

Glucose Monitoring Options

Glucose monitoring is one of the most important diabetes care skills. Knowing your glucose number allows you to determine the right amount of insulin to take. It's important to keep track of glucose levels and review them at least weekly, and with your diabetes care team during clinic visits.

There are currently three options for monitoring glucose:

Blood Glucose Meters - Blood glucose meters measure plasma blood glucose and should be used to test at least 4 times per day — usually before breakfast, lunch, dinner and at bedtime. There are many meter options, [with a wide range of costs and features](#). A meter and test strips can be purchased over the counter without a prescription.

Continuous Glucose Monitors (CGM) - CGMs measure interstitial glucose (the fluid between the cells) and can give up to 288 glucose readings a day. CGM are made of a sensor, a transmitter and a receiver (which can also be your smartphone). CGMs have alerts that you can customize to warn you when you are low or if you will soon be low. If the person wearing it is using a smartphone as a receiver, the data can be shared with “followers” who will also receive alarms when glucose levels are out of target. The [Medtronic Guardian Connect](#) requires finger sticks to make treatment decisions, but the [Dexcom G5](#) and [Dexcom G6](#) data can be used to make treatment decisions. The Dexcom G5 requires 2 fingerstick calibration per day, while the Dexcom G6 only requires fingersticks for calibration in rare circumstances. An implantable CGM by [Senseonics](#) was recently approved by the FDA for 90-day wear in adults.

Flash Glucose Monitors- The [Abbott Freestyle Libre](#) is the first and currently the only flash glucose monitoring system. It's a cross between a meter and a CGM. It has two parts: a sensor and a reader. When you wave the reader within 1.5 inches of the sensor, you get your current glucose level and a trend arrow to indicate if glucose is rising or falling. If you have an iPhone model 7 or later, you can use your phone as the receiver. With the Libre, you rarely have to do fingersticks like the Dexcom G6. However, it does not send high and low glucose alerts. The Libre is the least expensive sensor option currently available.

Reviewed by [Anastasia Albanese O'Neill, PhD](#), 7/15/19

This document is not intended to take the place of the care and attention of your personal physician or other professional medical services. Our aim is to promote active participation in your care and treatment by providing information and education. Questions about

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individual health concerns or specific treatment options should be discussed with your physician.

Recommended

[CGM and Flash Monitoring Comparison](#)

[Blood Glucose Meters](#)

[CGM Benefits](#)

Sources

[Blood Glucose Monitoring Devices, FDA](#)

[CGM and Flash Monitoring, Diabetes Forecast Consumer Guide](#)

[Meters, Diabetes Forecast Consumer Guide](#)

[Continuous Glucose Monitoring, DiaTribe](#)

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