

March

## Diabetes and Heart Disease

"Diabetes mellitus," more commonly referred to as "diabetes," is a condition that causes blood sugar to rise to dangerous levels: a fasting blood glucose of 126 milligrams per deciliter (mg/dL) or more.

### How Diabetes Develops

Most of the food you eat is turned into glucose, or sugar, for your body to use for energy. The pancreas, an organ near the stomach, produces a hormone called insulin. This hormone is necessary for the body to be able to use sugar or glucose, the basic fuel for cells in the body. Insulin's role is to take sugar from the blood into the cells. When your body does not produce enough insulin and/or does not efficiently use the insulin it produces, sugar levels rise and build up in the bloodstream. When this happens, it can cause two problems: 1. Right away, the body's cells may be starved for energy. 2. Over time, high blood glucose levels may damage the eyes, kidneys, nerves or heart.

### Types of Diabetes

There are two main types of diabetes: type 1 diabetes and type 2 diabetes. Both types may be inherited in genes, so a family history of diabetes can significantly increase a person's risk of developing the condition.

### Type 1 Diabetes

Type 1 diabetes is a serious condition that occurs when the pancreas makes little or no insulin. Without insulin, the body is unable to take the glucose (blood sugar) it gets from food into cells to fuel the body. So without daily injections of insulin, people with type 1 diabetes won't survive. For that reason, this type of diabetes is also referred to as insulin-dependent diabetes.

Type 1 diabetes was previously known as juvenile diabetes because it's usually diagnosed in children and young adults. However, this chronic, lifelong disease can strike at any age, and those with a family history of it are particularly at risk.

### Health Risks for Type 1 Diabetes

During the development of type 1 diabetes, the body's immune system attacks certain cells (called beta cells) in the pancreas. Although the reasons this occurs are still unknown, the effects are clear. Once these cells are destroyed, the pancreas produces little or no insulin, so the glucose stays in the blood. When there's too

much glucose in the blood, especially for prolonged periods, all the organ systems in the body suffer long-term damage. Learn more about the health consequences of diabetes and how to treat it.

### **Type 2 Diabetes**

Type 2 diabetes is the most common form of diabetes. Historically, type 2 diabetes has been diagnosed primarily in middle-aged adults. Today, however, adolescents and young adults are developing type 2 diabetes at an alarming rate. This correlates with the increasing incidence of obesity and physical inactivity in this population, both of which are risk factors for type 2 diabetes.

#### **This type of diabetes can occur when:**

The body develops "insulin resistance" and can't make efficient use of the insulin it makes, and

The pancreas gradually loses its capacity to produce insulin.

In a mild form, this type of diabetes can go undiagnosed for many years, which is a cause for great concern since untreated diabetes can lead to many serious medical problems, including cardiovascular disease. Type 2 diabetes may be delayed or controlled with diet and exercise.

Diabetes can affect many major organs in your body, which can lead to an array of serious complications when left untreated. These medical problems include:

Cardiovascular disease (CVD), or heart disease, including peripheral artery disease (PAD) and stroke

Renal (kidney) disease

Unhealthy cholesterol levels, which can lead to atherosclerosis

Metabolic syndrome

Blindness

Nerve disease

Limb amputations

The good news is that diabetes is treatable and often preventable. Individuals with diabetes may avoid or delay other health complications by:

Working with their health care team to manage the disease, which may include the use of medications

Knowing their critical health numbers

Choosing a healthy lifestyle

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