

## Diabetes Mellitus, Type 1, Adult

### What is it?

Diabetes mellitus is a disease that causes the blood glucose concentration to increase. Glucose is a form of sugar. Over time, too much sugar in the blood damages nerves, blood vessels, and organs. Heart disease and strokes can result. Vision loss, kidney disease, and other problems can also result. Careful treatment of diabetes can help prevent or delay these problems.

There are two types of diabetes: type 1 (insulin-dependent) and type 2 (non-insulin-dependent). You have type 1. Your blood sugar is high because your body does not make enough insulin. (In type 2 diabetes, the body is unable to make enough insulin to meet increased needs that result from obesity and/or insulin resistance.) It is important that you understand how your body uses sugar. What follows is a brief explanation. We recommend that you read other materials and attend classes to learn more. The more you know, the better you can take care of yourself. Sugar, water, and oxygen provide energy for the body. Your body can change most of the food you eat into sugar. Sugar from digested food moves into the bloodstream. Blood travels through the body.

Insulin is a hormone made in the pancreas. This is a gland located near the stomach. Insulin allows sugar to move from the bloodstream into the cells of body tissues. There it is used for energy. If your body does not have enough insulin, sugar stays in the blood. This leaves your muscles, brain, and other organs without enough sugar to work well. Over time, diabetes causes damage to small blood vessels. This in turn causes damage to the organs that depend on blood from these vessels. The most common organs of the body affected by diabetes are the heart, nerves, eyes, and kidneys.

### What is the cause?

Type 1 diabetes occurs when the cells of the immune system attack the pancreas. Normally the immune system is what fights off illness for us. But sometimes the system "goes wrong" and attacks body cells instead. In type 1 diabetes, lymphocytes (the immune cells) attack the cells in the pancreas that make insulin. The exact cause for this is not known. Diabetes often runs in families.

### What are the symptoms?

When your diabetes is first discovered, your blood sugar may be very high. The usual symptoms of untreated diabetes include:

- Feeling thirsty and hungry
- Frequent urination (including getting up often at night to urinate)
- Weight loss
- Weakness and fatigue
- Blurry vision
- Wounds that will not heal
- Vaginal yeast infections that come back after being treated once we start treating your diabetes, you should feel completely normal.

### How is it treated?

The goal of treatment is to keep your blood sugar levels as close to normal as possible. You do this by eating correctly, getting the right kind of exercise, and using insulin. Insulin lowers the amount of glucose in your blood. Because your body does not make insulin, you have to take insulin each day. This has to be done by a shot (injection). You can do this yourself.

It is very important that you learn how to use insulin correctly. Too much insulin can make your blood sugar level dangerously low. This is called hypoglycemia. It can be life-threatening. In the short term, it is more dangerous than high blood sugar. You must eat regular meals. If you are not eating, you may have to reduce your insulin until you are eating.

Too little insulin can cause a condition known as ketoacidosis which can also be dangerous. It is associated with very high blood sugar. You will need to monitor your blood sugar. At first, and also when you make changes to your insulin, eating patterns or exercise routine, you may do this many times during the day. At other times, you may be able to do it less often. Whenever your health changes, you will need to check your blood sugar more often for a while. You will also need to check your own urine for sugar and ketones at home. This is very easy.

Good eating habits are important in diabetes. You can help balance your blood sugar by eating evenly throughout the day. The foods you eat should have the correct balance of sugars, fats, and proteins. We will teach you what to eat. There is nothing odd about a diabetic diet. It is the healthy way we all should eat.

Exercise lowers blood sugar because your muscles use more sugar than. If you exercise more, you may be able to use less insulin. You may also have to eat more.

High blood pressure can make the problems of diabetes worse.

If you have high blood pressure, we will need to treat you for that as well. We will check the levels of fats in your blood often. If they get too high, we may treat you for that. We suggest that you get regular eye exams and dental care. We also suggest that you take special care of your feet. We suggest regular foot exams to watch for signs of any problems with the feet. Your feet are at risk for serious infections. They are easy to injure. You may have less sensation in the feet. You may not notice when you have an injury or sore on the feet. You may also have less blood flow in the feet, which slows healing.

### What can I expect?

There is no cure for diabetes yet. However, with the right treatment, you can lead a healthy, active life. Treatment can help prevent or delay complications, such as problems with the eyes or kidneys. Diabetes can seem complicated at first. There is so much to know and understand. But you have a team of people ready to help you. Your team may include a doctor who specializes in diabetes, a nurse educator, and a dietitian. They will help you learn all you can about diabetes. The more you know, the better you can take care of yourself.

It is natural to feel angry, anxious, or depressed when you first learn you have diabetes. We can help you understand and work with these feelings.

**What to watch for.**

There is danger that your blood sugar will become too high or too low. Both of these conditions can be life-threatening. Learn the signs that tell you when they are happening. Make sure your family knows these signs too. Get immediate medical help if they happen.

Call us right away any time you feel too sick to do your normal activities. Call any time you are vomiting or nauseous.