

DIABETES

Diabetes is a disease that affects how your body turns food into energy.

When you eat, your body turns food into sugars, or glucose. At that point, your pancreas, an organ near the stomach, is supposed to release a hormone called insulin.

Insulin serves as a “key” to open your cells, allowing the glucose to enter so your cells can use the glucose for energy.

If you have diabetes, your body either doesn’t make enough insulin or can’t use the insulin it makes as well as it should.

HOW DIABETES AFFECTS THE BODY

When the pancreas is not producing insulin, cells don’t use glucose properly. The body loses its main source of fuel. Instead of helping produce energy for the body, glucose remains in the blood and is released in the urine.

- A person with diabetes might:
- Have to urinate frequently.
- Constantly feel hungry and/or thirsty.
- Feel tired.
- Experience coldness or numbness in hands and feet.

Over time, high glucose levels in the blood (or hyperglycemia) can cause:

- Heart disease.
- Stroke.

- Kidney disease.
- Eye problems.
- Dental disease.
- Nerve damage.
- Severe foot problems, sometimes necessitating amputation.
- Risk of infection.

TYPES OF DIABETES

About 1 in 11 people in the United States – 29.1 million people – has diabetes. There are three main types.

Type 1: If you have type 1 diabetes, your body doesn’t make insulin because your immune system attacks and destroys the cells in your pancreas (called beta cells) that make insulin. Type 1 diabetes is usually found in children and young adults, but it can appear at any age. People with type 1 diabetes must take insulin daily to stay alive.

Type 2: If you have type 2 diabetes, by far the most common type, your body doesn’t make or use insulin well. You can develop type 2 diabetes at any age. However, type 2 diabetes occurs most often at middle age or later in life.

Gestational diabetes: This develops in some women when they are pregnant. Most of the time, this gestational diabetes goes away after the baby is born. However, about half of women with history of gestational diabetes go on to develop type 2 diabetes within five to 10 years after delivery. (Sometimes diabetes

diagnosed during pregnancy is actually type 2 diabetes.)

Additionally, an estimated 86 million Americans have prediabetes – slightly elevated levels of blood glucose, indicating that the person is at risk of progressing to type 2 diabetes.

DIAGNOSING DIABETES

People who are overweight or who have a parent, brother or sister with diabetes are at risk for developing type 2 diabetes. A health care professional might use one of the following tests to find out whether you have diabetes or pre-diabetes.

Fasting plasma glucose (FPG) test: This test measures your blood glucose level at one point in time. The test is often given in the morning after you have fasted for at least eight hours. Fasting typically involves not eating and drinking only sips of water.

A1C test: The A1C (also known as hemoglobin A1C, HbA1C, glycated hemoglobin and glycosylated hemoglobin test) is a blood test that provides your average levels of blood glucose over the past three months. You can eat and drink before this test. Your doctor will consider factors such as your age and whether you have anemia or another problem with your blood.

Random plasma glucose (RPG) test: Sometimes this RPG test is used to diagnose diabetes at short notice, especially when diabetes symptoms are present and a health care professional does not want to wait until you have fasted.

Glucose challenge test: If you are pregnant and a health care professional is checking you for gestational diabetes, you might first receive the glucose challenge test (also known as the glucose screening test). Your blood will be drawn an hour after you drink a liquid containing glucose. You do not need to fast for this test. If your blood glucose is too

high, you might need to return for an oral glucose tolerance test while fasting.

Oral glucose tolerance test (OGTT): The OGTT measures blood glucose after you fast for at least eight hours. After your blood is drawn, you will drink the liquid containing glucose, and additional blood samples will be taken at timed intervals.

PREVENTION AND MANAGEMENT

It's possible to delay or prevent diabetes by losing weight (those who are overweight should aim for losing five to seven percent of their body weight) and keeping it off, improving eating habits by choosing foods with less fat and drinking water instead of sugary beverages, and getting at least 30 minutes of physical activity five days a week.

If you already have diabetes, it's crucial to communicate with your health care professional to learn the best ways to monitor and manage it. Typical strategies involve eating well, exercising, taking medication, checking your blood glucose level and avoiding stress.

DIABETES QUICK FACTS

- One in four of people in the United States who has diabetes don't know they have it.
- More than 84 million American adults — over a third — have prediabetes, and 90 percent of them don't know they have it.
- Diabetes is the seventh leading cause of death in the United States.
- Type 2 diabetes accounts for about 90 to 95 percent of diagnosed cases of diabetes. (Type 1 accounts for about 5 percent.)
- In the last 20 years, the number of adults diagnosed with diabetes has more than tripled. Why? The American

population has aged and has become more overweight.

FOR MORE INFORMATION

The UK Barnstable Brown Diabetes Center:

This nationally recognized center provides medical management in every area of diabetes as well as educational support to help patients change their lifestyles to fight the disease.

**ukhealthcare.uky.edu/diabetes-center
859-323-2232**

American Diabetes Association: The group's purpose is "to prevent and cure diabetes and to improve the lives of all people affected by diabetes." In addition to practical information about managing and treating diabetes, the ADA offers local support groups for those who have diabetes and their families.

**www.diabetes.org
800-342-2383**

National Diabetes Education Program: The National Institutes of Health's National Institute of Diabetes & Digestive & Kidney Diseases offers information about diabetes treatment online and through free printed publications that can be ordered.

**www.niddk.nih.gov
800-860-8747
healthinfo@niddk.nih.gov**