

## Blood Glucose Levels

*To diagnose pre-diabetes and diabetes*

*This handout lists blood glucose levels that are used to diagnose pre-diabetes and diabetes. It also gives blood glucose recommendations after diagnosis and target levels for hemoglobin A1C, eAG, blood pressure, and cholesterol.*

### What are blood glucose levels?

Glucose is a sugar that comes from the foods we eat. A *blood glucose level* is the amount of glucose in your blood.

This handout lists blood glucose levels that are most often used to diagnose pre-diabetes and diabetes. But, your ideal blood glucose levels (blood glucose targets) depend on:

- Your age
- If you are pregnant
- If you have heart disease
- If you cannot tell when your blood glucose is low

Ask your diabetes care provider what blood glucose targets are right for you.



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### Diagnosing Pre-diabetes

These blood glucose levels are commonly used to diagnose pre-diabetes:

- Fasting glucose reading between 100 and 125 mg/dL
- Glucose reading 140 to 200 mg/dL 2 hours after an oral glucose tolerance test

### Diagnosing Diabetes

These blood glucose levels are commonly used to diagnose diabetes:

- Fasting glucose reading 126 mg/dL or higher
- Any reading over 200 mg/dL
- A1C greater than or equal to 6.5%

## After Diagnosis

Here are common blood glucose targets for people who have been diagnosed with having diabetes or pre-diabetes. These levels are recommended by the American Diabetes Association (ADA):

- 80 to 130 mg/dL when fasting or before a meal.
- Less than 180 mg/dL at peak after meal. If you are advised to check your blood glucose after meals, check it 1 to 2 hours after you start eating the meal. (This is usually when blood glucose is highest after eating.)

## What are hemoglobin A1C and eAG?

- **Hemoglobin A1C (A1C)** is a test to measure the average level of glucose in your blood over the past 2 to 3 months. Your healthcare team uses this test to see how well you are managing your diabetes over time.
- Like the A1C, **estimated Average Glucose (eAG)** also shows the average level of glucose in your blood over time. The eAG is measured in mg/dL. These are the same measurements used when you check your blood glucose with your glucose meter or receive a blood glucose value from a lab test. The ADA recommends that eAG be less than or equal to 154 mg/dL for most people.

Ask your diabetes care provider to explain the relationship between A1C and eAG and the daily values you get from your own glucose meter. This information can help you to see how your daily blood glucose checks relate to your long-term glucose control.

This table shows how A1C percentages relate to eAG levels:

<b>A1C</b>	5%	6%	7%	8%	9%	10%	11%	12%
<b>eAG (mg/dL)</b>	97	126	154	183	212	240	269	298

## Target Hemoglobin A1C

The ADA recommends an A1C goal of less than 7%. Your diabetes care provider may recommend a lower A1C goal if you are pregnant or thinking about becoming pregnant. Please talk with your provider to learn more.

## Blood Pressure and Cholesterol Levels

You may also need to monitor your blood pressure and cholesterol levels. Here are the ADA's target numbers for these levels:

### Target Blood Pressure Levels

- Less than 140/80 mmHg\*

### Target Cholesterol or Lipids Levels

The ADA recommends that people with diabetes keep LDL levels at or below 100 mg/dL, or under 70 mg/dL if they also have heart disease. The ADA also recommends using cholesterol-lowering medicines to reach those goals.

- **HDL cholesterol:**
  - Higher than 40 mg/dL in men
  - Higher than 50 mg/dL in women
- **Triglycerides:** less than 150 mg/dL

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### Sources:

*American Diabetes Association: Clinical Practice Recommendations*

*\*Lower blood pressure targets may be recommended by your healthcare provider if you have high blood pressure or kidney disease.*

## Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Endocrine and Diabetes Care Center: 206.598.4882

UW Medicine Neighborhood Clinics: 206.520.5000