

Title: Controlling Blood Glucose - All about Blood Glucose for People with Diabetes

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Abstract: Intensive glucose-control strategy starting at the time of diagnosis as well as the addition of lipid lowering therapy and anti-hypertensive treatment significantly reduces the risk of heart attacks, stroke, and blindness/diabetic eye disease in diabetic patients.

This document was created by a medical student enrolled in the Primary Care Clerkship at the University of Minnesota Medical School as part of the course project. The aim of the project is to present information on a medical topic in the format of a patient education handout. It does not necessarily reflect the views of the University of Minnesota Medical School physicians and faculty. These materials are provided for informational purposes only and are in no way intended to take the place of the advice and recommendations of your personal health care provider. The information provided may no longer be up to date since it has not been reviewed since the date of creation. The information provided should not be used to diagnose a health problem or disease, or as a means of determining treatment. In the event of a medical emergency, immediately contact a doctor or call 911.

### Getting an A-1-C blood glucose check

The A-1-C check is the blood glucose check “with a memory.” It tells you what your average blood glucose level has been for the past 2 to 3 months. If your number is 7% or higher (7.9% or higher if you are 65 years or older), you may need a change in your diabetes care plan.

### Translate your A-1-C

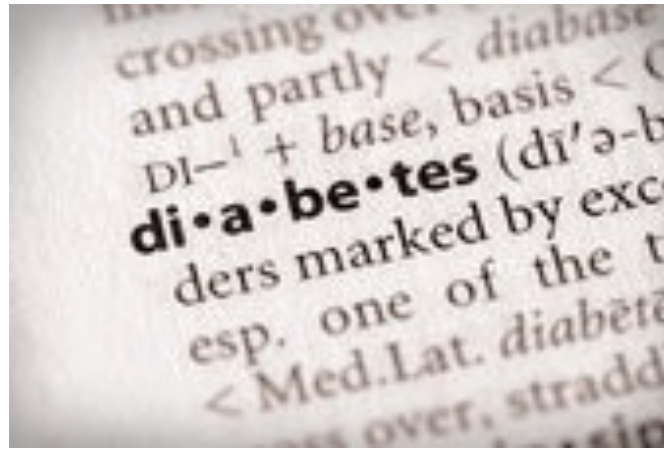
Find your A-1-C number on the left. Then, check the chart to learn your average blood glucose for the past 2 to 3 months.

A-1-C	Average blood glucose
6%	135
7%	170
8%	205
9%	240
10%	275
11%	310
12%	345

### What if my blood glucose is frequently too high?

Call your health care provider for an early appointment if your blood glucose numbers are often higher than your targets. Talk with your health care team about recommended changes in your meal plan, your physical activity, or your diabetes medications when high blood glucose occurs.

## Resources



University of Minnesota Physicians  
<http://www.umphysicians.umn.edu/>

American Diabetes Association  
<http://www.diabetes.org/>

CDC Diabetes Public Health Resources  
<http://www.cdc.gov/diabetes>



## Controlling Blood Glucose



## All About Blood Glucose for People with Diabetes

# Blood Glucose

Keeping your blood glucose (sugar) in the recommended target range can prevent or delay the long-term health problems caused by diabetes. Most of the steps needed to take care of diabetes are things you do yourself:

- Using a meal plan
- Being physically active
- Taking medications
- Trying to reach your blood glucose most of the time
- Keeping track of your blood glucose numbers using a blood glucose meter and the results of your A-1-C checks



## Why should I try to keep my blood glucose on target?

The closer your blood glucose stays to your target range, the more you'll lower your risk of blindness or diabetic eye disease, kidney disease, foot problems, nerve damage, tooth and gum disease, and skin problems. You will also lower your risk for heart attack or stroke.

## What makes my blood glucose level rise or fall?



Blood glucose levels rise and fall throughout the day. One key to taking care of your diabetes is understanding why they rise or fall. If you know the reasons, you can take steps to help keep your blood glucose on target.

## What can make the blood glucose rise?

- A meal or snack with more food or more carbohydrates (carbs) than usual
- Inactivity
- Not enough diabetes medication
- Side effects of other medications
- Infection or other illness
- Changes in hormone levels, such as during menstrual periods
- Stress

## What can make the blood glucose fall?

- A meal or snack with less food or fewer carbs than usual
- Drinking alcoholic beverages, especially on an empty stomach
- Missing a meal or snack
- Extra activity
- Too much diabetes medication
- Side effects of other medications

## What are the blood glucose targets for people with diabetes?

The targets recommended by the American Diabetes Association (ADA) are listed below. Talk with your health care team about your personal targets.

ADA Targets for Blood Glucose	My Usual Results	My Targets
Before meals: 90 to 130 mg/dl	_____ to _____	_____ to _____
2 hours after the start of a meal: less than 180 mg/dl	less than _____	less than _____

## What's the best way to keep track of my blood glucose levels?

Checking your blood glucose will tell you whether you're reaching your blood glucose targets. There are two ways to do it:

- **Using a blood glucose meter** to learn what your blood glucose is at a particular moment
- **Getting a blood glucose check called an A-1-C** at least twice a year

Both ways can be useful to you.

### Using a blood glucose meter

Many people use their meter to check their blood glucose several times a day. Your health care team can give you a record book to write down your blood glucose. This information can be used to make decision about food, physical activities and medications.

You can use your results to judge how well your diabetes care plan is working. The record book will show patterns (similar results over and over) and you and your health care team can use these patterns to fine-tune your diabetes care plan in order to reach your targets.