GUIDE

Continuous Glucose Monitoring (CGM)

The Ottawa Hospital | L'Hôpital d'Ottawa

Disclaimer

This is general information developed by The Ottawa Hospital. It is not intended to replace the advice of a qualified health-care provider. Please consult your health-care provider who will be able to determine the appropriateness of the information for your specific situation.

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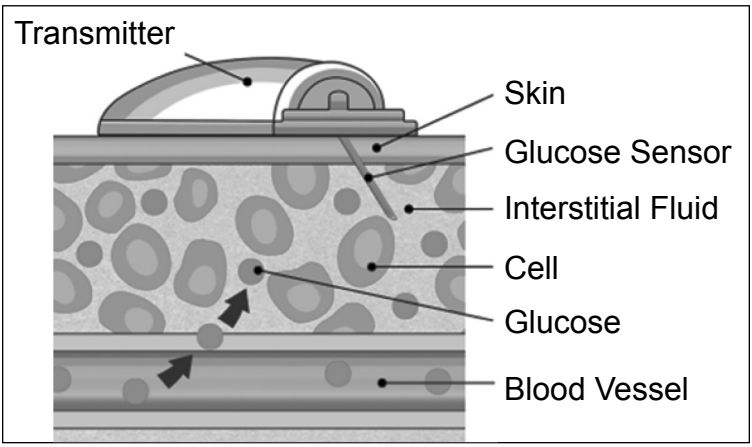
What is continuous glucose monitoring (CGM)?

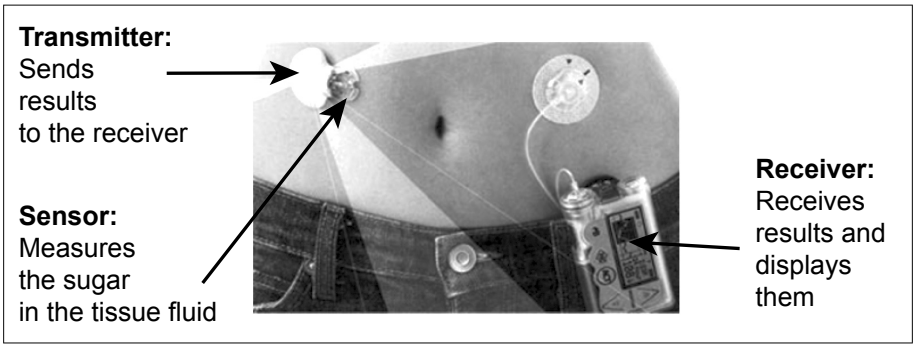
CGM is a system that measures sugar levels in the fluid around the cells in your body tissue throughout the whole day. When you test with your blood glucose meter, you are taking a measure of the sugar in your blood. The results from your meter and from CGM are not the same. Sugar moves through the blood first and then into the tissue fluid. This explains the difference between the CGM and meter results.



CGM can add to the information we get from the blood sugar readings from your glucose meter. CGM can help to track patterns in your sugar levels, but it must be used together with a blood glucose meter to be safe and useful. It does not replace the blood sugar tests you take using your meter. You will continue to use blood glucose meter readings to make day to day decisions about your insulin doses. Using CGM will not automatically control your blood sugars: you will still have to make your own decisions about insulin doses. If you are on an insulin pump, you will still have to program it with basal rates and every time you need to take a mealtime bolus or a correction.

To have accurate results from CGM, the system must be calibrated. This means that you must take blood sugar readings with your meter and enter the results in the receiver or pump. The system then makes adjustments based on your meter results and ensures they are accurate. CGM is most accurate when it is calibrated 3 to 4 times a day. The CGM will stop working if it is not calibrated with a meter blood sugar test at least every 12 hours.

CGM has 3 parts: a transmitter, a sensor and a receiver



The sensor is attached to the transmitter and sends the results to the receiver by radio signal. The sensor must be replaced every 6 days to 7 days. The receiver and transmitter are reusable.

Why does someone use CGM?

Research has shown that CGM can help reduce A1C and the number of low blood sugars in people who use the system most days of the week (on average 6 days a week). A useful feature of CGM is that you can set alarms to warn you when your sugar is dropping or when your sugar is rising. When the CGM alarms, you can then check your blood sugar with your meter to decide

if you need to take a correction dose of insulin, treat a low blood sugar, or eat. It is also very useful to regularly download the results and look for trends or patterns to help you decide what adjustments are needed to your insulin doses or pump program. There are four CGM systems available for use in Canada. One of the CGM systems, which is integrated with an insulin pump, has a feature that will stop the pump from delivering insulin if it measures a low sugar and if the alarm is not cleared. This is particularly helpful if you have difficulty feeling when you have a low blood sugar.

Reasons why you may want to use CGM

If you:

- Want to improve your blood sugar control
- Want another tool to help better manage your diabetes
- Often have low blood sugars
- Have difficulty feeling when you have a low sugar (hypoglycemia unawareness)
- Have a fear of low blood sugars
- Think that this extra information will help you make adjustments to your insulin

Is continuous glucose monitoring for me?

CGM works best if you:

- Are willing to wear it almost every day (average 6 days/week)
- Continue to test your blood sugar with your meter at least 3 to 4 times a day
- Use your meter results to make day to day decisions about insulin doses
- Have been using an insulin pump for at least 1 month and are

comfortable and confident with programming your pump

- Regularly download or log your blood sugars to see if there are patterns and make adjustments to your insulin doses or pump program when needed
- Have employee health benefits that cover or are able to pay for the extra cost of the sensors, a transmitter and a receiver

CGM doesn't have any added benefits in people who:

- Want CGM so that they can test their blood sugar less often
- Are not willing or able to wear CGM almost every day
- Don't regularly take the time to download or write down results to actively make changes to their insulin doses or pump program based on the results

Cost of CGM

- The cost of CGM varies depending on the system you choose. (See CGM cost chart)
- CGM is not covered by Assistive Devices Program (ADP), Ontario drug benefits, disability benefits or Trillium drug program.
- CGM may be covered by some employee health benefit plans. Companies that make CGM systems can help you find out if your health benefit plan covers some of the cost of CGM.

If you think CGM is right for you, please talk to your diabetes educator or doctor.