

Basic Information on Diabetes

Sourced from the Center for Disease Control and The International Diabetes Federation websites listed below:
<http://www.idf.org/about-diabetes> ; <http://www.cdc.gov/diabetes/consumer/index.htm>

Diabetes is a disease in which blood glucose levels are above normal. Most of the food we eat is turned into glucose, or sugar, for our bodies to use for energy. The pancreas, an organ that lies near the stomach, makes a hormone called insulin to help glucose get into the cells of our bodies where it is turned into energy. When you have diabetes, your body either doesn't make enough insulin or can't use its own insulin as well as it should. This causes sugar to build up in your blood.

Diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations.

There are three main types of diabetes:

Type 1 diabetes is sometimes called insulin-dependent. It is caused by an auto-immune reaction where the body's defense system attacks the insulin-producing cells. The reason why this occurs is not fully understood. People with type 1 diabetes produce very little or no insulin. The disease can affect people of any age, but usually occurs in children or young adults. People with this form of diabetes need injections of insulin every day in order to control the levels of glucose in their blood. If people with type 1 diabetes do not have access to insulin, they will die.

Type 2 diabetes is more common and accounts for at least 90% of all cases of diabetes.

Type 2 diabetes is sometimes called non-insulin dependent diabetes or adult-onset diabetes, and accounts for at least 90% of all cases of diabetes. It is characterized by insulin resistance and relative insulin deficiency. The diagnosis of type 2 diabetes usually occurs after the age of 40 but can occur earlier, especially in populations with high diabetes prevalence. Type 2 diabetes can remain undetected for many years and the diagnosis is often made from associated complications or incidentally through an abnormal blood or urine glucose test. It is often, but not always, associated with obesity, which itself can cause insulin resistance and lead to elevated blood glucose levels.

Gestational diabetes (GDM) is a form of diabetes consisting of high blood glucose levels during pregnancy. It develops in one in 25 pregnancies worldwide and is associated with complications in the period immediately before and after birth. GDM usually disappears after pregnancy but women with

GDM and their offspring are at an increased risk of developing type 2 diabetes later in life. Approximately half of women with a history of GDM go on to develop type 2 diabetes within five to ten years after delivery.

Risk Factors:

The risk factors for type 1 diabetes are still being researched. However, having a family member with type 1 diabetes increases the risks for developing the condition. Environmental factors, increased height and weight development, increased maternal age at delivery, and exposure to some viral infections have also been linked to the risk of developing type 1 diabetes.

Several risk factors have been associated with type 2 diabetes and include:

- Obesity: Being overweight can keep your body from making and using insulin properly and can cause high blood pressure
- Diet and physical inactivity
- Increasing age
- Having high blood pressure measuring 140/90 or higher
- Being physically inactive - exercising fewer than three times a week
- Family history of diabetes
- Having abnormal cholesterol

Changes in diet and physical activity related to rapid development and urbanization have led to sharp increases in the numbers of people developing diabetes.

Pregnant women who are overweight, have been diagnosed with Impaired Glucose Tolerance (IGT), or have a family history of diabetes are all at increased risk of developing Gestational diabetes (GDM). In addition, having been previously diagnosed with gestational diabetes puts women at increased risk of developing the condition.

Prevention:

At present, type 1 diabetes cannot be prevented.

Type 2 diabetes, however, can be prevented in many cases by maintaining a healthy weight and being physically active. Studies in China, Finland and the United States have confirmed this.

People with one or more of the risks listed above should embark on prevention efforts in order to delay or avoid the onset of type 2 diabetes.

Achieving a healthy body weight and moderate physical activity can help prevent the development of type 2 diabetes. At least 30 minutes of daily exercise, such as brisk walking, swimming, cycling or dancing is recommended. Regular walking for at least 30 minutes per day, for example, has been shown to reduce the risk of type 2 diabetes by 35-40%.

Warning Signs

Individuals can experience different warning signs, and sometimes there may be no obvious warning, but some of the signs of diabetes are commonly experienced:

- Frequent urination
- Excessive thirst
- Increased hunger
- Unexplained weight loss
- Tiredness
- Lack of interest and concentration
- Vomiting and stomach pain (often mistaken as the flu)
- A tingling sensation or numbness in the hands or feet
- Blurred vision
- Frequent infections
- Slow-healing wounds

The onset of type 1 diabetes is usually sudden and dramatic while the symptoms can often be mild or absent in people with type 2 diabetes, making this type of diabetes gradual in onset and hard to detect.

If you show these signs, consult a health professional.

Managing Diabetes

There is no cure for diabetes, but effective treatment exists. If you have access to the appropriate medication, quality of care and good medical advice, you should be able to lead an active and healthy life and reduce the risk of developing complications.

Good diabetes control means keeping your blood sugar levels as close to normal as possible (not too low or too high). This can be achieved by a combination of the following:

Physical Activity: a goal of at least 30 minutes of moderate physical activity per day (e.g. brisk walking, swimming, cycling, dancing) on most days of the week.

Why is it important for people with diabetes to be physically active?

Physical activity can help you control your blood glucose, weight, and blood pressure, as well as raise your “good” cholesterol and lower your “bad” cholesterol. It can also help prevent heart and blood flow problems, reducing your risk of heart disease and nerve damage, which are often problems for people with diabetes.

Talk to your health care provider about a safe exercise plan. He or she may check your heart and your feet to be sure you have no special problems. If you have high blood pressure, eye, or foot problems, you may need to avoid some kinds of exercise.

Body weight: weight loss improves insulin resistance, blood glucose and high lipid levels in the short term, and reduces blood pressure. It is important to reach and maintain a healthy weight.

Healthy Eating: eat smaller portions; avoid foods high in sugars, saturated fats and salt; and limit alcohol consumption.

Increase intake of:

- Fiber by eating more whole-grain foods found in cereals, whole grain rice and whole-wheat bread.
- Fruit and Vegetables (particularly dark green veggies, orange veggies and Beans & Peas).

Avoid tobacco: tobacco use is associated with more complications in people with diabetes.

Monitoring for complications: monitoring and early detection of complications is an essential part of good diabetes care. People with diabetes must take responsibility for day to day care and should take note of any changes in their health. This includes regular foot and eye checks, controlling blood pressure and blood glucose, and assessing risks for cardiovascular and kidney disease. People with diabetes should see a health care provider who will monitor their diabetes control and help them learn to manage their diabetes.

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