

Checking your sugars is an important part of managing your diabetes. How often you check your sugars depends on your treatment plan. Talk with your healthcare provider about when and how often to check.

What is blood sugar?

Blood sugar is the amount of sugar (glucose) in your blood at the moment you check. Sugar in our blood comes from carbohydrate containing foods and from glucose stored in our muscles and liver that is released into our blood when needed.

Checking your sugar levels

Checking your sugars can:

- tell you if your sugars are in or out of range
- show you how meal choices and lifestyle affect your sugars
- help you and your healthcare team make changes in your routine to improve your sugar levels

How do you check your sugar levels at home?

Sugars can be checked using a finger prick or a glucose sensor. Both measure sugar (glucose) but in different areas. The finger prick measures sugar in your blood. The sensor measures sugar in the fluid under your skin. Note that the readings may be different between both methods as it takes time for glucose to move from your blood into body fluids.

1. Blood sugar monitors (or meters):

Blood sugar monitors check the sugar (glucose) **circulating in your blood**. You will use a lancet (small needle) to prick your finger and get a small blood drop used to measure blood sugar. You can get a monitor and supplies at most pharmacies or from your diabetes educator. Be sure to get instructions on how to use your system before you start.

Ask your healthcare provider about:

- how and where to draw blood
- how to use and dispose of lancets
- the size of the drop of blood needed
- the type of testing strips to use
- how to clean the meter
- how to check if the meter is accurate



2. Continuous glucose monitor (CGM):

A sensor sticks to the top of your skin. There is a thin filament that is inserted under your skin that measures sugar levels in the **fluid that is around the cells under your skin** (interstitial fluid). Sugar is measured 24 hours a day. You may need adhesive tape or a patch to help keep the sensor in place over time.



The sensor can connect to a smartphone app or handheld device that gathers and stores the sensor information. Information about your sugar patterns and trends can be shared with your healthcare provider.

Some CGMs can also connect to insulin pumps.

Managing your sugars when you are ill

When you are sick, blood sugar can change often and be hard to predict. If you are still able to drink fluids and eat, keep taking your usual medications unless your healthcare provider has said to stop taking them.

- Check your sugars more often, such as every 2–4 hours.
- If you can't eat or drink, talk to your healthcare provider about your medications.
- Talk to your pharmacist about over the counter cold or cough medicines to make sure they are safe to use.
- Choose sugar-free cold and cough products when possible.
- Stay hydrated by drinking plenty of water or other sugar-free drinks. Avoid coffee, tea, energy drinks and pop that contains caffeine.

If you are sick and can't eat

- Drink fluids that have sugar to provide your body with carbohydrate.
- Aim for about 15 grams of carbohydrate every hour if you're not eating.
- If you are vomiting or have diarrhea 2 or more times in 4 hours, call your healthcare provider or go to the emergency room.
- If you use insulin, keep taking it when sick. Check with your healthcare team about dose or medication changes.

A guide to blood sugar targets

Blood sugar targets are different for each person and depend on many things. Keeping your sugars in your target range helps reduce the risk of diabetes complications. Ask your healthcare provider about your sugar targets.

A1C is a blood test that measures your *average* blood sugar control for the last 2-3 months. It tells you if your blood sugar has been high over time, not just on one day. A1C helps you and your healthcare team see how well your diabetes plan is working.

	A1C	Fasting sugar and sugar before meals	Sugar two hours after eating
Target for most people with diabetes	7.0% or less	4.0 to 7.0 mmol/L	5.0 to 10.0 mmol/L (5.0 to 8.0 mmol/L if A1C targets not met)

What is 'Time in Range'?

Time in range (TIR) is the amount of time your sugar (glucose) level is within the ranges you and your healthcare provider have determined is best for you. TIR also reflects how much time you may have been below range (low sugar) or above range (high sugar).

The targets below are for most people with diabetes. Individual targets may vary, especially for older adults, children, or those who experience hypoglycemia more often. Talk to your healthcare provider about what the best targets are for you.

	Target	Blood sugar
Time in Range (TIR)	70%	3.9 – 10.0 mmol/L
Time Below Range (TBR)*	less than 4.0%	below 3.9 mmol/L
Time Above Range (TAR)	less than 25%	greater than 10.0 mmol/L

* Time below range means you are having low blood sugar or hypoglycemia

Talk to your healthcare provider

Talk to your healthcare provider about your target ranges.

1. Bring your sugar check information to your appointments.
2. Have your A1C measured every 3 months if your targets aren't met or you make changes to your diabetes management.

Related education resources are on diabetes.ca:

Hypoglycemia: low blood sugar in adults | *Stay safe with diabetes during illness or dehydration* | *Getting started with insulin* | *Getting started: healthy eating and diabetes*

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