USING A CONTINUOUS GLUCOSE MONITOR (CGM)

WEARING A CGM

When do I wear a CGM?

All the time. The CGM sensor and transmitter are attached to your body at all times, even when you are sleeping.

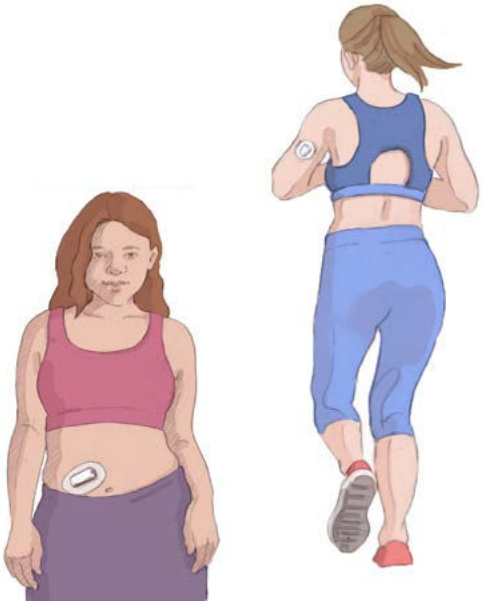
You live your life and do all your activities wearing your CGM. You keep it on all the time. This includes:

- When you exercise
- When you take a shower
- When you go swimming
- When you wear a fancy outfit
- When you have sex

Where does the CGM go on my body?

Each CGM system has information on where to place the sensor on the body. Usually these places include the arms, abdomen or lower back and upper buttocks. You need to check your CGM manual to be sure which places are best to wear your type of sensor.

The most common places people wear the sensor is on their abdomen or back of their arm. This is because it is easy to reach the fatty tissue. People attach it above or below the beltline and waistline. You will want to avoid areas where the skin is puffy from putting sensors in the same place a number of times. You will learn where on your own body a sensor is best.



What does “site rotation” mean?

Site rotation means changing the place you put the sensor each time. This is done to keep the skin and area under the skin healthy. If the sensor place is not changed, lumps or hard spots can start to form under the skin. A sensor can’t work as well then. Check your CGM manual for the best places on your body to put the sensor.

How often should I rotate my sensor site?

Your diabetes team will tell you how often to move the sensor from one place to another. Most people need to replace and move, or rotate, the short term sensor every 7 to 15 days. There is one long term sensor that lasts 180 days. Sometimes the diabetes team may tell you to rotate the site more often. Usually this is when it looks like the sensor is not working right. If the sensor falls off before it is time to change sites, call the sensor maker or distributor to ask for another one.

INSERTING A CGM SENSOR

You will learn how to put in the CGM sensors by yourself. This is the case unless you are using the Eversense CGM. Each CGM is a bit different. So you will have to follow your CGM brand instructions. There are videos available at the CGM company websites that you can watch. In general, sensors come with an insertion device that allows you to easily place the sensor. You will have to prepare to insert the sensor first.

It's as easy as...

1. Check the sensor date. Be sure it's not expired.
2. Wash your hands!
3. Follow the instructions on the package.

Popular CGMs and Where to Find Instructions for Insertion

- Abbott FreeStyle Libre Instructions: **https://www.freestyle.abbott/us-en/how-to-set-up.html**
- Dexcom G6 and G7 Instructions: **https://www.dexcom.com/en-us/training-videos**
- Medtronic Guardian Instructions: **https://www.medtronicdiabetes.com/download-library**
- Senseonics Eversense Instructions: **https://www.ascensiadiabetes.com/eversense/eversense-cgm-system/insertion-process/**

SETTING UP THE CGM RECEIVER

How do I set up the receiver or smartphone?

Your CGM system will most likely come with its own receiver. But you may also choose to use an app that you download to your smartphone. Some CGM systems will work with an insulin pump receiver. Setting up the receiver means adding information into the receiver or smartphone.

To do this, you start by turning on the receiver or opening the app on your smartphone. Each system will have a set of menus to follow. These menus can be set for English or Spanish. The first time you use the receiver or smartphone app you will follow the prompts to set:

- Date and time
- Target glucose range
- Alarms. Based on your CGM type, you might set a:
  - Low Alert - to let you know if your glucose is too low
  - High Alert - to let you know if your glucose is too high

Sometimes the batteries in the receiver can die. If this happens you may need to reset your receiver. You may also have to reset it if you need to make changes to your target glucose range or alerts.

Pairing your sensor and receiver

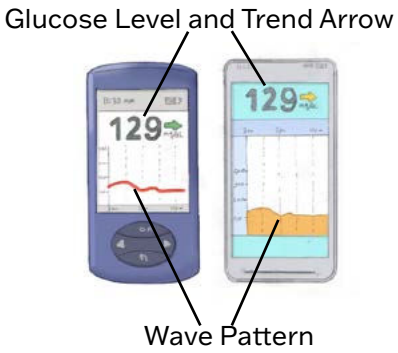
When you put in a new sensor you will have to do a few things to get your system working. Which of these things you do will depend on the CGM system you have.

- If you are using a new transmitter with a CGM that has a transmitter, connect or pair the transmitter with the receiver or app on a smartphone. This is done so the transmitter can send glucose data to your receiver or smartphone so you can see the data. Turn on the bluetooth function on the receiver or smartphone.
- Start or activate your sensor. To do this you may have to enter in a sensor serial number into the receiver or smartphone. Some systems require that you scan the sensor by holding a receiver or smartphone over the single sensor and transmitter.
- Calibrate the system. If your system needs this step, you will need to get a finger stick glucose reading from a glucose meter. Then you will enter your glucose reading into the receiver or smartphone.
- Wait for a warm-up period to end. The length of the warm-up period depends on which system you have. It can last anywhere from 30 minutes to 2 hours. The CGM phone app or receiver will let you know when it is ready to use.

USING THE CGM RECEIVER

What glucose information can I see on my receiver or smartphone?

The most important information you will be able to see on your receiver screen is your glucose level. You will be able to see this as a number. You will be able to see it as a wave pattern over time with your glucose target range highlighted. You will also see an arrow letting you know if your glucose is going higher or lower.



What do the lines on the screen mean?

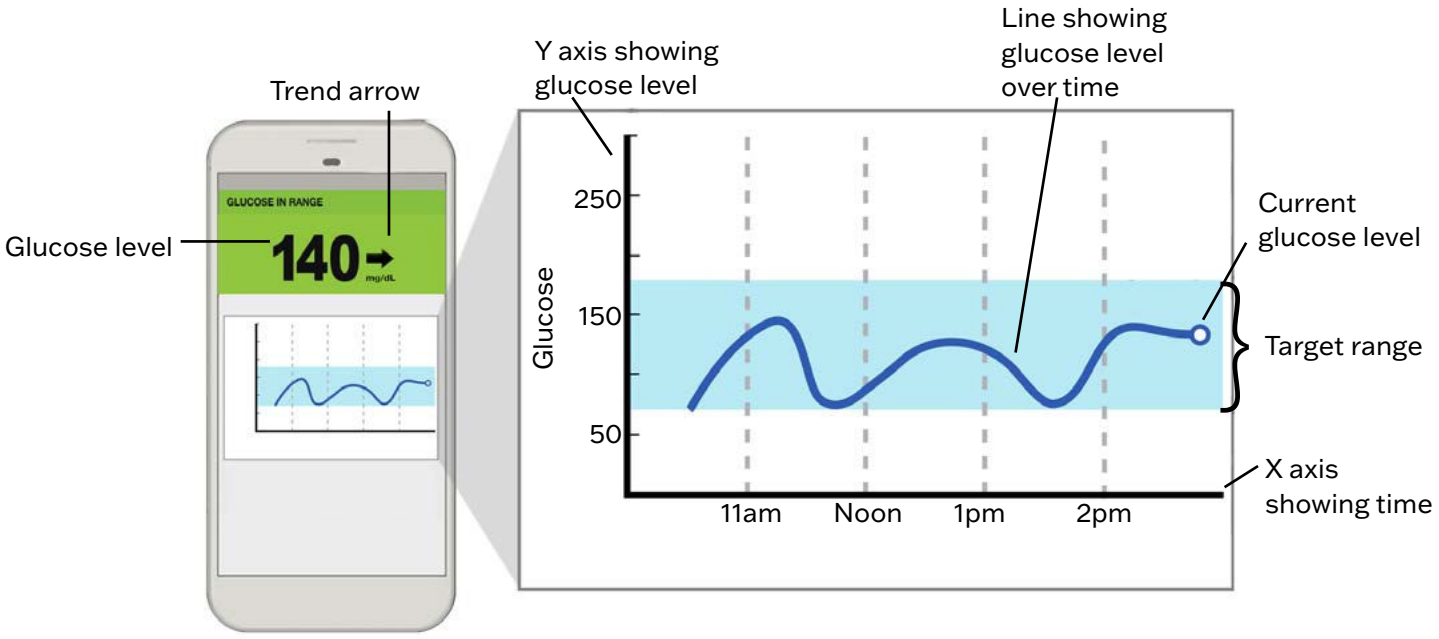
Every time the CGM reads your glucose level it creates a dot. The dots then connect to make a line. This line shows your glucose over time.

The Y axis is the vertical line of numbers on the left side of the graph. This is your glucose number. The X axis is the horizontal line on the graph that is at the bottom of the graph. This is the time of day.

Throughout the day many things will make the line will go up and down. For instance, when you eat, the line may start to go up. When you take insulin, the line may start to go down.

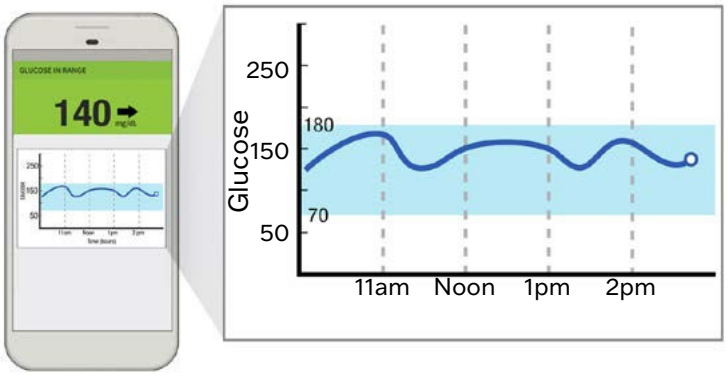
There is a colored area of the chart that shows the best place for your glucose wave to be. This is called the target range. Some people may have a wave right in the target range. Others may have a wave that always seems to be above the target range. And still others may have a wave the often goes below the target range.

A line that drops below the target range is showing low glucose, or hypoglycemia. A line that is above the target range is showing high glucose, or hyperglycemia. Some people may have a flatter looking line and others may have a very wavy line.

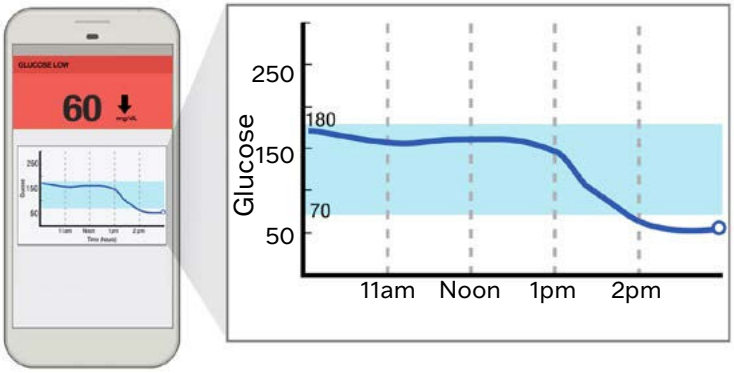


SAMPLE CGM READINGS

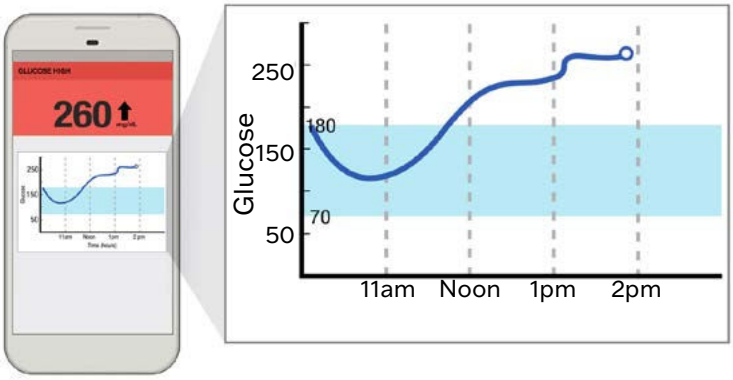
This is an example of a flatter line in the target range:



This is an example of a wavy line with low glucose, or hypoglycemia:



This is an example of a wavy line with high glucose, or hyperglycemia:



This is an example of a wavy line with both high and low glucose: