

Continuous Glucose Monitoring and Flash Glucose Monitoring

RSS Diabetes Service

Continuous glucose monitoring (CGM) and flash glucose monitoring (FGM) systems enhance standard blood glucose monitoring. Both systems can provide many more glucose readings per day than finger pricking with a meter and both can uncover patterns in blood glucose levels that were previously unknown.

Why use CGM or FGM?

CGM and FGM can be used in both type 1 and type 2 diabetes. Both systems measure the glucose in the fluid that is in and around the body's cells (interstitial fluid). Finger prick blood glucose monitoring tests the glucose in the blood.

CGM and FGM can assist you to make lifestyle and diabetes medication changes to fine tune diabetes management and reduce the amount of time spent out of your glucose target range (e.g. hyperglycaemia and hypoglycaemia).

CGM works 24 hours a day, so it can test glucose levels even while you sleep. FGM also works 24 hours a day but requires you to scan the sensor with the reader to obtain glucose readings.

Both systems can be very useful if you are worried about:

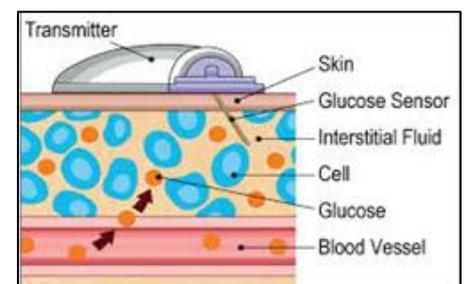
- hypoglycaemia unawareness (don't feel the low)
- night time hypoglycaemia
- sports related hypoglycaemia
- your HbA1c results not matching with blood glucose levels taken at home
- unstable blood glucose control.
- high blood glucose (hyperglycaemia) / sick day action plan.

What does it involve?

A small sterile subcutaneous needle is inserted just under the skin using an applicator. The needle is then removed leaving a 'glucose sensor'.

The CGM sensor is then attached to the transmitter and worn for 7 - 14 days. The interstitial glucose level is tested every 10 seconds and a glucose result is offered every 5 minutes (real-time).

Some CGM systems can be linked wirelessly to blood glucose meters, smart devices and/or insulin pumps. When linked to a smart device, you, your family member and/or carer can be alerted before the glucose is above or below your sensor glucose target. When linked to some insulin pumps, the insulin delivery can be suspended to avoid hypoglycaemia (low blood glucose) or insulin delivery automated to avoid hyperglycaemia (high blood glucose).



In FGM, each sensor can be worn for up to 14 days. When you use the reader or linked smart device to scan the sensor, a glucose result and the last 8 hours of glucose history is displayed.

Both CGM and FGM systems offer trend arrows which identify if the glucose is going up, going down or stable.

Specific CGM or FGM software can be added to your home computer or smart device which enables you to share this information (e.g. trends and patterns) with your health care professional, family and/or carer. Some CGM systems offer reports only after the sensor is removed (in retrospect).

Are CGM & FGM results accurate?

CGM and FGM systems are accurate but the level of glucose in interstitial fluid reacts slower than the level of glucose in the blood. The interstitial glucose result lags approximately 10 minutes behind the blood glucose result.

Most CGM systems require you to continue testing your blood glucose with your blood glucose meter for calibration. For both CGM and FGM, you will need to test when glucose levels are rapidly changing (e.g. lower and higher than target glucose).

If you require an admission to hospital, you can continue to wear your CGM or FGM but the blood glucose results provided by the hospital blood glucose meter will be used to make changes in your diabetes management.



What are the risks?

Apart from minor discomfort at the time of insertion, there is no expected discomfort when wearing the CGM or FGM sensor.

There is a small risk of infection but this risk is reduced by using a sterile technique when inserting the sensor and protecting the skin site.

Normal physical activities are encouraged (e.g. showering, bathing, and swimming) but CGM and FGM systems may need to be reinforced or removed during contact sports.

CGM and FGM systems may be affected by strong magnetic fields and are to be removed during X-rays, CT scans and MRIs.

How do I get one?

CGM and FGM systems are more expensive than your blood glucose meter. The sensors can only be used once and are an additional cost for those not eligible for the National Diabetes Services Scheme (NDSS) subsidy.

However, if you have type 1 diabetes and hold a concession or have type 1 diabetes and are planning a pregnancy, you can apply for fully subsidised CGM or FGM products through the NDSS. For more information on eligibility, or to apply for the subsidy, go to NDSS website <https://www.ndss.com.au/CGM>. If you have private health insurance, you may receive some assistance.

You may also be able to loan a CGM or FGM system for a short time. If you are keen to try one or are planning to obtain your own CGM or FGM system, you will need some extra training and practice to use the technology correctly. Talk to your credentialed diabetes educator, doctor or diabetes specialist.

Where can I get more information?

- Health Direct Australia (24hr health advice line)
- Diabetes Australia
- National Diabetes Services Scheme
- Australian and Medical Scientific Limited
- Medtronic
- Abbott Diabetes Care

Phone: 1800 022 222

www.diabetesaustralia.com.au

www.ndss.com.au

www.amsl.com.au/

www.medtronic-diabetes.com.au/

<https://www.freestylelibre.com.au/>

For more information

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www.chsa-diabetes.org.au

www.sahealth.sa.gov.au/regionalhealth

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