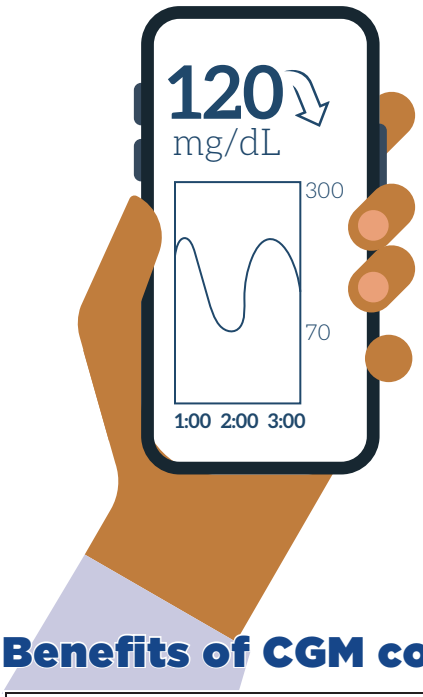
The Role of Continuous Glucose Monitors (CGM) in Diabetes Management



What is a CGM?

CGM systems measure glucose levels continuously, displaying a glucose level every 1-5 minutes along with trend arrows to indicate the rate and direction of glucose change.

CGM system components:

- Sense glucose in interstitial fluid through a thin, flexible, sensor inserted under the skin and adhered to the skin with adhesive.
- Transmit sensor glucose information to a display device, which can include a wireless handheld device, smartphone application or a compatible insulin pump.

Benefits of CGM compared to Blood Glucose Monitoring (BGM)

FEATURE	BGM	CGM
Provides continuous glucose data	✗	✓
Shows the rate and direction of glucose change	✗	✓
Has research that shows use improved time in target range and reduced A1c, hospital admissions, hypoglycemia, and absenteeism[1, 2]	✗	✓
Has personalized alerts to help identify hypo/hyperglycemia	✗	✓

How Can CGM Improve Diabetes Management?

Glucose trend information provides valuable context that helps the person with diabetes make proactive treatment decisions to mitigate hypoglycemia and hyperglycemia.

CGM reports synthesize large amounts of glucose data (up to 1440 glucose values per day) into reports and graphs, providing insights into glucose patterns.

Reference List: See page 4

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Who is a good candidate for CGM?

Any person with diabetes who:[3]

- Requires insulin for treatment of their diabetes
- Can tolerate the CGM adhesive and is willing to wear an on-body device
- Desires more comprehensive information about their glucose values and trends
- Is at risk for severe hypoglycemia or has hypoglycemia unawareness

CGM Across the Lifespan

Group	Challenges CGM Can Help Address[4, 5, 6, 7, 8]
Infants/Toddlers/ Children	Hypoglycemia unawareness, overnight hypoglycemia, wide variability, impact of meals
Teens/Young Adults	Impact of medications, meals, physical activity, reducing acute complications and chronic complications, effects of alcohol and sex
Type 1 diabetes	Impact of medications, meals, physical activity, stress, reducing acute complications
Type 2 diabetes	Impact of medications, meals, physical activity, stress, reducing acute complications
Pregnancy	Impact of meals, activity, pregnancy hormones, medications, achieve tighter targets
Newly diagnosed (with or without medication)	Impact of meal composition, physical activity, stress, medications
Long standing diabetes/Older Adults	Impact of medications, meal composition, activity, reducing risk of severe hypoglycemia

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How can I help ensure success with CGM?

Address the most common problems

Problem: Skin irritation from the CGM adhesive

Solutions: Use the following tips to prevent skin reaction and promote skin health.[9]

- ✓ Insert the sensor in a site approved by manufacturer and in an area with enough fat to "pinch" up.
- ✓ Clean the insertion site and allow to thoroughly dry.
- ✓ Avoid inserting sensors in areas with broken skin, such as cuts or scabs, or areas where skin creases with bending, like the waistline.
- ✓ Rotate sensor insertion sites to a different location with each change to give skin time to heal.
- ✓ The user should remove the device and not continue using the device if skin irritation continues to occur.
- ✓ Use a liquid barrier product to reduce skin exposure to CGM adhesive if skin irritation occurs.

Problem: Alarm and alert fatigue

Solutions: Use personalized CGM alert settings.[10]

- ✓ Users may not need to program all CGM alerts.
- ✓ If alert frequency is burdensome to the user, consider setting only the hypoglycemia threshold alert and disabling all other alerts.
- ✓ Ensure alerts are actionable and align with the individual's goals for using CGM.

Problem: Information overload-being overwhelmed by the data

Solutions: Use these tips to systematically review the data.[11]

- ✓ Focus on one actionable pattern at a time.
- ✓ Deal with hypoglycemia first.
- ✓ Set reasonable expectations (example: glucose levels are supposed to rise after meals).
- ✓ Focus on big picture, not on a particular day.

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