

Metformin Hydrochloride

500 mg and 1000 mg Powder for Oral Solution

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you

- Keep this leaflet. You may need to read it again.
- If you any have further questions, please ask your doctor or pharmacist.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Metformin is and what it is used for
2. What you need to know before you take Metformin
3. How to take Metformin
4. Possible side effects
5. How to store Metformin
6. Contents of the pack and other information

1. What Metformin is and what it is used for

Metformin belongs to a group of drugs called biguanides, used in the treatment of Type 2 (non-insulin dependent) diabetes mellitus. Metformin Hydrochloride Powder for Oral Solution contain the active ingredient metformin hydrochloride. Each sachet contains either 500 mg or 1000 mg of metformin hydrochloride.

Insulin is a hormone produced by the pancreas that makes your body take in glucose (sugar) from the blood. Your body uses glucose to produce energy or stores it for future use.

If you have diabetes, your pancreas does not make enough insulin or your body is not able to use properly the insulin it produces. This leads to a high level of glucose in your blood. Metformin helps to lower your blood glucose to as normal a level as possible.

If you are an overweight adult, taking Metformin over a long period of time also helps to lower the risk of complications associated with diabetes. Metformin is associated with either a stable body weight or modest weight loss

Metformin is used to treat patients with type 2 diabetes (also called 'non-insulin dependent diabetes') when diet and exercise alone have not been enough to control your blood glucose levels. It is used particularly in overweight patients.

Adults can take Metformin on its own or together with other medicines to treat diabetes (medicines taken by mouth or insulin).

Children 10 years and over and adolescents can take Metformin on its own or together with insulin.

2. What you need to know before you take Metformin**Do not take Metformin**

- if you are allergic to Metformin or to any of the ingredients in this medicine (listed in section 6)
- if you have liver problems
- if you are suffering from severe infection such as an infection affecting your lung or bronchial system or your kidney. Severe infections may lead to kidney problems, which can put you at risk for lactic acidosis (see 'Warnings and precautions') or have recently suffered a severe injury
- if you are treated for acute heart failure or have recently had a heart attack, have severe problems with your circulation (such as shock) or have breathing difficulties. This may lead to a lack in oxygen supply to tissue which can put you at risk for lactic acidosis (see 'Warnings and precautions')
- if you lost too much water from your body (dehydration), such as due to long-lasting or severe diarrhoea, or if you have vomited several times in a row. Dehydration may lead to kidney problems, which can put you at risk for lactic acidosis (see 'Warnings and precautions')
- if you drink a lot of alcohol
- if you have severely reduced kidney function
- if you have uncontrolled diabetes, with, for example, severe hyperglycaemia (high blood glucose), nausea, vomiting, diarrhoea, rapid weight loss, lactic acidosis (see "Risk of lactic acidosis" below) or ketoacidosis. Ketoacidosis is a condition in which substances called 'ketone bodies' accumulate in the blood and which can lead to diabetic pre-coma. Symptoms include stomach pain, fast and deep breathing, sleepiness or your breath developing an unusual fruity smell

If any of the above applies to you, talk to your doctor, before you start taking this medicine. Make sure you ask your doctor for advice, if:

- you need to have an examination such as X-ray or scan involving the injection of contrast medicines that contain iodine into your bloodstream
- you need to have major surgery

You must stop taking Metformin for a certain period of time before and after the examination or the surgery. Your doctor will decide whether you need any other treatment for this time. It is important that you follow your doctor's instructions precisely.

Warning and precautions**Risk of lactic acidosis**

Metformin may cause a very rare, but very serious side effect called lactic acidosis, particularly if your kidneys are not working properly. The risk of developing lactic acidosis is also increased with uncontrolled diabetes, serious infections, prolonged fasting or alcohol intake, dehydration (see further information below), liver problems and any medical conditions in which a part of the body has a reduced supply of oxygen (such as acute severe heart disease).

If any of the above apply to you, talk to your doctor for further instructions.

Stop taking Metformin for a short time if you have a condition that may be associated with dehydration (significant loss of body fluids) such as severe vomiting, diarrhoea, fever, exposure to heat or if you drink less fluid than normal. Talk to your doctor for further instructions.

Stop taking Metformin and contact a doctor or the nearest hospital immediately if you experience some of the symptoms of lactic acidosis, as this condition may lead to coma.

Symptoms of lactic acidosis include:

- vomiting
- stomach ache (abdominal pain)
- muscle cramps
- a general feeling of not being well with severe tiredness
- difficulty in breathing
- reduced body temperature and heartbeat

Lactic acidosis is a medical emergency and must be treated in a hospital.

If you need to have major surgery you must stop taking Metformin during and for some time after the procedure. Your doctor will decide when you must stop and when to restart your treatment with Metformin.

Metformin on its own does not cause hypoglycaemia (a blood glucose level which is too low). However, if you take Metformin together with other medicines to treat diabetes that can cause hypoglycaemia (such as sulphonylureas, insulin, meglitinides), there is a risk of hypoglycaemia. If you experience symptoms of hypoglycaemia such as weakness, dizziness, increased sweating, fast heart beating, vision disorders or difficulty in concentration, it usually helps to eat or drink something containing sugar.

During treatment with Metformin, your doctor will check your kidney function at least once a year or more frequently if you are elderly and/or if you have worsening kidney function.

Other medicines and Metformin

If you need to have an injection of a contrast medium that contains iodine into your bloodstream, for example in the context of an X-ray or scan, you must stop taking Metformin before or at the time of the injection. Your doctor will decide when you must stop and when to restart your treatment with Metformin.

Tell your doctor if you are taking, have recently taken or might take any other medicines. You may need more frequent blood glucose and kidney function tests, or your doctor may need to adjust the dosage of Metformin. It is especially important to mention the following:

- medicines which increase urine production (diuretics).
- medicines used to treat pain and inflammation (NSAID and COX-2-inhibitors, such as ibuprofen and celecoxib).
- certain medicines for the treatment of high blood pressure (ACE inhibitors and angiotensin II receptor antagonists)
- beta-2 agonists such as salbutamol or terbutaline (used to treat asthma).
- corticosteroids (used to treat a variety of conditions, such as severe inflammation of the skin or in asthma).
- medicines that may change the amount of Metformin in your blood, especially if you have reduced kidney function (such as verapamil, rifampicin, cimetidine, dolutegravir, ranolazine, trimethoprim, vandetanib, isavuconazole, crizotinib, olaparib).
- other medicines used to treat diabetes.

Metformin with food, drink and alcohol

Avoid excessive alcohol intake while taking Metformin since this may increase the risk of lactic acidosis (see section 'Warnings and precautions').

Pregnancy and breast-feeding

If you are pregnant, think you may be pregnant or are planning to have a baby, speak to your doctor in case any changes will be needed to your treatment or monitoring of your blood glucose levels.

This medicine is not recommended if you are breast-feeding or if you are planning to breast-feed your baby.

Driving and using machines

Metformin on its own does not cause hypoglycaemia (a blood glucose level which is too low). This means that it will not affect your ability to drive or use machines.

However, take special care if you take Metformin together with other medicines to treat diabetes that can cause hypoglycaemia (such as sulphonylureas, insulin, meglitinides). Symptoms of hypoglycaemia include weakness, dizziness, increased sweating, fast heartbeat, vision disorders or difficulty in concentration. Do not drive or use machines if you start to feel these symptoms.

Metformin Hydrochloride sachet contains sodium

This medicine contains less than 1 mmol sodium (23 mg) per sachet, that is to say essentially 'sodium-free'.

3. How to take Metformin

Always take this medicine exactly as your doctor has told you. You should check with your doctor or pharmacist if you are not sure.

Metformin cannot replace the benefits of a healthy lifestyle. Continue to follow any advice about diet that your doctor has given you and get some regular exercise.

The recommended dose in:

Adults: The usual starting dose is 500 mg or 850 mg Metformin two or three times a day. Your doctor may increase the dose to a maximum of 3000 mg per day taken as 3 divided doses.

Elderly: The starting dose will be determined after tests have been carried out on your kidney function.

Children aged 10 years and older and adolescents: Normally the starting dose is 500 mg or 850 mg Metformin daily. Your doctor may increase the dose to a maximum of 2000 mg per day taken as 2 or 3 divided doses. Treatment of children between 10 and 12 years of age is only recommended on specific advice from your doctor, as experience in this age group is limited.

If you have reduced kidney function, your doctor may prescribe a lower dose.

If you take insulin too, your doctor will tell you how to start Metformin.

This product is not suitable if a dose of 850mg is required, or other intermediate doses not divisible by 500mg or 1000mg, in this situation an appropriate tablet or oral solution product should be substituted.

Monitoring

- Your doctor will perform regular blood glucose tests and will adapt your dose of Metformin to your blood glucose levels. Make sure that you talk to your doctor regularly. This is particularly important for children and adolescents or if you are an older person.
- Your doctor will also check at least once a year how well your kidneys work. You may need more frequent checks if you are an older person or if your kidneys are not working normally.

How to take Metformin

Take Metformin with or after a meal. This will avoid you having side effects affecting your digestion.

Pour the powder into a glass and add 150 ml water to get a clear to slightly cloudy solution. Drink the solution immediately after preparation. If necessary, stir the solution.

- If you take one dose a day, take it in the morning (breakfast)
- If you take two divided doses a day, take them in the morning (breakfast) and evening (dinner)
- If you take three divided doses a day, take them in the morning (breakfast), at noon (lunch) and in the evening (dinner)

If, after some time, you think that the effect of Metformin is too strong or too weak, talk to your doctor or pharmacist.

If you take more Metformin than you should

If you have taken more Metformin than you should have, you may experience lactic acidosis. Symptoms of lactic acidosis are non-specific such as vomiting, bellyache (abdominal pain) with muscle cramps, a general feeling of not being well with severe tiredness, and difficulty in breathing. Further symptoms are reduced body temperature and heartbeat. **If you experience some of these symptoms, you should seek immediately medical attention, as lactic acidosis may lead to coma. Stop taking Metformin immediately and contact a doctor or the nearest hospital straight away.**

If you forget to take Metformin

Do not take a double dose to make up for a forgotten dose. Take the next dose at the usual time.

If you stop taking Metformin

If you stop taking Metformin, tell your doctor as soon as possible, as your diabetes will not be controlled.

If you have any further questions on the use of this medicine ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Metformin may cause a very rare (may affect up to 1 in 10,000 people), but very serious side effect called lactic acidosis (see section 'Warnings and precautions'). If this happens you must **stop taking Metformin and contact a doctor or the nearest hospital immediately**, as lactic acidosis may lead to coma.

Very common side effects (may affect more than 1 in 10 people):

- digestive problems, such as feeling sick (nausea), being sick (vomiting), diarrhoea, bellyache (abdominal pain) and loss of appetite. These side effects most often happen at the beginning of the treatment with Metformin. It helps if you spread the doses over the day and if you take Metformin with or straight after a meal. **If symptoms continue, stop taking Metformin and talk to your doctor.**

Common side effects (may affect up to 1 in 10 people):

- changes in taste.
- decreased or low vitamin B12 levels in the blood (symptoms may include extreme tiredness (fatigue), a sore and red tongue (glossitis), pins and needles (paraesthesia) or pale or yellow skin). Your doctor may arrange some tests to find out the cause of your symptoms because some of these may also be caused by diabetes or due to other unrelated health problems.

Very rare (may affect up to 1 in 10,000 people):

- lactic acidosis. This is a very rare but serious complication particularly if your kidneys are not working properly. Symptoms of lactic acidosis are non-specific (see section 'Warning and precautions')
- abnormalities in liver function tests or hepatitis (inflammation of the liver; this may cause tiredness, loss of appetite, weight loss, with or without yellowing of the skin or whites of the eyes). If this happens to you, **stop taking Metformin and talk to your doctor.**
- skin reactions such as redness of the skin (erythema), itching or an itchy rash (hives).

Children and adolescents

Limited data in children and adolescents showed that adverse events were similar in nature and severity to those reported in adults.

Reporting of side effects

If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the Yellow Card Scheme at www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store. By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Metformin

Keep this medicine out of the sight and reach of children. If a child is treated with Metformin, parents and caregivers are advised to oversee how this medicine is used.

Do not use this medicine after the expiry date which is stated on the blister pack and carton after EXP. The expiry date refers to the last day of that month.

This medicinal product does not require any special storage conditions.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Metformin contains

The active substance is metformin hydrochloride. Each sachet contains 500 mg or 1000 mg metformin hydrochloride.

The other ingredients are mannitol, povidone, sucralose (E955), sodium dihydrogen citrate and citric acid anhydrous.

What Metformin looks like and contents of the pack

Metformin Hydrochloride 500mg and 1000mg Powder for Oral Solution in sachets is white to off-white granular powder. Each pack contains 20, 30 or 60 single-dose sachets.

Not all pack sizes may be marketed.

Marketing Authorisation Holder

Morningside Healthcare Ltd.
Unit C, Harcourt Way
Leicester, LE19 1WP, UK

Manufacturer

Kleva Pharmaceuticals S.A.
Parnithos Ave. 189,
Acharnai Attiki,
13675, Greece

This leaflet was last revised in September 2022.

Useful tips

- If you smoke, try to stop.
- Take regular exercise.
- Drink as little alcohol as possible.
- Look after your feet. Ask about this at the surgery or hospital.
- Carry a card, bracelet or disk saying you are diabetic.
- Visit your diabetic clinic regularly.