



**Wolverhampton  
Diabetes Care**

## **Self Blood Glucose Testing**

Blood testing is an important part of diabetes self care. People with diabetes can test their own blood using a finger prick blood sample and a simple small electronic blood testing meter.

### **Should all people with diabetes test their blood?**

Not everybody needs to and nobody should force you to. Some people on diet treatment, or even when taking tablets, can be safely checked by using other blood test done by their doctor, especially if they have no problems with low blood sugars (hypos). However, most people will benefit from self blood testing especially if they are on certain diabetes tablets (sulphonylureas) or insulin.

### **Why should I test my blood?**

It is an easy and accurate way of finding out how well your diabetes is controlled on your current diet and treatment plan.

It is the only real way to find out about how your blood sugar changes throughout the day with your treatment and with foods and exercise and to know about "hidden" low or high blood tests that don't cause symptoms. This is especially true of people who have serious problems with hypos and don't get warning.

It is common for people not to have any symptoms or not be unwell even when the blood tests are too high or too low. That is why you cannot rely on the way you are feeling to assess your diabetes control.

It helps you to know what is going on if you are unwell with some other illness or infection and to work out if any action needs to be taken.

It is a helpful way of adjusting your treatment – especially when you start a new treatment such as tablets or insulin. It gives many people confidence to know what is going on.

As well as informing you, it can be used to help your medical team check and understand your diabetes control when they see you.

### **What are the disadvantages?**

Not many. It can be a bit of a chore and it is never nice to have to prick your finger but nearly everybody copes with that.

### **How should I test my blood?**

Don't worry about this, it is easy to learn how to do it but you should get some training and not just start up yourself without really knowing all the facts.

## When should I test my blood?

Other than in certain circumstances, it only needs to be done once a day – but check it if you think your blood sugar may be too high or low, especially if you are not feeling well. There are many different patterns of testing. Some say test in the morning, others before meals or after meals and it can get confusing.

A simple pattern is to do 1 test a day but at different times on different days, before breakfast one day, before lunch the next, before the evening meal the next and last thing at night before going to bed the next day. Then start again in the morning.

Sometimes you will be asked to do a blood test in the middle of the night at about 3 to 4 am because that is when blood sugars can go low without warning in people with diabetes treated with insulin. Test at other times if you are worried about the blood sugar being too high or low. Test if you are exercising, or are ill, or have missed food or if you are going to drive, particularly on long journeys.

## What should my blood levels be?

The aim of your treatment is to keep your blood sugar levels as good as possible without allowing them to fall too low. Before meals, the ideal range is between 4 and 7 mmol/l. If you do test after meals the sugar can normally rise to as high as 11. Blood tests greater than this are considered high, especially so if they are more than 15 mmol/l. A blood test of less than 4 mmol/l is low and should be dealt with as if it were a hypo, even if you have no symptoms.

## What do I do with the answer?

There is no point in blood testing if you cannot or do not do anything with the answer.

- Test accurately – mistakes can affect the result
- Record the result in your book – if you do not write it down you will not get to see the overall pattern and nobody else can look at it.
- Know the targets for the blood tests – do not just do the test without knowing what the level should be otherwise you might just be recording bad diabetes control without knowing it. Results should be between 4 and 7 before meals.
- Do your reckoning – every week or two go over your book and see if you have been happy with the control, whether it's in target, where problems occurred and how to explain them.
- Look for any patterns that need to be put right. For example, you may always be high at one certain time of the day or you may be getting hypos at a certain time.
- Take Action – If things are not right work out how to adjust diet and exercise or how to adjust your treatment to fix the problem. Don't just "wait and see". Get advice as you need it. You should be encouraged to make these changes yourself if you are confident to do so. If not, get help from your usual health team.
- Use it in clinic visits – don't keep all your good work and effort a secret. Take the record with you when you see the doctor, nurse or dietitian so that they can get a good idea of what's going on. If you have a memory meter, take that as well because it can be fed into a computer to analyze the results.

## What to do with one off results?

Always fix a low blood test by taking something to eat.

Whether the reading is high or low, don't make sweeping changes to diet or treatment on one blood result. If you are concerned about a single result or a recent run of results and you don't know what to do about it, you should consult your usual diabetes health care advisor-this may be your GP, Practice nurse or Diabetes specialist nurse.

## What care to expect and seeking advice

You should be offered blood glucose testing when you first develop diabetes or along the way if things change. You should be taught about how to do it, what to look for and how to record it. You should be helped with taking action for yourself by knowing how to adjust your treatment –especially your insulin treatment. When you have particular problems, your team should discuss them with you. They should always ask to look at your record book as well as your meter when you go to see them and use the information to adjust your treatment plan as needed. Please don't expect diabetes teams to continue prescribing the blood strips if you can't show them the results or that there is any benefit out of doing it. Remember, more money is spent on blood strips than all of the diabetes tablets and insulin put together – so please don't waste it.