



WHAT YOU NEED TO KNOW ABOUT BLOOD SUGAR

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When you have type 2 diabetes, your body has a problem using the food you eat for energy.¹ After you eat, your body works to break down the sugars and starches in the foods (carbohydrates) into glucose, a form of sugar. This sugar moves into your bloodstream.¹ Insulin, a hormone secreted by an organ called the pancreas, helps your body take this sugar and use it for energy.^{1,2}

When you have type 2 diabetes, your pancreas may not be producing enough insulin to meet your body's needs, or your body may be having trouble using the insulin it does make.¹

This means that your body has a harder time keeping your blood sugar in a healthy balance.³ When your blood sugar is too high for too long, it can potentially hurt your body and increase your risk for many serious health problems.⁴

Maintaining a Healthy Blood Sugar Level

Keeping track of your daily blood sugar level is one of the best ways to know how well you are managing your diabetes.⁵

Your healthcare team will help determine your daily blood sugar targets based on how long you've had type 2 diabetes, how old you are, and if you have any other health considerations.⁵ They will also tell you when and how often you should check your blood sugar.



For most nonpregnant adults with type 2 diabetes, the American Diabetes Association recommends the following blood sugar goals before and after a meal⁵:

- 80-130 mg/dL before a meal
- Less than 180 mg/dL 1-2 hours after a meal

Remember to write down your results each day to help understand how what you eat can affect your blood sugar. If your blood sugar goals are not on target, it may be time to talk with your healthcare team about a plan to eat right, become more active, or make a change to your medication.⁵

BLOOD SUGAR HIGHS

High blood sugar or hyperglycemia

High blood sugar, known as hyperglycemia, can lead to numerous health concerns throughout your body if not controlled well.^{4,6}

What May Cause Hyperglycemia⁶

- Eating too much food
- Not staying active enough
- Being sick, for example having a cold or the flu
- Stress, for example work or family problems
- The dawn phenomenon: some people experience a surge of hormones each morning around 4:00 a.m. to 5:00 a.m.⁷

Signs of Hyperglycemia⁶

- High blood sugar level (revealed when you check)
- High levels of sugar in the urine
- Frequent urination
- Increased thirst

What to do if you have hyperglycemia

The best things you can do are eat right, stay active, and be sure to take any medication as your healthcare team directs. Remember to consult your healthcare team before beginning any exercise program.^{8,9}



BLOOD SUGAR LOWS

Low blood sugar or hypoglycemia

Low blood sugar is known as hypoglycemia. It usually means that your blood sugar level is less than 70 mg/dL.¹⁰ Remember to talk to your healthcare team about what your blood sugar target levels should be to know what is too low for you.

What May Cause Hypoglycemia¹¹

- Certain type 2 diabetes medications and certain combinations of medications
- Not eating enough; delaying or skipping meals
- Increased activity level
- Alcohol

What to do if you have hypoglycemia¹⁰

Eat about 15-20 grams of glucose or simple carbohydrates such as 2 tablespoons of raisins or about a half cup of regular soda or juice. Check your blood sugar again after 15 minutes; if it's still low, repeat this until your blood sugar returns to normal. If your next meal is more than an hour or two away, eat a small snack.

Hypoglycemia can be very dangerous. If it's not treated, you could pass out or have a seizure. Severe hypoglycemia can cause accidents, injuries, coma, or even death.¹⁰

Signs of Hypoglycemia^{10,11}

- Lightheadedness or dizziness
- Shakiness
- Confusion, including delirium
- Weakness or fatigue
- Sweating, chills, and clamminess
- Nightmares or crying out during sleep
- Rapid/fast heartbeat
- Sleepiness
- Blurred/impaired vision
- Tingling or numbness in the lips or tongue
- Headaches
- Anger, stubbornness, or sadness
- Lack of coordination

A Note on Hypoglycemia Unawareness

Many people don't experience any symptoms of hypoglycemia even if their blood sugar readings test below 70 mg/dL. This can sometimes happen in people who have frequent hypoglycemia, have had diabetes for a long time, or tightly control their diabetes. If your blood sugar tests low, it's very important that you treat your hypoglycemia, even if you don't experience any symptoms.^{10,11}

If you think you have hypoglycemia unawareness, speak with your healthcare team. Your healthcare team may adjust or raise your blood sugar targets and modify your diabetes management plan to help reduce the risk of future hypoglycemia episodes.

STAYING IN CONTROL



Keeping your blood sugar levels within a healthy range can help prevent and lessen many of the potential complications of diabetes.¹² Write down your results each day to help you understand how what you eat can affect your blood sugar. It is also important to recognize the signs of hyperglycemia and hypoglycemia and learn to manage your blood sugar to help stay in good health.¹⁰⁻¹² If you are prescribed medication, it's very important to take it as your doctor has prescribed.^{8,9} If you have any questions about your blood sugar, don't hesitate to speak with your healthcare team.

References: **1.** National Institute of Diabetes and Digestive and Kidney Diseases. Diabetes Tests and Diagnosis. <https://www.niddk.nih.gov/health-information/diabetes/overview/tests-diagnosis>. Updated November 2016. Accessed September 11, 2020. **2.** National Institute of Diabetes and Digestive and Kidney Diseases. Prediabetes and Insulin Resistance. <https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes/prediabetes-insulin-resistance>. Accessed September 11, 2020. **3.** American Diabetes Association. Diabetes basics: type 2. <http://www.diabetes.org/diabetes-basics/type-2/?loc=DropDownDB-type2>. Accessed September 11, 2020. **4.** American Diabetes Association. Living with diabetes: complications. <http://www.diabetes.org/living-with-diabetes/complications/>. Accessed September 11, 2020. **5.** American Diabetes Association. Living with diabetes: checking your blood glucose. <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/checking-your-blood-glucose.html>. Accessed September 11, 2020. **6.** American Diabetes Association. Living with diabetes: hyperglycemia (high blood glucose). <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/hyperglycemia.html>. Accessed September 11, 2020. **7.** American Diabetes Association. Living with diabetes: dawn phenomenon. <https://diabetes.org/diabetes/medication-management/blood-glucose-testing-and-control/hyperglycemia>. Accessed September 11, 2020. **8.** American Diabetes Association. Living with diabetes: medication. <http://www.diabetes.org/living-with-diabetes/treatment-and-care/medication/>. Accessed September 11, 2020. **9.** American Diabetes Association. Living with diabetes: oral medication. <http://www.diabetes.org/living-with-diabetes/treatment-and-care/medication/oral-medications/>. Accessed September 11, 2020. **10.** American Diabetes Association. Living with diabetes: hypoglycemia (low blood glucose). <https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/low-blood-glucose-hypoglycemia>. Accessed September 11, 2020. **11.** National Diabetes Information Clearinghouse. Hypoglycemia. https://www.niddk.nih.gov/-/media/Files/Diabetes/hypoglycemia_508.pdf. Updated November 6, 2012. Accessed September 11, 2020. **12.** American Diabetes Association. Living with diabetes: tight diabetes control. <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/tight-diabetes-control.html>. Accessed September 11, 2020.