

First Nations Food, Nutrition and Environment Study (FNFNES)



University of Northern British Columbia
 Université de Montréal
 Assembly of First Nations

Summary of Results: British Columbia

What was the study about?

A study was conducted in **21 BC First Nations** communities during the fall of 2008 and 2009 to find out:

- What kinds of traditional and market foods were people eating?
- How well were people eating?
- What level of mercury were people exposed to?
- What amount of trace metals and pharmaceuticals were in the water?
- Is traditional food safe to eat?

Who participated?

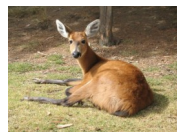
- 1103 adults from BC
- 705 women and 398 men
- average age:
 44 years old (women)
 46 years old (men)

Which communities participated?

- | | | |
|------------------------|---------------------|----------------|
| • Kitsumkalum | • Nat'oot'en Nation | • Namgis |
| • Hagwilget Village | • Fort Nelson | • Sliammon |
| • Moricetown | • Prophet River | • Samahquam |
| • Tahltan First Nation | • Doig River | • Douglas |
| • Iskut | • Saulteau | • Lil'wat |
| • Tsay Keh Dene | • Skidegate | • Lower Nicola |
| • Tl'azt'en Nation | • Nuxalk Nation | • Splotsin |

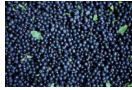
What kinds of traditional and market foods were people eating?

| Top 5 traditional foods eaten in BC: | Average amount eaten per week | Top 5 market foods eaten in BC: | Average amount eaten per week |
|--------------------------------------|-------------------------------|---------------------------------|-------------------------------|
| 1. Moose meat | 1/2 cup | 1. Soup | ~2 1/2 cups |
| 2. Salmon | 1/2 cup | 2. Vegetables | 2 cups |
| 3. Deer meat | ~3 tbsp | 3. Potatoes | 1 1/2 cups |
| 4. Trout | 2 tbsp | 4. Fruits | 1 1/2 cups |
| 5. Elk meat | 2 tbsp | 5. Grains (rice, barley) | 1 1/3 cups |



Thank you to everyone who participated!

How well are BC First Nations eating compared to the recommendations?



| Food Group | Gender | BC First Nations Current Intake | Canada's Food Guide Recommendations |
|--|--------|---------------------------------|-------------------------------------|
| | | Servings/day | |
| Vegetables and Fruits | men: | 5 | 7-10 |
| | women: | 4 | 7-8 |
| Suggestion for change: Eat more vegetables and fruits. 1 serving= 1/2 cup of dark green or orange vegetables, or 1/2 cup of wild plants, or 1/2 cup of berries or fruits | | | |
| Grain Products | men: | 4 | 7-8 |
| | women: | 4 | 6-7 |
| Suggestion for change: Eat more whole grains. 1 serving= 1 slice of whole wheat bread or bannock, or 1/2 cup of whole wheat pasta, or 1/2 cup of wild or brown rice | | | |
| Milk and Alternatives* | men: | 1 | 2-3 |
| | women: | 1 | 2-3 |
| Suggestion for change: Eat more milk products. 1 serving= 1 cup of milk or fortified soy milk, or 3/4 cup of yogurt, or 50 grams (1 1/2 oz) of cheese *Individuals who do not eat or drink milk products should seek advice from a health care provider | | | |
| Meat and Alternatives | men: | 4 | 3 |
| | women: | 3 | 2 |
| Intake of meat and alternates met the recommendations. 1 serving =1/2 cup of traditional meats and wild game, fish or shellfish, or 2 eggs, or 3/4 cup of beans | | | |

Food insecurity is an important problem in BC First Nations communities:

- 40% worried that their food would run out before they could buy more
- 36% said that food they bought didn't last and there wasn't any money to buy more
- 12% cut the size of their meals or skipped meals
- 7% were hungry but did not eat because they couldn't afford enough food



41% of BC First Nations experience food insecurity

91% of BC FN participants would like to eat more traditional food.

Participants said that these are the 5 main barriers that prevent them from using more traditional food:

- 1) Lack of equipment or transportation
- 2) Lack of availability
- 3) Lack of time
- 4) Difficult to access
- 5) Government/firearms certificate regulations



Depending on age, 53-80% of BC First Nations women and 81-87% of men are overweight or obese



Trace Metals in Drinking Water

Only 1 out of 568 water samples collected contained lead above the maximum acceptable guideline. Other trace metals found in the drinking water were within an acceptable range established in the Guidelines for Canadian Drinking Water Quality.



Pharmaceuticals in Water Sources Near the Communities

The levels of pharmaceuticals found in the water are not harmful to human health.



Mercury in Hair

Only 2 out of the 487 hair samples had levels of mercury that were above Health Canada's guideline normal acceptable range. Letters were sent to these 2 participants with suggestions on how to reduce their exposure to mercury.



Contaminants in Traditional Food

A total of 429 food samples representing 158 different types of traditional food were collected for contaminant analyses.

- Levels of contaminants in traditional food are within levels that are typically found in this region.
- Intake of contaminants (except cadmium) from traditional food is below the guideline levels and is not a cause for concern.
- To decrease exposure to cadmium (which can cause kidney problems and weak bones), limit intake of the following foods:
 - moose kidney and liver: not more than 1/2 a cup per month
 - seaweed: not more than 1/2 a cup per day
- It is recommended to replace lead shot with steel shot. Lead contamination of traditional foods can cause toxic effects to the brain, especially in children.

Traditional food is safe to eat and healthy for you

Key Results For All BC Communities:

1. Overall, the nutritional quality of food intake is below what is required for optimal health but it is improved when traditional food is eaten.
2. Excess body weight (overweight and obesity) is a major health issue.
3. Food insecurity is an important problem.
4. Water quality is overall satisfactory but close monitoring is recommended.
5. Mercury exposure, as measured by mercury levels in hair and food intake, is not a health concern.
6. Chemical contamination of traditional food is not a health concern, but it is important to have the information that was collected in this study to monitor any future changes.



More information can be found on the FNFNES website: www.fnfnes.ca

If you have any questions about these results or the project itself, please contact:

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The information and opinions expressed in this publication are those of the authors/researchers and do not necessarily reflect the official views of Health Canada.
