A1C Test for Diabetes

What is the A1C test?

The A1C ("A-one-C") is a blood test that checks your average blood sugar over the past 2 to 3 months. This average is different from your day to day blood sugar.

Sugar absorbed from your food goes into the bloodstream. The sugar sticks to the hemoglobin protein in red blood cells, forming hemoglobin A1C. The A1C stays in the blood for the life of the red blood cell, which is 90 to 120 days. This means that the amount of A1C in your blood reflects how high your blood sugar has been over the past 3 months.

Another name for this test is hemoglobin A1C test. It is different from a regular blood sugar or blood glucose test.

Why is this test done?

There are 3 reasons to check your A1C:

- To diagnose prediabetes
- To diagnose diabetes
- To see how well you are controlling your blood sugar

A1C tests are important because:

- They can check the accuracy of the blood sugar results you get at home.
- They help predict your risk of diabetic complications. A high A1C percentage means that your average blood sugar has been high, and this increases your risk of serious problems, like eye, kidney, blood vessel, and nerve damage problems.

If your A1C is high, your diabetes plan will need to be changed.

How do I prepare for this test?

You don’t need to do anything to prepare for this test. One of the advantages of this test is that you don’t have to fast before you take it.

How is the test done?

Having this test will take just a few minutes. A small amount of blood is taken with a prick of the finger or from a vein in your arm with a needle.

At some pharmacies you may be able to buy a device that allows you to test A1C at home. You may find that the results of the home test are not the same as results of tests done at your healthcare provider's office. Talk with your provider about whether it’s helpful for you to check your A1C levels at home.

What does the test result mean?

The A1C percentage rises as your average blood sugar level rises.

- The normal range for a person without diabetes is 4 to 5.6%.
- The range for prediabetes is 5.7 to 6.4%.
- Diabetes is diagnosed if your A1C is 6.5% or higher.
- The goal for most adults with diabetes is an A1C below 7%.

Talk to your healthcare provider about what your A1C level should be.

Previously the hemoglobin A1C result was reported only as the percentage. Now it is also available from some labs as the **eAG**, or **estimated average glucose**. You can use your A1C results and the chart below to know what your average blood glucose has been.

A1C	Estimated Average Glucose (eAG)
6%	126 mg/dL (7.0 mmol/L)
7%	154 mg/dL (8.6 mmol/L)
8%	183 mg/dL (10.2 mmol/L)
9%	212 mg/dL (11.8 mmol/L)
10%	240 mg/dL (13.3 mmol/L)
11%	269 mg/dL (14.9 mmol/L)
12%	298 mg/dL (16.6 mmol/L)

Remember that, even though you have the A1C test every few months, you need to keep testing your blood sugar at home as often as your provider recommends. The blood sugar test results help you and your healthcare provider know if you are on the best medicine dose and schedule for the daily ups and downs of your blood sugar.

What if my test result is not normal?

If you have not yet been diagnosed with diabetes and your test is not normal, you need to talk with your healthcare provider about whether you have diabetes.

If you have been diagnosed with diabetes and your test is not normal, your healthcare provider will talk to you about how to lower your blood sugar with medicine if you have type 1 diabetes, or with diet, exercise, and possibly medicine if you have type 2 diabetes. Keeping your blood sugar levels and A1C levels in or near normal ranges will help you avoid the complications of diabetes, such as eye disease, heart or kidney disease, and nerve damage.

If your test results are not normal, ask your healthcare provider:

- If you need more tests
- What kind of treatment you might need
- When you need to be tested again
- What lifestyle, diet, or other changes you might need to make

You should have an A1C test every 3 to 6 months.

Developed by RelayHealth.

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