TEST

A1C test

An A1C test measures how much glucose has attached to hemoglobin in your red blood cells, giving a picture of your average blood sugar over the past few months.

WHAT IT MEASURES
Average blood sugar over the last two to three months

SAMPLE
Blood

FASTING NEEDED?
No, unless other tests require it

USED FOR
Screening and monitoring

MAIN LIMITATION
Changes in red blood cell turnover can distort results

Overview

The A1C test (also called HbA1c) is a blood test. It helps estimate your average blood sugar level over about 2 to 3 months.

A test like this does not have symptoms. It also does not predict your future health by itself. It's one piece of information that your overall situation puts into context.

How to prepare

Usually, you do not need to fast for an A1C test. Still, preparation instructions can vary depending on what other tests are being done at the same visit.

Before the test, you can share details that may affect A1C accuracy, such as:

Plainly put: tell the lab or your care team about anything that changes your red blood cells, since A1C depends on them.

- Recent blood loss or anemia (low red blood cell count or low hemoglobin)
- A recent blood transfusion
- Certain blood disorders or unusual hemoglobin types

- Pregnancy (because blood sugar patterns and interpretation can differ)
- Recent changes in diabetes medicines (if you already use them)

What happens during the test

The A1C test is done with a standard blood draw.

You might feel brief discomfort where the needle goes in. Bruising can happen at the puncture site, but serious problems are uncommon.

- A health professional cleans the skin on your arm.
- A needle is used to collect a small blood sample.
- Pressure is applied, and a bandage covers the site.
- The sample is sent to a lab for analysis.

Understanding your results

Your report will show a number (often written as A1C %). Different labs can report and interpret results slightly differently, and the right meaning can depend on your age, sex, pregnancy status, current medicines, and clinical context.

A commonly used interpretation framework is:

Those are thresholds used in many settings, but they are not the only way to interpret A1C for every person. Your care team may consider other information too, such as fasting glucose, symptoms, or results from repeat testing.

Also, A1C can be less reliable when red blood cell turnover changes. For example:

- Below 5.7% : not in the diabetes range
- 5.7% to 6.4% : often called prediabetes
- 6.5% or higher : often used as a diabetes threshold
- If red blood cells are destroyed faster than usual (certain anemias or other conditions), A1C can look lower than expected.
- If red blood cells last longer than usual, A1C can look higher than expected.
- If you have had a recent transfusion, your A1C may reflect the donor blood's red cells for a period of time.

Sources