

Continuous Glucose Monitoring (CGM)

Summary

- CGM involves having a small glucose-sensing device (or sensor) inserted just under the skin
- The sensor measures glucose levels every five minutes
- Data is either stored in the device or sent via a wireless transmitter to a receiver or your own insulin pump
- Upon completion the data is uploaded and reviewed together with you, an educator and doctor
- CGM is performed at the Diabetes Education Service, requires a doctor's referral and a day-stay admission

What is CGM

A continuous glucose monitor (CGM) is a device that measures glucose levels continuously, 24 hours a day. The information provided by the glucose monitor may help you and your doctor/diabetes educator understand how food, exercise, and medication impact your blood glucose levels, so you can better manage your diabetes.

CGM is currently only available as a diagnostic tool used for short intervals. It **does not** replace normal blood glucose testing. However, it is a very useful supplement enabling you to see what is happening in between tests and overnight. Continuous glucose monitoring provides more complete information, so you and your doctor or diabetes educator can make confident decisions about your diabetes management.

What does CGM involve?

CGM involves having a small glucose-sensing device (or sensor) inserted just under the skin on either your stomach, or upper outer buttock. The sensor measures glucose levels every five minutes. Depending on the type of sensor, it is generally worn for a six to seven day period.

The information from the glucose sensing is either:

1. Stored in the device:

The data is 'blinded' meaning it is not available for you to see until it is uploaded onto the computer at the end of the investigation. The information is uploaded into management software and plotted onto graphs. This can assist with identifying patterns in your blood glucose levels.

2. Sent via a wireless transmitter to a receiver or insulin pump:

The CGM data is not blinded and may be viewed on the pump/receiver screen. With trend graphs and directional arrows, this provides you with information about what your glucose level is now, what direction it is moving (i.e. up or down) and how fast it's getting there. The data can also be uploaded from the receiver/pump into management software.

Your doctor/diabetes educator can help you decide which type of CGM is right for you. If you are on an insulin pump, the monitoring system will be determined by the brand of pump you are using.



'Blinded/Retrospective' CGM



CGM data sent via wireless transmitter to an insulin pump



CGM graph displayed on a receiver screen

Insertion of the sensor and device training

If your doctor has referred you for CGM, you will have been consented to have the investigation and will be provided with admission paperwork and information.

You are requested to return your signed admission paperwork to the Diabetes Education Service before your admission day.

You will receive the following appointments:

- An admission appointment for sensor insertion and device training*.
- An admission appointment for sensor removal and data uploading*.
- An RMH outpatient Diabetes Clinic appointment to review the CGM data with your referring doctor/ an Endocrinologist

*Appointments for the insertion and removal are held in the Diabetes Education Service, Room 401, West Wing Level 4, The Royal Melbourne Hospital – City Campus

Please allow up to 2 hours for your appointment/s.

A medical certificate can be provided at your request.

What does the investigation cost?

You will be admitted as a public day-stay inpatient for both the insertion and the removal of your CGM sensor. There is no fee for the investigation.

Wearing the device

During your training you will be advised on how often you will need to 'calibrate' with fingerpick blood glucose tests. Calibration of the device is required to ensure accuracy of the results.

You will also be advised what activities you will need to record/log while wearing the device. Your CGM sensor and transmitter is completely waterproof. You may swim, shower, exercise and engage in other daily activities as usual. In fact, we strongly encourage you to follow your normal routine so that the data provides a true reflection of your blood glucose levels on a day-to-day basis.

Following completion of your initial sensor insertion and training, you will be discharged home wearing the CGM for 24 hours a day for the duration of the investigation. Depending on the type of sensor used; you will wear the device for 6 - 7 days, and then return for your sensor removal. Your data will then be uploaded and reviewed together with you by a diabetes educator and your referring doctor/Endocrinologist.

Your results will be discussed with you during your next outpatient appointment in the diabetes clinic.

Contact

Diabetes Education Service
The Royal Melbourne Hospital – City Campus
Room 401, West Wing Level 4
Grattan Street, Parkville Victoria 3050
Phone: (03) 9342 2600
Email: diabeteseducationservice@mh.org.au

Practitioner / Patient notes

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