

ABOUT DIABETES: WORKING IT OUT

1. What are the types of diabetes?

There are three types of diabetes:

- Type 1 diabetes – used to be called juvenile diabetes. It is when the islet cells of the pancreas are destroyed. This means they cannot make insulin. Type 1 diabetes is often diagnosed in early childhood, but can occur at any age. About 5–10 percent of people with diabetes have this type. It is caused by the body’s immune system attacking the pancreas, not by lifestyle factors.
- Type 2 diabetes – makes up about 90 percent of people diagnosed with diabetes. It is a lifestyle disease that is a result of how you take care of yourself. You may be able to delay or even prevent it by being more active, eating healthy and losing weight and staying at a weight that is healthy for you.
- Gestational diabetes – diabetes that happens to some women later in pregnancy. It goes away after the baby is born.

2. How does type 2 diabetes affect the body?

Type 2 Diabetes	No Diabetes
The insulin receptor binding does not cause enough glucose to be absorbed into cells. The pancreas does not make enough insulin to overcome this “insulin resistance”.	During digestion, carbohydrates (sugars and starches from food) are converted into glucose, also known as blood sugar.
Blood sugar absorption into cells may be decreased for two reasons: a) There are fewer insulin receptors; b) Available insulin receptors may not function as well.	Glucose circulates in the bloodstream and is used as food for the body’s cells. The pancreas produces insulin to help the absorption of blood sugar by the body’s cells.
Abdominal fat cells produce hormones that interfere with insulin action.	Insulin interacts with a receptor – a protein found on the cell surfaces. As the insulin binds to the receptor, it starts a series of intracellular events that result in glucose being absorbed by the body’s cells.
Since insulin cannot work well, and not enough insulin is produced, movement of glucose into cells is limited, and blood sugar levels increase.	This process returns the body’s blood sugar to a normal level.

3. What are the conditions associated with diabetes?

If left untreated or improperly managed, diabetes can cause many complications, including:

- heart disease and/or stroke
- kidney disease
- eye disease
- problems with erection (impotence)
- nerve damage

The first step in preventing or delaying the onset of these complications is knowing the risk factors, as well as the signs and symptoms of diabetes.

4. What are the risk factors for diabetes?

If you are aged 40 or over, you are at risk for type 2 diabetes and should be tested at least every three years. You should be tested earlier and/or more often if you are a member of a high-risk group (Aboriginal, Hispanic, Asian, South Asian, or African descent), and if you are over-weight (especially around your middle). Other important risk factors include:

- having a parent, brother or sister with diabetes
- having health complications that are associated with diabetes
- given birth to a baby that weighed more than 4 kg (9 lb)
- had gestational diabetes (diabetes during pregnancy)
- have an impaired glucose tolerance or impaired fasting glucose
- have high blood pressure
- have high cholesterol
- been diagnosed with polycystic ovary syndrome, acanthosis nigricans (darkened patches of skin), or schizophrenia

5. What are the warning signs?

You may notice that you:

- are more thirsty than usual
- pass water (pee) more often
- gain or lose weight without trying
- are very tired or have no energy
- have cuts and bruises that are slow to heal
- have tingling or numbness in the hands or feet
- have trouble getting or keeping an erection

However, many people with type 2 diabetes may have no symptoms.

6. How does exercise help your body resist diabetes?

- Body fat makes cells more resistant to insulin. Insulin is needed to convert glucose to energy.
- Exercising regularly, especially doing resistance training will reduce fat and increase muscle. As the body absorbs more glucose, there is less in the bloodstream. This means that physical activity lowers blood sugar levels during and after exercise.
- Along with controlling weight and stimulating insulin activity, regular exercise also is good for your heart. The Canadian Diabetes Association recommends at least 150 minutes of moderate- to vigorous-intensity aerobic exercise each week (e.g., 30 minutes, five days a week). When you are ready, try adding resistance exercises like lifting weights three times a week. Speak with your family doctor before starting a new exercise program.

Visit www.diabetes.ca for detailed information on how you can reduce your risk of developing diabetes.

Source: Written by Jennifer Partridge, Apple Magazine, Nov/Dec 2008.

Alberta Health Services offer Chronic Disease Management Program for people living with chronic diseases in Calgary and areas. To enrol for education, exercise or self-management classes, please go to www.calgaryhealthregion.ca/programs/cdm or Call 403 943 2584. In some areas, some of the classes are available in Punjabi, Cantonese, Mandarin and English.

To speak to a health professional, contact your family doctor or speak to a registered nurse 24 hours a day, seven days a week by calling: Calgary Health Link at 403-943-LINK (5465), Edmonton Health Link at 780-408-LINK(5465) or toll free at 1-866-408-LINK (5465). Mandarin Health Link 403-943-1554, Cantonese Health Link 403-943-1556.