

Type 2 Diabetes: What You Need to Know

Type 1 diabetes is a disease in which the body has trouble controlling the amount of glucose in the blood. In this handout, you will learn the causes and symptoms of Type 2 diabetes. You will also learn how doctors and treat the disease.

WHAT IS TYPE 2 DIABETES?

Type 2 diabetes is a condition in which the body has trouble controlling the amount of **glucose** (sugar) in the blood.

WHAT CAUSES TYPE 2 DIABETES?

In many cases, excess weight gain can cause Type 2 diabetes. The condition can also develop when the following processes in the body occur:

- **Insulin resistance.** This is a condition in which the body does not respond normally to insulin made by the **pancreas** (a small digestive organ behind the stomach). Insulin is a hormone that acts as a bridge between the bloodstream and cells. Insulin lets sugar to enter the cells. Then, the cells use the sugar for energy. Insulin also helps lower blood sugar levels after meals. About half of all teenagers with obesity also have insulin resistance.
- **In some people, beta cells in the pancreas cannot make enough insulin to make up for insulin resistance.** Over time, people lose beta cells and the pancreas makes less insulin. This loss of beta cells and lower insulin levels leads to high blood sugar.

WHAT ARE THE SYMPTOMS OF TYPE 2 DIABETES?

- Fatigue (extreme tiredness)
- Feeling very thirsty
- Urinating more than usual
- Blurry eyesight
- Darkening and thickening of skin, usually around the neck and under the arms

HOW DO DOCTORS DIAGNOSE TYPE 2 DIABETES?

Doctors diagnose Type 2 diabetes through a blood test. Doctors also look at your child's symptoms and sugar levels in their urine.

HOW DO DOCTORS TREAT TYPE 2 DIABETES?

The most important treatment for Type 2 diabetes are **lifestyle changes**. This can include learning how to make healthier eating choices, eating the appropriate number of calories and exercising more.

Other treatments can include:

- **Metformin**, a medication taken with food to help manage blood sugar levels
- **Insulin**, either through an injection or an infusion pump that gives insulin through a small needle under the skin. Children with Type 2 diabetes usually need both **short-acting** and **long-acting insulin**. Some people can come off insulin after a while and some cannot.
- **Frequent blood sugar checks during the day.** This is done by putting a drop of blood into a blood glucose meter or through a continuous glucose monitoring device (CGM). A CGM device is a monitor that automatically checks blood sugars through the day without having to prick your child's finger multiple times.

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HOW DO DOCTORS TREAT TYPE 2 DIABETES? (CONTINUED)

- **Glucagon-like peptide-1 (GLP-1) agonists.** These are medications, mostly injected, which help the pancreas put out more insulin after eating. The only GLP-1 analog currently approved in children is called **liraglutide**.

WHAT ARE OTHER MEDICAL CONDITIONS THAT CAN HAPPEN WITH TYPE 2 DIABETES?

Children with type 2 diabetes may have other disorders. There are many doctors, nurses, and other providers who can help care for your child. Other medical conditions can include:

- Kidney disease
- Obstructive sleep apnea
- Liver disease
- High blood pressure
- Polycystic ovary syndrome (PCOS) in girls
- Other conditions

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