What is diabetes? How can I know for sure if I have it?



So what is diabetes?

The following is a basic explanation of a very complex, tightly regulated process within your body where two natural "ingredients" in your body — glucose and insulin — work in harmony:[1]

Glucose (a sugar):[1]

1. The body takes the carbohydrate in the food that you eat and converts it into glucose, which is a form of sugar.
2. When glucose is created, it is carried through your blood to reach all of the cells in your muscles, fat and liver.
3. Glucose provides energy to your cells, or it can be converted into fat.

Insulin (a hormone):[1]

1. Hormones are chemical messengers that help control and regulate bodily functions, from hunger to reproduction to emotions.
2. The insulin hormone is created in an organ called the pancreas (which is located behind the stomach).
3. Insulin allows the cells to absorb this sugar from the bloodstream to create the energy you need.

Lots of blood glucose in the bloodstream is very dangerous to the body and needs to be moved into cells as soon as possible. There's lots of insulin, too, telling the liver and muscles to store blood glucose. When they're full, the liver sends the excess blood glucose to fat cells to be store as body fat, resulting in weight gain. And what's more serious, the stage is set for prediabetes and type 2 diabetes.

Types of diabetes[1,2]

Type 2 diabetes

Let's start with type 2 diabetes, because it's the most prevalent form of the disease. In type 2 diabetes, cells become resistant to the insulin that the body makes. As a result, too much glucose builds up in the blood, causing damage throughout the body over time.

Type 1 diabetes

Type 1 diabetes is different. It's thought to be caused by an autoimmune reaction, meaning the body attacks itself by mistake. People with type 1 diabetes don't make enough insulin and need to take it to survive.

In type 1 diabetes, the pancreas cannot produce enough or any insulin, which is why too much glucose builds up in the blood. People with type 1 diabetes must have daily insulin injections for the rest of their lives. This form of diabetes is sometimes referred to juvenile-onset diabetes because people are generally younger than 30 when they are diagnosed. However, type 1 diabetes can develop at any age.

Gestational diabetes

Gestational diabetes is a temporary type of diabetes that develops during pregnancy (gestation). A woman who had gestational diabetes in one pregnancy has a higher risk of developing gestational diabetes in future pregnancies. Although gestational diabetes reverts to normal after pregnancy, it increases the risk of type 2 diabetes in the future. Regular screening for type 2 diabetes is essential for women who have had gestational diabetes.

Know the basics[1]

There are some basic things to understand about diabetes:

- Your healthcare provider can diagnose diabetes with simple blood tests
- There's no cure for diabetes; it's characterized as a chronic (always present) disease
- When diabetes is diagnosed early and properly managed, there is a high likelihood of avoiding or delaying complications, particularly with type 2 diabetes

Sources:

1. Centers for Disease Control and Prevention. Insulin Resistance and Diabetes, August 10, 2021. Available from www.cdc.gov.
2. World Health Organization. Diabetes, November 10, 2021. Available from www.who.org.

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