



Health Effects Monitoring Program

Summary of Phase 1 Results

Yellowknife General Population

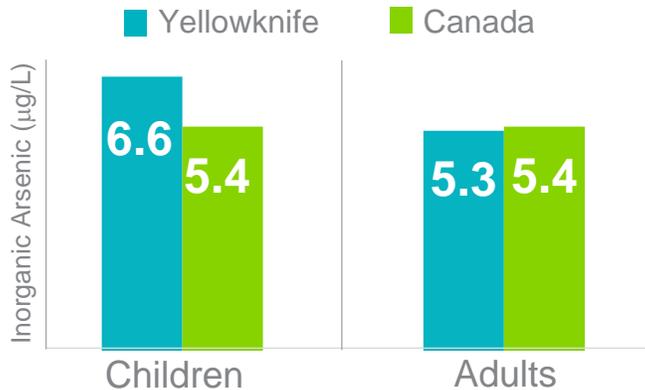
The Health Effects Monitoring Program is a long-term study that monitors levels of contaminants in the people of Ndilo, Dettah and Yellowknife. The program started in Fall 2017 and finished collecting samples of urine, toenail and saliva in Summer 2018. The aim of Phase 1 was to establish a baseline level of arsenic exposure among the local communities.

Who participated?

Randomly Selected	Volunteers	Overall
217 Children 673 Adults 890 Total	191 Children 685 Adults 876 Total	506 Children 1531 Adults 2037 Total

What were the findings?

Overall Urine Results



- There is **no difference** in inorganic arsenic levels between the overall Yellowknife population and the general Canadian population¹.
- Inorganic arsenic levels in **adults** are **similar** to the general Canadian population.
- Inorganic arsenic levels in **children** are **higher** than adults in Yellowknife and children in the general Canadian population.



- Inorganic arsenic levels in **randomly selected child participants** are **higher** than randomly selected adults and children in the general Canadian population.
- Inorganic arsenic levels in **child volunteers** are **higher** than the general Canadian population while **adult volunteers** are **similar**.

¹Arsenic levels of the general Canadian population come from the Canadian Health Measures Survey cycle 2 (2009-2011), 3 (2012-2013), and 4 (2014-2015).

More Results

Overall toenail results

- Arsenic levels in toenail are **higher** in **children** (3-17) than in adults (18+).
- **Children** between ages **3-11** have **higher** arsenic in toenail than those ages 12-17.

What is next?

- Participants with metal concentrations above existing urine reference levels or toenail screening levels² have been invited for a follow-up with a nurse to be re-tested and receive tips on how to lower their exposure.
- **More findings** on possible sources of arsenic, saliva sample and medical records will be available in **2020**.
- **Child** participants will be invited to participate in a **follow-up study in 2022**, **adult and child participants** will be invited in a **follow-up study in 2027**.

²Urine inorganic arsenic concentrations higher than 95% of the Canadians or toenail total arsenic concentrations in the top 20% of children participants and top 5% of adult participants. The toenail screening levels were chosen based on the advice of the chief medical officer. A higher result does not necessarily mean that a person's health is at risk, it means that their levels are higher than the majority of the population.

Thank you to everyone who participated!

If you have any questions, please contact us:

613-325-9080 or 867-445-1574

ykhemp@uottawa.ca

For more information, visit:

www.ykhemp.ca