

What is the A1C test?

The A1C blood test, also called the hemoglobin A1C test or [glycohemoglobin](#), provides information about your average blood glucose levels for the past 2 to 3 months. People with diabetes should have the A1C test at least twice a year. Your doctor uses the results of your A1C tests to see whether you need changes in your diabetes medicine, meal plan, or physical activity routine to keep your diabetes under control.

How do hemoglobin variants affect the A1C test and my diabetes care?

A variant form of hemoglobin in your blood can give you false A1C test results. If your test result is falsely high, your doctor might change your diabetes medicine or make other changes in how you take care of your diabetes. These changes could cause low blood glucose, or [hypoglycemia](#). If your test result is falsely low, your doctor might make changes in your treatment that could cause your blood glucose to stay too high, increasing your risk for diabetes problems in your eyes, nerves, and kidneys. Not all A1C tests are affected by variant hemoglobin. Your doctor can take steps to make sure you get accurate results from your A1C test.

How will I know whether I have a hemoglobin variant?

Many people with hemoglobin variants have no symptoms. You might be at risk for having a hemoglobin variant if

- you are of African, Mediterranean, or Southeast Asian heritage
- members of your family have sickle cell trait or sickle cell anemia
- the results of your self blood glucose monitoring don't match the results of your A1C test
- your A1C result is different than expected
- your A1C result is high—more than 15 percent
- your most recent A1C result is very different from your last A1C result

Laboratory tests can confirm whether you have a hemoglobin variant.

This information is provided by:

National Diabetes Information Clearinghouse

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Publications produced by the Clearinghouse are carefully reviewed by both NIDDK scientists and outside experts. This publication was reviewed by Randie R. Little, Ph.D., National Glycohemoglobin Standardization Program, University of Missouri School of Medicine.

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