



diabetes

the body cannot absorb starch properly because hormone insulin.

## What is Diabetes?

**Most of the food we eat is turned into glucose for the body to use for energy. The pancreas makes a hormone called insulin to help glucose get into the cells of the body.**

Diabetes is a common life-long condition where the amount of glucose in the blood is too high as the body cannot use it properly. This is because the pancreas does not produce any or not enough insulin, or the insulin that is produced does not work properly.

## Types of Diabetes

There are more than 220 million people worldwide that have one of the following types of diabetes:

**Type 1 diabetes** develops when the insulin-producing cells have been destroyed and the body is unable to produce any insulin. Usually it appears before the age of 40, and especially in childhood. It is treated with daily administration of insulin either by injection or pump, a healthy diet and regular physical activity. Symptoms may occur suddenly and include frequent urination, excessive thirst, extreme hunger, unusual weight loss, vision changes, fatigue and irritability.

**Type 2 diabetes** develops when the body does not produce enough insulin or the insulin that is produced does not work properly. Usually it appears in people aged over 40 as a result of excess body weight and physical inactivity, though in South Asian and Black people it can appear from the age of 25. It is becoming more common in children and young people of all ethnicities. This condition is treated with a healthy diet and regular physical activity, but medication and/or insulin is often required. Symptoms may be similar to those of Type 1 diabetes (others include blurred vision, cuts/bruises that are slow to heal, tingling/numbness in the hands/feet, recurring skin, gum or bladder infections) but are often less marked. As a result, the disease may be diagnosed several years after onset once complications have already arisen.

**Maturity Onset Diabetes of the Young (MODY)** is a rare form of diabetes that runs strongly in families. MODY is caused by a mutation (or change) in a single gene. If a parent has this gene mutation, any child they have has a 50% chance of inheriting it from them. If a child does inherit the mutation, they will generally go on to develop MODY before they are 25 - whatever their weight, lifestyle, ethnic group etc.

**Gestational diabetes (GDM)** is hyperglycaemia (abnormally high blood glucose) that arises usually during the second or third trimester of pregnancy, and usually disappears after the baby is born. In some women, GDM occurs because the body cannot produce enough insulin to meet the extra needs of pregnancy. In other women, GDM may be found during the first trimester and most likely existed before pregnancy. If GDM is not detected and treated, it can increase the risk of birth complications for both mother and baby.

**Neonatal diabetes** is a form of diabetes diagnosed under the age of six months, caused by a change in a gene which affects insulin production. This means that levels of blood glucose in the body rise very high. There are two types of neonatal diabetes: (I) Transient neonatal diabetes usually resolves before the age of 12 months, but usually recurs later on in life like in the teenage years (II) Permanent neonatal diabetes lasts forever. Around 50% of people with neonatal diabetes do not need insulin and can be treated with a tablet called Glibenclamide instead.

**Wolfram Syndrome** and **Alström Syndrome** are rare genetic disorders with common features such as diabetes, loss of vision and deafness.

Impaired glucose tolerance (IGT) and impaired fasting glycaemia (IFG) are intermediate conditions in the transition between normality and diabetes.

### Who is at greater risk for Type 2 Diabetes?

- Individuals with impaired glucose tolerance (IGT) and/or impaired fasting glucose (IFG)
- People over 45 years or with a family history of diabetes
- Those who are overweight, do not exercise regularly, have low HDL cholesterol or high triglycerides, high blood pressure
- Certain racial and ethnic groups
- Women who had gestational diabetes, or previously given birth to a large baby.

### Prevention

To delay the onset of type 2 diabetes and its complications, it is important to:

- achieve and maintain normal body weight
- be physically active - at least 30 minutes of regular, moderate-intensity activity on most days
- eat a healthy diet of between three and five servings of fruit and vegetables a day, and reduce sugar and saturated fats intake
- avoid smoking as this increases the risk of cardiovascular diseases.

### Treatment

The main aim when treating your diabetes is to achieve blood glucose, blood pressure and blood fat levels (including cholesterol) as near to normal as possible. These, together with a healthy lifestyle, will help to improve your wellbeing and reduce the risk of developing long-term complications.



## Long-term Complications of Diabetes

Diabetes makes your blood glucose higher than normal. After many years, too much sugar in the blood can cause the following problems in your body:

- Diabetic retinopathy - You could have trouble seeing (especially at night), light could bother your eyes and there is risk of becoming blind.
- Diabetes may make it harder to control your blood pressure and cholesterol. This can lead to heart attack, stroke and become harder for blood to flow to your legs and feet.
- Your skin and feet could develop sores, infection and may eventually need to be removed (foot or leg).
- Nerves in your body can become damaged, causing pain, tingling, and loss of feeling. Nerve damage can also make it harder for men to have an erection, and women may experience sexual problems.
- High blood glucose can cause the kidneys to not work as well that you may even need dialysis or kidney transplant.
- You could have difficulties digesting the food you eat, feel weak or have trouble going to the bathroom.

It is important for diabetics to keep their blood glucose, blood pressure, and cholesterol in a healthy range. Basic steps for managing diabetes include a good diet, exercise, and sometimes medicines (i.e. to prevent heart disease and stroke).

Consult your doctor about whether you need to check your blood glucose with a glucometer every day, how many times daily and your target results. Visit your dentist every 6 months to check your teeth and gums, see your eye doctor at least once a year, and care for your feet (arrange foot examinations). Your doctor should also assist in ordering blood/other tests to help keep complications of diabetes away.

