What Is Type 1 Diabetes?

This handout answers common questions about your diabetes. If you want to learn more or if you have questions be sure to ask your healthcare provider.

**What is diabetes?**

Diabetes is a condition that causes the sugar level in your blood to become too high. In Type 1 diabetes, blood sugar levels rise out of control because the body has stopped making enough **insulin** (in-suhl-in). Type 1 is most common in children and young adults. Someone with Type 1 diabetes has to inject insulin to stay healthy and to keep their blood sugar level near normal.

**What is insulin?**

Insulin is a chemical substance in the body (hormone) that is needed to keep blood sugar levels normal. It also helps the body use fat and protein. It is made in the **pancreas** (pan-cree-us), an organ near the stomach.

**How did I get diabetes?**

You don’t catch diabetes, your body just stops making insulin. In some people the pancreas is damaged. And, over time the cells that make insulin are destroyed. Diabetes is an autoimmune (awe-toe-ih-mewn) process. “Auto,” at the start of the word “autoimmune,” means self. So, this disease process occurs when the body destroys its own cells — the cells that produce insulin.

At first the person does not know that anything is wrong. Only when nearly all the cells that produce insulin are destroyed does Type 1 diabetes develop.

**What are the signs of diabetes?**

You may have:

- Lost weight without trying
- Had to use the bathroom a lot
- Felt very hungry
- Felt very thirsty
- Started wetting the bed
- Had trouble seeing
- Felt tired

**Is there a cure?**

No. There is no cure for diabetes. But if you work with your healthcare team, eat right and exercise, you can live a great life and stay healthy.

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**To Learn More**

- Endocrinology
  206-987-2640
- Ask your child’s healthcare provider
- seattlechildrens.org

**Free Interpreter Services**

- In the hospital, ask your nurse.
- From outside the hospital, call the toll-free Family Interpreting Line, 1-866-583-1527. Tell the interpreter the name or extension you need.
What do we do now?

**Start treatment with insulin**

The goal of treatment is to lower blood sugar levels. This is done with insulin shots, testing blood sugars, a healthy diet and exercise.

Your doctor will tell you what kind of insulin to take. You need insulin to live. The shots replace the insulin your body no longer makes. If you are ready you can give yourself the shots. It might be scary at first, but believe it or not, you get used to it. A nurse will show you and your family how to do it. You'll get to practice on artificial skin.

An adult will help you dial up the dose on your insulin pen and attach the pen needle. When you are older you can start dialing up your own insulin into the pen.

This picture shows where to choose sites for shots.

![Sites for insulin shots](image)

**Ask questions**

There is a lot to learn about this disease. Be sure to ask questions or talk to someone about your concerns. Write your questions down as they come up so you remember to ask them when you meet with someone on your care team. Keep the phone numbers you'll need in a handy place.

**Get a medical ID tag**

Ask your healthcare provider about how to order an ID (identification) tag that alerts others that you have diabetes. There are many styles. You can choose a necklace or a bracelet. There are also tags that can be put on watchbands, or you could carry a wallet card.

![Medical ID tag](image)
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**Eat healthy foods**

When you eat, your body turns food into *glucose* (*glue*-kohs). Blood glucose (or blood sugar) levels go up. You prevent this rise by taking insulin before meals and by eating healthy foods.

Some kids need to eat at about the same time every day, eat about the same amount of carbohydrates (*kar-bow-high-drates*) and to not skip meals. Check with your healthcare provider to see if you have to be this strict with your eating.

You will likely meet with a *dietitian* (*die-uh-tish-uhn*) who will help work out a meal plan for you. To make sure your plan fits your life, tell your dietitian:

- What foods you do and don’t like
- What foods you often eat at home
- What foods you eat when not at home
- Your daily schedule and about your family's lifestyle
- Your exercise habits
- Who does the cooking and what they like to cook
- About any other health problems you have

**Get exercise**

Being active helps your cells take in glucose. It lowers the blood sugar levels in your body. So, exercise is good for most people with diabetes. Talk to your care team about a plan that will work for you. Walk, play soccer, rollerblade, swim. Do whatever is fun for you, but check with your doctor before making a big change in your exercise habits or starting a new sport.

When you exercise, or go on an outing:

- Check your blood sugar first.
- Take a backpack or duffel bag with you packed with:
  - a water bottle
  - glucose tablets, hard candy or juice
  - a healthy snack such as crackers and cheese or a sandwich
  - your diabetes supplies (meter, strips and other items you need to check your blood sugar)

**Test your blood sugar level**

Someone on your care team will explain how to test your blood sugar levels. Most people do the test using a drop of blood from the tip of their finger. A machine called a glucose monitor, also called a glucometer (*glue-kohm-uh-ter*) will tell you how much glucose is in your blood. There are many styles of glucose monitors and they use different methods of “reading” the blood sample.
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You will also likely get a logbook to keep track of your blood sugar levels. Check your blood sugar level 4 to 5 times a day. Keep good records and bring them with you when you go for check-ups.

Your healthcare provider will tell you the blood sugar levels that you should try to maintain. These levels are expressed with numbers.

Doing the testing helps you stay in control of your diabetes.

Test your ketones

Urine ketone (key-tone) testing is very important. A method for testing ketones must be kept in the home (and taken on trips) at all times. Urine ketones are chemicals that appear in the urine when body fat is being broken down for energy. Fat is burned by the body when there is not enough insulin to allow sugar to be burned for the energy needed by the body. Ketones are also formed when not enough carbohydrates have been eaten to provide the energy the body needs.

Most times you will be taught how to test for ketones right when you are diagnosed with diabetes. Frequent urine ketone tests are done the first few days to find out if enough insulin is being given to turn off ketone production. This is the first goal of treatment when you are first diagnosed. The second goal is to lower your blood sugar levels.

Testing of ketones is done because they can build up in your body and make you sick. Someone on your healthcare team will tell you what supplies to use to test your ketones and how often you should test for them.

Most times, you will be asked to test for ketones when your blood sugar is high or when you are sick. It is important to test them when you feel sick to your stomach or when you vomit. If you are sick, ketones can be present even when your blood sugar is not high.

Ketones are measured as being negative (which is good), small, moderate or large. You will learn how to manage your ketones at home, but you should always call your healthcare provider if ketones aren’t responding to corrections. Large (high) ketones can be very dangerous. You will learn what symptoms to watch for.

Follow a schedule every day

You may need to stick to a schedule each day. Your healthcare provider can help you set up a routine that works best for you. Your schedule depends on the kind of insulin you take and your family's needs.

- Good Morning!
- Check blood sugar
- Give insulin
- Breakfast
- Snack
- Check blood sugar
- Give insulin
- Lunch
- Snack
- Check blood sugar
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- Give insulin
- Dinner
- Check blood sugar
- Snack
- Goodnight
- Check blood sugar between 1-3 a.m. or “overnight”

Remember to get some exercise every day!

Know what to do if something goes wrong

Diabetes can cause four types of problems:
- Low blood sugar, also called hypoglycemia (high-poh-gligh-see-mee-uh).
- High blood sugar, also called hyperglycemia (high-per-gligh-see-mee-uh).
- Health problems with your eyes, heart, kidneys, nerves and feet.
- Ketoacidosis (kee-toe-ass-ih-doh-sis). Ketones building up in your body usually due to not enough insulin.

We have handouts about low and high blood sugar. They explain what causes each of these problems and what to do about them.

Know what to do if you are sick

Most times when you are sick it will affect your blood sugar levels.

Follow these steps when you are sick:

1. Check urine ketones any time you are sick. Even if your blood sugar is in the normal range, check ketones before meals and bedtime and every 3 hours if you are home sick from school or whenever you urinate.
2. Test your blood sugar every 2 to 4 hours, or ½ to 1 hour when vomiting.
3. Never skip or stop insulin even if you don’t feel like eating or you are throwing up (vomiting).
4. Call your healthcare provider if you think you need to adjust your insulin dose.
5. When your stomach is upset these “sick day” foods will give you 15 grams of carbohydrates. 15 grams of carbohydrates has been found to be the amount that will help start to bring up your blood sugar level if it is too low.
   - ½ cup apple juice
   - ½ cup Jell-O
   - ¾ cup non-diet soda
   - ¼ cup sherbet
   - 6 saltine crackers
   - 8 to 12 ounces of sports drink (check label for most up-to-date carbohydrate content)
   - 1 slice toast
6. Watch for signs of high blood sugar such as upset stomach, vomiting, moderate or large ketones in the urine, stomach pain and feeling tired or confused. Call your healthcare provider if you have any of these signs.
7. Drink more liquids. Sport drinks are a good choice.
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To learn more

- Contact your healthcare provider.
- JDRF (Juvenile Diabetes Research Foundation International):
  200 Vesey Street, 28th Floor
  New York, NY 10281
  1-800-533-CURE (2873)
  jdrf.org
- American Diabetes Association:
  2451 Crystal Drive, Suite 900
  Alexandria, VA 22202
  1-800-DIABETES (1-800-342-2383)
  diabetes.org