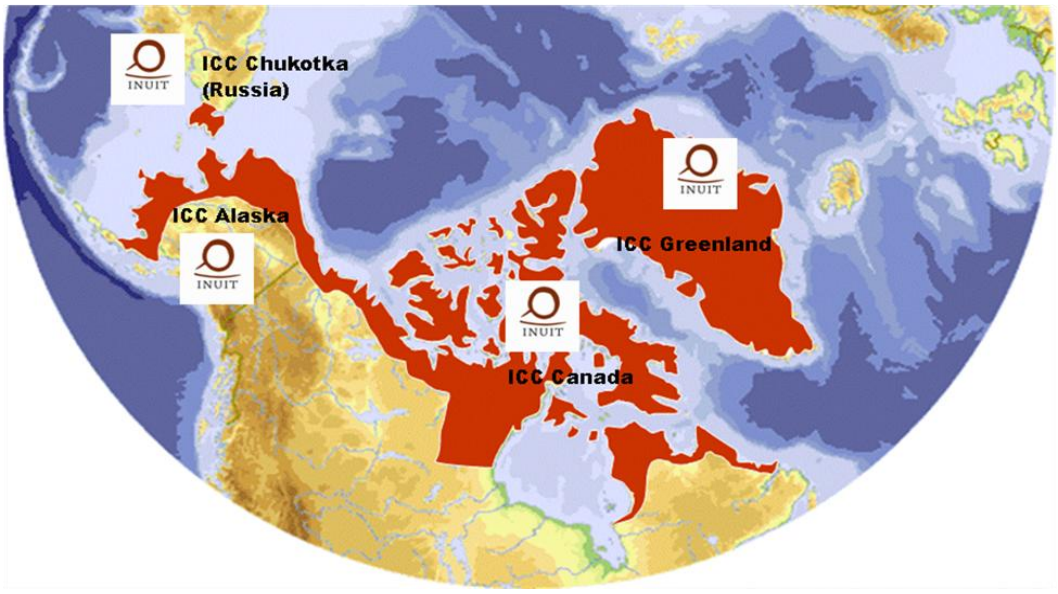
INUIT CIRCUMPOLAR COUNCIL (ICC)

WHAT IS INUIT CIRCUMPOLAR COUNCIL?

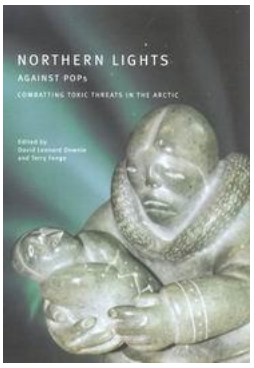
Inuit Circumpolar Council (ICC) was founded in 1977 by the late Eben Hopson of Barrow, Alaska, out of the realization that Inuit need to speak with a united voice on issues of common concern and to combine the energies and talents towards protecting and promoting the Inuit way of life. The principle goals of ICC are to:

- Strengthen unity among Inuit of the circumpolar region;
- Promote Inuit rights and interests on an international level;
- Develop and encourage long-term policies that safeguard the Arctic environment; and
- Seek full and active partnerships in political, economic and social development in the circumpolar region.

Since then, ICC has flourished and grown into a major international non-government organization representing approximately 155,000 Inuit of Alaska, Canada, Greenland, and Chukotka (Russia). ICC has offices in each of the four countries, and works on issues affecting pan-circumpolar Inuit such as environment, health and human rights.



SOME PAST ACCOMPLISHMENTS



ICC holds Special Status at the United Nations, is an accredited observer to United Nations Environment Programme (UNEP,) and has been very active on a variety of issues that affect pan-circumpolar Inuit on a global basis. In particular, ICC has been instrumental in the negotiations leading up to the Stockholm Convention of Persistent Organic Pollutants, which was adopted in 2001. As a result of these efforts, ICC published a book called 'Northern Lights against POPs – Combatting Toxic Threats in the Arctic' (McGill-Queen's University Press 2003), and was recognized by UNEP in 2001 for its contributions to the 'POPs Club' leading to the successful completion of the Stockholm Convention on Persistent Organic Pollutants.

Further, ICC has been the recipient of many awards, among them the WANGO Environment Award in 2002, and its Inuit Regional Conservation Strategy for the Arctic was elected by UNEP to the Global 500 Honour Roll in recognition of outstanding practical achievements in the protection and improvement of the environment in 1988. In 2007, Sheila Watt-Cloutier was nominated for a Nobel Prize for her work as ICC's Chair.

ICC'S WORK ON CONTAMINANTS

A very important issue for Inuit is contaminants which undergo long-range transport, bioaccumulate in the Arctic ecosystem and lead to very high concentrations in some Inuit populations, potentially impacting their health and well-being. At ICC's last General Assembly in Barrow, Alaska, in 2006 it was determined that ICC should "*maintain its efforts to reduce worldwide emissions of contaminants that end up in the Arctic threatening the health and well-being of Inuit and the natural environment, including participation in national and regional plans to implement the global Stockholm Convention on Persistent Organic Pollutants*".

Funding by the Canadian government, and in particular the Northern Contaminants Program (NCP) of the Department of Indian and Northern Affairs (INAC), has enabled ICC Canada to work effectively on addressing the issue of contaminants in the Arctic. ICC Canada is part of the NCP Management Committee, is directly involved with contaminant research in the Arctic, works within the Arctic Monitoring Assessment Programme (AMAP) of Arctic Council, and represents Inuit interests at the United Nations Environment Programme (UNEP) and related meetings.

ICC is continuing work to achieving a contaminant-free environment for Inuit to live in by involvement in contaminant research, representation of Inuit viewpoints and interests on a national (e.g. at the NCP), circumpolar (at AMAP and other Arctic Council working groups), and international (within UNEP, e.g. the Stockholm Convention, the POPs Review Committee, and the negotiations for a global mercury agreement) level.

Within those activities, ICC continues to encourage scientists, industry leaders and policy-makers to understand the cumulative effect that contaminants have on Inuit land and seas and ultimately the global environment.

A SHORT BACKGROUND ON MERCURY

Mercury levels have been increasing globally to concentrations that adversely affect humans and wildlife, which has prompted international efforts to reduce levels in the environment.

Mercury is a naturally occurring metal, which can be present in high amounts in some rocks or soils. Mercury occurs in the environment in various forms. In its elemental form it is liquid at room temperature, evaporates into the air at ambient temperatures, and can travel far distances in the atmosphere.

Natural emissions of mercury include volcanic eruptions, and it may enter water by wet or dry deposition, and natural weathering of soil or erosion.

Mercury has a lot of uses in a variety of products, such as thermometers and other measuring devices, compact fluorescent lamps and dental amalgam.

Currently, the biggest anthropogenic emissions are from burning of fossil fuels, especially coal. While many European and North American governments recently succeeded in reducing mercury emissions, they have been rising in rapidly developing economies, such as India and China.

Mercury is continually transformed by bacteria to its most toxic form, methylmercury. In this form, it binds to protein and can only be slowly metabolized by organisms, resulting in its bioaccumulation: its concentrations in the body get higher over time if mercury-containing food is continually consumed and exceed the excretion rate. Methylmercury also biomagnifies, which means that top predators that feed high in the food chain can have very high levels of mercury, depending on their food source.

It should be noted that climate change will likely cause increasing levels of mercury in the environment due to many effects such as soil erosion, and warmer temperatures that increase the formation and uptake of methylmercury.

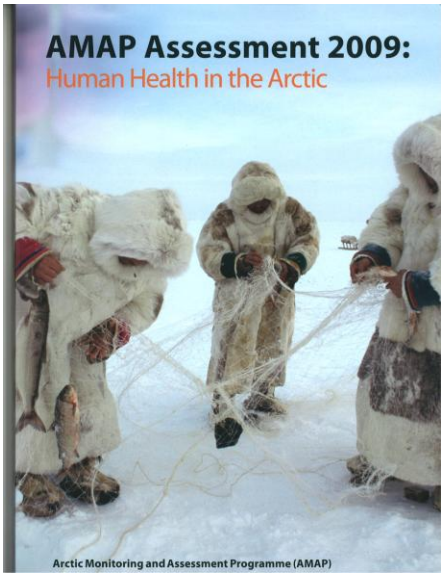
Most human exposure to methylmercury is from eating fish and marine mammals. Methylmercury is a known neurotoxin and easily passes the blood-brain barrier, which means it accumulates also in the brain and can cause nerve damage there. Many epidemiological studies documented growth and developmental effects of prenatal methylmercury (MeHg) exposure. Neurobehavioral effects during childhood have been shown, such as in verbal function, visuomotor integration, verbal memory and attention. Methylmercury has also been related to cardiovascular disease.

It is suspected that some nutrients that can be found in traditional food items, such as selenium, may have a protective effect against mercury damage. Selenium binds to mercury and is probably involved in its metabolism and secretion. The average half-life for methyl mercury in human blood ranges from 46 – 90 days, and is excreted predominately in the feces, but also in urine, sweat and hair.

Some studies have reported symptoms of low-level methyl mercury exposure such as fatigue, headache, decreased memory and concentration, muscle and joint pain as well as several neurobehavioral disturbances. The latter include vision (chromatic discrimination, contrast sensitivity, peripheral fields), and psychomotor functions (tremor, dexterity, grip strength, complex movement sequences, hand-eye coordination, rapid alternating movement).

MERCURY AND CIRCUMPOLAR INUIT

Inuit are often exposed to higher levels of methylmercury due to higher consumption of top predators such as marine mammals. The recently published AMAP 2009 Human Health Assessment summarizes studies that looked at mercury values in Arctic Indigenous Peoples[1].



The highest mercury concentrations have been found in Inuit of Greenland, where average blood levels up to 53 µg/L have been reported. Those levels are well above guidelines set by US EPA (5.8 µg/L) or Health Canada (20 µg/L). A study looking at the number of Indigenous women in reproductive age exceeding those guidelines found that 19% of Inuit/Yupik women in Alaska exceeded the US EPA guideline, between 5.6 and 32% Inuit women exceeded the guideline in northern Canada, between 20 and 98% of Inuit women in Greenland, and 1.5 to 12 % of Indigenous women exceeded the guideline in northern Russia (see Figure 1 below). Although the results in that study suggested declining mercury concentrations in some Indigenous peoples, high percentages of women are still exceeding guideline values (especially in Greenland).

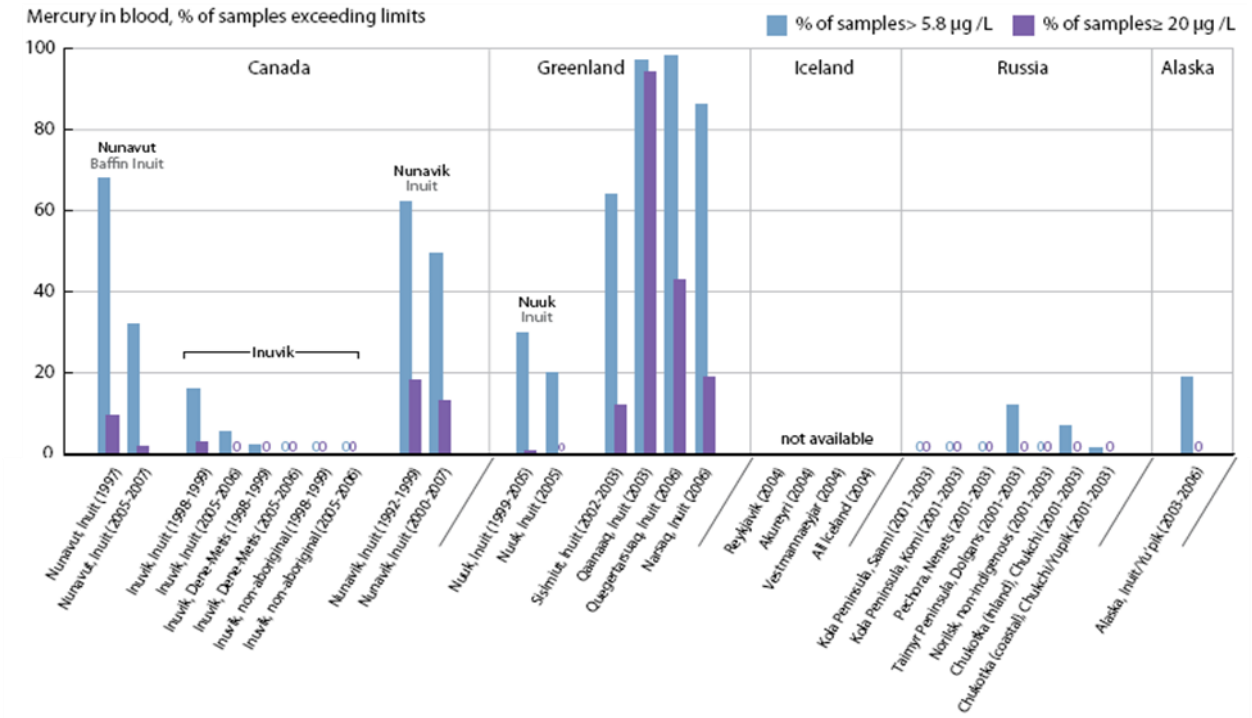


Figure 1: Exceedances of blood guideline values for mercury in mothers and women of childbearing age in different populations around the Arctic. Figure is adapted from the AMAP Assessment 2009: Human Health in the Arctic.

Another very recent study, the Inuit Health Survey, that was done in Nunavut, Canada, looked at mercury concentrations in Inuit children's hair[2]. The study found that 25% (or 89 children) had mercury levels that exceeded the World Health Organizations (WHO) reference value of 2 µg/g for mercury in children's hair. The major dietary sources of mercury in that study were beluga muktuk (33%), narwhal muktuk (26%), ringed seal liver (15%), fish (11%), caribou meat (6%) and ringed seal meat (5%), together accounting for over 95% of the total mercury intake. It should be mentioned that most food items in that study had concentrations below the 0.5 ppm or 0.5 µg/g guideline for mercury in commercial fish established by Agriculture Canada. Only mercury levels of ringed seal liver (raw), narwhal muktuk (age) and caribou kidney (raw) were higher than the guideline[2].

Although mercury blood levels for Inuit have been found to decline recently, the reason is most likely not reductions of mercury in the environment, in fact, some mercury levels have been increasing in the Arctic environment in recent years. Decreases of mercury in Inuit blood are more likely due to changes in Inuit diet, such as a lower consumption of marine mammals that have higher mercury concentrations.

CAN INUIT AVOID MERCURY EXPOSURE?

In the short term, exposure to mercury for Inuit can be mostly controlled through diet. Traditional foods contain high amounts of nutrients and healthy fatty acids and local health authorities and other health experts still recommend its consumption because they assume that the benefits outweigh the risks. However, studies to determine the benefits of the traditional diet and potential protection it may offer to contaminant exposure are ongoing. Benefits of the traditional diet with regards to health issues such as diabetes and other obesity related diseases are very apparent and undisputed.

Since the greatest concern is mercury exposure to the developing child, in particular pregnant women are currently asked to limit their mercury intake and to contact local health authorities for advice on their diet.

In the long term, mercury concentrations in the Arctic can only be reduced if global anthropogenic mercury emissions to the environment are minimized. Therefore, a global, legally binding mercury agreement is of great importance for Inuit. With food insecurity being a common problem for Inuit in the Arctic[1,2], and the added social and cultural importance of traditional foods for Inuit[1,2], restrictions on the consumption of traditional food items are not acceptable as a long-lasting solution.

REFERENCES

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