



Project Team and Local Staff

Popular Report for the Cree Nation of Chisasibi



Opening Ceremony



Science Camp

About the Project

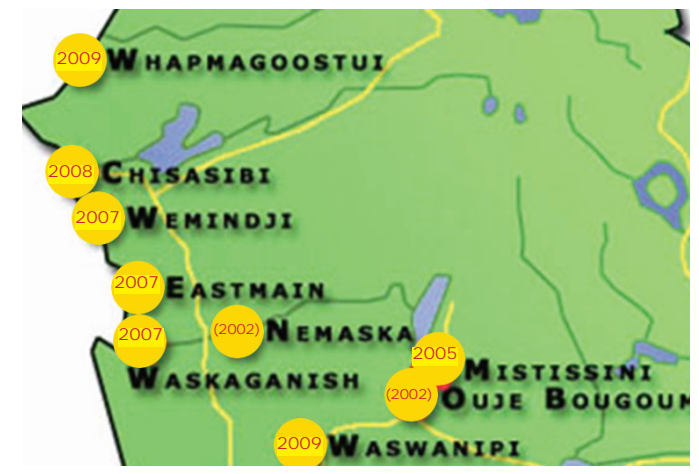
Iiyiyiuch know that the land, water, and animals are closely tied to their well-being. *Nituuchischaayihhtitaau Aschii* is a project to study the links between people's health, the kinds of food they eat, and the contaminants in the environment.

Many of the traditional Iiyiyiu foods are healthy but, these days, some fish and animals may be contaminated with harmful chemicals. Also, some diseases can be passed from animals to the humans.

We need to know whether the benefits of eating traditional food outweigh the risks. To find out, the project asked five questions:

1. **Nutrition:** What kinds of food are of foods are people eating in Iiyiyiu Aschii? What nutrients are people getting from traditional foods?
2. **Physical Activity:** Are people leading active lives?
3. **Contaminants:** What contaminants are found in people's bodies?
4. **Zoonoses:** How many people have caught infections from animals?
5. **General Health:** Do people have health problems that might be linked to their food choices and to contaminants?

The project is funded by Niskamoon under the 2001 Mercury Agreement between the Crees and Hydro-Québec. It has visited all 9 Iiyiyiu communities.



Community Participation

The project team visited Chisasibi from June 15 - July 6, 2008 and 266 people, including babies, children, adults and elders, participated in the study. Participants gave samples of their hair, nails and blood to be tested for contaminants and health indicators. They also did clinical tests to check their height, weight, heart rate and blood pressure, and answered questionnaires about their health, eating habits and activities.



Over a hundred people participated in the opening ceremony, Niihmaunnut Challenge and Aboriginal Day celebrations organized in collaboration with the Elders' Council of the Cree Nation of Chisasibi

Educational Activities



Science campers did science activities at the Youth Centre and learned about wildlife during a field trip

The project's educational component makes science exciting through fun, hands on activities. The goal is to encourage young people in Iiyiyiu Aschii to pursue science and health careers.

Grade 3 and 4 classes at JBES participated in activities about ecology and the scientific method. Daycare kids learned about good nutrition by baking healthy muffins and pizzas. Twenty-five youth also took part in a week-long Science Summer Camp held at the Youth Centre.

120 youth took part in the educational activities!

Conclusions

People do have some traces of contaminants in their bodies, but this is not a major health concern in Chisasibi right now.

However, development projects will continue to impact the environment. Therefore, it is important to keep checking the levels of contaminants in the environment and in people's bodies to make sure that they do not reach levels that could impact our health.

Being overweight, eating unhealthy food, and lacking physical activity are bigger health problems than contamination right now.

Traditional food remains a healthy choice compared to market food with high fat and sugar content. **The benefits of eating traditional food outweigh the risks!**

The priorities for health promotion in Chisasibi are:

- ✓ Do not smoke.
- ✓ Be active by walking, doing physical work, and playing sports.
- ✓ Eat foods high in vitamins like fruits and vegetables.
- ✓ Cut back on store-bought foods with high fat and sugar.
- ✓ Keep eating traditional foods as they are healthy.

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1. Nutrition

Traditional foods such as game, fish, fowl and berries are healthy. They are low in fat and high in some vitamins and minerals that help protect against illness. Moose, goose, rabbit, beaver and ptarmigan are the most common traditional foods eaten in Chisasibi. 60% of the people interviewed had eaten these foods in the last year.



As in other Iiyiyiu communities, people over 40 years of age eat traditional foods far more often than people aged 18-39, and children eat the least amount of traditional food. On average, men reported eating more traditional foods than women.

People in Chisasibi get enough protein and carbohydrates in their diets. However, most people tend to eat too much fat, saturated fat, and cholesterol.

Most people eat enough meat to get plenty of zinc and iron. An exception is boys 18 years and under, who ate less than the number of meat portions recommended by the Canadian Food Guide. People in all age groups eat fewer fruits, vegetables, and milk products than recommended. This leads to low levels of important nutrients like calcium, magnesium and some vitamins

Children get about 13% of their daily calories from drinking pop and other sweet drinks (not including fruit juice). The extra calories and sugar contribute to being overweight and can lead to diseases like diabetes.

2. Physical Activity

This study found encouraging links between physical activity (especially walking) and better weight in Iiyiyiu Aschii. Other studies have established that doing regular physical activity lowers the risk of heart disease, diabetes, and other health problems.



Daily activities like walking, chopping wood and dancing can help maintain a healthy body weight.

3. Contaminants

Contaminants are chemicals like mercury and pesticides that can be harmful to our health. Some contaminants are released into the environment by industries in the South and carried north by the wind and rain. Mercury is present naturally in the soil, but developments such as hydroelectric dams and forestry cause mercury to move from the soil into lakes and rivers, where it is absorbed by plants and tiny animals. Contaminants travel up the food chain and accumulate in the fish and animals that we eat.

Our bodies can tolerate a small amount of contaminants, but too much is toxic to our health. Babies, children and pregnant women are especially vulnerable. The project tested for Mercury, Lead, Cadmium, Selenium, PCBs and other Organic Contaminants, such as pesticides and fire retardants

Fortunately, most people in Chisasibi have only small amounts of these chemicals in their blood. Older people who have eaten a lot of fish and game in their lifetime tend to have higher levels of Mercury, Lead and other contaminants, but not enough to be dangerous to their health.

Mercury levels were higher than in Southern Quebec, but lower than in Mistissini. None of the participants in Chisasibi required follow-up with a doctor for high mercury levels. In fact, the mercury levels detected in Iiyiyiu Aschii are lower than they were in the 1970s.

However, people in Chisasibi had higher levels of lead in their blood than people in Southern Quebec and other parts of Iiyiyiu Aschii. Nine adults were seen by a doctor or nurse to try and determine the source of the contaminant. Some possible sources of lead are: smoking, eating birds and game killed with lead shot, and shooting a gun.

Another contaminant that is cause for concern is Cadmium, a chemical that affects kidney health. The people with high Cadmium levels were mostly smokers under 40 years of age. This suggests that cigarettes, and not traditional food, are the main source of Cadmium in Chisasibi.

Finally, the study found that people in Chisasibi had some exposure to PCBs and pesticides. Although the levels in Chisasibi were lower than in Mistissini, 33 adults needed non-medical follow-up for these contaminants.



Traditional foods such as game, fish, and berries are healthy.

4. Zoonoses

Zoonoses are bacteria, germs and viruses that people can catch from animals. Hunters and trappers who come into contact with wild animals may be at risk. When we come into contact with zoonoses, our bodies make antibodies to fight infection. These antibodies stay in our blood for years and can be detected with a blood test.

The study found some traces of past infection by zoonoses, but nobody was currently infected. Often these infections have very few symptoms.

A local group like the CTA could tell hunters and trappers what symptoms to look out for. Health care workers should also be informed about the symptoms of these illnesses

5. General Health

Some health problems are linked to people's eating habits and contaminants. These include thyroid problems, heart disease and diabetes.

Risk Factors for Heart Disease

Weight

- 83% of participants in Chisasibi were overweight.
- 62% can be considered obese.
- The results in Chisasibi are similar to Mistissini, and slightly better than Eastmain and Wemindji. People in Waskaganish had the healthiest weight on average.



Blood pressure

- Only 11% had high blood pressure at the time they were tested.

Cholesterol and fats

- 61% of the participants had low levels of "good" High-Density cholesterol.
- 24% had high triglycerides, an unhealthy fat.
- These factors put people at risk for heart disease.

Carotid artery thickness

- This was measured with a neck ultrasound
- The results in Chisasibi and the other communities visited are a little surprising because men and women have the same amount of buildup in their arteries. Usually, men have more.
- Overall, men and women had healthy arteries.

Diabetes

- 18% of participants had fasting blood sugar levels that indicate that they are at risk for diabetes.
- 2% had blood sugar levels that indicate undiagnosed or improperly managed diabetes. This is much lower than in the other Iiyiyiu communities visited.

To reduce chances of getting diabetes and heart disease, people need to eat less foods high in cholesterol, fat, and sugar, and to be more active.

Bone Health

Osteoporosis, or fragile bones, mostly affects older women. The study used ultrasound to measure the bone strength of women over the age of 35 in Chisasibi. **Women in Iiyiyiu Aschii have a low risk of breaking a bone compared to women in Southern Quebec.**