

## **What is type 1 diabetes?**

Type 1 diabetes (sometimes called type 1 "diabetes mellitus") is a disorder that disrupts the way your body uses sugar.

All the cells in your body need sugar to work normally. Sugar gets into cells with the help of a hormone called insulin. If there is not enough insulin, or if the body stops responding to insulin, sugar builds up in the blood. That is what happens to people with diabetes.

There are 2 types of diabetes. People with type 1 diabetes make little or no insulin. People with type 2 diabetes sometimes also make too little insulin, but more often the problem is that their cells do not respond to insulin.

## **What are the symptoms of type 1 diabetes?**

The symptoms include:

- Intense thirst
- Being very tired
- Urinating often
- Losing weight
- Blurred vision

In extreme cases, type 1 diabetes can also cause nausea or vomiting, belly pain, and panting.

## **How do I know if I have type 1 diabetes?**

Your doctor or nurse can do a blood test to measure the amount of sugar in your blood. The test will show whether you have diabetes. If you do, your doctor or nurse can then decide whether it is type 1 or type 2 – based on your age, your weight, and other factors.

## **How is type 1 diabetes treated?**

Treatment for type 1 diabetes involves 2 key parts:

- Measuring your blood sugar often, to make sure it does not get too high or too low. (Your doctor or nurse will explain how to measure your blood sugar, and how often to do it.)
- Using insulin shots or an insulin pump to keep your blood sugar levels in the right range. (An insulin pump is a device that you wear close to your body. It is connected to tube that goes under your skin and supplies insulin.)

People with type 1 diabetes also need to carefully plan their meals and activity levels. That's because eating raises blood sugar, while being active lowers it. Despite the need to plan, people with diabetes can have normal diets, be active, eat out, and do all the things that most other people do.

There are other things you can do to stay healthy, such as not smoking. It's also important to get the flu vaccine every year. Some people also need a vaccine to prevent pneumonia, too.

### **How often do I need to see my doctor or nurse?**

You will probably need to see your doctor or nurse at least 3 or 4 times a year. Sometimes you will need more visits to learn how to manage your diabetes or if your blood sugar is not well controlled.

During your visits, your doctor or nurse will want to measure your blood sugar using a test called "A1C." This test tells you your average blood sugar level over the last few months. Its results will help your doctor or nurse decide whether to adjust your treatment.

During some of your visits, your doctor or nurse will also check other aspects of your health. For instance, he or she might measure your blood pressure or cholesterol. It is very important that you keep all your appointments with your doctor or nurse.

### **Why is it important to keep my blood sugar close to normal?**

Having high blood sugar can cause serious problems over time. It can lead to:

- Nerve damage
- Kidney disease
- Vision problems (or even blindness)
- Pain or loss of feeling in the hands and feet
- The need to have fingers, toes, or other body parts removed (amputated)
- Heart disease and strokes

Having **low** blood sugar can cause problems, too. It can make your heart beat fast, and make you shake and sweat. If blood sugar gets really low, it can cause more serious problems, too. People with very low blood sugar can get headaches, get very sleepy, pass out, or even have seizures.

### **Why is it important to keep my blood pressure and cholesterol low?**

People with diabetes have a much higher risk of heart disease and strokes than people who do not have diabetes. Keeping blood pressure and cholesterol low can help lower those risks.

If your doctor or nurse puts you on blood pressure or cholesterol medicines, be sure to take them. Studies show that these medicines can prevent heart attacks, strokes, and even death.

### **What if I want to get pregnant?**

Many women with type 1 diabetes have healthy pregnancies. If you want to have a baby, make sure you control your blood sugar really well before and during pregnancy. This will protect you and your baby from problems.

## **What is type 2 diabetes?**

Type 2 diabetes (sometimes called type 2 "diabetes mellitus") is a disorder that disrupts the way your body uses sugar.

All the cells in your body need sugar to work normally. Sugar gets into the cells with the help of a hormone called insulin. If there is not enough insulin, or if the body stops responding to insulin, sugar builds up in the blood. That is what happens to people with diabetes.

There are 2 different types of diabetes. In type 1 diabetes, the problem is that the body makes little or no insulin. In type 2 diabetes, the problem is that:

- The body's cells do not respond to insulin
- The body does not make enough insulin
- Or both

## **What are the symptoms of type 2 diabetes?**

Type 2 diabetes usually causes no symptoms. When symptoms do occur, they include:

- Needing to urinate often
- Intense thirst
- Blurry vision

## **If type 2 diabetes rarely causes symptoms, why should I care about it?**

Even though type 2 diabetes might not make you feel sick, it can cause serious problems over time, if it is not treated. The disorder can lead to:

- Heart attacks
- Strokes
- Kidney disease
- Vision problems (or even blindness)
- Pain or loss of feeling in the hands and feet
- The need to have fingers, toes, or other body parts removed (amputated)

## **How do I know if I have type 2 diabetes?**

To find out if you have type 2 diabetes, your doctor or nurse can do a blood test to measure the amount of sugar in your blood.

## **How is type 2 diabetes treated?**

There are a few medicines that help control blood sugar. Some people need to take pills that help the body make more insulin or that help insulin do its job. Others need insulin shots.

Depending on what medicines you take, you might need to check your blood sugar regularly at home. But not everyone with type 2 diabetes needs to do this. Your doctor or nurse will tell you if you should be checking your blood sugar, and when and how to do this.

Sometimes, people with type 2 diabetes also need medicines to reduce the problems caused by the disease. For instance, medicines used to lower blood pressure can reduce the chances of a heart attack or stroke.

Medicines are not the only tool to manage diabetes. Being active, losing weight, eating right, and not smoking can all help people with diabetes stay as healthy as possible. It's also important to get the flu vaccine every year. Some people also need a vaccine to prevent pneumonia, too.

### **Can type 2 diabetes be prevented?**

Yes, it can. To reduce your chances of getting type 2 diabetes, the most important thing you can do is control your weight. If you already have the disorder, losing weight can improve your health and blood sugar control. Being active can also help prevent or control the disorder.

### **What is hemoglobin A1C?**

Hemoglobin A1C is a blood test that shows what your average blood sugar level has been for the past 2 to 3 months. Doctors and nurses use this test for 2 reasons:

- To see whether a person has diabetes
- To see whether diabetes treatment is working the right way

Other names for hemoglobin A1C are "glycated hemoglobin," "HbA1C," or just "A1C."

### **What should my A1C numbers be?**

That depends on why you have the test.

- **When checking for diabetes** – If you had an A1C test to see if you have diabetes, your A1C should be 6 or less.
- If your A1C is 6.5 or higher, it probably means you have diabetes, but you should have the test done again to be sure.
- If your A1C is between 5.7 and 6.4, you are at risk for getting diabetes. You should probably start doing things that can help prevent diabetes. For example, you should become more active and lose weight (if you are overweight).
- **When checking how treatment is working** – If you already know you have diabetes, and you had an A1C test to see how well controlled your blood sugar is, your A1C should probably be 7 or less. But you need to check with your doctor on what your level should be. Not everyone with diabetes is the same. Some people need to aim for different A1C levels than others.

### **Can I do this test at home?**

It is now possible to buy kits to test your A1C at home. But home testing of A1C is not usually necessary.

### **How often should I have an A1C test?**

That depends on whether you have diabetes and on what your last A1C test showed.

- If you had an A1C test to check for diabetes and your A1C was less than 5.7 (meaning you do **not** have diabetes), you should have A1C tests done every 3 years.
- If you had an A1C test to check for diabetes and your A1C was between 5.7 and 6.4 (meaning you do not have diabetes but are at risk for it), you should have A1C tests done every 1 to 2 years.
- If you do have diabetes and your blood sugar is well controlled, you should have A1C tests every 6 months.
- If you have diabetes and you recently changed treatment plans or you are having trouble controlling your blood sugar, you should have A1C tests every 3 months.

### **Why do my A1C numbers matter?**

Studies show that keeping A1C numbers close to normal helps keep people from getting:

- Diabetic retinopathy, an eye disease that can cause blindness
- Nerve damage caused by diabetes (also called neuropathy)
- Kidney disease

For people with newly diagnosed diabetes, keeping the A1C close to normal might also prevent heart attacks and strokes in the future.

### **Do I still need to measure my blood sugar at home?**

If your doctor wants you to check your blood sugar at home, you should keep doing so even if you have routine A1C tests. Blood sugar tests tell you what your blood sugar is from moment to moment. That's important information to have, because it lets you know if your medications and lifestyle changes are keeping your blood sugar in a safe range.

### **Why is diet important in diabetes?**

Diet is important because it is part of diabetes treatment. Many people need to change what they eat and how much they eat to help treat their diabetes. It is important for people to treat their diabetes so that they:

- Keep their blood sugar at or near a normal level
- Prevent long-term problems, such as heart or kidney problems, that can happen in people with diabetes

Changing your diet can also help treat obesity, high blood pressure, and high cholesterol. These conditions can affect people with diabetes and can lead to future problems, such as heart attacks or strokes.

### **Who will work with me to change my diet?**

Your doctor or nurse will work with you to make a food plan to change your diet. He or she might also recommend that you work with a "dietitian." A dietitian is an expert on food and eating.

### **Do I need to eat at the same times every day?**

When and how often you should eat depends, in part, on the diabetes medicine that you take. For example, people who use a certain type of insulin or who take diabetes pills that increase insulin levels (called "sulfonylureas") should eat meals at the same time each day. This helps prevent people from getting low blood sugar.

People who use an insulin pump, insulin before each meal, or pills that improve the way insulin works (called "[metformin](#)") do not always have to eat meals at the same time. That's because people who use these treatments have a smaller chance of getting low blood sugar.

### **What do I need to think about when planning what to eat?**

Our bodies break down the food we eat into small pieces called carbohydrates, proteins, and fats.

When planning what to eat, people with diabetes need to think about:

- Carbohydrates (or "carbs") – Carbohydrates, which are sugars that our bodies use for energy, can raise a person's blood sugar level. Your doctor, nurse, or dietitian will tell you how many carbohydrates you should eat at each meal or snack. Foods that have carbohydrates include:

- Bread, pasta, and rice
- Vegetables and fruits
- Dairy foods
- Foods with added sugar

It is best to get your carbohydrates from fruits, vegetables, whole grains, and low-fat milk.

- Protein – Your doctor, nurse, or dietitian will tell you how much protein you should eat each day. It is best to eat lean meats, fish, eggs, beans, peas, soy products, nuts, and seeds.

- Fats – The type of fat you eat is more important than the amount of fat. "Saturated" and "trans" fats can increase your risk for heart problems, like a heart attack.

- Foods that have saturated fats include meat, butter, cheese, and ice cream.

- Foods that have trans fats include processed food with "partially hydrogenated oils" on the ingredient list. This may include fried foods, store bought cookies, muffins, pies, and cakes.

"Monounsaturated" and "polyunsaturated" fats are better for you. Foods with these types of fat include fish, avocado, olive oil, and nuts.

- Calories – People need to eat a certain amount of calories each day to keep their weight the same. People who are overweight and want to lose weight need to eat fewer calories each day.

- Fiber – Eating foods with a lot of fiber can help control a person's blood sugar level.

- Salt – People who have high blood pressure should not eat foods that contain a lot of salt (also called sodium). People with high blood pressure should also eat healthy foods, such as fruits, vegetables, and low-fat dairy foods.

- Alcohol – Having more than 1 drink (for women) or 2 drinks (for men) a day can raise blood sugar levels. Also, drinks that have fruit juice or soda in them can raise blood sugar levels.

### **What can I do if I need to lose weight?**

If you need to lose weight, you can:

- Exercise – Try to exercise for 30 minutes a day, most days of the week. Some people with diabetes need to change their medicine dose before they exercise. They might also need to check their blood sugar levels before and after exercising.

- Eat fewer calories – Your doctor, nurse, or dietitian can tell you how many calories you should eat each day in order to lose weight.

If you are worried about your weight, size, or shape, talk with your doctor, nurse, or dietitian so that he or she can help.

### **Can I eat the same foods as my family?**

Yes. You do not need to eat special foods if you have diabetes. You and your family can eat the same foods. Changing your diet is mostly about eating healthy foods and not eating too much.

### **What are the other parts of diabetes treatment?**

The other parts of diabetes treatment are:

- Exercise

- Medicines

Some people with diabetes need to learn how to match their diet and exercise with their medicine dose. For example, people who use insulin might need to choose the dose of insulin they give themselves. To choose their dose, they need to think about:

- What they plan to eat at the next meal

- How much exercise they plan to do

- What their blood sugar level is

If the diet and exercise do not match the medicine dose, a person's blood sugar level can get too low or too high. Blood sugar levels that are too low or too high can cause problems.