

Q. What is a normal blood sugar level?

A. Blood sugar (glucose) levels are usually checked after fasting (no food or nutritive drink for 8 hours). The American Diabetes Association recommends the following fasting blood sugar standards:

- Normal 70-89 mg/dL
- High normal 90-99 mg/dL
- Prediabetes 100-125 mg/dL
- Diabetes 126 mg/dL or higher

If your fasting blood sugar is 126 mg/dL or higher, you have diabetes which needs medical attention.

If you've just been diagnosed, you may be able to bring your blood sugar down and control it largely by lifestyle changes such as losing excess fat weight, getting regular aerobic activity, and eating more healthfully. Ask your doctor for guidance.

If your blood sugar is in the prediabetes range, your risk for cardiovascular disease is increased, and it is important to make major lifestyle.

Get your doctor's guidance. People with prediabetes have a 70% chance of developing diabetes in their lifetime.

Fasting blood sugar levels less than 100 are considered "normal." However, new research shows that the upper limit of "normal" blood sugar (90-99 mg/dL) has a greater influence on a person's risk of developing diabetes than previously realized. If you are in the "high normal" range, you may still be at increased risk for diabetes.

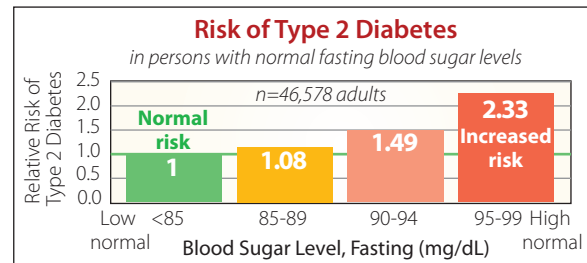
Blood Sugar



ASK THE WELLNESS DOCTOR

This new research looked at the risk of developing type 2 diabetes in over 46,000 people who all had "normal" blood sugar levels (less than 100 mg/dL) at the start of the study.¹ Over the next 7 years, people with a fasting blood sugar level of 95-99 mg/dL (the upper limit of normal) were 2.33 times more likely to develop type 2 diabetes than were those with fasting blood sugar levels less than 85 mg/dL. Even people with blood sugar levels of 90-94 mg/dL were 1.49 times more likely to develop type 2 diabetes.

This shows the importance of keeping blood sugar levels at 70-85 mg/dL for preventing type 2 diabetes later in life.



Ask your doctor for the actual number of your blood sugar level. If your test result is between 90 and 99 mg/dL, you may be at increased risk for developing diabetes in the next few years. This is especially true if you have other risk factors for diabetes including family history, overweight, inactivity, smoking, or high blood pressure. Taking action early to lower your risk can pay great health dividends. See the next page for recommendations on keeping your blood sugar level low.



How to keep your blood sugar level low:

- **Keep your weight in a healthy range.** Find your Body Mass Index (BMI) on the chart below. A BMI of less than 25 is the most healthy. In this study¹, for every 1 point your BMI increases, your risk of developing diabetes increases by 6%. Or, if you are overweight, for every 1 point you lower your BMI, you also lower your future risk of developing type 2 diabetes by 6%.

WEIGHT STANDARDS (based on BMI)				
HEIGHT in.	BMI 19 lbs.	BMI 25 lbs.	BMI 30 lbs.	BMI 35 lbs.
4' 10"	91	119	143	167
5' 0"	97	128	153	179
5' 2"	104	136	164	191
5' 4"	111	145	174	204
5' 6"	118	155	186	216
5' 8"	125	164	197	230
5' 10"	132	174	209	243
6' 0"	140	184	221	258
6' 2"	148	194	233	272
6' 4"	156	205	246	287
HEALTHY RANGE				

- **Get regular physical activity.** Aim for 30-60 minutes of moderate to vigorous activity daily. People who exercise regularly have improved insulin sensitivity and have lower blood sugar levels all day long. Exercise acts similarly to insulin: They both keep blood sugar levels lower. The Nurses' Health Study² showed that exercisers who walked briskly for 3 hours or more per week cut their risk of getting diabetes in half compared to those who didn't exercise regularly.

- **Don't smoke. Or if you are a smoker, stop.** Smokers in this study were 37% more likely to develop diabetes than were nonsmokers.
- **Keep your blood pressure in a healthy range** (less than 120/80). For every 5 points your systolic blood pressure increases over 120/80, your risk of developing diabetes is 2% higher. If you already have high blood pressure, your risk of diabetes is increased by 51%.
- **Keep your blood cholesterol levels in a healthy range** (HDL greater than 45 mg/dL for men, and greater than 55 mg/dL for women). For every 5-point increase in HDL cholesterol (the "good" cholesterol), your risk of type 2 diabetes drops by 10%. Factors shown to raise HDL levels include getting regular aerobic activity, losing excess weight, not smoking, and eating healthy fats while avoiding trans fats, and eating berries daily.
- **Keep your blood triglycerides in a healthy range** (less than 150 mg/dL). For every 50 mg/dL your triglycerides go up, your risk of diabetes increases by 9%. Factors shown to lower triglycerides include getting regular aerobic activity, losing excess weight, and limiting refined carbohydrates and alcohol.
- **Follow a heart-healthy lifestyle.** People with diagnosed cardiovascular disease in this study were 95% more likely to develop type 2 diabetes during the 7-year follow up.

If you don't know what your fasting blood sugar level is, get it checked. The American Diabetes Association recommends that all people should have a blood glucose test every 3 years starting at age 45, or earlier if they have risk factors (obese, inactive, smoker, high blood pressure, etc.). By taking action early, much can be done to prevent type 2 diabetes and the serious health consequences that follow.

References:

1. Nichols G et al. Normal fasting plasma glucose and risk of type 2 diabetes diagnosis. *The American Journal of Medicine*. 2008; 121:519-524.
2. Hu FB et al. Walking compared with vigorous physical activity and risk of type 2 diabetes in women. *Journal of the American Medical Association*. 1999 Oct 20; 282 (15):1433-1439.

