**What Is Type 2 Diabetes?**

Type 2 diabetes is a lifelong disease that keeps your body from using insulin the way it should.

People who are middle-aged or older are most likely to get this kind of diabetes. It used to be called adult-onset diabetes or diabetes mellitus. But type 2 diabetes also affects kids and teens, mainly because of childhood obesity.

Type 2 is the most common form of diabetes. About 1 in 10 people in the U.S. have type 2. Nearly 1 in 3 have prediabetes, meaning their blood sugar (or blood glucose) is high but not high enough to be diabetes yet.

**Symptoms of Type 2 Diabetes**

The [symptoms of type 2 diabetes](https://www.webmd.com/diabetes/type-2-diabetes-symptoms) can be so mild that you don't notice them. About 9 million people have it and don't know it. Symptoms include:

* Being very thirsty
* Peeing a lot
* Blurry vision
* Tingling or numbness in your hands or feet
* Fatigue/feeling worn out
* Wounds that don't heal
* Yeast infections that keep coming back
* Feeling hungry
* Weight loss without trying
* Getting infections

If you have dark rashes around your neck or armpits, see your doctor. These are called acanthosis nigricans, and they can be signs that your body is becoming resistant to insulin.

**Types of Diabetes**

There are three main types of diabetes:

**Type 2 diabetes**

About 90%-95% of all people with diabetes have this type. With type 2, your pancreas makes some [insulin](https://www.webmd.com/diabetes/insulin-explained) -- the hormone that helps your cells turn glucose (a type of sugar) from the food you eat into energy. In some people, your cells don't respond to this hormone as they should (a condition called insulin resistance).

**Type 1 diabetes**

In type 1, your immune system attacks and destroys the cells in your pancreas that make insulin, leading to high blood sugar. Doctors aren't sure why this happens. Type 1 isn't related to weight or lifestyle habits. It used to be called insulin-dependent or childhood diabetes.

**Gestational diabetes**

You only get this type of diabetes when you're pregnant. It happens because hormonal changes and weight gain during pregnancy can lead to [insulin resistance](https://www.webmd.com/diabetes/insulin-resistance-syndrome). It usually goes away after you have your baby.

**Causes of Type 2 Diabetes**

Usually, a combination of things causes type 2 diabetes. They might include:

* **Genes.** Scientists have found different bits of DNA that affect how your body makes insulin.
* **Weight.**Having extra weight or obesity can cause insulin resistance.
* **Metabolic syndrome.** People with insulin resistance often have a group of conditions including high blood sugar, high blood pressure, and high cholesterol and triglycerides.
* **Too much glucose from your liver.** When your blood sugar is low, your liver makes and sends out glucose. After you eat, your blood sugar goes up, and your liver usually slows down and stores its glucose for later. But some people's livers don't. They keep making sugar.
* **Bad communication between cells.** Sometimes, cells send the wrong signals or don't pick up messages correctly. When these problems affect how your cells make and use insulin or glucose, this can lead to diabetes.
* **Broken beta cells.** If the cells that make insulin send it out at the wrong time, your blood sugar gets thrown off. [High blood sugar](https://www.webmd.com/diabetes/how-sugar-affects-diabetes) can damage these cells, too.

**Type 2 Diabetes Risk Factors**

Certain things make it more likely that you’ll get type 2 diabetes. The more of these that apply to you, the higher your chances of getting it are. Some things are related to who you are:

* **Age.** 45 or older
* **Family.** A parent, sister, or brother with diabetes
* **Ethnicity.** African American, Alaska Native, Native American, Asian American, Hispanic or Latino, or Pacific Islander American

Risk factors related to your medical history and health include:

* Insulin resistance
* Prediabetes
* Heart and blood vessel disease
* High blood pressure, even if it's treated and under control
* Low HDL ("good") cholesterol
* High triglycerides
* Being overweight or having obesity
* Having a baby who weighed more than 9 pounds
* Gestational diabetes while you were pregnant
* Polycystic ovary syndrome (PCOS)
* Depression

Other things that raise your [risk of diabetes](https://www.webmd.com/diabetes/video/diabetes-risk-and-exercise) have to do with your daily habits and lifestyle. These are the ones you can do something about:

* Getting little or no exercise
* Smoking
* Stress
* Sleeping too little or too much

**Type 2 diabetes epidemiology**

Some 462 million people worldwide, or about 6.3% of the population, have type 2 diabetes. It's the ninth leading cause of death, responsible for more than 1 million deaths each year. Cases of type 2 diabetes are increasing faster in developed countries like the U.S. and Western Europe.

Scientists say type 2 diabetes affects men and women at about the same rate.

It's more common in people in middle age and older, affecting:

* 4.4% of those ages 15-49
* 15% of those ages 50-69
* 22% of those 70 and older

It's also more common in people of color, including those whose heritage is:

* Black
* Hispanic
* Native American
* Asian

**Type 2 Diabetes Diagnosis and Tests**

Your doctor can test your blood for signs of type 2 diabetes. Usually, they’ll test you on 2 different days to confirm the diagnosis. But if your blood glucose is very high or you have many symptoms, one test may be all you need.

Blood tests for type 2 diabetes include:

A1c. It's an average percent of your blood glucose over the past 2 or 3 months.

Fasting plasma glucose. This is also known as a fasting blood sugar test. It measures your blood sugar on an empty stomach. You won't be able to eat or drink anything except water for 8 hours before the test.

Oral glucose tolerance test (OGTT). This checks your blood glucose before and 2 hours after you drink something sweet to see how your body handles the sugar.

**Stages of Type 2 Diabetes**

Researchers have defined four stages of type 2 diabetes:

**Insulin resistance**

In this stage, your body usually makes enough insulin to keep blood sugar levels in the normal range. But if your cells "resist" the insulin (don't use it correctly), your body will make more insulin to try to help the glucose get into them. Insulin resistance can be temporary, but it can also last. There's no test to detect insulin resistance, so it can be hard to diagnose.

**Prediabetes**

Eventually, insulin resistance causes glucose to build up in your blood. You have prediabetes when your blood sugar levels are higher than normal, but not high enough to be considered diabetes. An A1c between 5.7% and 6.4% means you have [prediabetes](https://www.webmd.com/diabetes/what-is-prediabetes). You may not have any symptoms. But prediabetes ups your risk for heart disease, stroke, and type 2 diabetes.

**Type 2 diabetes**

If your A1c is 6.5% or higher, you have diabetes. You may have symptoms like increased thirst, blurred vision, and numbness in feet or hands. Or you may not have any symptoms at all.

**Type 2 diabetes with vascular complications**

At this stage, your diabetes has led to vascular (blood vessel) problems. You may have damage to vessels in your eyes (retinopathy), kidneys (nephropathy), and certain nerves (neuropathy). You might also develop heart disease, stroke, or circulation issues.

**Type 2 Diabetes Treatment**

Managing type 2 diabetes includes a mix of lifestyle changes and medication.

**Lifestyle changes**

You may be able to reach your target blood sugar levels with diet and [exercise](https://www.webmd.com/fitness-exercise/health-benefits-exercise) alone.

* **Weight loss.** Dropping extra pounds can help. While losing 5% of your body weight is good, losing at least 7% and keeping it off seems to be ideal. That means someone who weighs 180 pounds can change their blood sugar levels by losing around 13 pounds. Weight loss can seem overwhelming, but portion control and eating healthy foods are a good place to start.
* **Healthy eating.** There’s no specific diet for type 2 diabetes. A registered dietitian can teach you about carbs and help you make a meal plan you can stick with. Focus on:
  + Eating fewer calories
  + Cutting back on refined carbs, especially sweets
  + Adding veggies and fruits to your diet
  + Getting more fiber
* **Exercise.** Try to get 30 to 60 minutes of physical activity every day. You can walk, bike, swim, or do anything else that gets your heart rate up. Pair that with strength training, like yoga or weightlifting. If you take a medication that lowers your blood sugar, you might need a snack before a workout.
* **Watch your blood sugar levels.** Depending on your treatment, especially if you’re on insulin, your doctor will tell you if you need to test your blood sugar levels and how often to do it

Medication

If lifestyle changes don’t get you to your target blood sugar levels, you may need medication. Some of the most common for type 2 diabetes include:

Metformin (Fortamet, Glucophage, Glumetza, Riomet). This is usually the first medication used to treat type 2 diabetes. It lowers the amount of glucose your liver makes and helps your body respond better to the insulin it does make.

Sulfonylureas. This group of drugs helps your body make more insulin. They include glimepiride (Amaryl), glipizide (Glucotrol), and glyburide (DiaBeta, Micronase).

Meglitinides. They help your body make more insulin, and they work faster than sulfonylureas. You might take nateglinide (Starlix) or repaglinide (Prandin).

Thiazolidinediones. Like metformin, they make you more sensitive to insulin. You could get pioglitazone (Actos) or rosiglitazone (Avandia). But they also raise your risk of heart problems, so they aren’t usually a first choice for treatment.

DPP-4 inhibitors. These medications -- linagliptin (Tradjenta), saxagliptin (Onglyza), and sitagliptin (Januvia) -- help lower your blood sugar levels, but they can also cause joint pain and could inflame your pancreas. They work by blocking DPP-4, which is an enzyme that affects the hormone incretin.

GLP-1 receptor agonists. You take these medications with a needle to slow digestion and lower blood sugar levels. Some of the most common ones are exenatide (Byetta, Bydureon), liraglutide (Victoza), and semaglutide (Ozempic).

SGLT2 inhibitors. These help your kidneys filter out more glucose. You might get bexagliflozin (Brenzavvy), canagliflozin (Invokana), dapagliflozin (Farxiga), or empagliflozin (Jardiance). Empagliflozin has also proven effective in reducing the risk of hospitalization or death from heart failure.

GIP and GLP-1 receptor agonist. Tirzepatide (Mounjaro) is the first in its class and activates both the GLP-1 and GIP receptors, which leads to improved blood sugar control.

Insulin. You might take long-lasting shots at night, such as insulin detemir (Levemir) or insulin glargine (Lantus).

**Surgeries for type 2 diabetes**

Weight loss surgery can effectively treat type 2 diabetes by helping you to [lose weight](https://www.webmd.com/diet/lose-weight-fast). These procedures limit how much food you can eat or how many nutrients your body can take in. You'll need to commit to long-term healthy lifestyle changes to get full benefits of this type of surgery.

Several types are available. Talk to your doctor about whether weight loss surgery is right for you.

**Alternative treatments for type 2 diabetes**

There's not much scientific evidence that any alternative treatment can you help manage your blood sugar.  Research into dietary supplements has found that:

* Chromium has little benefit and can be harmful in large doses.
* Cinnamon might lower fasting blood sugar levels, but doesn't affect A1c.
* Magnesiumhas mixed results in studies, may cause side effects, and can be dangerous at large does.

Type 2 Diabetes Health Disparities

Some populations are more likely to get type 2 diabetes. Latino (12%), Black (12%), and Asian (10%) people have higher rates of diabetes than white people (7%). American Indians get it at about twice the rate as white people (14.5%). Members of racial and ethnic minority groups with type 2 are also likely to have worse health outcomes.

Yet research shows that members of minority groups are less likely to use newer diabetes medications, regardless of their income or whether they have health insurance. And no matter what their ethnicity, people with lower incomes were less likely to take these medications. Across all races and ethnicities with diabetes, about 15% live in poverty, 19% have difficulties accessing food, and 51% have low-quality diets.

Also, Black, Latino, and Native American people are less likely to be included in clinical studies to try new diabetes drugs.

**Type 2 Diabetes Complications**

Over time, high blood sugar can damage and cause problems with you’re:

Heart and blood vessels. You’re up to twice as likely to get heart disease or have a stroke, and at a younger age. You’re also at high risk of blocked blood vessels (atherosclerosis) and chest pain (angina).

Kidneys. If your kidneys are damaged or you have kidney failure, you could need dialysis or a kidney replacement.

Eyes. High blood sugar can damage the tiny blood vessels in the backs of your eyes. If this isn’t treated, it can cause blindness.

Nerves. This can lead to trouble with digestion, the feeling in your feet, and your sexual response.

Skin. Your blood doesn’t circulate as well, so wounds heal slower and can become infected.

Pregnancy. Parents with diabetes are more likely to have a miscarriage, a stillbirth, or a baby with a birth defect.

Sleep. You might develop sleep apnea, a condition in which your breathing stops and starts while you sleep.

Hearing. You’re more likely to have hearing problems, but it’s not clear why.

Brain. High blood sugar can damage your brain and might put you at higher risk of Alzheimer’s disease.

Depression. People with the disease are twice as likely to get depressed as people who don’t have it.

The best way to avoid these complications is to manage your type 2 diabetes well.

* Take your diabetes medications or insulin on time.
* Check your blood sugar.
* Eat right, and don't skip meals.
* See your doctor regularly to check for early signs of trouble.

## Living With Type 2 Diabetes

Managing diabetes is complicated. You'll need to adopt healthy lifestyle habits, check your blood sugar regularly, and keep up with doctor visits and treatments. But your efforts can have a big impact on your health and your quality of life.

**Type 2 diabetes diet**

A [dietitian](https://www.webmd.com/diabetes/nutritionist-dietitian-choose) can help you create a personalized meal plan that takes your needs and preferences into account. A healthy diabetes diet should focus on:

* Limiting highly processed foods
* Reducing added sugars and low-fiber refined grains like white bread
* Boosting your intake of non-starchy vegetables like broccoli and green beans

**Type 2 diabetes costs**

On average, people diagnosed with diabetes spend about 2.3 times more on medical care than those who don't have the condition. Their medical expenses average about $16,750 a year, $9,600 of which is due directly to diabetes.

These expenses include doctor visits, hospitalizations, and medication. You may have other costs as well, such as lost time and less productivity at work.

**Managing type 2 diabetes**

Managing your type 2 diabetes well helps you avoid complications and feel your best. Along with a healthy diet, regular exercise, and medication as prescribed:

* Keep your blood pressure and cholesterol levels in the healthy range. High levels of either could raise your risk of diabetes complications.
* Get regular eye exams, dentist visits, and physicals.
* Check your feet daily for sores, redness, or swelling and let your doctor know if you notice any issues.
* Get at least 7 hours of good-quality sleep each night, as [sleep loss](https://www.webmd.com/sleep-disorders/sleep-deprivation-effects-on-memory) interferes with blood sugar control. Ask your doctor for help if you have a hard time sleeping.
* Be careful with alcohol. Limit alcoholic drinks to 1-2 drinks a day, depending on your size and gender. If you do drink alcohol, check your blood sugar afterward.
* Work with your doctor to come up with a sick day plan. Even a minor illness can interfere with your blood sugar and insulin levels. You may need to adjust your medications or check your blood sugar more often.

**Type 2 diabetes and mental health**

A long-term health condition can take a toll on your mental health. People with diabetes are more than twice as likely to have [depression](https://www.webmd.com/depression/detecting-depression), and 20% more likely to have anxiety, than those without the condition. Many don't get diagnosed or treated, even though therapy, medication, or a combination can work very well.

Many people with diabetes sometimes get overwhelmed by the pressures of trying to manage the condition. This is called diabetes distress, and it can lead to you to neglect your health. A support group or counseling could help you overcome it.

If you're worried about your emotional health, ask your doctor to recommend a mental health professional.

**Type 2 Diabetes Prognosis**

The long-term outlook for people with type 2 varies, depending on how effectively they manage the condition. At age 50, the average life expectancy (LE) for those with type 2 is 6 years shorter than those without the condition. But proper care and treatment can help you improve those odds.

**Can type 2 diabetes be cured?**

There's no cure for type 2. You may be able to get your blood sugar under control by losing weight and making [healthy lifestyle changes](https://www.webmd.com/diabetes/diabetes-lifestyle-tips), and might even be able to stop taking diabetes medications. But this isn't the case for everyone.

**Type 2 Diabetes Prevention**

Adopting a healthy lifestyle can help you lower your [risk of diabetes](https://www.webmd.com/diabetes/diabetes-causes) :

* **Lose weight.** Dropping just 7% to 10% of your weight can cut your risk of type 2 diabetes in half.
* **Get active.** 30 minutes of brisk walking a day will cut your risk by almost a third.
* **Eat right.** Avoid highly processed carbs, sugary drinks, and trans and saturated fats. Limit red and processed meats.
* **Quit smoking.** Work with your doctor to keep from gaining weight after you quit, so you don't create one problem by solving another.

## Takeaways

Type 2 diabetes is a serious condition that requires lifelong management. Weight loss, a healthy lifestyle, and medications, if needed, can help you keep it under control. They can also help you live a longer, healthier life.