



What is Metformin?

Metformin is one of the most commonly used medication for the treatment of type 2 diabetes. It is from a class of drugs called biguanides, that are used to treat diabetes by lowering the levels of glucose (sugar) in the blood.

It's usually prescribed when diet and exercise alone have not been enough to control your blood glucose levels. It may be prescribed alone or in combination with other medicines for diabetes.

What does Metformin do?

Metformin lowers your blood glucose levels by improving the way your body responds to insulin. Insulin is the hormone that is produced by the pancreas which helps your body to use the glucose from the carbohydrates in the food you eat for energy. It also reduces the amount of glucose that your liver releases into the blood.

Medications such as metformin reduce the symptoms of high blood glucose levels (such as passing large amounts of urine and feeling thirsty). In the longterm, good control of blood glucose levels reduces the risk of developing problems with your eyes, kidneys and feet. Metformin may also reduce the risk of heart disease and stroke.

Metformin can help some people lose weight but is not recommended solely for this purpose.

How is Metformin given?

Metformin is usually given as a tablet, but also comes as a liquid. It is started at a low dose (one or two tablets daily) and the dose is slowly increased over several weeks. In this way your body gets used to Metformin and this reduces the chances of getting any unwanted side effects.

What are the side effects of Metformin?

Metformin does not cause side effects for most people that take it. However, for a small number of people, the most common side effects are:

- Feeling and being sick
- Diarrhoea
- Stomach pain
- Loss of appetite

If you experience these side effects, your doctor or nurse may advise you to reduce the dose or in certain cases may advise you to stop the medicine.



Taking Metformin with meals can help reduce these side effects and usually they settle in most people after a few weeks.

A slow-release version of Metformin, which is taken once a day, is sometimes prescribed to people that are experiencing side effects.

Some of the other less common side effects of Metformin include:

- A change in your taste buds
- Reduced vitamin B12 levels
- Abnormal liver function results
- Skin rash
- Severe itching

Please speak to your doctor or nurse if you have side effects that are not improving.

Metformin has been associated with a rare condition called 'lactic acidosis'. 'Lactic acidosis' is associated with the build-up of acids in your blood and is most commonly seen in people admitted with severe illness and/or infection.

The risk of 'lactic acidosis' is increased if your kidneys do not work well. Your doctor or nurse will monitor your kidney function periodically by doing a simple blood test. Your doctor or nurse may ask you to reduce or stop taking your Metformin if your kidneys are not functioning well. Metformin does not itself cause kidney damage.

Metformin may also be stopped temporarily if you get admitted to hospital for some other reason or if you are due to get a scan that involves the injection of a dye (contrast).

You should stop taking Metformin if you become very unwell, especially if you have vomiting and/or diarrhoea or are not eating and drinking.

You can start taking Metformin again once you are back to normal health. You should inform your doctor or nurse at the earliest opportunity that you have stopped your Metformin.

When should Metformin not be used?

Metformin is usually only given to people with type 2 diabetes. It may not be suitable for some people. You should tell your doctor before starting Metformin if you:

- Have had an allergic reaction to Metformin or any other medicines in the past
- Have liver or kidney problems
- Have a severe infection
- Are being treated for heart failure or have had a heart attack
- Have severe circulation problems or breathing difficulties
- Drink a lot of alcohol



Metformin is safe to be taken in pregnancy and while breast feeding.

What if I forget to take it?

If you miss a dose of Metformin, take the next dose at the usual time. Do not take a double dose to make up for a forgotten dose.

What if I take too much?

Taking an overdose of a large amount of Metformin can cause serious health problems. The symptoms can come on quickly and are severe, they include:

- Stomach pain
- Diarrhoea
- Fast or shallow breathing
- Feeling cold
- Feeling sleepy
- Tiredness or weakness

If you have taken too much Metformin you need to attend A&E immediately.

Metformin and Driving

Taking Metformin should not affect your ability to drive, cycle or use machinery or tools as long as your blood glucose levels are stable. Metformin will never on its own cause your blood glucose to fall below normal levels (called hypoglycaemia); however it may be prescribed alongside other medications (like insulin or sulphonylureas (e.g. gliclazide) that can cause low glucose.

Check with your diabetes care team if you would like further guidance or have a look at the [national guidelines for driving when you have diabetes](#).

Getting the most from your treatment

Continue to take Metformin regularly unless your doctor tells you otherwise. It is important that you keep your regular clinic appointments.

If you have been advised by your doctor or nurse about changes to your diet, stopping smoking or taking regular exercise, it is important that you follow this advice.

Generally, if you are on Metformin alone you do not need to check your blood glucose levels, unless otherwise recommended by your doctor or nurse.

