

# Diabetes

Diabetes is a disease that affects the body's ability to control blood sugar (blood glucose). The effects of diabetes can include blindness, kidney disease, heart disease, stroke and nerve damage. To understand diabetes, you first need to understand normal blood sugar.

## Normal Blood Sugar

People eat food for its taste, nutrients and the energy it gives us. Normally, the energy from food is absorbed into the blood stream in the form of sugar (glucose). Blood carries the sugar to all the body's cells. Cells use some of the sugar for energy, but most of it is stored for later energy use.

Sugar can't get into the cells without help from a hormone called insulin. Think of insulin as a key. It opens the cell doors to let in sugar. The pancreas makes insulin.

Blood sugar (blood glucose) is measured in terms of milligrams (mg) of sugar per deciliter (dl) of blood. If blood sugar drops down to 60 mg/dl or lower, sugar is released from the body's cells for energy. If blood sugar climbs to 110 mg/dl, the pancreas releases insulin to move the sugar into cells for storage.

## What is Diabetes?

When a person has diabetes, sugar can't get into their body's cells. As a result, the sugar level builds up in the blood. When the level gets high:

- Blood sugar appears in the urine.
- Water is pulled out of the body's cells and large amounts of urine are produced.
- The cells get hungry because they aren't getting enough sugar. The body responds by breaking down fat and muscle for energy.

### Diabetes

#### Early Symptoms

- Excessive thirst
- Excessive hunger
- Excessive urination
- Unexplained, rapid weight loss

## Kinds of Diabetes

There are two forms of diabetes.

**Type I** is referred to as "Insulin Dependent Diabetes." A person with this type of diabetes is not making insulin and must inject insulin. The people most often diagnosed with Type I are children and young adults.

**Type II** is also called “Non-Insulin Dependent Diabetes.” A person with this type of diabetes is either not producing enough insulin or has trouble using the insulin his or her body makes. This person is often overweight. The people most often diagnosed with Type II are adults over age 40. However, the number of children with Type II diabetes is rising.

## Treatment

There are three parts to diabetes care: diet, physical activity and medication. All persons with diabetes should work with their doctors and a registered dietitian (R.D.) to design a personalized care plan.

Type I diabetics must balance diet, physical activity and insulin.

Type II diabetics must balance diet, physical activity and any medication such as an oral agent or insulin if the doctor has ordered it. For the Type II person, weight loss of as little as 10 pounds can often improve blood sugar control without medication.

Ignoring diet, physical activity or medication is like playing with fire. The person who does this will get “burned” sooner or later from the side effects of poorly controlled blood sugar.

## Diet

Following the United States Department of Agriculture’s Dietary Guidelines is a good rule for all persons, including diabetics. It helps people meet their nutritional needs and be aware of less nutritious foods that are high in fats and sugar. Of course, the **number** of servings needed depends on one’s height, weight and activity level.

- Eat meals and snacks at regular times.
- Try to eat the same amount of food each day.
- Be sure to include plenty of high-fiber foods such as whole fruits and vegetables and whole grains.
- Limit your fat and cholesterol intake.

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