



Controlling your blood sugar is key to good health and managing your diabetes. Testing your blood sugar regularly is an important part of your health care plan. The A1C test is another way to track your diabetes. Be sure that you use this helpful tool, as well as your blood glucose (sugar) meter. The power to improve your diabetes is in your hands.

For more information, call the Ascensia Diabetes Care
Customer Service Help Line at
1-800-348-8100

(8:00 AM – 12:00 AM, 7 days a week,
Eastern Time) or visit:

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For more help in managing your diabetes, see a diabetes
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Know YourTM Health Facts

A1C Testing



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A1C Testing

Keeping your diabetes well managed is one of the keys to staying healthy. Checking your blood sugar at different times of the day is helpful to see the effects of your diabetes management on your blood sugar (For more information – ask your healthcare provider for a copy of the *Know Your™* Health Facts: Blood Sugar Monitoring). When you self-monitor your blood sugar, it tells you what your blood sugar level is at that exact moment, but your blood sugar may change a lot over the course of the day. Self-monitoring your blood sugar is just one important part of your diabetes management plan. However, self-monitoring alone may not give you all the information you need to make sure your diabetes plan is working.

There is another test that can give you information to assist with your diabetes management. It is called an “A1C” test, and it can tell you and your healthcare team your average blood sugar for the past 2 to 3 months. You may be familiar with this test because your healthcare provider usually performs it several times a year. The A1C test may also be called:

- Hemoglobin A1C (HbA1C)
- Glycosylated or glycated hemoglobin



An A1C test tells you your average blood sugar for the past 2 to 3 months.

What is Hemoglobin?

Hemoglobin is a protein inside your red blood cells. It is part of the red blood cell that carries oxygen from your lungs to the rest of the body. Hemoglobin, like most proteins in the body, can also carry blood sugar throughout the body. Once blood sugar attaches to hemoglobin (the hemoglobin becomes “glycated”) it stays there for the life of the red blood cell. This lifetime ranges from 3 to 4 months. The more sugar there is in the blood, the more that will attach to the hemoglobin in the red blood cells. This makes the A1C number higher.

What Does the A1C Measure?

A1C measures how much sugar attaches to the hemoglobin in your red blood cells. Your A1C reading tells you what your average blood sugar level has been for the past 2 to 3 months. If you have a lot of sugar in your blood, and your average blood sugar has been high over the past few months, then your A1C will likely be high. An A1C test provides you with information on your overall blood sugar management.

How Does My A1C Reading Compare to My Daily Blood Sugar Readings?

Healthcare professionals and people with diabetes have been using the A1C test for many years to gauge overall blood sugar management. A recent study, called the A1C Derived Average Glucose (ADAG), confirmed that A1C translates to an average blood sugar number - therefore - A1C is a measure of average blood sugar.¹ For instance, an A1C reading of 6.5% indicates an estimated average daily glucose[†] (eAG) of 140 mg/dl.



A1C to Estimated Average Glucose† (eAG) Conversion Table*.

This table shows how A1C compares to your estimated average glucose† (eAG).

Matching A1C with eAG²	
A1C (%)	Blood sugar (mg/dL)
6	126
7	154
8	183
9	212
10	240
11	269
12	298

†Glucose is another word for sugar.
*These numbers are for non-pregnant adults. Individual laboratories may have different ways to test A1C and report normal ranges. Talk with your healthcare provider about your results.

As you look at this table, you may wonder why these numbers are different than the average blood sugar number on your meter. Most people check their blood sugar more often when their blood sugar levels are lower rather than when they are higher. An A1C average blood sugar number gives you and your healthcare provider more information needed to make adjustments to your diabetes treatment plan.



How Can A1C Testing Help Me?

1. A1C Testing provides you with additional information to help you manage your diabetes and your risk of developing complications.

2. A1C Testing can help you set goals for improving your diabetes management.

- For instance, a person without diabetes has an A1C between 4 - 6%.
- The American Diabetes Association recommends an A1C of less than 7% as a treatment goal.*
- The American Association of Clinical Endocrinologists recommends an A1C less than 6.5% as a treatment goal.³

Ask your healthcare provider what your A1C Target Goal should be. Use the space below and enter this number for your reference.

My A1C Target Goal is:

It is normal to have changes in your diabetes treatment plan from time-to-time to help improve your A1C. When your A1C is less than 7%, you know that you are on a healthy path. Research shows that controlling blood sugar as close to normal as possible lowers your risk of developing complications such as heart disease, stroke, kidney disease, eye disease, nerve damage, amputations, and circulation problems.

Where Do I Go for an A1C Test?

Today there are a few different places you can obtain an A1C test. **Important:** Always set up an appointment to discuss your results with your physician.

- **At your healthcare provider's office:** A drop of blood is taken from a finger stick to test your A1C right away or a blood sample can be sent to a lab. Your healthcare provider can teach you why an A1C test is so important in helping to manage your diabetes.



*With no comorbidities.

- **At a medical lab:** A blood sample is drawn and the results are sent to your healthcare provider. You may be asked to set up an appointment to discuss the results.
- **At a pharmacy:** A pharmacist or diabetes educator at the pharmacy will help you through the process of testing your A1C.
- **In between physicians' visits:** You can monitor your A1C at home. You can purchase an A1C monitoring system at your local pharmacy in order to do this. Follow the instructions using a small blood sample from your finger.

(An A1C test does not require you to fast.)

How Often Should I Have an A1C Test?

The American Diabetes Association (ADA) recommends having an A1C test based on the following schedule:²

- At least two times a year if the diabetes treatment plan is being met and blood sugar levels are in the target range.
- At least every three months if the diabetes treatment plan has changed or blood sugar goals are not in the target range.

Two major studies, the Diabetes Control and Complications trial (DCCT) and the United Kingdom Prospective Diabetes Study (UKPDS), have shown the importance of good blood sugar management in reducing the risk of diabetes complications.^{4,5} The DCCT trial showed that those people with type 1 diabetes with close to normal A1C levels had fewer diabetes-related complications, including eye and kidney disease, as well as nerve damage.⁴ The UKPDS study showed that in people with type 2 diabetes, the higher the A1C, the more at risk they were for diabetes related complications.⁵ Your hard work to manage your blood sugar can pay off. Having an A1C under 7% (average blood sugar less than 154 mg/dl) can reduce your risk of diabetes complications.

How A1C Testing Helped Maria

Maria has diabetes. She was testing her blood sugar every morning before breakfast. Her results were usually normal, below 100 mg/dl. When Maria's A1C was tested, she was very surprised that the result was high (9%). This result meant that her estimated average blood sugar was 212 mg/dl. The diabetes educator asked Maria to test her blood sugar after meals as well as before breakfast. Maria found out that her blood sugar was normal in the morning, but it was high at other times in the day. She needed to control her morning blood sugar and her after-meal and bedtime blood sugar. Maria's healthcare team helped her to make changes in her diabetes care plan to help her better manage her blood sugar. Maria was happy to learn that her A1C went down to 7.5% (average blood sugar of 169 mg/dl) by her next visit. This showed that her new plan was already helping, all day long.



It is important to test your blood sugar regularly, and have your A1C tested at least twice per year. Both of these tests can give you the information you and your healthcare provider need to come up with the best possible treatment plan.

References:

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