

# Patient information from BMJ

Last published: Aug 06, 2021

## Diabetes: what is it?

**Diabetes is a long-term condition. It can lead to serious health problems. But making changes to your lifestyle and taking medications can help you live a long and healthy life.**

### What happens in diabetes?

If you have diabetes you have too much glucose in your blood. Glucose is a kind of sugar that your body uses for energy. But if it builds up in your blood it can make you ill. Doctors call this hyperglycemia.

There are two main types of diabetes: type 1 and type 2. Type 1 diabetes usually starts suddenly, when you're a child or teenager. But it can start later. Type 2 diabetes comes on gradually, usually when you're 40 or over.

This information is for **adults with type 2 diabetes**. More than 90 in 100 people with diabetes have type 2.

Ask your doctor: What type of diabetes do I have?

### Glucose and your body

You always need to have some glucose in your blood. It comes from food and it gives your body energy.

Normally, a chemical called insulin helps keep the levels of glucose in your blood steady. Insulin is made in your body. But if you have type 2 diabetes, either your body is not making enough insulin, or the insulin your body makes is not working properly.

The level of glucose in your blood goes up and down throughout the day. It's higher when you've just eaten and lower first thing in the morning, or after you've been exercising.

Doctors measure your glucose levels in **milligrams per deciliter (mg/dL)**. Your "fasting" blood glucose (the amount of glucose in your blood when you haven't eaten or drunk anything but water overnight) should be less than 126 mg/dL.

Ask your doctor: What is my blood glucose level? What should it be ideally?

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## Who gets diabetes?

More than 30 million people in the US have diabetes. That's about 10 in every 100 people.

Some people are more likely to get it than others. Things that make you more likely to get type 2 diabetes include:

- having a relative with type 2 diabetes
- being overweight or obese (very overweight)
- not exercising enough
- coming from African-American, Hispanic American, Asian-American, Native American, and Pacific Islander ethnic backgrounds (we don't know why this is)
- (for women) having had a type of diabetes while pregnant (called gestational diabetes) increases your chance of getting diabetes later in life
- having problems with your heart or blood vessels (cardiovascular disease) or having too much harmful fat in your blood.

But we don't know why some people get diabetes. For example, being overweight and not exercising enough increase people's chances of getting diabetes. But not everyone who gets diabetes is overweight or doesn't exercise. Even some athletes get diabetes.

Ask your doctor: Why do I have diabetes?

## What are the symptoms of diabetes?

Not everyone with type 2 diabetes gets symptoms, and most people find out they have it through screening (testing). But these are some possible symptoms.

- Needing to pass urine more often: your body tries to get rid of the extra glucose in your blood by flushing it out in your urine.
- Feeling very thirsty: you may feel thirsty more often. This is partly because you pass urine more.
- Feeling very hungry or tired: if you have diabetes, your body can't use the glucose in your blood properly. So your cells don't get the energy they need. This makes you hungry and tired.

These symptoms should go away if your treatment is working properly. But if it's not diagnosed and treated properly, type 2 diabetes gets worse. You might get:

- blurred vision
- an infection called candidiasis. You might get it in your mouth or in the folds of your skin. If you're a woman you might get it in your vagina
- wounds or sores that don't heal well.

There are some symptoms you need to watch out for, because they mean your blood glucose may have gotten very high. These include feeling light-headed, dizzy, sick to your stomach,

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or confused. Or you might lose consciousness. If you get these symptoms you need medical help straight away.

Ask your doctor: What symptoms should I look out for that might mean my diabetes is getting worse or is not being well controlled?

### How do doctors diagnose diabetes?

Your doctor will give you a blood test to find out how much glucose is in your blood. The usual test for diabetes measures glucose levels first thing in the morning, before you eat.

The result is called your **fasting plasma glucose level**. If it is more than 126 mg/dL you could have diabetes. You will need to have a second test to make sure.

You might also have a type of blood test called an **HbA1c test** (sometimes called an A1c test). This test can give your doctor an idea of what your average blood glucose has been for the past few months.

If you've been told you have diabetes your doctor will probably want to do other tests on your blood and urine. These tests are to find out how well your thyroid gland, liver, and kidneys are working. You will also have a test to see if your cholesterol is high.

After you've been diagnosed with diabetes you should have a thorough check-up at least once a year with a doctor experienced in treating diabetes. You might have follow-up tests as often as every 3 to 6 months.

Ask your doctor: How often do I need follow-up tests?

### What will happen to me?

If you have diabetes you should be able to lead a normal life. But you will probably need to:

- take medicines regularly. You may have heard that people with diabetes can be treated with insulin. This is usually only used for people with type 1 diabetes. But some people with type 2 diabetes take it, too
- watch what you eat
- exercise regularly
- check your blood glucose level throughout the day. But this is usually only needed for people who take insulin.

Apart from these changes, you should be able to take part in all your normal activities.

If you've had diabetes for a long time, you may have a greater chance of a heart attack, a stroke, or problems with your circulation. You may also get problems with your eyes, kidneys, and feet. These problems are called **complications**.

Not everyone with diabetes gets complications. If you carefully control your blood glucose level you are more likely to avoid some of the complications of diabetes.

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But you might also need to take medications to control your blood pressure and cholesterol. Having regular health checks with your doctor can help you to avoid complications.

Ask your doctor: Do I have any complications from my diabetes? If not, how can I best avoid getting problems in future?

For more information about what you can do to help yourself, see our leaflet: *Diabetes: what can I do to keep healthy?*

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