

Tell Me About Blood Glucose and Hemoglobin A1C



Normally, food is digested into glucose and the pancreas responds by producing insulin. The insulin allows glucose to enter into the body's tissues and cells and be used to produce energy. Diabetes is a chronic disease which occurs when the body is not able to use glucose for energy because the pancreas does not produce enough insulin, or the body is unable to use insulin correctly. If the glucose cannot enter the body's cells, the level of glucose, or sugar, in the blood increases significantly. Hemoglobin A1c is a blood test that reflects the average level of blood glucose over the previous 2-3 months.

	Ideal	Recommended	At Risk	High Risk
Blood Sugar (fasting)		70-100 mg/dL	101 - 125 mg/dL	126 mg/dL or greater
Blood Sugar (non-fasting)		139 mg/dL or less	140-199 mg/dL	200 mg/dL or greater
Hgb A1c	< 6	6 - 6.9	7 - 8	greater than 8

When blood glucose levels remain at high levels, there is increased risk of developing a number of disease complications, such as:

- Heart disease - 75% of diabetes-related deaths are due to heart disease
- High blood pressure
- Stroke
- Neuropathy, or nerve damage, usually apparent in the extremities such as the feet, legs, and hands. Coupled with increased plaque in the blood, this causes severe complications in the feet and legs and may lead to leg amputation
- Kidney disease
- Blindness

Unfortunately, the onset of diabetes is gradual and most individuals may not feel the symptoms. Being aware of risk factors and the symptoms can greatly decrease the amount of time between onset of the disease and diagnosis and will decrease the risk of complications.

Risk factors:

- Family history of diabetes
- Ethnicity (African Americans, Hispanics, Asian Americans and Native Americans are at increased risk)
- Excess weight - having a Body Mass Index of 25.0 or greater and/or a waist measurement of 35 inches (F) or 40 inches (M) or greater
- High blood pressure
- Gestational diabetes, or giving birth to a baby weighing more than nine pounds

Warning signs:

- Temporary blurred vision
- Fatigue
- Frequent infections or illnesses
- Dry skin
- Frequent urination

Tips to Control Blood Glucose

Controlling blood glucose levels can help prevent the onset of diabetes, even with a family history of the disease. Individuals diagnosed with diabetes can decrease the risk of disease-related complications by monitoring and managing blood glucose levels.

- Exercise at least 30 minutes 3 times per week and work toward a goal of exercising most days of the week (5-7 days).
- Develop a healthy diet, watching especially carbohydrate (starch) intake. Make the switch to whole-grain breads, cereals and pasta.
- Manage stress levels by practicing regular relaxation exercises.
- Monitor blood glucose, take prescribed medications and get regular medical check-ups if already diagnosed with diabetes.
- If diabetic, a flu shot is recommended

