



What to know about Prediabetes

Definition

Prediabetes means that your blood sugar level is higher than normal, but it's not yet increased enough to be classified as type 2 diabetes. Still, without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less. And, if you have prediabetes, the long-term damage of diabetes — especially to your heart and circulatory system — may already be starting.

There's good news, however. Prediabetes can be an opportunity for you to improve your health, because progression from prediabetes to type 2 diabetes isn't inevitable. With healthy lifestyle changes — such as eating healthy foods, including physical activity in your daily routine and maintaining a healthy weight — you may be able to bring your blood sugar level back to normal.

Causes

The exact cause of prediabetes is unknown, although researchers have discovered some genes that are related to insulin resistance. Excess fat — especially abdominal fat — and inactivity also seem to be important factors in the development of prediabetes.

What is clear is that people who have prediabetes aren't quite processing sugar (glucose) properly anymore. This causes sugar to build up in the bloodstream instead of doing its normal job of fueling the cells that make up muscles and other tissues.

Most of the glucose in your body comes from the foods you eat, specifically foods that contain carbohydrates. Any food that contains carbohydrates can affect your blood sugar levels, not just sweet foods.

During digestion, sugar enters your bloodstream and with the help of insulin is then absorbed into the body's cells to give them energy.

Insulin is a hormone that comes from the pancreas, a gland located just behind the stomach. When you eat, your pancreas secretes insulin into your bloodstream. As insulin circulates, it acts like a key that unlocks microscopic doors that allow sugar to enter your cells. Insulin lowers the amount of sugar in your bloodstream. As your blood sugar level drops, so does the secretion of insulin from your pancreas.

Symptoms

Often, prediabetes has no signs or symptoms.

Darkened areas of skin, a condition called acanthosis nigricans, is one of the few signs of prediabetes. Common areas that may be affected include the neck, armpits, elbows, knees and knuckles.

Classic red flags of type 2 diabetes to watch for include:

- Increased thirst
- Frequent urination
- Fatigue
- Blurred vision

When to see a doctor

Consult your doctor if you're concerned about diabetes or if you notice any type 2 diabetes signs or symptoms — increased thirst and frequent urination, fatigue, and blurred vision.

Ask your doctor about blood glucose screening if you have any risk factors for prediabetes, such as:

- You're overweight, with a body mass index above 25.
- You're inactive.
- You're age 45 or older.
- You have a family history of type 2 diabetes.
- You're African-American, Hispanic, American Indian, Asian-American or a Pacific Islander.
- You developed gestational diabetes when you were pregnant or gave birth to a baby who weighed more than 9 pounds (4.1 kilograms).
- You have polycystic ovary syndrome.
- You have high blood pressure.
- Your high-density lipoprotein (HDL) cholesterol is below 35 mg/dL (0.9 mmol/L) or your triglyceride level is above 250 mg/dL (2.83 mmol/L).
- You regularly sleep 5.5 hours or fewer a night.

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Prediabetes Risk factors

The same factors that increase the risk of developing type 2 diabetes increase the risk of developing prediabetes, including:

- **Weight.** Being overweight is a primary risk factor for prediabetes. The more fatty tissue you have — especially around your abdomen — the more resistant your cells become to insulin.
- **Inactivity.** The less active you are, the greater your risk of prediabetes. Physical activity helps you control your weight, uses up glucose as energy and makes your cells more sensitive to insulin.
- **Age.** The risk of prediabetes increases as you get older, especially after age 45. This may be because people tend to exercise less, lose muscle mass and gain weight as they age. However, older people aren't the only ones at risk of prediabetes and type 2 diabetes. The incidence of these disorders is also rising in younger age groups.
- **Family history.** The risk of prediabetes increases if a parent or sibling has type 2 diabetes.
- **Race.** Although it's unclear why, people of certain races — including African-Americans, Hispanics, American Indians, Asian-Americans and Pacific Islanders — are more likely to develop prediabetes.
- **Gestational diabetes.** If you developed gestational diabetes when you were pregnant, your risk of later developing diabetes increases. If you gave birth to a baby who weighed more than 9 pounds (4.1 kilograms), you're also at increased risk of diabetes.
- **Polycystic ovary syndrome.** For women, having polycystic ovary syndrome — a common condition characterized by irregular menstrual periods, excess hair growth and obesity — increases the risk of diabetes.
- **Inadequate sleep.** Several recent studies have linked a lack of sleep to an increased risk of insulin resistance. Research suggests that regularly sleeping fewer than 5.5 hours a night might up your risk of prediabetes or type 2 diabetes.

Other conditions associated with diabetes include:

- High blood pressure
- Low levels of HDL, or "good," cholesterol
- High levels of triglycerides — a type of fat in your blood

When these conditions — high blood pressure, high blood sugar, and abnormal blood fats and cholesterol — occur together along with obesity, they are associated with resistance to insulin. This is often referred to as metabolic syndrome.