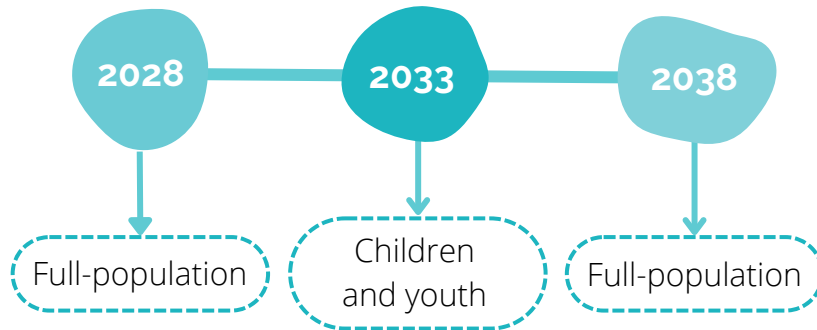


What's next?

- Follow-up with participants with higher than usual metal levels.
- Re-test, collect additional information, and provide personalized tips to lower exposure.
- More results to come in 2025.

Follow-up testing:



Questions? Contact us!

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2023 Results

Yellowknife Children and Youth



What?

YKHEMP is a long-term study testing the levels of arsenic and other metals of concern in the populations of Yellowknife, Ndilo, and Dettah.

Why?

To find out if local residents are exposed to higher levels of arsenic and other metals compared to other Canadian and to investigate the long-term relationships between arsenic and health outcomes.

Who participated?

Children and youth, ages 3-19, who lived in the Yellowknife area for at least one year.

Randomly Selected Participants

122 participants who were randomly selected from a list of residential addresses in 2023.

Returning Participants

142 participants out of 408 from 2017/18 returned in 2023.

99 volunteers and 6 North Slave Métis Alliance members also participated.

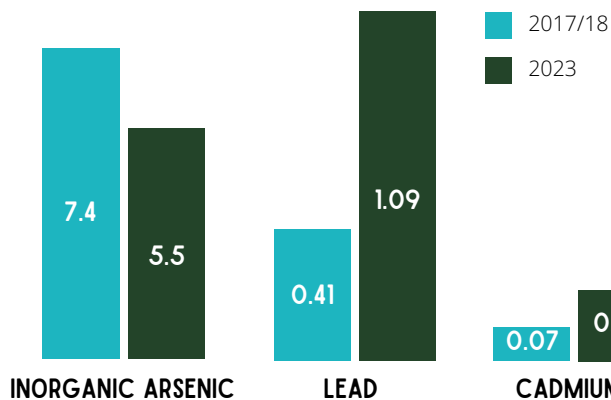
Levels of the arsenic, cadmium, and lead were measured in urine and toenail samples provided by participants.



Returning Participants

Do the participants from 2017/18 show the same metal levels in 2023?

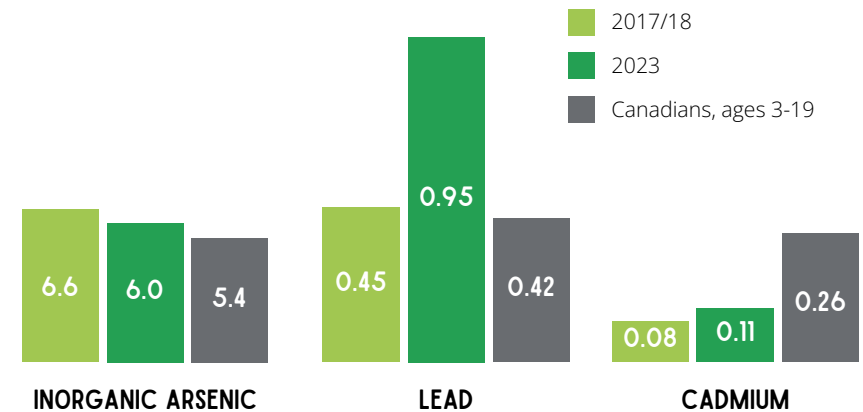
- Arsenic levels were similar in 2017/18 and 2023, with year-to-year variation.
- Lead levels in 2023 were higher than in 2017/18, we are investigating why.
- Cadmium levels in 2023 were higher than in 2017/18. In general, cadmium levels:
 - Increase with age.
 - Are higher in youth who smoke or who are exposed to second-hand smoke.



Randomly Selected Participants

Do new, randomly selected children and youth tested in 2023 show the same metal levels to those found in 2017/18?

- Inorganic arsenic levels were similar in 2017/18 and 2023, with year-to-year variation.
- Lead levels in 2023 were higher than in 2017-18, we are investigating why.
- Cadmium levels in 2023 were higher than in 2017/18.



How do the 2023 results compare to the Canadian general population?

- Compared to the Canadian average:
 - Inorganic arsenic levels are similar.
 - Lead levels are higher in Yellowknife.
 - Cadmium levels are lower in Yellowknife.