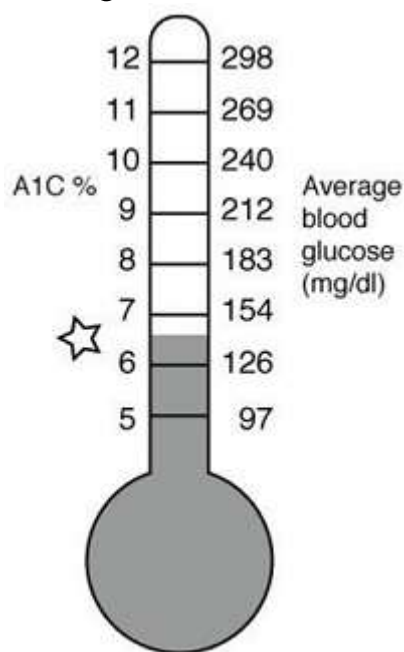


Self-monitoring of blood sugar (glucose)

Checking your blood sugar and keeping it under control are important to staying well when you have diabetes.

You can find out how much sugar is in your blood, at any given time, by checking a drop of blood with a meter (glucometer). This will help you to see how medicine, food, and activity affects your blood sugar. Knowing your blood sugar may help you make treatment decisions. Your average blood sugar over time is measured in a lab with a test called a Hemoglobin A1c (A1C). Ask your clinician what your A1C is.

Check out the thermometer below to see how your average blood sugar relates to your A1C reading.



When to check your blood sugar

There is no one plan for everyone when it comes to checking blood sugar. People taking insulin may need to monitor their blood sugar several times a day so they know how to adjust their medication safely and effectively. Other people may be able to check less often. People taking diabetes pills may not need to check blood sugar at all.

Talk with your healthcare provider to decide when you should check your blood sugar. If you take medicine that could cause hypoglycemia (low blood sugar), you should check your blood sugar before driving or using hazardous equipment.

Target blood sugar ranges

Your blood sugar level changes throughout the day. It may be lower when you first get up and before you eat (though some people with type 2 diabetes have their highest blood sugar of the

day early in the morning). It may be higher after you eat or when you are sick. Talk with your healthcare provider about your target blood sugar ranges.

Target Blood Sugar Ranges (mg/dl)			
Time	Normal	Most people with diabetes	My target*
Average before meals	70-100	80-130 for most people*	
Average 2 hours after the start of meals	<140	<180	
Average at bed time	<120	110-150	
Hemoglobin A1c	<5.7%	<7% without hypoglycemia, sometimes higher targets are appropriate	

**Your goal is based on your age, how long you have had diabetes, and any other illnesses you have. Older patients may have a target of 100-150 mg/dl or higher before meals.*

Tips for getting a good blood sample

- Before checking blood glucose, wash hands or use an alcohol wipe to remove any food/drink on your hands that could elevate results by mistake
- Hold your hands downward to increase blood flow to your fingers
- "Milk" your finger to increase blood flow to the tip
- Shake your hands quickly
- Prick the side of your finger instead of the end—you won't feel it as much

Possible reasons for errors on blood glucose meters

- Strips were stored outside of their original container
- Strips were stored in a moist location (like a bathroom)
- Strips are out of date

Watch for patterns

Write down your blood sugar readings on a sheet of paper or in a logbook. This will help you to watch for patterns in your blood sugars. Bring your meter and your readings to your medical appointments and review them with your provider. Once you know the pattern of your blood sugar results, your provider may recommend that you check less often.

Differences between low blood sugar (hypoglycemia) and high blood sugar (hyperglycemia)

- Low blood sugar is when there is not enough sugar in your blood. For most adults, this happens when blood glucose is less than 70 mg/dl. Some people call the feeling of hypoglycemia a "low."
- High blood sugar is when there is too much sugar in your blood. Very high blood sugar (higher than 250 mg/dl) can cause immediate problems.

Causes of low and high blood sugars

Things that make your blood sugar go down	Things that make your blood sugar go up
Not eating enough food	Eating too much food
Taking too much insulin or other diabetes medicine	Not taking enough insulin or other diabetes medicine
Getting more activity than usual	Not getting enough activity
Alcohol*	Alcohol*
	Eating or drinking sweet things (like regular soda/cola/tonic or juice, even 100% fruit juice)
	Illness or infections
	Stress
	Certain medicines (like prednisone)

**Use caution when drinking alcohol. It may make your blood sugar go up or down.*

Symptoms of low and high blood sugar

When your blood sugar is low you may feel/have:	When your blood sugar is high you may feel/have:
Shaky	Shaky
Blurry vision	Blurry vision
Fast heartbeat	Increased urination (amount of urine you pass and how often)
Sweaty	Thirsty
Dizzy	Frequent infections
Anxious/ Nervous	Sick to your stomach
Tired	Tired
Hungry	Very hungry
Headache	Itchy (or have very dry skin)
	No symptoms

If you have these symptoms, check your blood sugar level to see if that is the cause.

If your blood sugar is low

Check with your diabetes care providers to determine what level blood sugar is too low for you. Always keep a source of sugar with you in case you experience low blood sugar.

If your blood sugar level is <70 you should do the following:

- Eat or drink 15-20 grams of simple sugar to cause a rapid rise in blood sugar. Examples include:
 - 4 ounces of juice or regular soda
 - 2-3 sugar packets
 - 6-7 lifesavers

- 3 glucose tablets
- 4 dextrose tablets
- Re-check your blood sugar level about 15 minutes after eating simple sugar. If blood sugar is still <70 , repeat treatment.

If your blood sugar is high

Blood sugar is normally higher after eating. Blood sugar that is >130 before meals, or >180 after meals, is too high for most adults, but usually doesn't cause symptoms. ***If you are having symptoms from high blood sugar, call your diabetes care provider for advice.***

Eat regular meals, exercise, and take your medicines regularly to keep your blood sugars in the target range.

Consistently high blood sugar over a long time means that your diabetes is out of control. This can cause long-term health problems, such as damage to your heart, eyes, kidneys, and feet. If your blood sugar is consistently high, talk with your healthcare provider. You may need to make changes to your diabetes plan.

Patient Care Advice (PCOI) documents are available under **Resources** on your Patient Gateway home page.

This document is not a substitute for your care team's medical advice and should not be relied upon for treatment for specific medical conditions.

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