

What is blood glucose?

Blood glucose (sugar) is the amount of glucose in your blood at a given time.

Why should you check your blood glucose levels?

Checking your blood glucose levels will:

- provide a quick measurement of your blood glucose level at a given time;
- determine if you have a high or low blood glucose level at a given time;
- show you how your lifestyle and medication affect your blood glucose levels; and
- help you and your diabetes healthcare team to make lifestyle and medication changes that will improve your blood glucose levels.

How often should you check your blood glucose levels?

How frequently you check your blood glucose levels should be decided according to your own treatment plan. You and your healthcare provider can discuss when and how often you should check your blood glucose levels. Checking your blood glucose levels is also called Self-Monitoring of Blood Glucose (SMBG).

How do you test your blood glucose levels?

A blood glucose meter is used to check your blood glucose at home. You can get these meters at most pharmacies or from your diabetes educator. Talk with your diabetes educator or pharmacist about which one is right for you. Once you receive a meter, ensure you receive the proper training before you begin to use it.

Ask your healthcare provider about:

- How and where to draw blood
- how to use and dispose of lancets (the device that punctures your skin)
- the size of the drop of blood needed
- the type of blood glucose strips to use
- how to clean the meter
- how to check if the meter is accurate
- how to code your meter (*if needed*)

Note: Your province or territory may subsidize the cost of blood glucose monitoring supplies. Contact your local Diabetes Canada branch to find out if this applies to you.

How do you keep your blood glucose levels within their target range?

If you have diabetes, you should try to keep your blood glucose as close to target range as possible. This will help to delay or prevent complications of diabetes. Maintaining healthy eating habits and an active lifestyle, and taking medication, if necessary, will help you keep your blood glucose levels within their target range. Target ranges for blood glucose can vary. It depends on a person's age, medical condition and other risk factors.

Targets for pregnant women, older adults and children 12 years of age and under are different. Ask your health care provider what your levels should be.



Managing your blood glucose when you're ill

When you are sick, your blood glucose levels may fluctuate and be unpredictable. During these times, it is a good idea to check your blood glucose levels more often than usual (for example, every two to four hours). It is also very important that you continue to take your diabetes medication. If you have a cold or flu and are considering using a cold remedy or cough syrup, ask your pharmacist to help you make a good choice. Many cold remedies and cough syrups contain sugar, so try to pick sugar-free products.

When you are sick, it is **VERY IMPORTANT** that you:

- drink plenty of extra sugar-free fluids or water; try to avoid coffee, tea and colas, as they contain caffeine, which may cause you to lose more fluids.
- replace solid food with fluids that contain glucose if you can't eat according to your usual meal plan;
- try to consume 15 grams of carbohydrate every hour if you are not able to follow your usual meal plan;
- call your doctor or go to an emergency room if you vomit and/or have had diarrhea two times or more in four hours; and
- if you are on insulin, be sure to continue taking it while you are sick. Check with your healthcare team about guidelines for insulin adjustment or medication changes during an illness.

Recommended blood glucose targets for most people with diabetes*

Your target may not be the same as the examples in this blood sugar levels chart. Yours should be specific to you.

| | A1C** | Fasting blood glucose/ blood glucose before meals (mmol/L) | Blood glucose two hours after eating (mmol/L) |
|--------------------------------------|--------------|--|--|
| Target for most people with diabetes | 7.0% or less | 4.0 to 7.0 | 5.0 to 10.0 (5.0 – 8.0 if A1C** targets not being met) |

* This information is based on the Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada and is a guide.

** A1C is a measurement of your average blood glucose control for the last 2 – 3 months and approximately 50% of the value comes from the last 30 days.

Talk to your healthcare provider about YOUR blood glucose target ranges.

You should have your A1C measured every 3 months, when your blood glucose targets are not being met or when you are making changes to your diabetes management.

A1C, before meal and after meal blood glucose levels are all important measurements of your diabetes control.

Related article: *Lows and highs: blood glucose levels*

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