

# Children and Young People with Type 2 Diabetes

## Paediatric Diabetes Department

### Metformin treatment for Children and Young People with Type 2 Diabetes

You have been started on a medicine called **Metformin**. It is usually the first medicine that is used to treat Type 2 Diabetes.

**Metformin is a very safe drug if you take it properly.** It has been used for over 50 years. It was discovered from the French lilac plant which was used for hundreds of years as a herbal medicine to control sugar levels. Scientists discovered that they could copy a chemical in the plant and make it in a tablet.

#### Metformin can:

- ✓ Help your body to control sugar levels better therefore is a good medication to use for type 2 diabetes. It can also help prevent Type 2 Diabetes
- ✓ Reduce your appetite (feel less hungry).
- ✓ Help your body to produce less insulin which can assist with weight loss in conjunction with healthy eating habits and regular physical activity
- ✓ Help girls to have regular periods, especially if they have polycystic ovarian syndrome.

#### What preparations are available?

Metformin is available as a tablet, liquid or powder. The tablets are easy to swallow; however, some children or young people can struggle to swallow them and thus may require a liquid or powder formulation. Tablets are available as a standard release or slow release. Slow release preparation can benefit those who are having gut symptoms.

**Our diabetes nurses can help you with this medicine.** We can help if you are having problems or even if you just want to chat about the medicine. You can call or email. You can also ask to talk to your doctor.

## Are there any side-effects?

The most important side effects of Metformin that may occur are:

- **Nausea (feeling sick), intermittent abdominal pain, diarrhoea or vomiting.** These can be prevented in most cases with slow dose titration and by always taking Metformin with meals. These side-effects can also be reduced by the use of slow release Metformin.
- **Metallic taste in the mouth (This is rare).** If you start Metformin and have mild side-effects, **keep taking** the tablets. The symptoms often wear off after a couple of days. If symptoms persist then speak to your Diabetes Team.
- **Liver function abnormalities (This is a rare side-effect.)** This will be monitored by appropriate blood tests
- **Kidney disturbances** which can alter the salt and acid levels in your blood, called lactic acidosis. **(This is rare).**

## How to take Metformin

We will ask your GP to give you a prescription for this medicine. You can ask your surgery to send the prescription automatically to your local chemist. Many GPs and pharmacists aren't used to prescribing Metformin to children and teenagers. Tell them to call us if they are worried and not sure about using this medicine.

## How much should I take?

Your doctor will advise you about dosage. However, it is usually started as 500 mg (of tablet/liquid/powder) given once a day **with meals** either at tea or breakfast. The dose is then increased gradually (500 mg once a week) over 3 to 4 weeks until a maximum dose of 1000 mg twice a day is achieved.

## Is it safe for me to take Metformin?

Metformin should:

- ✓ **Not** be used at certain stages of liver and kidney disease.
- ✓ Be **discontinued** in the 2 days before and after surgery.
- ✓ **Not** be used in those who drink excess alcohol.
- ✓ Be **stopped** before some special X-rays in which radiographic contrast material is given. (Ask the Radiographer)
- ✓ Be **temporarily discontinued** if you have a gastro-intestinal complaint such as diarrhoea or vomiting or are admitted with Diabetic Ketoacidosis (DKA).

## Nine ideas to help you take Metformin

- 1) Talk to us if you aren't sure about taking this medicine. We want to make sure that you feel confident and safe taking Metformin.
- 2) Some people like to start at the weekend or during school holidays so that they don't have problems with side-effects at school.
- 3) Only take Metformin when you eat. You will have fewer side-effects if you take it with food. If you don't eat breakfast, then take the morning dose with your first meal of the day.
- 4) Start with a small dose and increased it slowly. You will have fewer-side effects if you allow your body to get used to the medicine slowly.
- 5) Tell us if you are having side-effects that are not settling down. If you are having problems with standard release Metformin, we can ask your GP to prescribe modified release Metformin. Some people have fewer side-effects with modified release Metformin.
- 6) Tell us if you can't take Metformin in the morning. We can ask your GP to prescribe modified release Metformin which can be taken just once a day.
- 7) You can crush standard Metformin tablets using a pill crusher. You can get a pill crusher from most chemists. You can add crushed medicine to your food. You **cannot** crush modified release Metformin.
- 8) You can ask your GP or pharmacy to give you 1000mg (milligram) strength tablets. This is the same as two 500mg tablets.
- 9) Lots of people find it hard to take medicines. These are some ideas that other young people have used to help them remember:
  - ✓ Leave your medicine near where you eat or cook. Lots of people leave them in the kitchen or the where they eat to remind themselves at mealtimes.
  - ✓ Set a daily alarm on your phone or smart speaker.
  - ✓ Ask your GP to change you to modified release Metformin. Modified Metformin can be taken once a day with dinner or breakfast.
  - ✓ Take Metformin at the same time as other people at home take their medicines. You can remind each other to take your medicines.
  - ✓ A medicine box can remind you when to take your medicine. You can buy these at most chemists.

## Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty. If they cannot resolve your concern, please contact our Patient Experience Team on 01932 723553 or email [asp-tr.patient.advice@nhs.net](mailto:asp-tr.patient.advice@nhs.net). If you remain concerned, the team can also advise upon how to make a formal complaint.

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**We can provide interpreters for a variety of languages, information in larger print or other formats (e.g. audio) - please call us on 01932 723553.**



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**Ashford Hospital** London Road, Ashford, Middlesex, TW15 3AA Tel: **01784 884488**  
**St. Peter's Hospital** Guildford Road, Chertsey, Surrey, KT16 0PZ Tel: **01932 872000**

Website: [www.ashfordstpeters.nhs.uk](http://www.ashfordstpeters.nhs.uk)