

Diabetes: *HbA1c and Self-Testing*

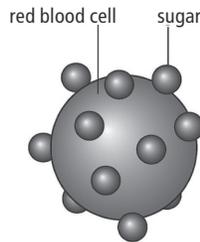
How is my blood glucose measured?

If you have diabetes, two types of test will help you keep track of your blood glucose: the HbA1c test done by your doctor, and the self-testing you do at home. **You need to do both.** This fact sheet explains why both tests are important.

What is HbA1c?

HbA1c (also called A1C) is a test to show the average level of blood glucose over the previous 3 months. Here's how it works:

- Hemoglobin (or Hb, for short) is a protein in your red blood cells. The hemoglobin picks up glucose (sugar) from your bloodstream.
- The glucose stays attached to the Hb for the life of the cell — about 3 months. HbA1c measures the percentage of hemoglobin that is saturated with glucose.



What number am I aiming for?

If you have diabetes, the closer your HbA1c score is to 6%, the better your glucose control. The American Diabetes Association recommends that most people with diabetes aim for less than 7%. If you have other chronic conditions, or if your life expectancy is less than 10 years, your goal should be between 7% and 8%.

What is eAG?

Your eAG is your “estimated Average Glucose.” It uses your HbA1c result to show your average blood glucose control over the previous 3 months. The graph below shows how HbA1c and eAG match up. Note that an HbA1c of less than 7% matches up to an eAG of less than 154 mg/dL — fairly good control.

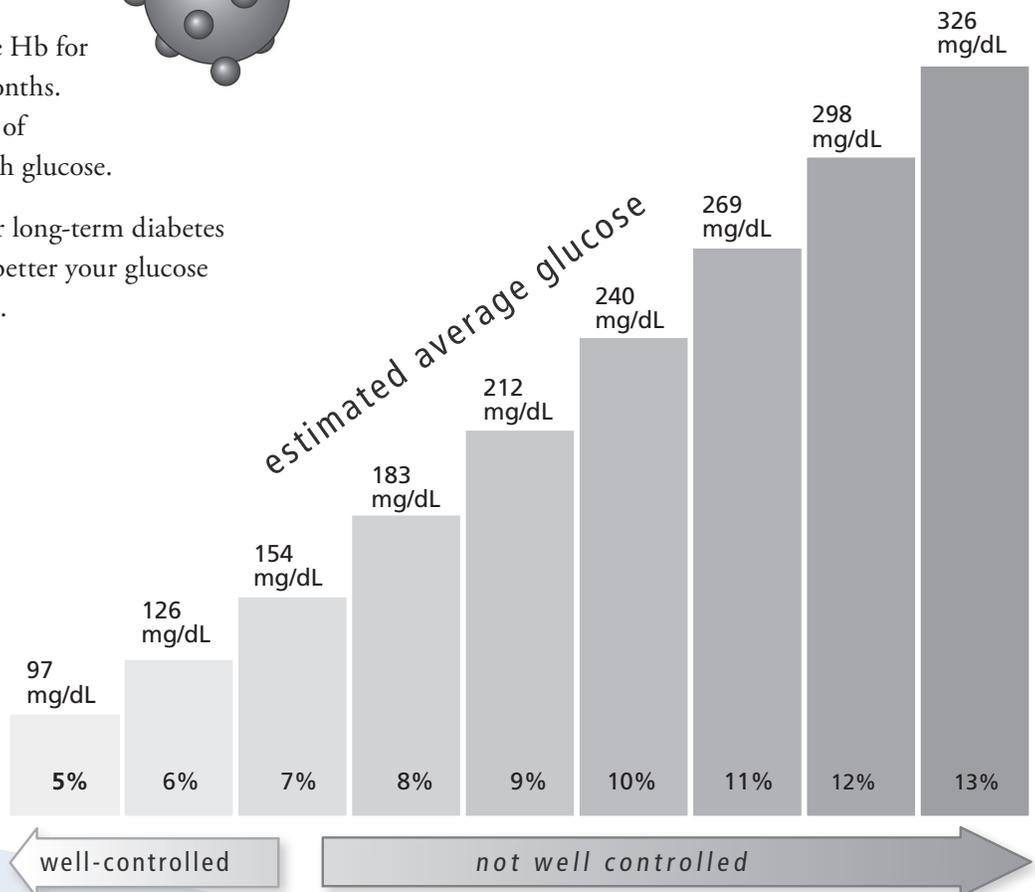
HbA1c is a good way to check your long-term diabetes control. The lower your score, the better your glucose control over the previous 3 months.

Your HbA1c _____

Your eAG _____

Date _____

Here's how your HbA1c results compare with your average fasting blood glucose test results.



If I get HbA1c tests, do I still need to self-test?

Yes. An HbA1c test is the easiest and most accurate way to paint the big picture view of your blood glucose control. But there are things that only self-testing — and good records of your readings — can tell you.

You need to self-test often in order to:

- Know whether you're balancing high blood glucose with periods of low blood glucose.
- Make connections between your blood glucose and your daily choices about food, exercise, and so on. For example, let's say your self-test glucose reading is higher than normal after lunch. You can think about what you just ate and make different lunch choices the very next day.

That's why you need both regular HbA1c tests AND good records of your self-testing.

I know my glucose by how my body feels? Do I still need to test?

Yes, you still need to test. Relying on symptoms to help you guess what's happening with your blood glucose is asking for trouble. Here's why:

- Symptoms of low and high glucose can be similar, and are easily confused. You need to be sure of the problem before you can correct it!
- Symptoms are “old news.” By the time you have symptoms, your blood glucose may be seriously out of control.
- Symptoms are often easy to ignore. People tend to become used to their symptoms — and some people no longer have symptoms at all.
- Symptoms can come from things other than your diabetes.

You need clear, reliable, early signs of blood glucose trouble. Only blood glucose self-testing and regular HbA1c tests can give you this information.

Why go low?

In the long run, keeping your blood glucose within target ranges can help you avoid diabetes complications. In fact, the National Diabetes Education Program reports that reducing your HbA1c by just 1% may:

