

Diabetes Glossary

Term	Definition
A1C	A test measuring a person's average blood glucose level over the past 2 to 4 months. Also called hemoglobin A1C or glycosylated hemoglobin, the test shows the amount of glucose that sticks to the red blood cell, which is proportional to the amount of glucose in the blood. Results are given as a percentage or as an average glucose value, called an estimated average glucose. The ideal range for people with diabetes is generally less than 7%.
ACE inhibitor	A <i>blood pressure</i> lowering medicine; ACE stands for angiotensin-converting enzyme . For people with diabetes, especially those who have <i>protein (albumin)</i> in the urine, it also helps slow down kidney damage.
acetone	A chemical formed in the blood when the body uses fat instead of glucose (sugar) for energy. If acetone forms, it usually means that the cells do not have enough insulin, or cannot use the insulin in the blood, to use glucose for energy. Acetone passes through the body into the urine. Increased levels of acetone in the body can produce breath that smells fruity and is called "acetone breath." See also: Ketone bodies.
acidosis	Too much acid in the body. For a person with diabetes, this can lead to <i>diabetic ketoacidosis</i> .
adult-onset diabetes	A former term for Type 2 diabetes.
albuminuria	More than normal amounts of a <i>protein</i> called <i>albumin</i> in the urine. Albuminuria may be a sign of kidney disease, a problem which may occur in people who have had diabetes for a long time.
alpha cell	A type of cell in the pancreas that makes and releases a hormone called glucagon. The body sends a signal to the alpha cells to make glucagon when blood glucose falls too low. Then glucagon reaches the liver where it tells it to release glucose into the blood for energy.
ARB (angiotensin receptor blocker)	An oral medicine for lowering <i>blood pressure</i> . For people with diabetes, especially those who have <i>protein (albumin)</i> in the urine, it also helps slow kidney damage progression.
arteriosclerosis	A group of diseases in which the walls of the arteries get thick and hard. In one type of arteriosclerosis, fat builds up inside the walls and slows the blood flow. These diseases often occur in people who have had diabetes for a long time. See also: Atherosclerosis.
atherosclerosis	One of many diseases in which <i>fat</i> builds up in the large- and medium-sized arteries. This buildup of fat may slow down or stop blood flow. This disease can happen to people who have had diabetes for a long time.
autoimmune disease	A disorder of the body's immune system in which the immune system mistakenly attacks and destroys body tissue it believes to be foreign. Insulin-dependent diabetes is an autoimmune disease because the immune system attacks and destroys the insulin-producing beta cells.
autonomic neuropathy	Nerve damage to organs of the body that cannot consciously be controlled such as the digestive system, blood vessels, urinary system, skin, and sex organs. This is a common condition in people who have had diabetes for a long time.
background retinopathy	A type of damage to the retina of the eye marked by bleeding, fluid accumulation and abnormal dilation of the blood vessels. Background retinopathy is an early stage of diabetic retinopathy and usually does not impair vision. Also called simple or nonproliferative retinopathy.
beta cell	A type of cell in the <i>pancreas</i> in areas called the islets of Langerhans. Beta cells make and release <i>insulin</i> , a hormone controlling of the level of <i>glucose</i> (sugar) in the blood.

Diabetes Glossary

Term	Definition
blood glucose	The main sugar the body makes from the three elements of food-proteins, fats, and carbohydrates-but mostly from carbohydrates. Glucose is the major source of energy for living cells and is carried to each cell through the bloodstream. However, the cells cannot use glucose without the help of insulin.
blood glucose level	The amount of <i>glucose</i> in a given amount of blood. It is noted in milligrams in a deciliter, or mg/dL.
blood glucose meter	A small, portable machine used by people with diabetes to check their blood glucose levels. After pricking the skin with a lancet, a drop of blood is placed on a test strip in the machine. The meter (or monitor) soon displays the blood glucose level as a number on the meter's digital display. Some meters have a memory to store results from multiple tests.
blood pressure	The force of blood exerted on the inside walls of blood vessels. Blood pressure is expressed as a ratio (example: 120/80, read as "120 over 80"). The first number is the systolic pressure, or the pressure when the heart pushes blood out into the arteries. The second number is the diastolic pressure, or the pressure when the heart rests.
blood urea nitrogen (BUN)	A product of metabolism excreted in the urine. It is measured in the blood as an indirect measure of how well the kidney is functioning. Increased BUN levels in the blood may indicate early kidney damage, meaning the kidneys aren't effectively excreting BUN.
C.D.E. (Certified Diabetes Educator)	A health care professional who is qualified by the American Association of Diabetes Educators to teach people with diabetes how to manage their condition. The health care team for diabetes should include a diabetes educator, preferably a C.D.E.
Candida	A fungus normally found in the body but commonly becomes overgrown in people with diabetes. Overgrowth is due to increased sugar in the body and a weakened immune system. Use of antibiotics or birth control pills also increases the risk of candida overgrowth. Candida overgrowth can lead to infection, causing itching, skin lesions, or rash.
carbohydrate	One of the three main classes of foods and a source of energy. Carbohydrates are mainly sugars and starches the body breaks down into <i>glucose</i> (a simple sugar the body can use to feed its cells). The body also uses carbohydrates to make a substance called <i>glycogen</i> which is stored in the liver and muscles for future use. If the body does not have enough <i>insulin</i> or cannot use the insulin it has, then the body will not be able to use carbohydrates for energy the way it should. This condition is called diabetes. See also: Fats; protein.
carbohydrate counting (carb counting)	A method of meal planning for people with diabetes based on counting the number of grams of carbohydrate in food.
Charcot Foot	A foot complication associated with diabetic <i>neuropathy</i> resulting in destruction of joints and soft tissue. Also called "Charcot's joint" and "neuropathic arthropathy."
combination therapy	The use of different medicines together (oral hypoglycemic agents or an oral hypoglycemic agent and insulin) to manage the blood glucose levels of people with Type 2 diabetes.
creatinine	A chemical found in the blood and passed in the urine. A test for the amount of creatinine in blood or in blood and urine shows if the kidney is working right or if it is diseased. This is called the creatinine clearance test.

Diabetes Glossary

Term	Definition
dextrose (glucose)	A simple sugar found in the blood. It is the body's main source of energy. Also called glucose. See also: Blood glucose.
diabetes	A condition characterized by <i>hyperglycemia</i> (high blood glucose) resulting from the body's inability to use <i>blood glucose</i> for energy. In <i>type 1 diabetes</i> , the <i>pancreas</i> no longer makes <i>insulin</i> ; therefore, blood glucose cannot enter the cells to be used for energy. In <i>type 2 diabetes</i> , either the pancreas does not make enough insulin or the body is unable to use insulin correctly. Also called diabetes mellitus.
diabetic amyotrophy	A disease of the nerves leading to the muscles. This condition affects only one side of the body and occurs most often in older men with mild diabetes. See also: neuropathy.
diabetic ketoacidosis (DKA)	Severe, out-of-control diabetes (high blood sugar) needing emergency treatment. DKA happens when blood sugar levels get too high. This may happen because of illness, taking too little <i>insulin</i> , or getting too little exercise. The body starts using stored <i>fat</i> for energy, and <i>ketone bodies</i> (acids) build up in the blood.
diabetic mastopathy	A rare fibrous breast condition occurring in women, and sometimes men, with long-standing diabetes. The lumps are not malignant and can be surgically removed, although they often recur.
diabetic retinopathy	A common complication of diabetes affecting the small blood vessels in the back of the eye (retina) which may bleed or form new vessels. If untreated, it may lead to blindness. If diagnosed and treated promptly, blindness is usually preventable. This condition usually occurs in people with long-standing diabetes. Regular eye examinations are an important part of diabetes management.
dietitian	A health care professional who advises people about meal planning, weight control and diabetes management. A registered dietitian (RD) has more training and has met certain requirements.
dilated eye exam	A necessary part of an examination by an eye care specialist for diabetic eye disease. Special drops are used to enlarge the pupils, enabling the doctor to view the back of the eye for damage.
Emergency Medical Identification	Cards, bracelets, or necklaces with a written message used by people with diabetes or other medical problems to alert others in case of a medical emergency such as coma.
endocrinologist	A doctor who treats people who have problems with their <i>endocrine glands</i> . Diabetes is an endocrine disorder.
exchange lists	One of several approaches for diabetes meal planning. Foods are categorized into three groups based on their nutritional content. Lists provide the serving sizes for carbohydrates, meat and meat alternatives, and fats. These lists allow for substitution for different groups to keep the nutritional content fixed.
fasting blood glucose test	A check of a person's <i>blood glucose level</i> after the person has not eaten for 8 to 12 hours (usually overnight). This test is used to diagnose <i>pre-diabetes</i> and <i>diabetes</i> . It is also used to monitor people with diabetes.
fats	1. One of the three main nutrients in food. Foods providing fat are butter, margarine, salad dressing, oil, nuts, meat, poultry, fish, and some dairy products. 2. Excess calories are stored as body fat, providing the body with a reserve supply of energy and other functions.
fructose	A type of sugar found in many fruits and vegetables and in honey. Fructose is used to sweeten some diet foods, but this type of sweetener is typically not recommended to diabetics because it could have a negative effect on blood sugar.

Diabetes Glossary

Term	Definition
gastroparesis	A form of neuropathy that affects the stomach. Digestion of food may be incomplete or delayed, resulting in nausea, vomiting, or bloating, making blood glucose control difficult.
glucagon	A hormone which raises the level of <i>glucose</i> in the blood by releasing stored glucose from the liver. Glucagon is sometimes injected when a person has lost consciousness (passed out) from a low blood sugar reaction. The injected glucagon helps raise the level of glucose in the blood.
glucose	A simple form of sugar acting as the body's main fuel source. It is produced during digestion of carbohydrate and carried to the cells in the blood.
glucose tablets	Chewable tablets made of pure <i>glucose</i> used for treating <i>hypoglycemia</i> .
glycemic index	A ranking of carbohydrate-containing foods, based on the food's effect on blood glucose compared with a standard reference food.
glycemic response	The speed at which the food is able to increase your <i>blood glucose level</i> . It can be influenced by many factors, including how much food you eat, how much the food is processed or even how the food is prepared
glycogen	A substance made up of sugars. It is stored in the liver and muscles and releases glucose (sugar) into the blood when needed by cells. Glycogen is the chief source of stored fuel in the body.
glycosuria	An abnormal amount of <i>glucose</i> in the urine.
HDL cholesterol (high-density-lipoprotein cholesterol)	Lipoproteins (combinations of lipids (fats) and proteins) are the form in which lipids are transported in the blood. The high-density lipoproteins (HDL) transport cholesterol from the tissues of the body to the liver so it can be gotten rid of (in the bile). HDL cholesterol is therefore considered the "good" cholesterol. The higher the HDL cholesterol level, the lower the risk of coronary artery disease.
hyperglycemia	Too high a level of <i>glucose</i> (sugar) in the blood; a sign of <i>diabetes</i> being out of control. Many things can cause hyperglycemia. It occurs when the body does not have enough <i>insulin</i> or cannot use the insulin it does have to turn glucose into energy. Signs of hyperglycemia are a great thirst, a dry mouth, and a need to urinate often. For people with insulin-dependent diabetes, hyperglycemia may lead to <i>diabetic ketoacidosis</i> .
hyperinsulinism	In patients with type 2 diabetes melitus (DM), a condition in which hyperglycemia is present despite high levels of insulin in the bloodstream. Insulin resistance and hyperinsulinemia have been linked to hypertension, obesity, hyperlipidemia, and increased cardio-vascular mortality in patients with type 2 DM.
hypoglycemia	A condition occurring when one's <i>blood glucose</i> is lower than normal, usually less than 70 mg/dL. Signs include hunger, nervousness, shakiness, perspiration, dizziness or light-headedness, sleepiness, and confusion. If left untreated, hypoglycemia may lead to unconsciousness. Hypoglycemia is treated by consuming a <i>carbohydrate</i> -rich food such as a <i>glucose</i> tablet or juice. It may also be treated with an injection of <i>glucagon</i> if the person is unconscious or unable to swallow.
impaired fasting glucose (IFG)	A condition in which a blood glucose test, taken after an 8- to 12-hour fast, shows a level of glucose higher than normal but not high enough for a diagnosis of diabetes. IFG, also called pre-diabetes, is a level of 100 mg/dL to 125 mg/dL. Most people with pre-diabetes are at increased risk for developing type 2 diabetes, heart disease, and stroke.

Diabetes Glossary

Term	Definition
injection site rotation	Changing the areas on the body where a person injects <i>insulin</i> . By changing the area of injection, the injections will be easier, safer, and more comfortable. If the same injection site is used over and over again, hardened areas, lumps, or indentations can develop under the skin, which keep the insulin from being used properly.
insulin	A natural hormone made by the pancreas that controls the level of the sugar glucose in the blood. Insulin permits cells to use glucose for energy. Cells cannot utilize glucose without insulin. When the body cannot make enough insulin, it is taken by injection or through use of an insulin pump.
insulin pump	A device that delivers a continuous supply of <i>insulin</i> into the body. The insulin flows from the pump through a plastic tube connected to a needle inserted into the body and taped in place. Insulin is delivered at two rates: a low, steady rate (called the <i>basal rate</i>) for continuous day-long coverage, and extra boosts of insulin (called bolus doses) to cover meals or when extra insulin is needed. The pump runs on batteries and can be worn clipped to a belt or carried in a pocket. It is used by people with insulin-dependent diabetes.
insulin resistance	When a person's body will not allow insulin to work properly in the body, even if the person takes very high daily doses of insulin. This condition can occur when a person is overweight and it often improves when the person loses weight.
insulin shock	A severe condition that occurs when the level of <i>blood glucose</i> (sugar) drops quickly. The signs are shaking, sweating, dizziness, double vision, convulsions, and collapse. Insulin shock may occur when an insulin reaction is not treated quickly enough.
intermediate-acting insulin	A type of insulin that starts to lower blood glucose within 1 to 2 hours after injection and has its strongest effect 6 to 12 hours after injection, depending on the type used.
ketoacidosis	Severe, out-of-control <i>diabetes</i> (high blood sugar) needing emergency treatment. DKA happens when <i>blood sugar levels</i> get too high. This may happen because of illness, taking too little <i>insulin</i> , or getting too little exercise. The body starts using stored fat for energy, and <i>ketone bodies</i> (acids) build up in the blood. Signs of DKA are nausea and vomiting, stomach pain, fruity breath odor and rapid breathing. Untreated DKA can lead to coma and death.
ketonuria	A condition occurring when ketones are present in the urine, a warning sign of diabetic ketoacidosis (DKA).
Kussmaul breathing	The rapid, deep, and labored breathing of people who have <i>ketoacidosis</i> or who are in a diabetic coma. Named for Adolph Kussmaul, the 19th century German doctor who first noted it. Also called "air hunger."

Diabetes Glossary

Term	Definition
labile diabetes	A term used to indicate when a person's blood glucose (sugar) level often swings quickly from high to low and from low to high. Also called brittle diabetes.
LDL cholesterol (low-density lipoprotein cholesterol)	A <i>fat</i> found in the blood that takes <i>cholesterol</i> around the body to where it is needed for cell repair and also deposits it on the inside of artery walls. Sometimes called "bad" cholesterol.
lente insulin	An intermediate-acting insulin. On average, lente insulin starts to lower blood glucose levels within one to two hours after injection. It has its strongest effect 8 to 12 hours after injection but keeps working for 18 to 24 hours after injection. Also called L insulin.
lipid profile	A blood test that measures total <i>cholesterol</i> , <i>triglycerides</i> , and <i>HDL cholesterol</i> . <i>LDL cholesterol</i> is then calculated from the results. A lipid profile is one measure of a person's risk of cardiovascular disease.
lispro insulin	A rapid-acting insulin. On average, lispro insulin starts to lower blood glucose within five minutes after injection. It has its strongest effect 30 minutes to one hour after injection but keeps working for 3 hours after injection.
long-acting insulin	A type of <i>insulin</i> which starts to lower <i>blood glucose</i> within 4 to 6 hours after injection and has its strongest effect 10 to 18 hours after injection.
macrovascular disease	A disease of the large blood vessels sometimes occurring when a person has had diabetes for a long time. Fat and blood clots build up in the large blood vessels and stick to the vessel walls. Three kinds of macrovascular disease are coronary disease, cerebrovascular disease, and peripheral vascular disease.
meal plan	A guide for controlling the amount of <i>calories</i> , <i>carbohydrates</i> , <i>proteins</i> , and <i>fats</i> a person eats. People with <i>diabetes</i> can use such plans as the <i>Exchange Lists</i> or the <i>Point System</i> to help them plan their meals so that they can keep their diabetes under control.
microvascular disease	A disease of the smallest blood vessels, such as those found in the eyes, nerves, and kidneys. The walls of the vessels become abnormally thick but weak. Then they bleed, leak protein, and slow the flow of blood to the cells.
neuropathy	A disease of the nervous system. Many people who have not controlled their <i>diabetes</i> well have nerve damage. The three major forms of nerve damage are: <i>peripheral neuropathy</i> , <i>autonomic neuropathy</i> , and mononeuropathy. The most common form is peripheral neuropathy, which mainly affects the feet and legs.
nonketotic coma	A type of coma caused by a lack of insulin. A nonketotic crisis means: (1) very high levels of glucose (sugar) in the blood; (2) absence of ketoacidosis; (3) great loss of body fluid; and (4) a sleepy, confused, or comatose state. Nonketotic coma often results from some other problem such as a severe infection or kidney failure.
oral glucose tolerance test (OGTT)	The oral <i>glucose</i> tolerance test to diagnose <i>pre-diabetes</i> and <i>diabetes</i> following an overnight fast. A blood sample is taken, then the patient drinks a high-glucose beverage. Blood samples are taken at intervals for 2 to 3 hours. Test results are compared with a standard and show how the body uses glucose over time.
oral hypoglycemic agents	Medicines taken by mouth by people with type 2 diabetes to keep blood glucose levels as close to normal as possible.
pancreas	An organ behind the lower part of the stomach about the size of a hand. It makes <i>insulin</i> so the body can use <i>glucose</i> (sugar) for energy and makes <i>enzymes</i> to help the body digest food.

Diabetes Glossary

Term	Definition
periodontal disease	Damage to the gums. People who have diabetes are more likely to have gum disease than people who do not have diabetes.
peripheral neuropathy	Nerve damage, usually affecting the feet and legs; causing pain, numbness, or a tingling feeling. Also called "somatic neuropathy" or " <i>distal sensory polyneuropathy</i> ."
peripheral vascular disease (PVD)	A disease in the large blood vessels of the arms, legs, and feet. People who have had diabetes for a long time may get this because major blood vessels in their arms, legs, and feet are blocked and these limbs do not receive enough blood. The signs of PVD are aching pains in the arms, legs, and feet (especially when walking) and foot sores that heal slowly. Although people with diabetes cannot always avoid PVD, doctors say they have a better chance of avoiding it if they take good care of their feet, do not smoke, and keep both their blood pressure and diabetes under good control.
point system	A way to plan meals using points to rate each of the four food classes: calories, <i>carbohydrates</i> , <i>proteins</i> , and <i>fats</i> . Each food is given a point value within its class. A planned diet for the day can include foods in the same class that have the same point values for meals and snacks.
polydipsia	Excessive thirst lasting for long periods of time. This condition can occur in untreated or poorly controlled diabetes mellitus.
polyphagia	Excessive hunger and eating; may be a sign of <i>diabetes</i> . People with polyphagia often lose weight even though they are eating more than normal.
polyuria	Having to urinate often; a common sign of diabetes.
postprandial blood glucose	The <i>blood glucose</i> level taken 1 to 2 hours after eating.
preprandial blood glucose	The blood glucose level taken before eating.
proteinuria	A condition in which the urine contains large amounts of <i>protein</i> , a sign that the kidneys are not working properly.
pruritus	Itching skin; may be a symptom of diabetes.
regular insulin	Short-acting <i>insulin</i> . On average, regular insulin starts to lower <i>blood glucose</i> within 30 minutes after injection. It has its strongest effect 2 to 5 hours after <i>injection</i> , but keeps working 5 to 8 hours after injection. Also called R insulin.
self-management	In diabetes, the ongoing process of managing diabetes. Includes meal planning, planned physical activity, blood glucose monitoring, taking diabetes medicines, handling episodes of illness and of low and high blood glucose, managing diabetes when traveling, and more. The person with diabetes designs his or her own self-management treatment plan in consultation with a variety of health care professionals such as doctors, nurses, dietitians, pharmacists, and others.
short-acting insulin	A type of <i>insulin</i> which starts to lower <i>blood glucose</i> within 30 minutes after <i>injection</i> and has its strongest effect 2 to 5 hours after injection. See regular insulin.
sliding scale	A set of instructions for adjusting insulin on the basis of blood glucose test results, meals, or activity levels.

Diabetes Glossary

Term	Definition
Somogyi effect (rebound hyperglycemia)	When the <i>blood glucose level</i> swings high following <i>hypoglycemia</i> . The Somogyi effect may follow an untreated hypoglycemic episode during the night and is caused by the release of stress <i>hormones</i> .
Type 1 diabetes (Insulin-dependent diabetes mellitus)	A type of diabetes in which the insulin-producing cells (called beta cells) of the pancreas are damaged. People with type 1 diabetes produce little or no insulin, so glucose cannot get into the body's cells for use as energy. This causes blood sugar to rise. People with type 1 diabetes must use insulin injections to control their blood sugar.
Type 2 diabetes (Noninsulin-dependent diabetes mellitus)	A type of diabetes in which the <i>insulin</i> produced is either not enough or the person's body does not respond normally to the amount present. When there is not enough insulin or the insulin is not used as it should be, <i>glucose</i> cannot get into the body's cells for use as energy. This causes blood sugar to rise.
ulcer	A break in the skin; a deep sore. People with diabetes may get ulcers from minor scrapes on the feet or legs, from cuts that heal slowly, or from the rubbing of shoes that do not fit well. Ulcers can become infected.
very-long-acting insulin	A type of <i>insulin</i> that starts to lower <i>blood glucose</i> within 1 hour after injection and keeps working evenly for 24 hours after injection. Note: italicized words are found elsewhere in this glossary.