

A1C



Does this test have other names?

Hemoglobin A1c; HbA1c; glycosylated hemoglobin; glycohemoglobin; Glycated hemoglobin

What is this test?

A1C is a blood test that shows average blood sugar (glucose) levels over the last 3 months. The test is done to find out if a person has diabetes or prediabetes. It's also used to see how well a person with diabetes controls their blood sugar. The test can help guide diabetes treatment over time.

Why do I need this test?

You may need this test to check for prediabetes or diabetes.

If you have diabetes or prediabetes, you may need this test to see how well you control your blood sugar. People with diabetes need to track their blood sugar (glucose) levels every day to make sure they aren't too high or too low. The A1C test gives results for a longer period of time. It shows if your blood sugar has been too high on average over the last 3 months.

Glucose sticks to hemoglobin in the blood. Hemoglobin is a protein in red blood cells that carries oxygen. When blood sugar is high, more glucose builds up and sticks to the hemoglobin. The A1C test measures how much of the hemoglobin is coated with sugar.

You may have the test when a healthcare provider first works with you to treat your diabetes. You may then need to have the A1C test 2 or more times a year. This depends on the type of diabetes you have and how well it's controlled. The American Diabetes Association (ADA) advises an A1C test at least 2 times a year if you are meeting your blood sugar goals. If you aren't meeting your goals or your medicine has changed, you should have the A1C test more often.

What other tests might I have along with this test?

If your healthcare provider tests you for diabetes, you may also have any of these tests:

- Fasting plasma glucose blood test (FPG)
- Oral glucose tolerance test (OGTT)
- Urine test to check for sugar, ketones, or protein

What do my test results mean?

Test results may vary depending on your age, gender, health history, the method used for the test, and other things. Your test results may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

A1C results are reported as a percentage. Here are what the results mean:

- **A1C below 5.7%.** This is normal.
- **A1C from 5.7% to 6.4%.** You may have prediabetes. This means you have a higher risk for diabetes in the future.
- **A1C of 6.5% or above on 2 separate tests.** You may have diabetes.

The ADA says that people with diabetes should keep an A1C below 7%. The American Association of Clinical Endocrinologists advises an A1C of 6.5% or less. Your healthcare provider may give you other advice. This is based on your age, health conditions, and other things.

How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

Does this test pose any risks?

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

What might affect my test results?

Your blood sugar levels change throughout the day. This won't affect the A1C test result.

If you have sickle cell anemia or other blood disorders, an A1C test may be less useful for diagnosing or watching diabetes. Your healthcare provider may tell you to use a different test that will work better for you.

The test results may be less accurate if you have any of the below:

- Anemia
- Heavy bleeding
- Iron deficiency
- Kidney failure
- Liver disease

How do I get ready for this test?

You don't need to get ready for the test.

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