#### What's next?

**2023:** Child and youth (3-19) five-year follow-up to the 2017-18 baseline sample collection.

**2028:** Adult and child (3-79) ten-year follow-up to the 2017-18 baseline sample collection.

Continue to follow-up with participants with higher measured metal concentrations (arsenic, cadmium, and lead) including re-testing, collection of additional information and providing personalized tips to lower exposures.

#### **Questions? Contact us!**



For more information, visit our website: ykhemp.ca



# 2017-2018 Arsenic Baseline Results

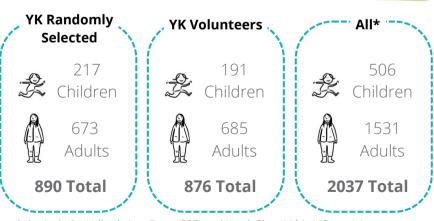
Yellowknife General Population

What?

YKHEMP is a study testing the populations in Yellowknife, Ndılo, and Dettah for levels of arsenic and other metals of concern.

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

## Who participated?



<sup>\*</sup>Also includes Yellowknives Dene (225) and North Slave Métis (46) participants

# **Key Findings & Observations**



- Used to measure **3-5 days** of past arsenic exposure.
- Most children and adults tested have total arsenic levels **similar** to the average Canadian.

# TOENAILS ----



- Used to measure 2-12 months of past arsenic exposure.
- Results show that some children have **higher** levels of arsenic compared to adults.
- Children are likely exposed through **external** sources like dust, soil, or sediment.

Due to historical mining activities, there is a higher amount of arsenic in the environment around Yellowknife compared to other parts of the NWT and Canada. However, the levels around Yellowknife are still much lower (up to 100 times) than in places where people are at risk for cancer and other arsenic-related illnesses.

Although YKHEMP observed higher levels of arsenic in children, we found no evidence that anyone's health was at risk with the arsenic levels we are seeing in the Yellowknife area.

### HEALTH

- We **asked permission** from participants to review their previous 5 years of medical records.
- At present, we did not find that arsenic levels were related to any identified health outcomes.
- The rate of **skin cancer was higher** in the Yellowknife population compared to NWT and national data
- The rate of heart conditions and hypertension was lower, compared to NWT and national data.

**Looking forward:** Following participants in coming years will provide us with more definitive information.

## **GENETICS**

- We collected saliva from participants to look at **specific** genes related to how the body processes arsenic.
- Because of their genetics, some participants were **less efficient** than others in the study at processing arsenic.

**Looking forward:** This information is useful for understanding the risk of arsenic exposure for the population.

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**2023:** Child and youth (3-19) five-year follow-up to the 2017-18 baseline sample collection.

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### **Questions? Contact us!**

613-325-9080
ykhemp@uottawa.ca
@ykhemp



Contact the YKDFN Wellness Department: 867-920-2925 — hemp@ykdene.com

For more information, visit our website: ykhemp.ca



# 2017-2018 Arsenic Baseline Results

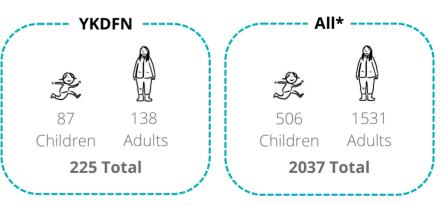
Yellowknives Dene First Nation

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### **HEALTH**



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- At present, we did not find that arsenic levels were related to any identified health outcomes.
- YKDFN members had higher rates of skin **conditions and diabetes** reported in their medical files, compared to the Yellowknife general population.
- YKDFN members had lower rates of cancer compared to the Yellowknife general population.

**Looking forward:** Following participants in coming years will provide us with more definitive information.

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### **Questions? Contact us!**



Contact the North Slave Métis Alliance: 867-873-6762 — lands@nsma.net

For more information, visit our website: ykhemp.ca



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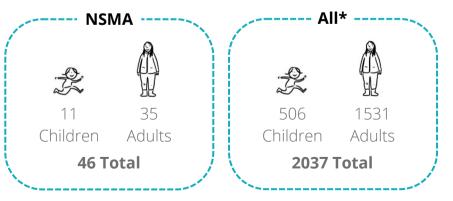
North Slave Métis Alliance

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Looking forward: Following participants in coming years will provide us with more definitive information.

# **GENETICS**

- We collected saliva from participants to look at **specific** genes related to how the body processes arsenic.
- The NSMA participant population was too small to analyse the population genetics.
- Because of their genetics, some participants were **less efficient** than others in the study at processing arsenic.

**Looking forward:** This information is useful for understanding the risk of arsenic exposure for the population.

