Continuous Glucose Monitors

Continuous glucose monitors (also known as CGMs or sensors) are devices that measure glucose or sugar in the body. CGMs use a tiny wire under the skin to measure the sugar between the cells. They give sugar values every 1-5 minutes. CGMs also show how quickly the sugar level is going up or down.

CGMs can be worn in places that insulin injections are often given. The site will depend on the device and where your child has enough fatty tissue. Your provider or diabetes nurse will discuss this with you.

CGMs are put in with a device. A needle in the device pushes the tiny, flexible wire under the skin. The needle then comes back out and only the wire stays under the skin. The site is typically changed every 1-2 weeks. Sensor data is sent to a receiver where the sugar level is viewed.

Benefits of Using a Continuous Glucose Monitor:

- CGM readings can replace the need for finger pokes most of the time.
- Early warning of a rising or falling sugar.
- Alerts let the user know if high or low sugars are noticed or predicted.
- Can help improve sugar levels and improve time spent with glucose in target range.
- Ability to share sugar levels with caregivers who are not with your child (if your child is using a device with cellular data or reliable WiFi).
- Provides information that can be used to adjust nutrition and medicines.

Accuracy of CGM

Sugar levels from a CGM are very accurate but may not be the same as readings from a glucometer. CGMs measure glucose in the fluid under the skin, so readings may lag behind blood sugar measured by a glucometer. CGM and glucometer readings can be most different when blood sugars are changing quickly, like after a meal, or when a blood sugar is very high or low.

When to Use a Glucometer:

- Having symptoms of a low blood sugar.
- Before and after treating a low blood sugar.
- The receiver doesn't display a sugar reading and a guiding arrow.
- The way you feel doesn't match the sensor reading.
- The CGM is warming up or not working.
- The device asks you to check a blood sugar.

Ordering CGM

If you are interested in a CGM, talk to your child's diabetes provider. They can help you decide if this is the right step and can start an order for the device.

Insurance

Your insurance plan will decide out-of-pocket cost, which device is insured, and the time it takes to get a CGM. Some insurances may need records from recent clinic visits and blood sugar logs that show testing blood sugars 4 or more times a day for up to 90 days. Wisconsin Medicaid plans sometimes want a diagnostic CGM trial, where your child has a CGM placed in our office and wears it for 10 days.

If your insurance does not approve the CGM, there may be chances to appeal this decision. Call the pediatric diabetes clinic if you receive any information about the CGM not being approved.

Starting the CGM
Patients typically start using their CGM once they get it, and do not usually need an appointment to get started. Your CGM will come with step-by-step instructions for how to place it and start using it. Each CGM company website has training videos. The insertion devices are easy to use. If you have questions, you can reach out to the CGM maker or to our office for support.

Setting Alarms
When first using a CGM, we will help set alarms that are safe, but that won't cause frequent alarms. Over time, we will work with you to make your alarm settings closer to your target glucose range. The alarm limits for your child when you start using a CGM are:

Low: _____

High: _____

Responding to High Sugars
When starting a CGM you may see sugar levels rise after eating or other patterns that you were not able to find when you were checking blood sugars with a glucometer. Some people feel uneasy when they see sugars going up quickly on CGM. If you see blood sugars increasing quickly or "spiking" on the CGM during or after a meal and you have already given insulin to your child for that meal or snack, **do not give more insulin to bring the spike down**. The insulin keeps working to bring the sugar down for about 3-4 hours. You and your diabetes team will work on reducing these spikes to allow your child to spend more time in the desired sugar range (more "time in range"). Some ways to reduce the spikes are:

- Adjust the timing of insulin injections so that the insulin is working right away when food is being digested. Usually this means giving insulin about 5-15 minutes before eating.
- Work with your family to think about how to blend certain foods in a meal.

CGMs provide a lot of readings, and sometimes this can feel overwhelming. To avoid feeling overwhelmed we suggest:

- Setting alarm limits that are realistic (see "Setting Alarms" for initial settings).
- Limiting how often you look at CGM data on the receiver if it is not alarming.
- Connecting with our clinic to review information and answer questions.

Supplies
Insurance companies will typically only approve enough sensors to last exactly 30 or 90 days. If you have a sensor fail early, be sure to report this to the device maker and ask for a replacement.
Call your company at:

- Dexcom: **888-738-3646**
- Freestyle Libre: **855-632-8658**
- Medtronic: **800-633-8766**

An order for this CGM:

- ☐ Dexcom G6
- ☐ Libre 2
- ☐ Medtronic Guardian

☐ Was sent to this pharmacy:

_____

On (date): _____

☐ Was Sent to this DME Supplier:
- ☐ Byram: **801-716-8872**
- ☐ Edgepark: **800-321-0591**
- ☐ Edwards: **888-344-3434**
- ☐ J&B Medical: **800-737-0045**
- ☐ Other:

Call the number listed to ask about your order or if you have not been called within 5-7 business days of the order being placed.