

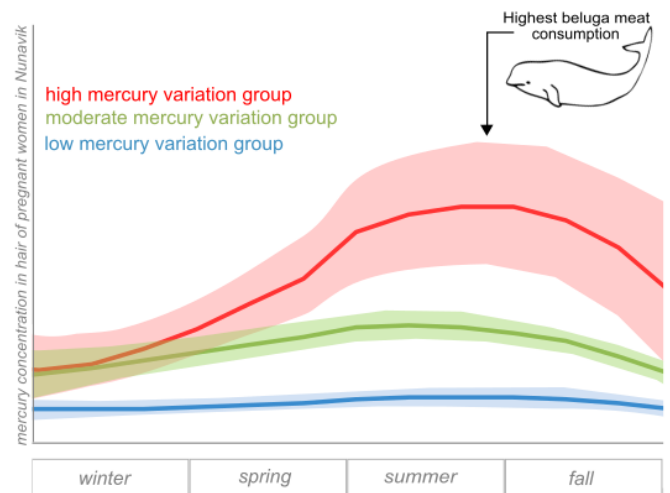
## Mercury exposure in Nunavik: recent findings to be shared with Nunavimmiut

The *Nutaratsaliit Qanuingsiarningit Niqituinnanut* (NQN) – Pregnancy wellness with country foods project was carried out in 2016-2017 in collaboration with 97 pregnant women in Nunavik, the Nunavik Nutrition and Health Committee, and several regional organizations. We studied the multiple nutritional benefits of eating country foods and the exposure to different contaminants with the **overall goal to promote healthy pregnancies and healthy child development in the communities of Nunavik and other circumpolar regions.**

*What did we do?* We studied the seasonal variations in mercury exposure among pregnant Inuit women and examined which country foods were responsible for mercury levels. To do so, we analyzed hair samples (hair grows 1 centimeter per month, therefore we can see the exposure overtime) and we documented country food consumption by season.

*Why study mercury?* Mercury is a contaminant that is known to be harmful for the brain development of the baby and child. Mercury is naturally found in the soil but recirculated into the environment by human activities, such as burning of coal, oil and wood, and artisanal gold mining activities in other part of the world. Although there is no major source of mercury in the Arctic, it is transported to the poles by long-range atmospheric and marine currents, to then accumulate in the aquatic food chain, primarily in top-predator fish and marine mammals.

*What did we find out?* Elevated mercury exposure remains a concern for pregnant women in Nunavik as 23% of participants had blood mercury levels above the Health Canada recommended value. We also observed lower mercury levels among participants in winter but then higher mercury levels in summer and fall. The consumption of beluga meat, particularly beluga *nikku*, contributed the most to these seasonal variations. As shown in the figure, pregnant women with the greatest variation in mercury levels over time (see red and green lines to the right) were also those with the highest consumption of beluga meat. Beluga *mattaaq* and other country foods did not have a significant impact on seasonal changes in mercury levels in pregnant women.



*What did we do with the results?* In 2019, together with Nunavik Regional Board of Health and Social Services, we visited several communities to share these results and discuss with Inuit midwives, other health professionals and Nunavimmiut. We also gathered their ideas on means to increase awareness about mercury exposure during pregnancy. Some questions raised by Inuit have led us to measure mercury levels in traditional meals consumed during pregnancy (results will be available next year). With Inuit colleagues, we have also set up a Regional Action Team to integrate Nunavimmiut knowledge and scientific data, to develop training tools for health professionals, pregnant women and community members, and to further raise awareness about the mercury issue as summer and beluga hunting season is starting.

**Country foods play a key role in a healthy diet, and the nutritional and cultural benefits of country foods are very important for healthy pregnancies and babies.**

**You can count on our team and Nunavik colleagues to continue advocating against mercury to protect the exceptional quality of country foods in Nunavik.**

**We also aim to increase awareness about this issue in Nunavik so that pregnant women can make their own choices and safely eat country foods while avoiding mercury and ensuring the health of their babies.**

## Mercury exposure in Nunavik: recent findings to be shared with Nunavimmiut

This research was funded by the Northern Contaminants Program of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). The scientific paper presenting these findings was recently published in Science of the Total Environment: <https://www.sciencedirect.com/science/article/pii/S0048969720367279?via%3Dihub>

Contact person for the NQN project:



Mélanie Lemire,  
Littoral Research Chair, Laval University  
[melanie.lemire@crchudequebec.ulaval.ca](mailto:melanie.lemire@crchudequebec.ulaval.ca)  
418-866-1138

**Nutaratsaliit  
qanuingisiarningit  
niqituinnanut**  
Pregnancy wellness  
with country foods





