

Effective testing: managing diabetes

Testing your blood

Blood glucose testing for people with
type 2 diabetes on insulin



The advice in this leaflet applies to people with type 2 diabetes who use insulin, usually in combination with other diabetes medicines.

Do I need to test?

If your diabetes is treated with insulin you need to be able to test your blood. This is because insulin can sometimes make your blood glucose too low. This is called hypoglycaemia, or hypo for short.

What is a hypo?

A hypo (or hypoglycaemia) is when your blood glucose is too low.

Signs you are having a hypo include:

- Feeling hungry
- Sweating
- Dizziness
- Tiredness (fatigue)
- Blurred vision
- Trembling or shakiness
- Going pale
- Fast pulse or palpitations
- Tingling lips
- Irritability
- Difficulty concentrating
- Confusion
- Disorderly or irrational behaviour, which may be mistaken for drunkenness.

The symptoms of a hypo usually begin when blood glucose levels drop to somewhere between 3 and 4mmol/l.

Why should I test my blood?

It is necessary to test to find out how you are responding to treatment and to help you avoid hypos.

Blood glucose level testing can help you to:

- Understand what factors affect your blood glucose, e.g. certain foods or activity. With this information you can consider appropriate changes to prevent, detect and treat hypoglycaemia (low blood glucose)
- Provide information to your nurse or doctor so that you receive appropriate treatment
- Maintain blood glucose levels during periods of change such as illness
- Ensure that blood glucose control is as good as possible during pregnancy or if you are preparing for pregnancy.



Which blood glucose meter should I use?

Your nurse or doctor will help you to understand blood glucose testing and give you a suitable meter. There is no need to buy a meter from a pharmacy.

How do I get my test strips?

Your doctor will prescribe the correct amount of strips for you.

If you have enough strips to test your blood, you do not need to order the following month.

Test strips

Always note the date you first open a pot of strips. Check the packaging to see how long after this date you can keep using the strips (usually 3-6 months). Do not use any strips after this period of time as you will not get an accurate result. Always replace the cap on the pot immediately after use and follow the manufacturer's storage instructions.

When should I test?

Your doctor or nurse will advise you how often you need to test. You should test usually once or twice each day before meals or before bedtime. You should vary the time of testing from day to day.

You should discuss and agree your own personal blood glucose target levels with your nurse or doctor.

As a guide, your blood glucose targets should be:

Before meals: target level 4-7mmol/l
Before bedtime: target level 6-10mmol/l

You might need to test more frequently in these situations:

- When newly diagnosed
- Following changes to treatment or lifestyle
- During illness
- During short course steroid therapy
- During osmotic symptoms e.g. excessive thirst
- Experiencing high blood glucose after meals
- To prevent development of short term complications such as very low or very high blood glucose levels
- During pre-conception and pregnancy
- If you are prone to high ketones
- When HbA1c testing is unavailable
- You are unable to detect physical signs of a hypo
- During end of life care.

Your doctor or nurse will advise you how often you need to test.

What should I do if I have a hypo?

If you think you are having a hypo you should use your meter to measure your blood glucose. In most cases a hypo can be self-treated when you recognise the symptoms.

The immediate treatment for a hypo is to have some glucose tablets or sugary food or a drink to end the attack. For example:

- **Five dextrose tablets or four glucose tablets**
- **A glass of fruit juice or non-diet soft drink**
- **A handful of sweets**

Avoid fatty foods and drinks such as chocolate and milk, because the fat delays the release of glucose in to the blood and it may take you longer to recover.

It will usually take 10-15 minutes to recover from a mild hypo. If you have a blood glucose meter, you should measure your blood sugar again and if it is still too low (below 4mmol/l) you should have sugary food or a drink and test your levels again in another 10-15 minutes.

After having something sugary, you should have a longer-acting carbohydrate food, such as a couple of biscuits or a slice of bread.

If you have several hypos a week you should contact your diabetes nurse or doctor to find out the cause. You may need a change to your medication or there may be another condition causing the hypos that needs treatment.



Central London Clinical Commissioning Group
West London Clinical Commissioning Group
Hammersmith & Fulham Clinical Commissioning Group
Hounslow Clinical Commissioning Group

Diabetes and driving

- **Rules for people with diabetes who wish to drive are set by DVLA and can be found at www.gov.uk/diabetes-driving**
- **Vocational drivers (includes buses, lorries and vehicles over 3.5 tonnes) please consult the DVLA website**

To drive a car or motorbike on insulin.

Patients should notify the DVLA and always carry their meter and strips. Appropriate blood glucose monitoring is defined by the Secretary of State's Honorary Medical Advisory Panel on Driving and Diabetes as no more than 2 hours before the start of the first journey and every 2 hours while driving.

Leaflet to be reviewed August 2016.