

Diabetes is when your body doesn't make enough insulin or can't use insulin properly. This causes sugar to build up in your blood instead of moving into your cells. High blood sugar can cause serious problems such as heart disease and damage to the eyes, nerves and kidneys.

There are 2 types of diabetes:

Type 1 - when your body doesn't produce any insulin.

Type 2 - your body either doesn't produce enough insulin or your cells ignore it. Most people with diabetes have type 2.

### **Diabetes treatments?**

The aim is to keep your blood sugar level normal - not too high (called hyperglycemia) or too low (called hypoglycemia).

Treatment always begins with having healthy diet and exercise. You may need to lose weight if you are overweight. If dietary changes aren't enough to control your blood sugar then your doctor will discuss the next options; medicine or insulin.

Regularly checking your blood sugar is important to help you control it. These will show you how food, exercise, insulin or other medicine affects your level. Checking your blood sugar also allows you and your doctor to change your treatment plan if needed.

### **Medicines used in diabetes?**

Medicines in diabetes will be pills taken orally or insulin injections.

Most people with type 2 diabetes start oral medicines but they won't be ideal for everyone. All people with type 1 and some people with type 2 diabetes will need to inject insulin.

### **Oral diabetes medications?**

There are six kinds of oral medications:

- metformin (a biguanide),
- sulfonylureas, thiazolidinediones,
- meglitinides,
- biguanides, thiazolidinediones,
- alpha-glucosidase inhibitors and
- dipeptidyl peptidase-4 (DPP-4) inhibitors.

### **Metformin**

Metformin is often the first oral medicine prescribed for someone newly diagnosed with diabetes. It helps your body use insulin better. It can cause nausea or diarrhea and may be prescribed with other oral diabetes medicine.

### **Sulphonylureas**

These are the most commonly prescribed diabetes medicines and they help your pancreas to make insulin. They have few side effects but may cause weight gain and low blood sodium. Sulphonylureas can be taken alone or with other drugs or insulin. If you're allergic to sulpha, you can't take a sulphonylurea.

### **Thiazolidinediones**

These medicines help your body respond better to insulin and can be used alone in combination with other diabetes medicines. Side effects may be weight gain, fluid retention and an increase in LDL cholesterol.

### **Meglitinides**

Meglitinides help your pancreas make insulin. There are 2 types taken with meals. Side effects may include weight gain.

### **Alpha-Glucosidase inhibitors**

Alpha-glucosidase inhibitors work in your stomach and bowels to slow down the absorption of sugar. They may cause stomach pain, diarrhea and bloating.

### **Dipeptidyl peptidase-4 inhibitors (DPP-4)**

These drugs help your body make more insulin after you eat. Side effects of DPP-4 inhibitors include upper respiratory tract infection, urinary tract infection (UTI) and headache.

Your doctor may prescribe a combination of 2, or even 3, types of medicine to help control your blood sugar levels. Some combinations are available together in one pill.

## **Injecting insulin**

Your body changes most of the food you eat into glucose. Insulin then allows this glucose to enter all the cells of your body to be used as energy. In diabetes, your body either doesn't make enough insulin or can't use it properly, so the glucose builds up in your blood instead of moving into the cells. All people with type 1 diabetes and some people who have type 2 diabetes need to take insulin to control their blood sugar.

Insulin can't be taken orally and is usually given with injections. Some people use an insulin pen or an insulin pump.

## Insulin types

- **Rapid-acting insulin** starts working in about 15 minutes - lasts for 3 to 5 hours.
- **Short-acting insulin** starts working in 30 to 60 minutes - lasts 5 to 8 hours.
- **Intermediate-acting insulin** starts working in 1 to 3 hours - 12 to 16 hours.
- **Long-acting insulin** starts working in about 1 hour - lasts 20 to 26 hours.
- **Premixed insulin** is a combination of 2 types of insulin (usually a rapid- or short-acting insulin and an intermediate-acting insulin).

## If you take too much insulin?

If you take too much insulin it will lower your blood sugar level too much, and you may get hypoglycemia. Signs of this include:

- Feeling very tired
- Frequent yawning
- Being unable to speak or think clearly
- Loss of muscle coordination
- Sweating
- Twitching
- Seizures
- Suddenly feeling like you're going to pass out
- Becoming very pale
- Loss of consciousness

People who have diabetes should always carry some fast-acting carbohydrate.