

# Blood glucose monitoring

Regularly checking your blood glucose levels (also called self-monitoring) can help you manage your diabetes. Your diabetes health professionals can help you with information and advice about blood glucose monitoring.

Regular monitoring can help you see the effects of food, exercise, medication and illness on your blood glucose levels. It can also help you identify any patterns or changes that you should discuss with your doctor or diabetes health professionals.



## Why monitor?

Monitoring your blood glucose levels helps you to:

- » know immediately if your levels are in the target range
- » gauge whether your diabetes medication is helping you to achieve target levels
- » better understand how physical activity, food, stress, travel and illness influence your blood glucose levels
- » look for any patterns at different times of the day to help you identify when you have high or low blood glucose levels
- » identify and treat low blood glucose levels (hypoglycaemia or hypo) quickly if you are using insulin or other types of blood glucose-lowering medications
- » feel more confident about managing your diabetes
- » know when you need to seek support from your doctor or diabetes health professionals to adjust your medications or insulin, or for advice on meal planning or physical activity.

Your diabetes health professionals, especially your credentialed diabetes educator, can:

- » help you choose a blood glucose meter that best suits you
- » give you information about how to check your blood glucose levels
- » work with you to decide how often and at what times you should check your levels
- » help you learn how to interpret your readings.

## How to monitor

To check your blood glucose levels, you need a blood glucose meter, a finger pricking device with lancets and blood glucose testing strips. There are a wide variety of blood glucose meters available. Your doctor or credentialed diabetes educator can help you choose one that suits your needs and show you how to use it.

The National Diabetes Services Scheme (NDSS) is an initiative of the Australian Government administered with the assistance of Diabetes Australia. Through the NDSS, you can access subsidised products to help you manage your diabetes, including blood glucose testing strips.

You can also monitor your blood glucose levels using a continuous glucose monitor (CGM). To find out more about CGM and how to access subsidised blood glucose testing strips, CGM and other products, visit [ndss.com.au](http://ndss.com.au) or call the NDSS Helpline on 1300 136 588.

Registration with the NDSS is free and open to everyone in Australia with a medicare card, diagnosed with diabetes.

## Targets

Your diabetes health professional will recommend a blood glucose range that is suitable for you. They will consider your age, how long you have lived with diabetes, the diabetes medication you take, and any other relevant health conditions you may have.

The following ranges for blood glucose targets are a guide only. Talk to your diabetes health professionals about your individual targets.

### Blood glucose targets

	Fasting/ before meals	Two hours after starting meals
Type 1 diabetes	4–8mmol/L	<10mmol/L
Type 2 diabetes	6–8mmol/L	6–10mmol/L

## When to check

Your doctor or diabetes health professional will help you decide when and how often to check your blood glucose levels, as well as the target range to aim for. Ask for help to develop a monitoring routine that suits your lifestyle. Common times for people to check blood glucose levels include:

- » before breakfast (fasting)
- » before lunch or dinner
- » two hours after a meal
- » before bed
- » before driving or exercise.

You may be advised to check your blood glucose levels more often if you are:

- » feeling sick or stressed
- » being more (or less) physically active
- » experiencing more hypos than usual
- » experiencing changes in your routine, such as travelling or starting a new job
- » changing or adjusting your diabetes medication or insulin
- » changing your eating pattern
- » experiencing night sweats or morning headaches
- » noticing frequent instances of high blood glucose levels above the target range
- » pregnant
- » preparing for, or recovering from, surgery
- » starting on new medications, for example steroids.



## What causes blood glucose levels to go up or down?

There are many reasons why your blood glucose levels may go up or down during the day. The most common causes include:

- » food (the time, type and amount of carbohydrate eaten)
- » the amount of exercise or physical activity
- » diabetes medication
- » emotional stress/excitement
- » hormonal changes
- » blood glucose monitoring techniques
- » illness and pain
- » alcohol
- » medications, such as steroids.

## Who is at risk of low blood glucose?

- » Insulin and some diabetes medications increase your risk of a hypo.
- » Hypos occur when the blood glucose level has dropped too low, below 4mmol/L.
- » Hypo symptoms can sometimes occur with higher blood glucose levels, especially in children, older people and those who have had blood glucose levels above the target range for a long time.



## Are high blood glucose levels dangerous?

- » Sometimes, your blood glucose levels may be high and you may not understand why.
- » If you have type 1 diabetes and your blood glucose levels are high, or if you are sick, it's important to check for ketones in your blood or urine. If you have ketones or are unwell, it's important to seek medical attention.
- » Long-term diabetes-related complications can occur if blood glucose levels are above the target range over a long period of time. If your blood glucose levels are high on a regular basis, ask your doctor or diabetes health professionals for advice.



## If your reading doesn't seem right

Sometimes, you may be surprised by the reading when you check your blood glucose level. If it doesn't seem right to you, there are a couple of things you can check.

- » Did you wash your hands and dry them well before you did the check?
- » Have the strips expired?
- » Is the strip the correct one for the meter?
- » Was there enough blood on the strip?
- » Did you put the strip into the meter correctly?
- » Have the strips been affected by climate, heat or light?
- » Is the meter clean?
- » Is the meter too hot or cold?
- » Is the battery low?

## What is the HbA1c test?

The abbreviation 'HbA1c' stands for glycosylated haemoglobin. It's a blood test that reflects your average blood glucose level over the last 10-12 weeks.

It's recommended that you have this test done at least every 12 months, although you may be advised to have it done more often (every three to six months). The results of an HbA1c can help give you an overall picture of your blood glucose management.

The target HbA1c for most people is 53mmol/mol (7%) or less. Your doctor will advise you of the HbA1c target that is best for you.



**Remember:** Monitoring blood glucose levels helps you manage your diabetes.

At times, the readings may not be what you expect, but it's important to remember that these readings are not a test of how well you are managing your diabetes.

Knowing – and understanding – your blood glucose levels can help you and your health professionals fine tune your diabetes management.

Your doctor or diabetes health professional will recommend a blood glucose target range that is suitable for you.

## The NDSS and you

A wide range of services and support is available through the NDSS to help you manage your diabetes. This includes information on diabetes management through the NDSS Helpline and website. The products, services and education programs available can help you stay on top of your diabetes.

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