Step-by-Step Biomonitoring Process

Biomonitoring is increasingly being used as an effective method of measuring and monitoring the level of contaminants in human populations. The Assembly of First Nations (AFN) is presently assessing the interest of First Nations in participating in a national First Nations’ specific biomonitoring study. A First Nations’ specific biomonitoring project on a national level would give First Nations communities the opportunity to focus on specific environmental health related issues and provide baseline data for future biomonitoring work or research on the health impact of chemicals in the environment.

What is involved in the testing process?

Lifestyle questionnaire

Volunteers will be asked to complete a short questionnaire that will be used to explore possible connections between a person's lifestyle (e.g. what foods a person eats) and the chemicals found in his or her body.

Fluid and tissue samples

Participants can provide fluid and/or tissue samples which are tested for toxic chemicals at private certified Canadian laboratories. These samples can be:

- Blood
- Urine
- Hair
- Nails
- Breast milk

You will be required to give samples of blood and urine. A qualified medical practitioner will take the blood samples with a needle and vial (the same as when your family doctor takes your blood). You will be asked to urinate into a container provided for you at your appointment.
Sample analysis*

Your blood and urine samples will be sent from where they are collected to laboratories that will conduct the analysis. Samples collected will be tested for a large number of substances including toxic chemicals, and vitamin and nutrition levels.

While some biomonitoring programs may keep and store samples in long-term storage, the First Nations Biomonitoring Initiative will not be storing samples in long-term storage. All samples will be properly disposed of after analysis is completed.

How Results Will Be Communicated

Risk Assessment and Risk Communications

The results of the tests will be available shortly after the samples are taken. At that time participants will be provided with a results package, containing (1) the raw test data outlining the chemical concentrations detected in blood and urine specimens and nutritional analysis; (2) a comparison of the national average for First Nations' people on reserve test results to the rest of Canada from the Canadian Health Measures Survey; (3) other supplemental information to help participants understand their results.

Abnormal results

The AFN will provide participants with information that will help them understand the results of their tests, but they will not provide medical advice or opinion because they are not qualified to do so. A participant with an unusually high level of a particular chemical in their blood will be informed and a recommendation to seek medical advice will be given.

Although the presence of toxic chemicals in the body is unnatural, biomonitoring results cannot be used to predict how exposure to a chemical will affect an individual's health. This is because potential effects from toxic chemicals vary according to: the chemical, when a person is exposed, how often they are exposed for, how long they are exposed for, and how much they are exposed to. The effects also vary according to many factors specific to the exposed individual.

*Please note: Samples collected will NOT be sent to a DNA data bank. Samples will only be used for purposes stated in research agreements. Samples will NOT be used to test participants for drug use.

To learn more about the AFN biomonitoring study or how to get involved, visit http://www.afn.ca/