

Diabetes: Basic Facts

What is diabetes?

Diabetes is a disease that affects the way the body turns sugar into energy. There are several types of diabetes.

How the body turns sugar into energy

The food we eat is made up of three things. They are carbohydrates (CAR-bow-HI-drates), which are sugars and starches; protein (PRO-teen); and fat. When we eat, a healthy body changes all of the carbohydrates and some of the protein and fat into a sugar. This sugar is called glucose (GLOO-cose). From the small intestine, glucose moves into the blood. From the blood, glucose then moves into the cells of the body. The sugar we call glucose is the fuel, or energy, that the cells of the body need to do their work.

Near the stomach is an organ called the pancreas (PAN-kree-us). The pancreas makes insulin (IN-suh-lin). Insulin is a hormone. When we eat, the sugar level in the blood goes up. The pancreas puts out more insulin. The insulin helps move the sugar out of the blood into the cells. The cells use the sugar for energy or store the sugar for use later.

What happens when you have diabetes?

When you have diabetes, your body either doesn't make enough insulin or doesn't use the insulin properly. Sugar stays in your blood. Then the cells don't get enough sugar for fuel. The body doesn't have enough energy to do its work. Over time, the high level of sugar in the blood can damage the body.

What are the types of diabetes?

Three types of diabetes are the most common.

Type 1 diabetes

In Type 1 diabetes, the pancreas does not make insulin. Sugar is unable to get into the cells. So the sugar level in the blood goes up. When the sugar level rises above normal, a person has high blood glucose. The name for high blood glucose is hyperglycemia (HI-per-glice-EE-mee-uh). Most often children and young adults get Type 1 diabetes.

Type 2 diabetes

In Type 2 diabetes, the pancreas still makes insulin. But the insulin doesn't work right, or the cells can't take in the sugar. The sugar level in the blood goes up. A person then has high blood glucose, or hyperglycemia.

People who tend to get Type 2 diabetes are:

- people who are overweight
- African Americans, Hispanics, Asians, Pacific Islanders, or Native Americans

DIABETES FACTS

- people with a history of diabetes in their family
- women who have had a baby weighing over 9 pounds at birth

Diabetes during pregnancy

Women who are pregnant may get gestational (jess-TAY-shun-ul) diabetes. Because of the hormone changes in pregnancy, sometimes the pancreas does not make enough insulin. After pregnancy, gestational diabetes often goes away. Some women with gestational diabetes may get diabetes in the future. If you had gestational diabetes in the past, you should have your blood glucose checked often. See the UPMC patient education sheet [Diabetes and Pregnancy](#) for more information.

Secondary diabetes (diabetes caused by other health problems)

High blood glucose levels can occur from treatments for other diseases. When this happens, it is called secondary diabetes. This means that diabetes was not the primary or first problem. Secondary diabetes can happen when blood glucoses rise because of certain medications, like some chemotherapy drugs or steroids. Some anti-rejection drugs that are used following organ transplantation can also affect blood glucoses. Secondary diabetes is usually treated with insulin, a sound nutrition plan, and monitoring.

Secondary diabetes is often a temporary problem. Once you reduce or stop taking the medications, like steroids or anti-rejection drugs, your blood glucose may go

back to normal. If, however, the drugs are started again, you should be careful to check your blood glucose levels regularly again.

What are the symptoms of diabetes?

Symptoms of diabetes include:

- extreme tiredness
- increased thirst
- weight loss
- blurry vision
- passing water (urinating) often
- cuts or sores that don't heal well

A person with Type 2 diabetes may have some of these symptoms. A person may not have any symptoms at all and have Type 2 diabetes.

How do you know if you have diabetes?

Blood glucose tests are the main way to learn if you have diabetes. The tests measure the number of milligrams (mg) of glucose in a deciliter (dl) of blood. After a person has fasted, the normal glucose level is 70 to 99 milligrams in a deciliter of blood. After a person eats, normally blood glucose may go higher, but rarely over 200. The American Diabetes Association lists three ways to tell if a person has diabetes:

- A person has symptoms of diabetes and a high blood glucose level (200 or higher) on a blood glucose test.

DIABETES FACTS

- A person has a fasting blood glucose level of 126 or higher on two separate days. For a fasting blood glucose test, the person does not eat or drink for at least 8 hours before blood is taken.
- A person has a blood glucose level of 200 or higher after drinking a special sugar solution. This test is called an oral glucose tolerance test.

UPMC
Information
for Patients

If you have diabetes

If you have diabetes, you should try to get and keep your blood glucose level as close to normal as possible. It's good to have a blood glucose level between 90 to 130 during the day before eating. At bedtime, the goal is to have blood glucose at 110 to 150. Ask your doctor what your personal goal should be. For more information about managing your diabetes, see the UPMC patient education sheet [Diabetes: Your Management Plan](#).

If you are at risk for diabetes

Sometimes a person has blood glucose higher than normal, but not high enough to have diabetes. This condition is called impaired fasting glucose or impaired glucose tolerance. The person does not yet have diabetes, but is at risk for getting diabetes. This is sometimes called pre-diabetes. If you have this condition, ask

your doctor what to do about your blood glucose. See the UPMC patient education-sheet [Pre-Diabetes](#).

For more information

Some useful resources include:

- **University of Pittsburgh Medical Center**
To find a doctor or a diabetes class, call:
1-800-533-UPMC (8762)
<http://diabetes.upmc.com>
- **University of Pittsburgh Diabetes Institute**
412-692 4280
<http://diabetesinstitute.upmc.com>
- **American Diabetes Association (ADA)**
1-800-DIABETES (342-2383)
www.diabetes.org
- **American Association of Diabetes Educators**
1-800-TEAMUP4 (832-6874)
www.diabeteseducator.org
- **Juvenile Diabetes Foundation International (JDF)**
1-800-JDF-CURE (533-2873)
www.jdf.org
- **American Dietetic Association National Center for Nutrition and Diabetics Hotline**
1-800-366-1655
www.eatright.org

UPMC
Pittsburgh, Pa., USA
www.upmc.com

For help in finding a doctor or health service that suits your needs, call the UPMC Referral Service at 412-647-UPMC (8762) or 1-800-533-UPMC (8762). Select option 1.

UPMC is an equal opportunity employer. Policy prohibits discrimination or harassment on the basis of race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, disability, or veteran status. Further, UPMC will continue to support and promote equal employment opportunity, human dignity, and racial, ethnic, and cultural diversity. This policy applies to admissions, employment, and access to and treatment in UPMC programs and activities. This commitment is made by UPMC in accordance with federal, state, and/or local laws and regulations.

This information is not intended to be used as a substitute for professional medical advice, diagnosis, or treatment. You should not rely entirely on this information for your health care needs. Ask your own doctor or health care provider any specific medical questions that you have.