

Appendix 12: Basic Diabetes Information

What is diabetes?

Glucose comes from the food we eat such as pasta, cereal, rice, bread, fruit, starchy vegetables, dairy products and added sugar (pop, candies, cookies and cake). Glucose is used by the body for energy to do such things as walk, run, work and play.

Insulin is a hormone that is made in the pancreas. When there is increased glucose in the blood stream, it causes the pancreas to release insulin. Insulin changes the sugar from food into energy. It does this by bringing the glucose into the cells so that it can be used for energy.

Diabetes occurs when you have too much sugar (glucose) circulating in your blood. If there is not enough insulin, or if the insulin does not work well, the glucose levels rise in the blood and diabetes occurs.

As well, when the glucose is not able to get into the cell and stays in the blood stream, it will get taken to the kidneys. The kidneys' role is to filter the blood and produce urine. The urine that is produced will carry the glucose out of the body. This can leave a person feeling weak and tired because they have just peed out all of the energy from the food they have eaten.

The liver's role

The liver stores and makes glucose depending on your body's need. During a meal, your liver will store glucose as glycogen for a later time when your body needs it. The high levels of insulin and suppressed levels of glucagon during a meal promote the storage of glucose as glycogen.

When you are not eating, especially overnight or between meals, the body has to make its own sugar. The liver supplies glucose by turning glycogen into glucose.

Blood glucose levels rise sharply in the early morning due to the release of certain hormones in the middle of the night. The presence of glucagon, growth hormone, epinephrine and cortisol increase the glucose production in the liver. For individuals without diabetes, these processes are balanced out by increased insulin secretion by the pancreas, which keeps blood glucose levels relatively stable. But in people with diabetes, changes in glucose metabolism during sleep can have a big impact on morning blood glucose levels.

Definitions:

Glucose	Pancreas	Insulin
A simple sugar that is an important energy source and is a component in many carbohydrates.	A large gland behind the stomach that produces the hormone insulin and secretes it into the bloodstream in order to regulate the body's glucose level.	A hormone produced in the pancreas that regulates the amount of glucose in the blood.

TEACHING ACTIVITY:

Below are two examples of ways that you can teach what is diabetes. This can be done with an individual, or in a group setting.

Key message: Diabetes is a lifelong condition where the body does not have enough insulin, or does not use insulin properly which results in high blood glucose. High blood glucose in diabetes can lead to other serious health problems.

WHAT IS DIABETES PUZZLE:

- a. Type out the definition of diabetes in large font (about 20-30).
- b. The definition is: "Diabetes is a disease where your body cannot use its blood glucose for energy."
- c. Print out the definition and cut it out with one word on each piece of paper.
- d. If you are teaching to a group, provide a puzzle to each table.
- e. Ask the table to try to figure out what the puzzle reads.
- f. The first table to get the correct answer wins.

Use your ADI resources to teach this concept!

The Healthy Living Jeopardy Game has been provided to every Manitoba ADI community program. Look for your healthy living jeopardy game. Play this game with community members and workers to find out more about diabetes.

Should you not have this resource, contact one of the ADI FNIHB team members. Refer to Appendix 11 for a full list of resources provided to the ADI community programs.

WHAT IS DIABETES? (From the Do-It-Yourself: Diabetes Prevention Activities)

What you need:

- Poster
- Construction paper
- Ketchup and tomato juice
- Display board
- Two large plastic or glass jars, labels removed, with lids
- Blank labels
- Colour markers
- Tape and scissors
- Old magazine pictures or photos

Show it!

1. Fill one jar $\frac{1}{2}$ full with ketchup. Label the jar 'high blood glucose'.
2. Fill the other jar $\frac{1}{2}$ full with tomato juice. Label this jar 'normal blood glucose'.

Label a poster with 'All these foods contain natural sugar'. Attach the pictures of food onto the poster. Write 'the body uses this sugar to burn energy' at the bottom of the poster. Display the poster.

Tell it!

Pointing at the picture of food say:

"Grains, milk, yogurt, fruits, some vegetables, beans and lentils all contain natural sugar. When we eat these foods, they break down into sugar & move in the blood. Sugar is fuel for the body. Like gas in a gas tank."

Show the insulin key and say:

"Insulin is a hormone that helps move sugar from the blood stream into the cells where it is burnt for energy. Insulin is like a key that helps open a door on the cells and allows sugar to float inside the cell where it can be used for energy. When there are not enough insulin keys or they are not working properly, the sugar builds up in the blood stream and causes all kinds of damage."

Show the jar of 'normal blood glucose' and say:

"This represents normal blood glucose where blood can flow easily through your body."

Show the jar of 'high blood glucose' and say:

"This represents high blood glucose. When insulin is not working or there is not enough insulin the sugar backs up in your blood. This makes it difficult for blood to flow through your body and causes all kinds of health problems. This is diabetes."

There are three main types of diabetes

- Type 1 diabetes
- Type 2 diabetes and
- Gestational diabetes

In addition, there is also a term called prediabetes

Prediabetes

Prediabetes refers to a condition where a person's blood glucose levels are higher than normal, but not yet high enough to be diagnosed as type 2 diabetes. Prediabetes can act as a warning sign of developing type 2 diabetes. The good news is that not all people with prediabetes will develop type 2 diabetes, but nearly half of people living with prediabetes will develop type 2 diabetes. Health care providers may recommend that people with prediabetes take oral medications.

Some research indicates that complications of diabetes such as heart disease may begin during prediabetes. Encourage community members to get screened for diabetes and take actions to prevent and delay diabetes by achieving and maintaining a healthy weight, eating healthy foods and being physically active. Losing even a modest amount of weight, such as 5-10% of total body weight, can have a very positive health impact and delay or prevent type 2 diabetes.

For more information on prediabetes, or to order resources on prediabetes, please visit the Diabetes Canada website at: <https://orders.diabetes.ca/collections/educational-material/products/prediabetes?variant=1270115393>

Type 1 diabetes

The cause of type 1 diabetes remains unknown. It is not caused by eating too much sugar and it is not preventable. It is believed that type 1 diabetes occurs when the immune system mistakenly attacks and kills the beta cells of the pancreas and as a result the pancreas is unable to make insulin. People with type 1 diabetes must take insulin injections for the rest of their lives.

Approximately 5-10% of people with diabetes have type 1 diabetes and it is usually diagnosed in children and adolescents. However, sometimes it is diagnosed in adults as well. Individuals living with type 1 diabetes can live a long a healthy life by keeping their blood glucose levels within the target range set by themselves and their health care provider. This can be done by taking their insulin as recommended, eating healthy, being physically active, aiming for a healthy body weight and managing stress effectively.

For more information on type 1 diabetes, or to order resources on type 1 diabetes, please visit the Diabetes Canada website at:

<https://orders.diabetes.ca/collections/educational-material/products/type-1-diabetes-the-basics?variant=1276758273>

Type 2 diabetes

Type 2 diabetes occurs in about 90% of people with diabetes. Type 2 diabetes is a disease in which the pancreas does not make enough insulin or the body does not effectively use the insulin that is made. As a result, glucose builds up in the blood instead of being used for energy. Type 2 diabetes usually develops in adulthood, although more and more children and especially Indigenous children are being diagnosed with type 2 diabetes.

Diabetes risk factors:

- Being over 40 years of age
- Having a parent or sibling with type 2 diabetes
- Being Indigenous, or member of another high risk population
- Having a history of impaired glucose tolerance or impaired fasting glucose
- Having heart disease
- Having a history of gestational diabetes
- Having prediabetes
- Having had a large baby (over 9 lbs)
- Having high blood pressure
- Having high cholesterol
- Being overweight, especially around the middle
- Having been diagnosed with polycystic ovary syndrome
- Having been diagnosed with Acanthosis nigricans (dirty neck syndrome)
- Having been diagnosed with sleep apnea
- Having a history of using glucocorticoid medication
- Having evidence of diabetes complications, such as eye, nerve or kidney disease

While we cannot change our age or our genetics, we can eat healthy and be active in order to help improve our weight, cholesterol levels and blood pressure. The purpose of the ADI program is to help teach and encourage people how to eat healthy and be physically active so that they can decrease their risk of developing type 2 diabetes and its complications.

Up to 10% of the population may have type 2 diabetes and not know it. Someone living with undiagnosed type 2 diabetes is at an increased risk of developing complications because they are not monitoring and controlling their blood glucose levels.

As the ADI worker, you should encourage community members to be screened for diabetes by the nurse or doctor in your community. All First Nations adults should be screened for diabetes annually. Children 18 years old and younger with one or two parents living with diabetes and who are overweight or obese should be screened for diabetes annually. Children of healthy weight and who do not have a family history of diabetes should be screened for diabetes at least every three years.

People living with type 2 diabetes can go on to live a long and healthy life if they keep their blood glucose levels within target range set by themselves and their health care team. This can be done by eating healthy, being physically active, monitoring blood glucose levels at home, reaching a healthy body weight, taking their diabetes medication or insulin if prescribed by their doctor and managing their stress effectively.

Complications of diabetes

Type 2 diabetes is a progressive, life-long disease. For people living with type 2 diabetes it may become more difficult to keep their blood glucose levels within the target range. High blood glucose levels may lead to diabetes complications such as blindness, heart disease, kidney problems, nerve damage and erectile dysfunction. The good news is that good diabetes care and management can prevent or delay the onset of diabetes complications.

Diabetes complications can be reduced by keeping blood glucose levels within the target range, avoid smoking, keeping cholesterol and blood pressure within the target range, taking care of their feet and regularly visiting their doctor, diabetes team, dentist and eye specialist.

For more information or to order resources on type 2 diabetes, please visit the Diabetes Canada website at: <https://orders.diabetes.ca/collections/educational-material/products/type-2-diabetes-the-basics?variant=1269697601>

TEACHING ACTIVITY:

Below is an example of how you can teach about diabetes risk factors. This can be done with an individual, or in a group setting.

Key message: You could have diabetes and not know it so it is important to know your risk factors and get tested regularly.

At Your Own Risk: (From the Do-It-Yourself: Diabetes Prevention Activities)

What you need:

-Deck of cards	-Blank labels	-Display board
-Construction paper	-Colour markers	-Tape

Show it!

1. Write on a piece of paper: “higher risk for diabetes” and display it.
2. Write the following risk factors on labels and stick them to the front of playing cards (right over the numbers).

-Over 40 years old	-Indigenous ancestry	-Mother has diabetes
-Father has diabetes	-Brother has diabetes	-Sister has diabetes
-Overweight	-Large waist	-Heart attack in the past
-Stroke in the past	-Kidney failure in the past	-Had a baby over 9lbs
-High blood pressure	-High cholesterol	-Gestational diabetes

-Warning signs (very thirsty, peeing a lot, blurred vision, slow healing)
 -Darkened patches of skin (under arms, skin folds, back of neck)
 -Diagnosed with prediabetes
 -Diagnosed with polycystic ovary syndrome

1. Shuffle the cards with the rest of the deck.

Tell it!

Say: *“Many people have diabetes but they do not even know it. We are going to play a game to help us learn what puts us at higher risk for diabetes. You will use the cards I give you as your pretend risks for diabetes. Cards with words on them are risk factors for diabetes and blank cards mean no risk.”*

Deal 4 cards to each person, say:

“Looking at your cards, does anyone have risk factors for diabetes? Everyone with risk factors on their cards needs to be tested for diabetes. Those with plain playing cards don’t have risk factors but they should check their risk again in one year.”

Go around the group, say: *“Read out your risk factors for diabetes.”*

Tape up the cards with risk factors written on them, under the “High risk for diabetes” sign.

Play another round by dealing 4 cards to each person again.

Keep playing until all the cards with risk factors on them are put up onto the display.

Point out all the risk factors saying:

“These are the risk factors for diabetes.”

TEACHING ACTIVITY:

Below is an example of how you can teach about the different types of diabetes. This can be done with an individual, or in a group setting.

TYPES OF DIABETES: (From the Do-It-Yourself: Diabetes Prevention Activities)

What you need:

-Construction paper

-Colour markers

-Display board

-Tape and scissors

-Old magazine pictures or photos

Show it!

1. Write “type 1 diabetes” on a coloured piece of paper. Write “type 2 diabetes” on another piece of paper. Display these signs.
2. Find or draw the following pictures and display them under the right sign:
 - “type 1 diabetes”: A kid, thermometer, band-aid, red cross, syringe
 - “type 2 diabetes”: Someone over 40 years old, healthy foods, someone being physically active, pills, syringe
3. Draw 10 stick people. Circle one stick person and label it: “type 1 diabetes”, circle the rest of the stick people and label them: “type 2 diabetes”. Display the drawing.

Tell it!

Pointing at the poster, and say: *“There are two main types of diabetes – type 1 and type 2 diabetes. There are key differences between the two types. Type 1 diabetes is usually found in kids. They get very sick and need to take insulin injections to live. Type 2 diabetes is usually found in people over 40 years old. They may or may not have any warning signs. Type 2 diabetes uses diet, activity, pills and sometimes insulin to control blood glucose levels.”*

Point to the stick people and say: *“Of ten people living with diabetes, nine people have type 2 diabetes and one person has type 1 diabetes.” Insulin is like a key that helps open a door on the cells and allows sugar to float inside the cell where it can be used for energy.*

Gestational diabetes

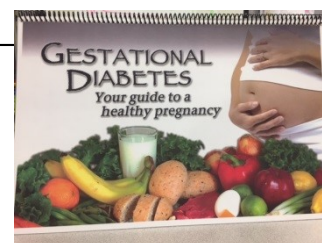
Gestational diabetes is a type of diabetes that occurs during pregnancy. The body cannot produce enough insulin to handle the effects of a growing baby and changing hormone levels. Insulin helps the body to control the level of glucose in the blood. If the body cannot produce enough insulin, blood glucose levels will rise.

Gestational diabetes affects about 8-18% of all pregnancies in Indigenous women and involves an increased risk of developing type 2 diabetes for both mother and child. First Nations women should be screened for diabetes at their initial prenatal visit (prior to 12 weeks gestation) and again between 24-28 weeks gestation, unless they have previously been diagnosed with diabetes.

Use your ADI resources to teach this concept!

Gestational Diabetes Flip Chart has been provided to every Manitoba ADI community program. Look for your gestational diabetes flip chart and use it to teach community members and workers about what is gestational diabetes and how to manage gestational diabetes.

Should you not have this resource, contact one of the ADI FNIHB team members. Refer to Appendix 11 for a full list of resources provided to the ADI community programs.



Gestational diabetes risk factors:

- Being 35 years of age or older
- Being an Indigenous woman
- Using corticosteroid medication
- Being obese
- Having prediabetes
- Having gestational diabetes with a previous pregnancy
- Previously given birth to a large baby (greater than 9 lbs)
- Having a brother, sister or parent with type 2 diabetes
- Having polycystic ovary syndrome or acanthosis nigricans

What does gestational diabetes mean for the mom?

A woman diagnosed with gestational diabetes will need to work more closely with her health care team to ensure that her blood glucose levels are within target during her entire pregnancy to help avoid complications during labor and delivery.

The mother's blood glucose levels will likely return to normal after the baby is born. However, she is at greater risk of developing gestational diabetes in future pregnancies

and of developing type 2 diabetes in the future. Achieving a healthy weight can help to reduce this risk.

What does gestational diabetes mean for the baby?

Untreated gestational diabetes can lead to high blood glucose levels. This increases the risk that the baby will weigh more than 9 lbs at birth and will have a difficult delivery. Gestational diabetes can also increase the baby's risk of being overweight or obese and developing type 2 diabetes later in life. It is important to note that the baby will not be born with diabetes.

Managing gestational diabetes:

- Enjoy healthy foods spread throughout the day (3 meals and 2 snacks)
- Achieve a normal pregnancy weight gain
- Be physically active
- Check blood glucose levels at home
- Take insulin or medication if prescribed

Gestational diabetes and breastfeeding:

It is important to breastfeed immediately after birth for at least 4 months to help avoid low blood glucose in the newborn and to reduce the risk of obesity and diabetes in the future for the baby.

There are many benefits to breastfeeding, beyond diabetes prevention. The Public Health Agency of Canada, Health Canada and the World Health Organization recommends for all women who can to provide breast milk only for feeding their baby from birth to 6 months. Women are encouraged to breastfeed for up to 2 years or more after introducing solid foods.

For breastfeeding support, speak to your community nurse, Tribal Diabetes Coordinator, or one of the FNIHB employees.

Screening for type 2 diabetes after pregnancy:

It is important for all women who are diagnosed with gestational diabetes to be tested for type 2 diabetes within 6 weeks to 6 months of giving birth, prior to planning another pregnancy and at least every 3 years (or more often depending on the risk factors).

For more information on gestational diabetes, or to order resources on gestational diabetes, please visit the Diabetes Canada website at:

<https://orders.diabetes.ca/collections/educational-material/products/gestational-diabetes?variant=1278967681>

TEACHING ACTIVITY:

Below is an example of how you can teach about gestational diabetes. This can be done with an individual, or in a group setting.

GESTATIONAL DIABETES: (From the Do-It-Yourself: Diabetes Prevention Activities)

What you need:

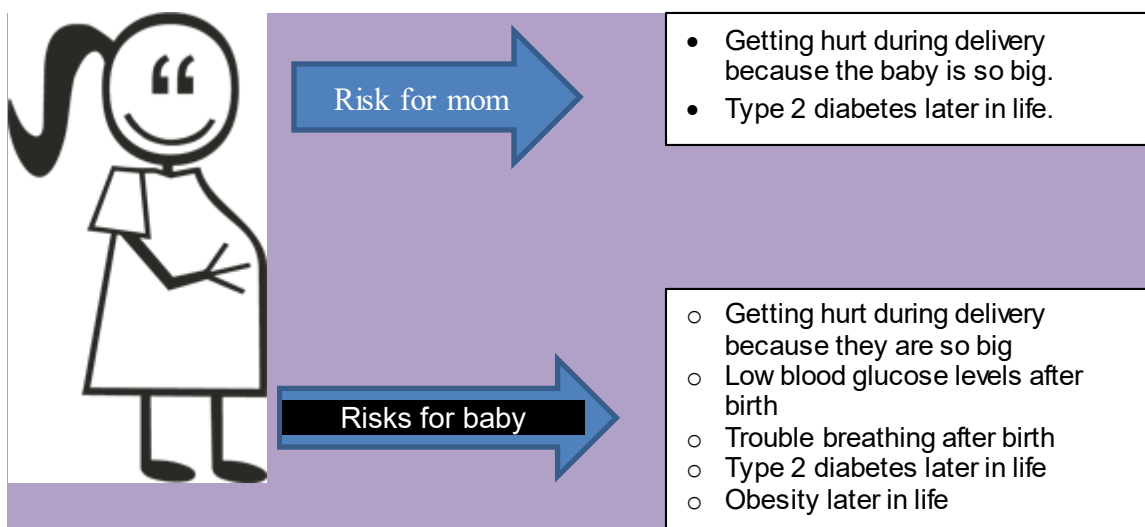
-Construction paper
-Tape

-Colour markers
-Poster

-Display board

Show it!

Draw and display this diagram listing the risks of gestational diabetes (diabetes in pregnancy) to the mom and the baby.



Tell it!**Say:**

“Gestational diabetes is another type of diabetes that happens when you are pregnant. Pregnancy hormones can sometimes make blood glucose rise. Once the baby is born, blood glucose levels go back to normal. Every woman is tested for diabetes during pregnancy. First Nations women have gestational diabetes more than non-First Nations women.”

Pointing at your display, say:

“There are risks for the mom and the baby, which is why mothers watch their blood glucose levels very closely. The main risks to the mom include getting hurt while giving birth because the baby is so big plus she can develop type 2 diabetes later in life. The main risks to the baby are getting hurt at birth because they are very big, plus they can have trouble breathing and low blood glucose levels after they are born. Children are also at risk for being obese or very over weight and developing type 2 diabetes later in life.”

Use your ADI resources to teach this concept!

The Diabetes in Pregnancy Jeopardy Game has been provided to every Manitoba ADI community program. Look for your diabetes in pregnancy jeopardy game. Play this game with community members and workers to find out more about diabetes during pregnancy.

Should you not have this resource, contact one of the ADI FNIHB team members. Refer to Appendix 11 for a full list of resources provided to the ADI community programs.

Pre-existing diabetes

Pre-existing diabetes refers to when a woman had type 1 diabetes or type 2 diabetes prior to becoming pregnant. The number of women with pre-existing diabetes has been increasing, mostly because of the increase in type 2 diabetes.

The key to a healthy pregnancy for a woman with diabetes is keeping blood glucose levels in the target range – both before she is pregnant and during her pregnancy. Poorly controlled diabetes in a pregnant woman with type 1 or type 2 diabetes increases her risk of miscarrying, having a baby born with a malformation and having a stillborn.

Prior to becoming pregnant, women with pre-existing diabetes should:

- Use reliable birth control until adequate glycemic control
- Attain a preconception A1C of $\leq 7.0\%$ ($\leq 6.5\%$ if safe)
- Remain on metformin + glyburide until pregnant, otherwise switch to insulin
- Assess for and manage any diabetes complications
- Take folic acid (1 mg/day) for 3 months pre-conception until at least 12 weeks gestation
- Discontinue medications that may be harmful to the growing baby:
 - ACE-inhibitors / ARB (prior to or upon detection of pregnancy in those with significant proteinuria)
 - Statin therapy

Planning a pregnancy for women with type 1 or type 2 diabetes:

Women with type 1 or type 2 diabetes should discuss pregnancy plans with their health care provider to:

- Review blood glucose targets
- Assess general health and status of any diabetes-related complications
- Aim for optimal weight and if overweight, start weight loss before pregnancy with healthy eating
- Review medication
- Start folic acid supplementation (1.0 mg daily)
- Ensure appropriate vaccinations have occurred

Diabetes and First Nations People

- Type 2 diabetes continues to be a significant health problem among First Nations adults.
- Approximately 21% of First Nations adults have type 2 diabetes compared to only 6% of non-Indigenous Canadians.
- First Nations adults tend to develop diabetes much younger and develop complications more rapidly compared to the general Canadian population living with diabetes (First Nations Regional Health Survey, 2008-10).
- The situation for youth is exceptionally concerning as the rates of diabetes among First Nations children has more than tripled from 1980 to 2005 (Diabetes Canada; www.diabetes.ca)
- Some estimates show that rates of type 2 diabetes are twelve times higher for Manitoba children compared to the Canadian average (Food Matters Manitoba; www.foodmattersmanitoba.ca).
- According to the 2010 Canadian national surveillance study, the province of Manitoba had the highest incidence of type 2 diabetes in youth at 12.45 cases per 100,000 children per year. This exceeds other regions by 10-20 times.

- More recent research indicates that this number now exceeds 20 cases per 100,000 children per year.
- According to the Diabetes Education Resource for Children and Adolescents (DER-CA) program, in 2015, 64 children were newly diagnosed with type 2 diabetes in Manitoba and Northwestern Ontario. Of these children, 90% of them have self-declared as being of First Nation origin.

Why First Nations people are at greater risk of developing type 2 diabetes:

Diabetes is a chronic disease with many causes including lifestyle, genetic susceptibility and the social determinants of health.

Lifestyle

- It is believed that major lifestyle changes have partially contributed to the increase rate of type 2 diabetes in First Nations people.
- In the past, people lived off the land to provide for themselves by hunting, gathering, gardening, fishing and trapping. They were more active when they travelled by walking, canoeing or using dog teams. They also had to chop their own wood for heat, haul their own water as well as tan their own hides and sew their own clothing.
- Today, technology reduces the necessity of much physical activity. Most of us do not chop wood for heat or haul water, and spend many hours of the day sitting.
- In addition, the traditional diet was healthier and made up of wild meats, fish, roots, plants and berries.
- Today's diets have changed drastically. Many diets are made up of highly processed foods and junk foods such as candies, pop and chips that they buy from the grocery store. These are high in calories, fat, sugar and sodium (salt) and were not part of the traditional diet.
- Healthy eating can be expensive and challenging to do for individuals on a limited income, for those who live in a remote area where access to healthy foods are limited, or for individuals who have limited cooking and food preparation skills.
- To learn how to prepare healthy foods at a lower cost, contact your Tribal Diabetes Coordinator or one of the FNIHB's nutritionists.

TEACHING ACTIVITY:

Below is an example of how you can teach about our daily living – then and now and the effect this has on rates of diabetes.

Daily Living – Then & Now: (From the Do-It-Yourself: Diabetes Prevention Activities)**What you need:**

- | | | |
|---------------------|---------------------------|----------------|
| -Construction paper | -Colour markers | -Display board |
| -Tape & scissors | -Old magazines and photos | |

Show it!

- Write these words on construction paper and display them on the wall:

“Then”	“Now”
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- Gather pictures of the following and place them under the “Then”/“Now” signs:

Then:

- Wild game
- Fish
- Berries
- Wild greens
- Campfire
- Gathering food or medicine
- Vegetable gardens
- Fishing
- Someone walking
- Glass of water
- Dog-sled team
- Sewing
- Cup of tea

Now:

- Canned meat
- Fried chicken
- Juice
- Sugary sweets
- Thermostat
- Department store
- Grocery store
- 4 wheeler
- Ski-doo
- Pop
- Truck
- Clothing store
- Energy drinks or sports drinks

Tell it!

Say: *“In the past, First Nations people were much more active. The way of life was to gather healthy foods from the land. Today, less activity and too much food is one of the reasons that type 2 diabetes is increasing in First Nations communities.”*

Pointing to the “Then” and “Now” display, say:

*“We used to eat wild game and fish, and now we are eating fried chicken.
 We used to eat berries for a treat, now we have lots of juice and sugary sweets.
 We used to start a fire to keep warm, now we turn up our thermostats.
 We used to tan hides and sew all our clothes, now we buy them at the store.
 We used to walk or use a dog-sled, now we use a 4 wheeler, ski-doo, car or truck.
 We used to go out on the land and hunt, fish, gather, even plant gardens for food.
 Now we drive to the grocery store and look for the closest spot to park.
 We used to drink traditional teas and now we drink lots of pop and energy drinks.”*

Key message: *The way of life in the past was very active and the food choices were healthy. The new way of life means using our bodies less and eating more. This imbalance leads to higher rates of type 2 diabetes.*

Genetic susceptibility

- Some research has shown that carrying a certain gene (HNF-1 α G319S polymorphism) is associated with a greater risk factor for developing type 2 diabetes.
- This gene has been identified in the Oji-Cree of northeastern Manitoba and northwestern Ontario, a group that has one of the highest prevalence rates of type 2 diabetes in the world.
- In one Oji-Cree community, the frequency of the S319 allele in adults was 20.9% in those with diabetes and 8.7% in those without diabetes.
- Further, individuals living with 2 copies of this gene have been diagnosed earlier compared to those who only have 1 copy of the gene, or who do not have this gene.
- There seems to be an association between carrying the HNF-1 α G319S polymorphism genes and developing diabetes and its complications.
- In addition, those who carry this gene are at higher risk for developing complications due to having high blood glucose levels for a long time.

Social determinants of health/Indigenous-specific determinants of health

- Health and social conditions vary significantly depending on where individuals live (on-reserve versus off-reserve; urban versus rural setting).
- Living on-reserve can lead to fewer opportunities for education and employment, limited availability of safe and healthy foods and poor living conditions.
- People living on-reserve often have less access to health care services due to high healthcare staff turnover, geographic barriers, language barriers, negative stereotyping, lack of social support and limited culturally-appropriate services.

Individuals and communities that experience inequalities in the indigenous-specific determinants of health carry an additional burden of health problems and are often restricted from access to resources that might help to improve problems. Not only do the social determinants of health influence overall health, but they also create health issues that often lead to circumstances and environments that, in turn, represent more determinants of health. For example, living in a low income condition has been linked to increased illness and disability, which is linked to decreased opportunities for employment, and therefore increasing the risk of poverty.

While we cannot affect some of the risk factors for type 2 diabetes, there are things we can do to help prevent and manage type 2 diabetes in First Nations people. A few of the best ways to prevent and manage diabetes is to eat well and to keep active. In the next sections of this resource, find out how healthy eating and regular physical activity can help prevent and manage diabetes and its complications.

Resources:

For a copy of the following powerpoint presentations, ask your Tribal Diabetes Coordinator (TDC), a FNIHB staff, or visit the website: www.mfndlc.ca

- Diabetes – what is it and how can we prevent it?