

Glossary of Diabetes Terms

A

Acanthosis Nigricans. A condition in which the skin around the neck, armpits, or groin looks dark, thick, and velvety. Acanthosis Nigricans is a physical sign of insulin resistance.

Americans with Disabilities Act (ADA). A Federal law enacted in 1990, and amended in 2008, to protect people with disabilities from discrimination. Under this law, diabetes can be considered a disability.

Autoimmune disease. A disorder in which the immune system mistakenly attacks and destroys body tissue that it believes to be foreign. In type 1 diabetes, an autoimmune disease, the immune system attacks and destroys the insulin-producing beta cells.

B

Basal insulin. Long-acting or immediate-acting insulin delivered once or twice a day. Basal insulin is used to control blood glucose levels overnight and between meals.

Basal/bolus insulin plan. An insulin plan that mimics the way a normally functioning pancreas produces insulin by using a coordinated combination of different types of insulin to achieve target blood glucose levels at meals, snacks, during periods of physical activity, and through the night.

Blood glucose level. The amount of glucose (sugar) in the blood.

Blood glucose meter. A small, portable machine that measures how much glucose is in the blood. After pricking the skin with a lancet, one places a drop of blood on a special test strip, which is inserted in the machine. The meter (or monitor) then gives the blood glucose level as a number on the meter's digital display.

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Blood glucose monitoring. The act of checking the amount of glucose in the blood. Also called self-monitoring of blood glucose.

Bolus insulin. A dose of rapid-acting or short-acting insulin given to cover the carbohydrate in a meal or snack and to lower blood glucose levels that are above target.

Blood ketone testing. Use of a meter to test the blood for ketones (or ketone bodies).



Carbohydrates or carbs. One of the three sources of energy in food for the body. Carbohydrates are mainly sugars and starches that the body breaks down into glucose. Foods that contain carbohydrates raise blood glucose levels. Carbohydrate foods include: breads, crackers, and cereals; pasta, rice, and grains; vegetables; milk and yogurt; fruit, juice, and sweetened sodas; and table sugar, honey, syrup, and molasses, cakes, pies, and cookies.

Carbohydrate (carb) counting. A popular meal planning approach for children and adolescents with diabetes that involves calculating the number of grams of carbohydrate, or choices of carbohydrate, eaten at meals or snacks.

Celiac disease. A condition in which a person cannot eat any food products that contain gluten or that have been prepared in a gluten-contaminated environment. Gluten is found in many grains, including wheat, rye, and barley, which are found in many breads, pastas, cereals, and processed foods. Ingestion of gluten can cause gastrointestinal side effects such as bloating, abdominal pain, or diarrhea.

Changing carb intake meal plan. A method of meal planning used by students who use multiple daily insulin injections or an insulin pump. Students who use this method do not have to eat the same amount of carbs at every meal or snack but they must adjust insulin doses (with rapid- or short-acting insulin) to cover the amount of carbs consumed. Students typically use this type of meal plan in conjunction with a basal/bolus insulin plan.

Complications of diabetes. Harmful effects that may happen when a person has diabetes. Short-term complications include hypoglycemia (low blood glucose) and hyperglycemia (high blood glucose). Long-term complications, which may develop when a person has had diabetes for a long time, may include heart disease, stroke, blindness, kidney failure, gum disease, nerve disease, and amputation of a foot or leg.

Consistent carb intake meal plan. A method of meal planning in which students aim for a set amount of carbs at each meal and snack and do not adjust their mealtime insulin for the amount of carb intake. These students follow a traditional or fixed insulin dose plan.

Continuous glucose monitor (CGM). A device that records glucose levels throughout the day. The CGM works through a sensor inserted under the skin that measures interstitial glucose levels (the glucose found in the fluid between cells) at regular intervals. The CGM sends the current glucose level wirelessly to a pump or a separate monitor that the student carries or wears in a pocket, a backpack, or a purse. When glucose levels are too high or too low, the CGM sets off an alarm.

D

Diabetes Medical Management Plan (DMMP). Describes the medical orders or diabetes care plan developed by the student's personal diabetes health care team.

Diabetic ketoacidosis (DKA). An emergency condition in which extremely high blood glucose levels, along with a severe lack of insulin, result in the breakdown of body fat for energy and an accumulation of ketones in the blood and urine.

E

Education Plan. A plan that addresses the student's needs for services to manage their diabetes safely and effectively in school, where required under Section 504 of the Rehabilitation Act or the Individuals with Disabilities Act (IDEA). These include the 504 Plan, other education plan, or individualized education program (IEP).

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Emergency Care Plans. Plans that provide school personnel with essential information on how to recognize and respond to symptoms of hypoglycemia and hyperglycemia, who to contact for help, and what to do in an emergency.



Family Educational Rights and Privacy Act (FERPA). A Federal law that, with certain exceptions, prohibits schools from disclosing personally identifiable information in a student's education record, unless the school obtains the prior written consent of the student's parent/guardian or of the eligible student (a student who is 18 years or older or who attends an institution of postsecondary education).



Glucagon. A hormone that raises the level of glucose in the blood. Glucagon, given by injection, is used to treat severe hypoglycemia.

Glucose. A simple sugar found in the blood. It is the body's main source of energy.

Glucose correction factor. The amount of insulin the student needs to lower blood glucose to the target level.

Glucose tablets or gel. Special products that deliver a pre-measured amount of pure glucose. They are a quick-acting form of glucose used to counteract hypoglycemia.



Health care plans. Plans that outline each student's individual diabetes management needs. These include the Diabetes Medical Management Plan prepared by the student's personal diabetes health care team and the Individualized Health Care Plan and Emergency Care Plans for Hypoglycemia and Hyperglycemia prepared by the school nurse.

Hormone. A chemical, produced by an organ, that travels in the blood to affect other organs. An example of a hormone is insulin.

Hyperglycemia. A high level of glucose in the blood. High blood glucose can be due to a mismatch in insulin, food, exercise or illness or pump malfunction.

Hypoglycemia. A low level of glucose in the blood. Low blood glucose is most likely to occur during or after exercise, if too much insulin is present, or not enough food is consumed.

Hypoglycemia unawareness. A condition in which students do not experience early physical warning signs of hypoglycemia (low blood glucose) such as jitteriness, shaking, and sweating.



Individualized Education Program (IEP). A program designed for a student with a disability covered by the Individuals with Disabilities Education Act (IDEA). Each child's IEP must include the supplementary aids and services to be provided for, or on behalf of, the child, and a statement of the program modifications or supports for school personnel that will be provided for the child to make progress and to be involved in the general education curriculum.

Individualized Health Care Plan (IHP). A written plan developed by the school nurse in collaboration with the student's personal diabetes health care team and the family to implement the student's Diabetes Medical Management Plan. Sometimes called the nursing care plan.

Individuals with Disabilities Education Act (IDEA). A Federal law that provides funds to States to support special education and related services for children with disabilities, administered by the Office of Special Education Programs in the U.S. Department of Education. To be eligible for services under IDEA, a student's diabetes must impair his or her educational performance so that he or she requires special education and related services. IDEA also contains specific confidentiality protections for student records.

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Insulin. A hormone made in the pancreas that allows glucose to enter the cells of the body where it is used for energy. Several types of insulin are used in combination to treat people with diabetes. These different types of insulin have been manufactured either to have immediate (rapid-acting or short-acting insulin), intermediate, or long (basal insulin) onset of action and duration of action in the body. A coordinated combination of different types of insulin is used to achieve target blood glucose levels at meals, snacks, during periods of physical activity, and through the night.

Insulin injections. The process of putting insulin into the body with a needle and a syringe or with an insulin pen.

Insulin pen. A pen-like device used to put insulin into the body.

Insulin pump. A computerized device that is programmed to deliver small, steady doses of insulin throughout the day. Additional doses are given when needed to cover food intake and to lower high blood glucose levels. The insulin is delivered through a system of plastic tubing (infusion set).

Insulin resistance. A condition in which the body does not respond normally to the action of insulin. Many people with type 2 diabetes have insulin resistance.

Insulin-to-carb ratio. Used to determine the number of units of insulin needed to cover the number of grams of carbs in the food the student plans to eat.



Ketoacidosis. See Diabetic ketoacidosis (DKA).

Ketones (ketone bodies). Chemicals made by the body when there is not enough insulin in the blood and the body must break down fat for energy. Ketones are usually associated with high blood glucose, but also may occur when a student is ill and blood glucose levels fall below the student's target range. See also diabetic ketoacidosis (DKA).

Ketosis. A buildup of ketones in the body that may lead to diabetic ketoacidosis. Signs of ketosis are nausea, vomiting, and stomach pain.

L

Lancet. A small needle, inserted in a spring-loaded device, used to prick the skin and obtain a drop of blood for checking blood glucose levels.

M

Medical alert identification. An identification card, necklace, or bracelet indicating the student has diabetes and giving emergency numbers to call for help.

mg/dL (milligrams per deciliter). This term is used in blood glucose monitoring to describe how much glucose is in a specific amount of blood.

N

Nursing Care Plan. A plan developed by the school nurse that is used to implement the student's diabetes medical management plan. See also Individualized Health Care Plan.

P

Pallor. Abnormal paleness of the skin.

Pancreas. The organ behind the lower part of the stomach that makes insulin.

Peak effect time. Time when insulin has its major impact on reducing blood glucose levels. See also Insulin.

Personal Diabetes Health Care Team. Includes the student with diabetes, the parents/guardian, the student's doctor, nurse, registered dietitian, diabetes educator, and other health care providers involved in the student's care.

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Quick-acting glucose. Foods or products containing simple sugar that are used to raise blood glucose levels quickly during a hypoglycemic episode. Examples include 3 or 4 glucose tablets or 1 tube of glucose gel or 4 ounces of fruit juice (not low-calorie or reduced sugar) or 6 ounces (half a can) of soda (not low-calorie or reduced sugar).



Section 504 of the Rehabilitation Act (Section 504). A Federal law, amended in 2008, that prohibits recipients of Federal financial assistance from discriminating against people on the basis of disability.

School Health Team. Includes the student with diabetes, the parents/guardian, the school nurse and other health care personal, the staff members designated as trained diabetes personal, administrators, the principal, the 504/IEP Coordinator, office staff, the student's teacher(s), the guidance counselor, coach, lunchroom, and other school staff members.

School nurse. The school staff member who promotes the health and safety of students, intervening to manage actual and potential health problems. The school nurse provides case management services and actively collaborates with others to build the student's and family's capacity to manage health issues. School nurse services are provided to the entire school population—infants, toddlers, pre-schoolers, children with special needs, traditional school populations, and school personnel. School nurses hold current licenses as registered nurses in the states in which they practice.

Syringe. A device used to inject medications such as insulin into body tissue.

T

Target or target range. A range of ideal blood glucose levels determined by the student's personal health care team and outlined in the Diabetes Medical Management Plan. See also blood glucose level.

Test strips. Specially designed strips used in blood glucose meters to check blood glucose levels or in urine testing for ketones.

Trained Diabetes Personnel. Nonmedical personnel who have received in-depth training about diabetes and diabetes management, and can perform student-specific diabetes care tasks, including blood glucose monitoring, insulin administration, recognition and treatment of hypoglycemia and hyperglycemia, and urine or blood ketone testing under supervision of the school nurse or a diabetes-trained health care professional. They also may be called unlicensed assistive personnel, assistive personnel, paraprofessionals, or trained nonmedical personnel.

U

Urine ketone testing. A procedure for measuring the level of ketones in the urine using test strips.

