

CGM Explained

Continuous Glucose Monitors (CGMs) have small glucose sensors that are injected just under the skin. This sensor measures changes in glucose levels in the body's fluid (interstitial fluid) around the sensor and sends the information to the receiver or Bluetooth enabled mobile device. The CGM device automatically records glucose measurements continuously around the clock, displaying the results every few minutes. Sensors are changed every few days, according to each device manufacturer's recommendations.

CGM Use

In addition to showing real-time glucose levels, CGMs are used to identify trends in glucose levels. They can even help identify trends that show glucose levels rising and falling.

The patient can set customizable alarms to alert the patient of glucose levels outside the identified target range. Alarms can be set to alert glucose levels that are rising or falling. It is recommended that alarms be used as only a guide to avoid unnecessary highs or lows. Use the trending data conservatively.

School staff should understand how to respond to CGM alarms. Students who are capable of managing their diabetes independently may be able to respond to alarms without assistance. Younger students will require assistance to appropriately respond to alarms.

Data Sharing



Most CGMs have the option of sharing the glucose data. In addition to parents or guardians having access to the data, your student's parents may request that school personnel also have access. The ADA recommends the following considerations be taken into account when data-sharing is requested:

Access to CGM receiver or mobile device: The student should have access to his/her CGM receiver or the Bluetooth device receiving data at all times. The student should be allowed to charge the device during school as necessary.

Access to wireless network: Some students may have a device enabled with cellular data, others will depend on the school's wireless network to share data.

Data sharing with school staff: The student, parent/guardian, and school staff should discuss data sharing options. Many school nurses find it helpful to be able to monitor students with type 1 in real time using share technology. If this is agreed upon, and appropriate device is needed for remote monitoring purposes.

Data sharing with parents or off-site caregivers: Students with a device capable of sharing data will also be able to share data with parent(s)/guardian(s) remotely. As students will be able to receive text messages and advice from off-site parents, the role of parents in “real-time” diabetes management should be specified in the student’s 504 plan. Although parents have the potential to provide diabetes management advice during the school day, this does not absolve the school of its responsibility to provide diabetes care for the child with diabetes under federal and state law.

Additional information about CGMs

- If the CGM is FDA approved, the CGM value may be used in place of fingertip blood glucose checking
- If the student has signs or symptoms of hypoglycemia, check fingertip blood glucose level regardless of the CGM level
- For sensor indicated hypoglycemia, confirm CGM results with a blood glucose meter check before taking action on the sensor blood glucose level
- Insulin injections should be given at least three inches away from the CGM insertion site
- DO NOT disconnect the CGM for sports activities
- If the CGM becomes dislodged, return everything to the parents/guardians. Do not throw any part away.
- Refer to the manufacturer’s instructions on how to use the student’s device.

Student’s Self-Care CGM Skills Review



Make sure that you understand how well the student can manage the CGM independently. The following questions will help you understand your role and the role of the student in managing blood glucose effectively with a CGM.

Is the student able to troubleshoot alarms and malfunctions?	Yes No
Does the student understand and know how to treat a HIGH alarm?	Yes No
Does the student understand and know how to treat a LOW alarm?	Yes No
Can the student calibrate the CGM (if required)?	Yes No
Does the student understand and know how to treat a rapid trending rise or fall in the blood glucose level?	Yes No
Should the student be escorted to the nurse if the CGM alarm goes off?	Yes No
Are there other instructions for the student regarding the CGM?	

Bottom line...The CGM is a powerful tool in diabetes management.

Understand how to interpret CGM data. Work together with parents to establish the best way to manage the data from the CGM. Add this information to the 504 plan so that everyone is on the same page. Also, make sure the student is aware of their role in monitoring CGM data and they are comfortable with that role.

References: www.diabetes.org, www.clevelandclinic.org