



Facts About Glucose Monitoring

Things that Affect your Glucose Meter Readings

Many things can make glucose meter readings wrong. Below are some hints that will help you to make sure the readings you get are correct.

Wash your hands using warm water.

- This makes sure there is no dirt on your skin, and increases the flow of blood to your fingertips.

Be sure your hands are dry.

- If your hands are not dry, any water remaining on your hands may dilute your blood drop.

Before poking, “milk” your finger by rubbing from the base of your finger to the fingertip.

- Make sure your hand is below your heart level. The “milking” motion produces a good blood drop. If you wait to “milk” your finger until after you have poked it, you might not get a true specimen of blood, or you might block the blood flow in your finger by squeezing too hard.

Never poke the pad or tip of your fingers.

- You should use the side of your fingertips, because you have a lot of nerve endings in the pad and tip.

Always rotate your fingers and hands.

- You can use all of your fingers, even your thumbs.

Do not clean your finger with an alcohol swab.

- You do not need to use alcohol if your hands are well washed. Alcohol dries your skin and can cause cracking.



Make sure the drop of blood is large enough.

- If the drop of blood is too small, some meters may give a false reading that is lower than your real blood sugar level.

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Our hospital is a **scent-safe** environment.
Please refrain from wearing scented products.

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Check the expiry date on the strips.

- If the date on your strips is older than the date on the container, your strips have expired. Using expired strips will show a false high or low reading.



Store your strips properly.

- Strips should be kept in the original packaging in a room where the temperature does not change drastically and where humidity is low. Humidity (which is often found in a bathroom or kitchen) can affect the reading of your blood sugar results.

Self-Monitoring of Blood Glucose

All people with diabetes, who are able, should be taught to monitor their blood glucose.

People with **type 1 diabetes** should monitor their blood glucose **at least 3 times per day**

People with **type 2 diabetes** (taking insulin or diabetes pills) should monitor their blood glucose **at least once daily**

The frequency should be determined individually, based on the type of diabetes, treatment prescribed and the need for information about blood glucose for the person to modify behaviours or adjust medications.

Alternate Site Testing

There are meters available which allow you to poke other areas such as your forearm, palm of hand and thigh, rather than your fingertip. It is preferred that you continue to test your fingertips after meals, while exercising, when medication is peaking, or when a low blood glucose is suspected. Forearm measurements are not as accurate as fingertip ones. Blood taken from the palm, near the base of the thumb, is very close to fingertip samples.

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Meter Correlation

Making sure your Glucose Meter is Accurate

- It is recommended everyone using a glucose meter makes sure it is accurate. This should be done at least once a year.
- For people starting insulin therapy, insulin pump or continuous glucose monitoring, this should be done before you begin the therapy/treatment.
 1. To check your meter, your doctor needs to order a fasting blood glucose test (8 hour fast).
 2. Bring your meter to the lab with you the morning of your test.
 3. As soon as the blood is drawn from your arm, use your meter to test your finger and write this in your logbook.
 4. Call your doctor's office within a week to see what number the lab got from your arm. Compare this number to yours. There should be a difference of less than 20% (for blood glucose levels above 4.2).
 5. The formula below can be used to figure out the difference:

$$\frac{\text{Lab value (from your arm)} \quad \text{Subtract} \quad \text{Meter value (from your finger)} \quad \text{X 100}}{\text{Divided by Lab value}}$$

Example:
Lab Value = 8.4
Meter Value = 7.9

Calculation:
8.4 subtract 7.9 = 0.5 x 100 = 50 divided by 8.4
= 5.9%

If this difference is greater than 20%, contact the meter company and ask for a replacement.

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Blood Glucose Targets

A) Target for most adults:

- Before meals and before bedtime: 4.0 – 7.0
- 2 hours after meals: 5.0 – 10.0

B) Normal Range (consider for adults in whom it can be achieved safely):

- Before meals and before bedtime: 4.0 – 6.0
- 2 hours after meals: 5.0 – 8.0

Disposal of “Sharps” (lancets)

- Proper care is needed to dispose of sharps used to manage diabetes.
- The Ministry of Environment recommends these sharps be placed in a hard, plastic, puncture-proof container such as a 2-litre pop bottle. The containers should have tops and be closed tightly.
- The City of Kingston has a by-law that bans sharps from being placed in the garbage, whether they are contained or not. Check with your municipality if you live outside of Kingston.
- In Kingston, the Kingston Area Recycling Centre (KARC) for Household Hazardous Waste will accept sharps containers for free (no charge).
 - Location: 196 Lappans Lane
 - Website: [www. CityofKingston.com](http://www.CityofKingston.com)
 - Hours of Operation:
Open Thursdays and Saturdays – see website for times.
- Most pharmacies, as well as the KFL&A Public Health Unit, offer disposal programs for a fee.

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