

## CONTINUOUS GLUCOSE MONITORING (CGM) #2: GETTING STARTED

Glucose monitoring with a meter provides the blood glucose reading at exactly the moment it is checked. For most people, this is 4-6 times a day. *CGM* provides much more information. It can "fill in the blanks" of what is happening between meals and how the body reacts to food, insulin and activity. Reviewing the *CGM* information regularly will help in making informed treatment decisions.

*CGM* has two main types of benefits:

- Reactive: setting alerts to catch the highs and lows before they happen
- Preventive: looking back at the upload for patterns and trends to make changes to prevent the highs and lows

Starting on a *CGM* system is very exciting, but it can also be overwhelming. Real-time glucose results will be displayed every 5 minutes. There will be a lot more information, and some of it will be surprising. The glucose may go up more after meals than you thought it did! Activity may lower the blood glucose for a lot longer than you thought it would. **Do not overreact to the sensor data.**

Suggestions for getting started with *CGM*:

- Read the user guide and watch the instructional video.
- Start with a wide range for the low- and high-glucose alert settings. Consider setting the low alert at 4.5 mmol/L and the high alert at 17 mmol/L to start. These can be tightened later, as you get used to the information the system provides.
- Do not set the rate-of-change alerts at first.
- Do not expect the *CGM* results to be exactly the same as blood glucose meter readings! Results can vary by up to 20% between devices and still be considered accurate.
- Give insulin at the usual times. **Remember** it takes 3-4 hours for a dose of rapid-acting insulin to finish working. Do not add extra corrections when you see a high glucose reading after meals. Giving corrections too closely together will cause insulin "stacking" which can lead to low blood glucose.
- Wait at least 2 hours before next correction dose of insulin.
- Expect to see at least 50% of the glucose readings to be outside of targets at first.
- Expect to see a spike after eating (glucose levels should be back under 10 mmol/L within 2 hours of eating.) Remember, this may initially be even higher.
- Download and review sensor information at home **weekly** to see if any adjustments to insulin doses or insulin pump settings are needed (this is preventive).

## Continuous Glucose Monitoring (CGM) #2: Getting Started (continued)

- If you are only reacting, you are only getting half the benefit of CGM.
- To interpret CGM results, look at the graph and arrows **before** looking at the glucose number on the screen!

CGM data should be interpreted in a step-by-step format using what we call the **TAG** system—Trend-Arrow-Glucose (this is mostly reactive):

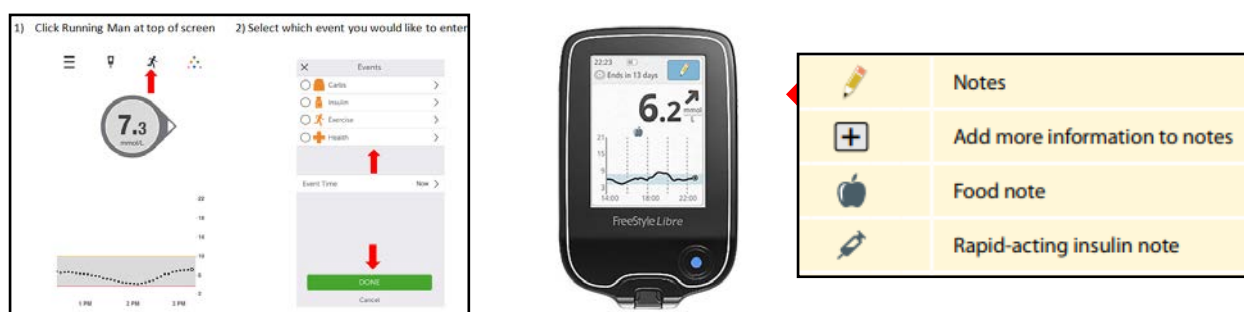
- **Trend:** view the graph on the screen to see where the glucose has been and is going
- **Arrows:** 1, 2 or 3 arrows tell you how fast the glucose is changing
- **Glucose:** the current glucose at that moment

Things to consider when using CGM:

- Confirm blood glucose with a meter before making treatment decisions when using the Medtronic Enlite® and Dexcom G4® sensors
- Calibrate the sensor with a blood glucose meter every 12 hours. **WASH** your hands before calibrating. This ensures the best accuracy when making treatment decisions.
- After treatment of a low blood glucose, use a meter to recheck the glucose after 15 minutes. This is due to the time lag with the body's response to hypoglycemia<sup>1</sup>.
- Acetaminophen (Tylenol®) will give a falsely high sensor reading for 4-6 hours.
- Lying on the sensor site can cause "pooling" of the interstitial fluid, which may read as a falsely low BG.
- Always measure a BG with a meter when symptoms don't match the sensor reading.
- **"When in doubt, get your meter out!"**

### CGM and MDI:

- Enter all carbs eaten and insulin given. This additional information will help you (and your healthcare team) with interpreting your results.



### CGM and pumps:

- If using both sensor and pump, both downloads must be reviewed together to see the whole picture before making adjustments.

<sup>1</sup> Scheiner G. (2015). *Practical CGM: A guide to improving outcomes through continuous glucose monitoring*. American Diabetes Association: Virginia. p. 11.