

Nituuchischaayihitaaau Aschii

STUDY OF HEALTH AND THE ENVIRONMENT IN MISTISSINI IN 2005

Report for Community Members

2007



Let's learn about our land
Let's learn about ourselves



Comité de la santé et des services sociaux de la Baie James
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*Tree Board of Health and Social Services of James Bay

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Tree Board of Health and Social Services of James Bay

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This is a simplified summary of a longer report entitled:
*Nituuchischaayihititaa Aschii: Multi-community Environment-and-
health Longitudinal Study in Iiyiyu Aschii: Mistissini*
Technical report: summary of activities, results and recommendations

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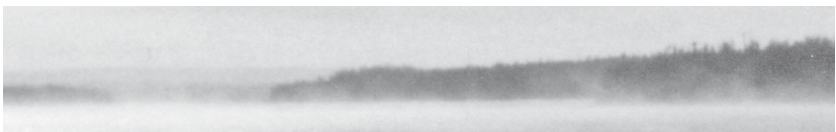
About the study

liiyiuch know that the health of the land, water, and animals is closely tied to their own health. The Nituuchischaayihititaa study looked at the links between people's health, the kinds of foods they are eating, and the contaminants in the environment. ("Contaminants" are chemicals like mercury or pesticides that may be in the water or in the animals that people eat.)

Many of the traditional liyiyiu foods are good for you: they are low in fat, and high in some vitamins and minerals that help protect against illness. But these days, some fish and animals are contaminated with harmful chemicals. Also, a few diseases can be passed from animals to the humans hunting or eating them. We need to know whether the benefits of eating traditional food outweigh the risks. To find out, this study looked at five questions:

1. What kinds of foods are people in Mistissini eating?
2. Have people built up contaminants in their bodies from eating fish and game?
3. Is the water in the lakes and rivers safe to drink?
4. How many hunters have caught diseases from animals?
5. How many people have health problems that might be linked to food and contaminants?

The study was funded under the 2001 Mercury Agreement. In the summer of 2005, 282 people in Mistissini answered questions about their health and activities. Many of them also gave samples of their hair, nails, and blood to be tested for various contaminants. In 2007 the study was done in Wemindji and Eastmain. The study will take place in Chisasibi and Waskaganish in 2008 and in the rest of the communities in liyiyiu Aschii over the next few years.



1. What kinds of foods are people eating?


Are people in Mistissini eating mostly traditional foods, or mostly store foods? The study found that many people hunt, and traditional foods are an important part of people's diets. People over age 40 eat at least twice as much land food (game, fish, birds, berries) as younger people. This shows in their blood, which contains a lot of a good type of fat. However, most people in Mistissini also eat a lot of unhealthy foods. They eat lots of foods that are high in bad fats, like French fries and store-bought cakes and cookies. In fact, many people are getting almost half their calories just from junk foods. And because they don't eat many fruits, vegetables, and whole grains, they are short in some of the vitamins that people need to stay healthy.

Besides this, many people in Mistissini drink sweet drinks like fruit punches or pop. On average, children drink two cans a day, and adults 1 ½ cans.

Drinking a can of pop a day can add 16 pounds to a person's weight within one year. The study also found that teenagers are eating a lot of sugar and already have high levels of bad (trans) fats in their bodies. This could set them up for heart problems and diabetes as they get older.

In short, the study found that although older people are still eating traditional foods, younger ones have switched to a diet that is high in bad fats and sugars. This could put them at risk of health problems in the future.

The study also asked people about how active they are. It found that people who are active and who walk regularly tend to have a better weight. This is likely to be good for their health.



2. Have people built up contaminants in their bodies from eating fish and game?

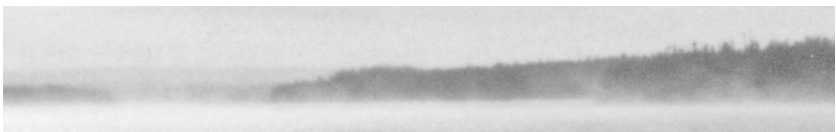
Harmful, chemicals can get into the environment. These contaminants last a long time, so they may originate in the south and then be carried north by wind and water. Examples are:

- Mercury
- PCBs (harmful chemicals that used to be in electrical wiring and transformers)
- Some kinds of pesticides that were banned in the 1970s and 80s
- Some chemicals that come from industry (like dioxins)
- Fireproofing chemicals that gradually leak out of fabrics, furniture, plastics, and appliances like toasters

Besides this, contaminants like cadmium and lead may also be in the environment.

Most of these contaminants work their way up the food chain. That is, they get into fish, then into the birds and animals that eat the fish, and so on into larger animals—including humans who eat fish and game. We can all tolerate small amounts of these chemicals, but too much is harmful. Babies and young children can only tolerate tiny amounts.

Fortunately, the study found that most people in Mistissini have only small amounts of these chemicals in their blood. Women of childbearing age, and young children, seem to have low levels of most contaminants. Some of the older people who have eaten a lot of fish and game in their lifetime have higher levels, but not enough to be dangerous. In fact, people's levels of mercury and lead are lower than they were in past studies. The improved lead levels may be because many hunters have switched to using lead-free bullets.



In spite of this good news, we need to be a bit cautious about people's levels of mercury, cadmium, and PCBs. Also, some teenagers and young adults have high levels of cadmium—a chemical that affects the kidneys—in their blood. This seems to come from cigarettes rather than from wild meat.

In sum, the study found that people in Mistissini have some harmful chemicals in their blood, but not enough to be of medical concern right now. However, large development projects in Iiyiyiu Aschii could release more of these chemicals. So we will need to keep checking them over the coming years to be sure that people's levels are not going into the danger zone. In the meantime, people should continue to eat fish and game, because right now the benefits outweigh the risks.

3. Is the water in the lakes and rivers safe to drink?

The research team tested the water in the lakes and rivers that people in Mistissini drink from. Community members think the purest water comes from the Perche River and Wapachee Camp, and the lab tests supported this. But they did find a few germs and parasites that could make people sick in most of the water sources. These germs probably come from animals rather than humans, and it is normal to find them in lakes and rivers. To be safe, people who want to drink the



water from lakes or rivers should first boil it for at least one minute to kill the germs.

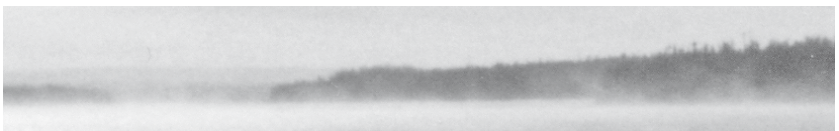
4. How many hunters have caught diseases from animals?

Some diseases can be passed from animals to humans. When this happens, we can usually detect traces of past infections in the blood even years after the sickness has passed. The scientists looked for these traces in the blood of 50 active hunters/trappers and their spouses. They found some traces, but not enough to be cause for

and trap are at risk of these illnesses, it would make sense for a group like the CTA to teach them what symptoms to look out for. Also, we could teach people the safest ways to handle dead animals so as not to pick up germs. Finally, we should alert doctors in the area to keep an eye open for these kinds of illnesses.



alarm. This probably means that the liyiyiuch have safe methods of handling animals. However, since people who hunt, fish,



5. How many people have problems linked to eating habits and contaminants?

Some health problems are linked to people's eating habits, although research suggests that contaminants in food may also contribute. These problems include:

- Fragile bones (osteoporosis)
- Thyroid problems
- Conditions that lead to heart disease
- Diabetes

The study checked to see how common these problems were among people in Mistissini.

FRAGILE BONES

Fragile bones are a problem because they can break easily. This condition is mostly a concern for women who are past childbearing age. It is often related to diet, but some of the man-made chemicals listed above may also play a part. The study measured how strong the bones of older women in Mistissini are, using ultrasound.

The results were encouraging: compared to women in Quebec City, those in Mistissini have quite a low risk of breaking a bone.

THYROID PROBLEMS

The thyroid is a gland in the neck that helps control how much energy we feel. Thyroid problems can set the stage for other illnesses, including heart disease. Scientists think that some contaminants might affect the thyroid. This study took only a quick look for thyroid problems and found very few, but further study is needed.



CONDITIONS THAT LEAD TO HEART DISEASE

Some health problems lead to heart disease and strokes. This includes high blood pressure, thickening of the arteries (atherosclerosis), and high cholesterol.

High blood pressure

When asked, 17% of people said they had high blood pressure, but most of them seemed to have it under good control. High blood pressure was most common in older people and those carrying a lot of fat around their waists. Mercury levels also increased people's blood pressure somewhat.

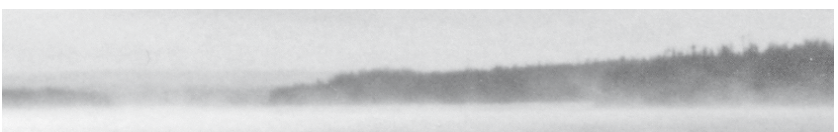
Thickening of the arteries (the large veins that carry blood to the heart and brain)

The study measured how thick the arteries were in people over age 40. Generally, people's arteries got thicker with age. Despite this, people in Mistissini still had better results than other Aboriginal people in Canada.

Cholesterol and fats

Only a few people in the study had high cholesterol. However, some people had fairly low levels of "good" cholesterol and high levels of another fat (triglycerides), which is linked to being overweight and lack of physical activity. Trans fats, which raise the risk of heart disease, were especially high in teenagers (likely due to junk food).

The study concluded that high blood pressure and thickening of the arteries are not major problems right now in Mistissini. However, people could be advised to change their diets and amount of physical activity so as to raise their levels of "good" cholesterol. This will help them to reduce their risk of heart disease.



DIABETES

Rates of most of the illnesses that the study looked at are not alarming. But diabetes is the exception, with very high rates. In Mistissini, about one adult in seven has diabetes. Further, the study found that one person in ten—especially women and girls—already shows signs of getting it in future. We know that diabetes is linked to weight, and that

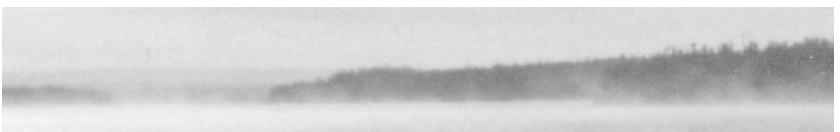
80% of people in the community are overweight. Also, many people are carrying their extra weight mostly around the waist, and this too seems to raise the risk of diabetes. Action is needed right now to convince people to eat less fat and sugar and to be more active.



Summary

The study found that contaminants are not a major problem in Mistissini, even though they are present in the traditional foods that people eat. Because development projects could change the environment, we need to keep checking the contaminant levels. However, right now being overweight and eating a poor diet are much bigger problems than contaminants. Based on what the study found, health workers should be advising people to:

- Avoid smoking
- Be active
- Eat foods that have lots of vitamins, like fruits and vegetables
- Cut back on store-bought foods that have lots of fat and sugar
- Keep eating traditional foods, as they are healthy



Notes

