

# Treat Diabetes

## Chapter 1

# Overview of Diabetes

### You Will Learn About:

1. What your pancreas does and the role of insulin
2. Your type of diabetes
  - a. What it is and what happens to your body
  - b. What causes it
  - c. What can you do about it
3. The signs and symptoms of diabetes
4. The tests used to diagnose diabetes

## 1. What Your Pancreas Does and the Role of Insulin

Many parts of your body are involved with digesting food and drink. When your body digests food and drink, sugar (also known as glucose) goes into your blood stream. When sugar goes into your blood, your pancreas releases a hormone called insulin. Insulin helps your body take sugar from your blood stream and store it. This stored sugar is used for energy. Knowing what foods and drinks raise your blood sugar and how your body reacts is vital to managing your diabetes. Over time, too much sugar in your blood leads to health problems like heart disease, stroke and kidney failure. Read Chapter 6 on Health Problems with Diabetes to learn more.

## 2. Your Type of Diabetes

Diabetes is a disease that impacts the way your pancreas produces insulin or how your body responds to insulin. There are 5 main types of diabetes:

1. Type 1 diabetes
2. Type 2 diabetes
3. Prediabetes
4. Gestational (pregnancy) diabetes
5. Medicine-induced diabetes

No matter what type of diabetes you have, you have too much sugar in your blood.

### **TYPE 1 DIABETES**

#### **What is type 1 diabetes and what happens to my body?**

Type 1 diabetes is a disease that happens when your pancreas stops making insulin. Without insulin, the sugar in your blood can't be stored. This causes sugar to collect in your blood.

There are many symptoms when sugar collects in your blood. Some of the signs and symptoms include thirsty, tired, need to pee often, blurry vision or weight loss.

Type 1 diabetes is most common in children and teenagers. Although more common in younger people, type 1 diabetes can occur at any age.

#### **What causes type 1 diabetes?**

No one knows the main cause of type 1 diabetes. Damage to the pancreas could be from a virus or maybe from your body's own defense system (called your immune system).

#### **What do I need to do?**

You will have to take insulin prescribed by your doctor if you have type 1 diabetes.

Since your body cannot produce insulin, sugar will collect in your blood. Over time, large amounts of sugar in your blood (called 'high blood sugar') may cause serious health problems. You will have to take insulin to process sugar since your body can't produce it. You give yourself insulin through a needle. This is called an insulin injection. This insulin will help take sugar from your blood to store it.

In addition to taking insulin you can manage your blood sugar by adopting healthy lifestyle behaviours.

#### Take Action

If you have diabetes (any type) take action to manage your blood sugar.

- Take your medicines as prescribed by your doctor
- Eat healthy
- Exercise and be active
- Manage your stress and depression
- Check your blood sugar
- Avoid smoking and breathing second-hand smoke

## TYPE 2 DIABETES

### What is type 2 diabetes and what happens to my body?

Type 2 diabetes is the most common type of diabetes. Type 2 diabetes is a disease that happens when your pancreas makes insulin but your body does not process sugar as it should. As time passes, your pancreas will stop making enough insulin.

Type 2 diabetes develops slowly over many years. Type 2 diabetes usually happens in people over the age of 40. Although more common in older people, type 2 diabetes can occur at any age.

#### What causes type 2 diabetes?

The exact cause of type 2 diabetes is not known, however, there are risk factors for type 2 diabetes. If you have these risk factors, it means you are more likely to get this disease. Risk factors for type 2 diabetes are:

- Inactive lifestyle (no exercise, sitting too long each day)
- Poor eating habits
- Family history of diabetes
- Large waist (extra body fat around your stomach and organs)

It is important to tell your family members (such as, your parents, siblings and children) about your diabetes. Your family members can book an appointment to be checked. The earlier someone is diagnosed the sooner they can take action and prevent the long-term health problems from high blood sugar.

#### What do I need to do?

In the early stages of diabetes when your pancreas is working (making insulin), you take medicine. The medicine comes in pill form and you take it by mouth with water or some other liquid to help swallow it. This medicine helps your body produce more insulin or react better to the insulin your pancreas makes.

Over time, your pancreas may stop making enough insulin. When your pancreas stops making enough insulin you may need to start taking insulin. Insulin is given by needle and is called an insulin injection. This insulin helps you manage your blood sugar.

Exercise can also help your body respond to insulin. Exercise makes your muscles use more sugar from your blood. Since your muscles use more sugar, your body reacts to insulin better. In addition to taking insulin and exercising you can manage your blood sugar by adopting other healthy lifestyle behaviours.

#### Take Action

If you have diabetes (any type) take action to manage your blood sugar.

- Take your medicines as prescribed by your doctor
- Eat healthy
- Exercise and be active
- Manage your stress and depression
- Check your blood sugar
- Avoid smoking and breathing second-hand smoke

## PREDIABETES

### What is prediabetes and what happens to my body?

Prediabetes is when your blood sugar is a little higher than normal but not high enough to be diagnosed with type 2 diabetes.

### What causes prediabetes?

The cause for prediabetes is not known, however, there are risk factors for prediabetes. Risk factors mean you are more likely to get prediabetes. The risk factors for prediabetes are the same as type 2 diabetes and include:

- Inactive lifestyle (no exercise, sitting too long each day)
- Poor eating habits
- Family history of diabetes
- Large waist (extra body fat around your stomach and organs)

#### What do I need to do?

Having prediabetes puts you at a high risk of developing type 2 diabetes in the future. You can manage your blood sugar by adopting healthy lifestyle behaviours.

#### Take Action

If you have diabetes (any type) take action to manage your blood sugar.

- Take your medicines as prescribed by your doctor
- Eat healthy
- Exercise and be active
- Manage your stress and depression
- Check your blood sugar
- Avoid smoking and breathing second-hand smoke

Your doctor can prescribe a medicine to control your blood sugar. The medicine is only given if you cannot manage your blood sugar with exercise and eating healthy. This medicine is taken by mouth and helps your body respond to the insulin made by your pancreas.

#### GESTATIONAL (PREGNANCY) DIABETES

##### What is gestational (pregnancy) diabetes and what happens to my body?

Gestational (pregnancy) diabetes means you have high blood sugar when you are pregnant. This type of diabetes lasts your pregnancy and normally goes away. Your blood sugar should return to normal after you deliver. Sometimes, gestational (pregnancy) diabetes can last a long time. This is when your blood

sugar does not return to normal after you deliver.

#### What causes gestational diabetes?

There are a few factors that increase your risk for gestational diabetes. Your risk is higher if:

- You are 35 years of age or older when pregnant
- You have a family history of gestational diabetes
- You have a large waist before pregnancy (extra body fat around your stomach and organs)

#### What do I need to do?

Gestational diabetes can affect your baby. When you have gestational diabetes, your baby can have a higher than normal birth weight. It also puts you at risk for developing diabetes in the future. Both birth weight and diabetes have known health problems. It is vital to manage your blood sugar. You can manage your blood sugar by adopting healthy lifestyle behaviours.

#### Take Action

If you have diabetes (any type) take action to manage your blood sugar.

- Take your medicines as prescribed by your doctor
- Eat healthy
- Exercise and be active
- Manage your stress and depression
- Check your blood sugar
- Avoid smoking and breathing second-hand smoke



After you deliver:

- Get your blood sugar checked 6 to 12 weeks after you deliver. This will ensure your blood sugar is back to normal
- Gestational diabetes puts you at risk for type 2 diabetes. See your doctor every 1 to 3 years after delivery to monitor your health. Eat healthy and exercise to lower your risk for type 2 diabetes in the future

## MEDICINE-INDUCED DIABETES

### What is medicine-induced diabetes and what happens to my body?

Medicine-induced diabetes means your medicine has given you diabetes. Your medicine has raised your blood sugar. Your medicine either caused your body to make more sugar or stopped your insulin from working in the right way.

Some examples of medicines that can raise your blood sugar are:

- Steroids
- Some antipsychotic medicines (treatment for schizophrenia)

### What causes medicine-induced diabetes?

Taking medicines that raise your blood sugar may cause medicine-induced diabetes. Medicines that cause medicine-induced diabetes work differently in your body. Talk to your doctor about what is happening to you.

### What do I need to do?

Speak with your doctor about other medicine options for you. You can manage your blood sugar by adopting healthy lifestyle behaviours.

#### Take Action

If you have diabetes (any type) take action to manage your blood sugar.

- Take your medicines as prescribed by your doctor
- Eat healthy
- Exercise and be active
- Manage your stress and depression
- Check your blood sugar
- Avoid smoking and breathing second-hand smoke

### 3. Signs and Symptoms of Diabetes

Your signs and symptoms of diabetes will be different than other people's signs and symptoms. You may experience all or none of the signs and symptoms below:

- Very thirsty
- Peeing often
- Very tired
- Hungry more often
- Cuts slow to heal
- Sudden weight loss or gain
- Blurry vision
- Nausea (upset stomach), stomach pain
- Infections often (for example, yeast infections)
- Numbness or tingling in hands or feet

#### 4. Tests to Diagnose Diabetes

There are different tests you could have to diagnose (find) diabetes. These tests are done with your routine blood work. There are 4 tests described below. All of these tests check your blood sugar level.

Tip: The word 'glucose' is used often when describing tests. Glucose is another term for sugar.

##### Random Blood Glucose test

- This test measures the sugar in your blood. It uses a sample of your blood. For this test, it doesn't matter when you last ate or drank. The results show what your blood sugar is at the time you have blood taken. These results can be affected by when you last ate and what you had to eat and drink that day.

##### Fasting Blood Glucose test

- This test measures the sugar in your blood. It uses a sample of blood. For this test, you can't eat or drink for at least 8 hours before the test. The results show your blood sugar level with no food or drink.

##### Oral Glucose Tolerance Test

- This test measures the sugar in your blood. It uses a sample of your blood. For this test, you must drink a sugary liquid. The results show your blood sugar level after drinking a specific amount of sugar. This test is not done with your routine blood work and is specially ordered by your doctor.

##### A1c test (also known as HbA1c)

- This test measures how well you managed your blood sugar over the past 3 months. This test uses a sample of your blood. For this test, it doesn't matter when you last ate or drank. The test counts the number of blood

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cells with sugar. The results are shown in percent (%). This number can be changed into an average blood sugar.

### Summary

- If you have diabetes (any type) you can manage your blood sugar by taking your diabetes medicines and adopting healthy lifestyle behaviours such as eating healthy, exercising, managing your stress (and depression), checking your blood sugar and avoiding smoking or exposure to second-hand smoke
- If you have diabetes, let your family know so they are aware of the signs and symptoms of diabetes and can be screened for diabetes by their doctor
- There are several tests to help you and your doctor determine if you have diabetes