

CONTINUOUS GLUCOSE MONITORING (CGM) SYSTEM



The use of Continuous Glucose Monitors (CGMs) has increased considerably for people with type 1 or type 2 diabetes in the last few years. These devices can help you manage your blood glucose and provide alarms to warn you if glucose levels are trending too high or low. You can then take action to keep them on target.

CGMs work by measuring blood-sugar data every 5 minutes, providing a better measurement of your blood-glucose patterns than fingerstick glucose readings, which are usually done at a few varied times each day. More frequent glucose readings can show you trends and patterns, as well as alerting you to take action when necessary to decrease the frequency of hypoglycemia. Most of these small devices attach to the body and have a tiny chemical filament that extends under your skin.

This filament measures glucose levels in the surrounding fluid. The devices are easily inserted after initial instruction.

Most CGMs are inserted by you and changed every 7-14 days. You can use a smart phone to see your data or a handheld receiver/reader. The CGM reading of the glucose in the fluid that surrounds your cells generally “lags” behind your real-time fingerstick blood sugar by about 15 minutes. While this may sound startling, the software in these devices is programmed to anticipate this and warn you about rising and falling glucose levels as needed.

Using a CGM and the data it provides, most people have been able to improve their overall blood glucose control and A1C, while also preventing hypoglycemia. Fingersticks to measure blood glucose can, for the most part, be eliminated, while CGM alarms help keep you safe.

The alarms and alerts are programmed to notify you via your smart phone or a handheld receiver/reader if blood glucose is outside the desired range. You can set that range with help from your diabetes care providers. CGMs also help you learn what impacts activities, such as meals and exercise, have on your blood-glucose levels. This feedback helps you make better decisions on how you balance food, activity, and insulin dosing.

In addition to helping you determine your insulin doses, CGM devices can be used in conjunction with other technologies to help you control your diabetes. They can work with smart pens, which help you calculate doses and/or keep track of your insulin injections.

They also can assist in determining insulin doses with, and even in some instances communicate directly with, insulin pumps. Pumps deliver small amounts of insulin continuously during the day and night, and then give additional premeal doses to cover the food that you eat. Your diabetes care provider can discuss these options with you.

CGM data can be shared with your doctor and other care providers, who can then review the data and help you with your glucose management. This is particularly useful during this time of COVID quarantine and “telemedicine” care, which limit face-to-face encounters.

You can call your insurance company to see if CGM devices are covered and, if you want to use this technology, discuss the options your care provider. A diabetes educator can assist you with the training necessary to insert the CGM, as well as with how to understand and analyze your daily and weekly reports.