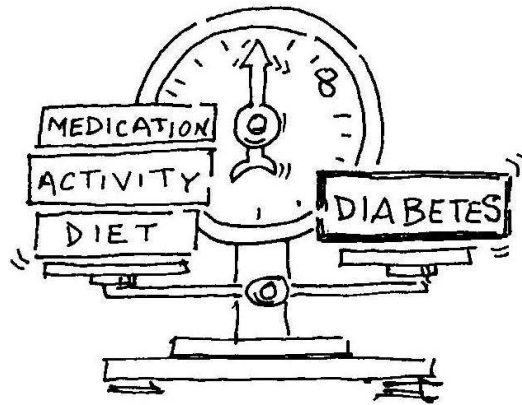


# Blood glucose monitoring

## Why monitor?

The aim of diabetes treatment is to keep blood glucose levels as close to normal as possible. If you have diabetes, your body cannot automatically maintain this control. You will therefore need to adjust and balance your food with your activity, life style and / or medication.



Blood glucose levels go up and down throughout the day. Lower blood glucose levels occur before meals, after extended exercise and sometimes in the middle of the night (when there's a longer period between meals). Higher blood glucose levels occur after meals and when you are unwell.

To help you balance your medication, lifestyle and blood glucose levels, it is recommended to monitor your blood. A diabetes educator can help you learn.

## What to aim for?

Blood glucose values		
	Before meals	After meals (2 hours)
*Ideal	between 4-6mmol/L	between 4-8mmol/L
Fair	between 6-7mol/L	between 8-11mmol/L
High	more than 7mmol/L	More than 11mmol/L
<b>Low blood glucose (hypo)</b> below 4mmol/L		

*\*Often difficult for a person with type 1 diabetes.*

**Note:** For some older people with type 2 diabetes, target values before meals need to be higher. Please discuss this with your doctor and diabetes educator.



## How to monitor blood glucose

Blood glucose monitoring involves putting a drop of blood from a finger prick on a special strip. The strip is then be read by a meter.

The important points for accurate blood glucose monitoring are:

- > washing and drying hands
- > obtaining enough blood for the strip
- > calibration of meter to each bottle of strips
- > checking expiry dates of strips or electrodes
- > correct storage of the strips and meter
- > choice and care of the puncture site.

## When to check

Regular checking of blood glucose is an important and easy way to find out if your diabetes treatment is working. Some people check at the same time each day. Others check at different times each day and build up a pattern over a period of time.

Checks should also be done in unusual circumstances eg when doing more exercise than usual or when you feel unwell. This will help to see if your BG is going too low or too high. More frequent blood glucose monitoring is also required if you are pregnant or have gestational diabetes. You should discuss when to check your blood glucose levels with your doctor or diabetes educator.

## Diabetes managed with diet or tablets

Checking your glucose levels before breakfast provides information about your blood glucose overnight. Checking before your evening meal gives information about your blood glucose during the day.

The best times to test are before meals. You can stagger the tests across the week.

If you have persistent elevated blood glucose levels, talk to your general practitioner or diabetes educator.

## Diabetes managed with insulin

It is recommended that you test at least two or three times a day, once before breakfast and at another time in the day – either before a meal or 2 hours after a meal.

You may need to test more often when you:

- > have unstable blood glucose levels
- > are unwell
- > are newly diagnosed with diabetes
- > are driving or any other activity which may be high risk.

When you have stable and predictable blood glucose levels, you may not need to test as often.

## Extra tests

Sometimes you may wish to try a different food or different exercise. You can check your blood glucose level at these times so you can then adjust your food or insulin correctly. Don't be afraid to test things out. YOU decide.

When you are ill your body is under stress. Your blood glucose levels may go high or low. You therefore need to check more often than usual so you can respond to lows and highs appropriately.

### Ketones

Ketone testing is important for people with type 1 diabetes. This can be done by testing either urine or blood. Discuss with your doctor or diabetes educator to find the most appropriate method for you. Moderate ketones are a warning sign that the body urgently needs insulin.

### A1C

This laboratory test checks long term diabetes control by measuring how much glucose is circulating in the blood over the last few weeks. The target for A1C is less than 7%.

As glucose circulated in the blood it attaches to blood proteins such as haemoglobin which is part of the red blood cell that carries oxygen. An A1C test measures the blood glucose levels over the past weeks. This test is usually done 2-4 times a year by your local doctor.

**Remember:** These tests are for you to know how your diabetes is going. Try to record them either in a book or by downloading them to a computer.

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## For more information

### Diabetes Outreach

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