Continuous Glucose Monitoring (CGM)
Information about devices currently on the market and how they work

What is CGM?
A continuous glucose monitor (CGM) is a small electronic device worn on the body to measure glucose levels on a continued basis. Unlike a glucometer, which measures glucose in your blood, the CGM measures the glucose level in the fluid around the cells, called interstitial fluid.

A CGM system contains a sensor (under the skin) and transmitter, plus a separate receiver worn outside the body. Messages and data can be sent to you via a phone app. Sometimes the system includes an insulin pump, too.
How does it work?  
A tiny disposable sensor is placed under the skin with a small needle and attached to a small transmitter. The transmitter sends glucose information via radio frequency to a wireless handheld receiver and smartphone or insulin pump. The sensor reads the glucose values every 5 minutes. You remove the sensor and replace it with a new one about once a week.

What can a continuous glucose monitor do for my child?

| CGM does: | • Provide continuous “real time” interstitial glucose readings  
• Give immediate feedback on how food choices, physical activity, stress, etc., affect your glucose values  
• Have alarms to alert you of high glucose and low glucose levels  
• Improve overnight control  
• Give you the ability to recognize spikes in blood glucose (continuous access to data leads to more frequent insulin dosing.)  
• Improve management of glucose when you are sick |
|---|---|
| CGM does not: | • Give insulin  
• Replace blood glucose checks. Your child will need to check their blood glucose:  
  • To confirm high or low glucose values. Your child may need to check their blood glucose:  
    • Before giving insulin for food or high blood glucose  
    • When calibrating the CGM device  
      (see information on calibration below)  
    • Before driving |

CGM may require calibration  
Each CGM device may require calibration to make sure it’s tracking accurately. Calibration means entering a fingerstick blood glucose value into the CGM device several times a day. The number of required times you will need to do calibrations each day depends on the CGM device. Good calibration habits are essential to assure that the CGM will work properly.

How do I know if CGM is right for my child?  
CGM may be most helpful if your child:  
• Has frequent low blood glucose (hypoglycemia), particularly during sleep  
• Experiences large blood glucose variability (has lots of large dips in their glucose highs and lows)  
• Is not aware when their blood glucose gets low  
• Is interested in learning how things like exercise, food, and growth impact blood glucose levels  
• Is interested in learning more about how to make insulin dose adjustments
Continuous Glucose Monitoring

Potential challenges with CGM

- Your child needs to wear the device all the time. Research shows that those who wear it at least 6 days per week consistently get the most benefit. (However, intermittent use can also be helpful in some cases.)
- There may be more fingerstick blood glucose monitoring, especially when first starting.
- You may feel information (data) overload: seeing this amount of glucose information can be overwhelming to some.
- Occasionally the sensor may malfunction, lead to insertion site infections or cause skin irritation from the adhesive.

What CGM devices are available?

Please ask your provider or nurse for company-specific brochures and visit these websites for more information.

**Dexcom**

dexcom.com
1-877-339-2664

**Medtronic MiniMed**

medtronicdiabetes.com
1-800-646-4633
What should I do if my child and I are interested in CGM?

Have a conversation with your diabetes healthcare provider.

Cost

The cost of the CGM device is determined by your insurance plan and CGM company. Contact your chosen company for information on pricing and assistance with insurance coverage.