

date visited 10/4/12

ACCU-CHEK

Roche

[Home](#) > [Self-monitoring](#) > [A1C test and calculator](#)

A1C test and calculator

The [A1C](#) test (also known as HbA1c or glycated hemoglobin) provides a long-term look at blood sugar control, so you can see how well your self-care plan is working.

A1C calculator

See how an A1C test result correlates to average daily blood sugar.¹ Enter your average blood sugar reading or your latest A1C result and click Calculate.

Average Blood Sugar* **CALCULATE** **A1C**
(from 100-300 mg/dL) (from 5.0-12.0%)

Studies show that an A1C result above 7% carries an increased risk of long-term complications.³ Start lowering your blood sugar, and you can reduce your risk of vision loss, nerve damage, heart disease and more. Get tips from your doctor right away.

*This tool uses average plasma blood sugar readings—the measure used by most meters available today. It should not be used to predict an A1C and is not a substitute for a clinical test performed by your doctor. It is intended to show the relationship between a healthy A1C and self-monitoring results, and give you an idea of how you can help prevent long-term diabetes complications.

What is A1C?

Your A1C test measures your average blood sugar levels by taking a sample of hemoglobin A1C cells—a specific component of your red blood cells.

Some blood sugar (or glucose) naturally attaches itself to A1C cells as they move through your bloodstream. When this happens, the cell is considered "glycated." The more sugar in your blood, the higher the percentage of glycated A1C cells you'll have.⁴

Once a cell has been glycated, it stays that way. And since each A1C cell has a lifespan of about 4 months, your A1C sample will include cells that are a few days, a few weeks and a few months old. As a result, the test covers a span of about 2 to 3 months.

Self-monitoring and A1C

As important as the A1C is, however, it's not a substitute for frequent self-monitoring. Only regular blood sugar checks show you how meals, activity, medications and stress affect your blood sugar at a single moment in time, as well as over the course of a day or week.

In fact, without regular self-testing to provide day-to-day insights, an A1C result can be misleading. Because it gives a long-term view, a person with frequent highs and lows could have an average A1C that looks quite healthy.² The only way to get a complete picture of your blood sugar control is by reviewing your day-to-day self-checks along with your regular A1C tests, and working closely with your healthcare team to interpret the results.

How often do I need an A1C test?

The American Diabetes Association recommends an A1C test at least two times a year for those who are in good control. For those who have changed their therapy or who are not in good control and not meeting glycemic goals, an A1C test is recommended quarterly. Your doctor will help decide what's right for you.³

To learn more about your A1C, visit the [American Diabetes Association](#) website.

[Using your blood glucose test results](#)[A1C test goals](#)

date visited 10/4/12

← PREVIOUS

NEXT →

¹ Nathan DM, Kuenen J, Borg R, Zheng H, Schoenfeld D, Heine RJ. Translating the A1C assay into estimated average glucose values. *Diabetes Care*. 2008;31(8): 1473-1478. Available at <http://care.diabetesjournals.org/content/31/8/1473.full.pdf>. Accessed November 14, 2011.

² Daily G. Assessing glycemic control with self-monitoring of blood glucose and hemoglobin A1C measurements. *Mayo Clinic Proceedings*. February 2007; 82(2);229-236. Available at: <http://www.mayoclinicproceedings.org/article/S0025-6196%2811%2961003-3/fulltext>. Accessed January 13, 2012.

³ American Diabetes Association. Standards of medical care in diabetes—2011 [position statement]. *Diabetes Care*. 2011;34(1):S11-S61. Available at: http://care.diabetesjournals.org/content/34/Supplement_1/S11.full. Accessed November 15, 2011.

⁴ American Diabetes Association. A1C. Available at: <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/a1c/>. Accessed November 14, 2011.



[Diabetes Heroes](#)

Meet the [Diabetes Hero](#) we have to thank for the American Diabetes Association.



[Print handy resources](#)

Access health info, travel tips, school forms and [self-care resources](#) in the ACCU-CHEK Inner Circle.



[Diabetes Heroes](#)

These Diabetes Heroes keep us all well educated. [Watch what they have to say.](#)

This website contains information on products which are targeted to a wide range of audiences and could contain product details or information otherwise not accessible or valid in your country. Please be aware that we do not take any responsibility for accessing such information which may not comply with any valid legal process, regulation, registration or usage in the country of your origin.

ACCU-CHEK product support is available 24 hours a day, every day: 1-800-858-8072.

© Roche Diagnostics . All rights reserved. Last updated: 04.15.2012

^aSome limitations apply. Valid on ACCU-CHEK products only. Offer not valid for persons paying cash or covered under Medicare, Medicaid or any other government healthcare program. Not valid in Massachusetts or where prohibited by law.

^bPolonsky WH, et al. Structured self-monitoring of blood glucose significantly reduces A1C levels in poorly controlled, noninsulin-treated type 2 diabetes: results from the Structured Testing Program study. *Diabetes Care*. 2011;34(2):262-267. Ranked first most often versus leading competitors. Data on file.

^cWhen compared to leading competitive systems. Data on file.

^dSpecifications based on current International Organization for Standardization (ISO) 15197: 2003.

^eRanked first most often versus leading competitors. Data on file.