



Official reprint from UpToDate®
www.uptodate.com
©2013 UpToDate®

Patient information: Diabetes mellitus type 2: Overview (Beyond the Basics)

Author

David K McCulloch, MD

Section Editor

David M Nathan, MD

Deputy Editor

Jean E Mulder, MD

INTRODUCTION

Type 2 diabetes mellitus is a disorder that disrupts the way your body uses glucose (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. This is what happens to people with diabetes mellitus.

There are two different types of diabetes mellitus. In type 1 diabetes mellitus, the problem is that the pancreas (an organ in the abdomen) does not make enough insulin. In type 2 diabetes mellitus, the pancreas does not make enough insulin ([figure 1](#)), the body becomes resistant to normal or even high levels of insulin, or both. This causes high blood glucose (blood sugar) levels, which can cause problems if untreated. In the United States, Canada, and Europe, about 90 percent of all people with diabetes have type 2 diabetes.

Type 2 diabetes is a chronic medical condition that requires regular monitoring and treatment throughout your life. Treatment includes lifestyle changes, self-care measures, and sometimes medications. Fortunately, these treatments can keep blood sugar levels close to normal and minimize the risk of developing complications.

THE IMPACT OF DIABETES

Being diagnosed with type 2 diabetes can be a frightening and overwhelming experience, and you likely have questions about why it developed, what it means for your long-term health, and how it will affect your everyday life.

For most people, the first few months after being diagnosed are filled with emotional highs and lows. If you have just been diagnosed with diabetes, you and your family should use this time to learn as much as possible so that caring for your diabetes (including testing your blood sugar, going to medical appointments, and taking your medications) becomes a part of your daily routine. (See "[Patient information: Self-blood glucose monitoring in diabetes mellitus \(Beyond the Basics\)](#)".)

In addition, you should talk to your doctor or nurse about resources that are available for medical as well as psychological support. These may include group classes, meetings with a nutritionist, social worker, or nurse educator, and other educational resources such as books, web sites, or magazines. Several of these resources are listed below (see "[Where to get more information](#)" below).

Despite the risks associated with type 2 diabetes, most people can lead active lives and continue to enjoy the foods and activities that they previously enjoyed. Diabetes does not mean an end to "special occasion" foods like birthday cake, and most people with diabetes can enjoy exercise in almost any form. (See "[Patient information: Type 2 diabetes mellitus and diet \(Beyond the Basics\)](#)" and "[Patient information: Diabetes mellitus type 2: Alcohol, exercise, and medical care \(Beyond the Basics\)](#)".)

CAUSES OF TYPE 2 DIABETES

Type 2 diabetes is thought to be caused by a combination of genetic and environmental factors. (See "[Pathogenesis of type 2 diabetes mellitus](#)" and "[Prediction and prevention of type 2 diabetes mellitus](#)".)

Genetic causes — Many people with type 2 diabetes have a family member with either type 2 diabetes or other medical problems associated with diabetes, such as high cholesterol levels, high blood pressure, or obesity.

The lifetime risk of developing type 2 diabetes is 5 to 10 times higher in first-degree relatives (sister, brother, son, daughter) of a person with diabetes compared to a person with no family history of diabetes.

The likelihood of developing type 2 diabetes is greater in certain ethnic groups, such as people of Hispanic, African, and Asian descent.

Environmental conditions — Environmental factors such as what you eat and how active you are, combined with genetic causes, affect the risk of developing type 2 diabetes.

Pregnancy — A small number (about 3 to 5 percent) of pregnant women develop diabetes during pregnancy, called "gestational diabetes." Gestational diabetes is similar to type 2 diabetes, but usually resolves after the woman delivers her baby. Women who have gestational diabetes are at increased risk for developing type 2 diabetes later in life. (See "[Patient information: Gestational diabetes mellitus \(Beyond the Basics\)](#)".)

TYPE 2 DIABETES DIAGNOSIS

The diagnosis of diabetes is based upon your symptoms and the results of blood tests. (See "[Diagnosis of diabetes mellitus](#)".)

Symptoms — Before being diagnosed with type 2 diabetes, most people have no symptoms at all. In those who do have symptoms, the most common include:

- Needing to urinate frequently
- Feeling thirsty
- Blurred vision

Laboratory tests — Several blood tests are used to measure blood glucose levels, the primary test for diagnosing diabetes.

- Random blood sugar test — For a random blood sugar test, you can have blood drawn at any time throughout the day, regardless of when you last ate. If your blood sugar is 200 mg/dL (11.1 mmol/L) or higher and you have symptoms of high blood sugar (see '[Symptoms](#)' above), it is likely that you have diabetes.

