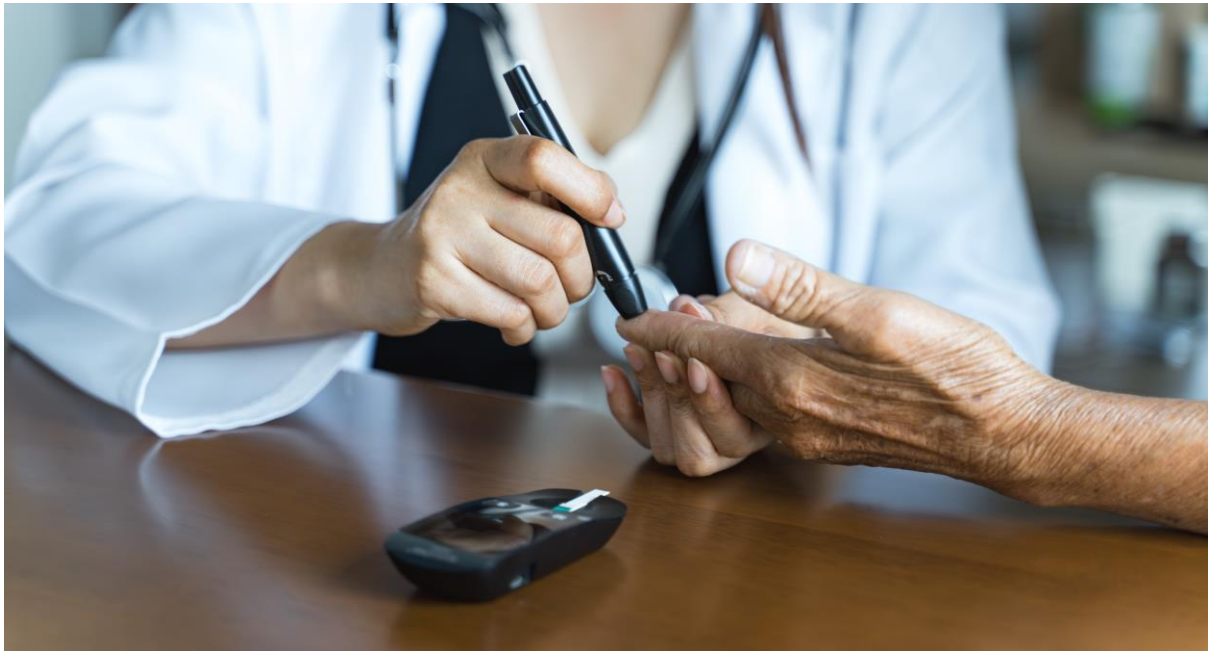


What Is Prediabetes?



Prediabetes, or borderline diabetes, is when your blood sugar level is higher than it should but not high enough for your doctor to diagnose diabetes.

People with type 2 diabetes almost always have prediabetes first. But it doesn't usually cause symptoms. About 98 million people in the U.S. have prediabetes, but more than 80% don't know that they have it. Prediabetes treatment can prevent more serious health problems, including type 2 diabetes and problems with your heart, blood vessels, eyes, and kidneys.

Your doctor might also call this condition:

- Impaired glucose tolerance (IGT)
- Impaired fasting glucose (IFG)
- Impaired glucose regulation (IGR)
- Non-diabetic hyperglycemia

Prediabetes Symptoms

Most people don't have any signs of prediabetes. But you might notice that:

- You're a lot thirstier than usual.
- You pee a lot.
- Your vision is blurry.
- You're a lot more tired than usual.

- You have areas of darker skin in your armpit or on your neck.
- You have small skin growths in the same areas.

Prediabetes symptoms in women

Some early diabetes symptoms that could affect women (and those assigned female at birth) in particular are:

- Yeast and urinary tract infections
- Longer and heavier periods
- Reduced interest in sex
- Vaginal dryness that can make sex uncomfortable
- Trouble getting pregnant

Prediabetes Causes

You get prediabetes because you have insulin resistance. That's when your body makes insulin (a hormone that helps regulate the levels of sugar in your bloodstream) but doesn't use it correctly. This causes your blood sugar levels to be higher than they should be.

Insulin resistance causes

Doctors aren't sure exactly why people develop insulin resistance. But things that can contribute to it include:

- Your genes
- Excess body fat
- Long-term stress
- Sleep loss
- Lack of exercise
- A diet heavy in processed foods
- Some hormonal health conditions, such as Cushing's syndrome and hypothyroidism
- Some medications, such as steroid drugs used over a long period

Prediabetes Risk Factors

Prediabetes risk factors

You're more likely to get prediabetes if you:

- Are over 45
- Have a waist size larger than 40 inches if you're a man (or were assigned as male at birth) and 35 inches if you're a woman (or were assigned female at birth)
- Eat a lot of red and processed meat
- Drink sugary beverages
- Don't eat enough fruit, veggies, nuts, whole grains, or olive oil
- Are Black, Native American, Latino, or Pacific Islander
- Have excess weight or obesity, especially if you tend to carry fat around your middle (belly fat)
- Have high cholesterol, high triglycerides, low HDL or "good" cholesterol, and high LDL or "bad" cholesterol
- Don't exercise regularly
- Had gestational diabetes or gave birth to a baby who weighed more than 9 pounds
- Have polycystic ovary syndrome, a common condition that causes irregular periods and other symptoms
- Have a sleep problem, such as sleep apnea
- Work that involves changing shifts or night shifts

Get tested for prediabetes if those things apply to you and if you:

- Have had an unusual blood sugar reading.
- Have heart disease.
- Show signs of insulin resistance, which means your body makes insulin but doesn't respond to it the way it should. These include darkened areas of skin, trouble concentrating, and more fatigue or hunger than usual.

Why race and ethnicity matter in prediabetes

As with diabetes, prediabetes is more common in people of certain ethnic and racial groups. Native Americans and Alaska Natives have the highest rates of diabetes among populations in the U.S. An estimated 75,000 people in the Navajo Area alone are thought to have prediabetes.

According to the CDC, prediabetes affects about:

- 38.6% of non-Hispanic Black adults
- 36.8% of Asian adults
- 35.7% of non-Hispanic white adults
- 34.6% of Hispanic adults (though they're more likely to have been diagnosed with diabetes than Asian or white adults)

There are many reasons for the disparities, including family health history and differences in access to health care, healthy foods, and safe places to exercise.

Prediabetes and gender

The CDC says prediabetes affects men at a slightly higher rate (41%) than women (32%).

Some early studies indicated that gender-affirming hormone therapy might worsen insulin resistance and increase the risk of diabetes in transgender women. But follow-up studies showed conflicting results, so more research is needed into this.

Prediabetes Tests and Diagnosis

Your doctor will do at least one of these tests:

Fasting plasma glucose test

You won't eat for 8 hours, and then a technician will take your blood to test the sugar levels.

The results indicate:

- **Normal range** if your blood sugar is less than 100 milligrams per deciliter (mg/dL)
- **Prediabetes range** if your blood sugar is 100–125 mg/dL
- **Diabetes range** if your blood sugar is 126 mg/dL or higher

Oral glucose tolerance test

First, you'll have a fasting plasma glucose test. Then, you'll drink something sugary. After 2 hours, a technician will take more blood for testing. The results indicate:

- **Normal range** if your blood sugar is less than 140 mg/dL after the second test
- **Prediabetes range** if your blood sugar is 140–199 mg/dL after the second test
- **Diabetes range** if your blood sugar is 200 mg/dL or higher after the second test

Hemoglobin A1c test

This blood test shows your average blood sugar levels for the past 2–3 months. Doctors give it to people who have diabetes to see if their blood sugar levels are under control. They can also use it to diagnose prediabetes or diabetes. The results indicate:

- **Normal range** if it's 5.6% or less
- **Prediabetes range** if it's 5.7%–6.4%
- **Diabetes range** if it's 6.5% or above

You may need to take the test again to confirm the results.

Children and Prediabetes Testing

Doctors diagnose prediabetes based on the same blood sugar levels, no matter the person's age. The American Diabetes Association says children aged 10 and older should be tested if they have extra weight or obesity along with:

- A family member with type 2 diabetes
- A mother who had gestational diabetes while pregnant with the child
- Native American, Black, Hispanic, Asian American, or Pacific Islander heritage
- Signs of insulin resistance or conditions linked to it, such as low birth weight, high blood pressure, or polycystic ovary syndrome

If a child who has a high chance of getting prediabetes gets normal test results, the American Diabetes Association advises testing them again at least every 3 years.

Prediabetes Complications

Without treatment, prediabetes can become type 2 diabetes. That can lead to other serious problems, including:

- Kidney disease
- Blindness
- High blood pressure
- Nerve problems (peripheral neuropathy)
- Loss of a limb (amputation)

Even before it becomes diabetes, untreated prediabetes could cause long-term damage to your blood vessels, kidneys, and heart. It's been linked to so-called silent heart attacks; whose symptoms are so minor that you may not even notice them.

Prediabetes Treatment

The main treatment for prediabetes is a healthy lifestyle that includes these steps:

- Eat a healthy diet.
- Lose weight if you need to.
- Exercise regularly.
- Stop smoking.
- Get your blood pressure and cholesterol under control.

If you're at high risk of diabetes, your doctor might also suggest you take medication such as metformin (Glucophage) to lower your blood sugar.

Prediabetes Management and Self-Care

Prediabetes diet

There's no official diet, but these five swaps can help reverse prediabetes and lower your chances of getting type 2 diabetes:

- Choose whole grains and whole-grain products over processed carbs such as white bread, potatoes, and breakfast cereals.
- Drink coffee, water, and tea instead of soda and juice.
- Choose good fats such as those in vegetable oil, nuts, and seeds over those in margarine, baked goods, and fried foods.
- Trade red meat and processed meats for nuts, whole grains, poultry, and fish.
- Use olive oil instead of lard or butter.

Success With Type 2 Diabetes

To stay on the right track, Dwayne Colyer credits several things to help manage his blood sugar.

If making big diet changes seems tough, start with little changes such as:

- Eat smaller portions.

- Add one vegetable to your dinner.
- Roast or bake foods instead of deep-frying.
- Eat a meat-free meal each week.

Some healthy eating plans that can lower your chances of diabetes include:

- Mediterranean
- Plant-based (vegetarian or vegan)
- Low-fat
- DASH (dietary approach to stop hypertension)

If you're not sure how to plan your meals, ask your doctor. They can refer you to a registered dietitian nutritionist (RDN). That's a professional who's trained to help you find healthy ways to eat. Most importantly, they'll want to come up with a plan you can stick to.

Exercise for prediabetes

When you exercise, your body uses the sugar in your blood to fuel your workout. Over time, regular physical activity can lower your overall glucose levels. You'll also become more sensitive to the insulin in your body. That makes it easier for your muscles to tap into that glucose.

You should get at least 150 minutes per week of moderate exercise. Aim for 30 minutes a day, 5 days a week. You don't have to do anything too intense. You can:

- Go for a brisk walk (at least 2.5 mph)
- Try water aerobics
- Take a dance class
- Bike (slower than 10 mph)

You may want to add a couple of days of strength, or resistance, training. That's when you use weight machines, free weights, your own body, or exercise bands to build muscle.

If you're new to exercise, talk to your doctor about what's safe for you.

Prediabetes and weight loss

Not everyone with prediabetes needs to lose weight. But if you're overweight, shedding 5%–10% of your body weight can lower your chances of diabetes by more than half.

You may wonder whether carrying extra weight or being obese causes diabetes. That's something experts are still trying to figure out. What they do know is that extra body fat, especially around your belly, sends out hormones that affect your appetite and cause inflammation. The cells that help you use insulin may get hurt in the process. Some experts think losing belly fat may help you get better control of your blood sugar.

Prediabetes and sleep

Studies show sleep loss can make it harder to control your blood sugar and appetite. That may be why your chances of obesity and type 2 diabetes go up if you sleep less than 5-6 hours a night. Your chances are also higher if the quality of your sleep is bad.

If you have ongoing sleep problems, skip your afternoon caffeine. You'll also want to avoid alcohol close to bedtime. Both can disrupt your slumber. If that doesn't help, talk to your doctor. They can help treat your insomnia.

Quit smoking

Studies show people who smoke have a higher chance of prediabetes than non-smokers. High levels of nicotine make it harder for your body to use insulin. Cigarette smoking also damages your cells in a way that experts think leads to diabetes. It's important to talk to your doctor about how to quit.

Prediabetes Prevention

The same healthy lifestyle habits that treat prediabetes can help prevent it. Other things that can help:

- Don't have more than one alcoholic drink a day.
- Get regular check-ups so your doctor can keep tabs on your blood sugar.
- Take any blood sugar medications just as your doctor prescribes.

Unfortunately, prediabetes isn't always preventable. Some people whose genes put them at high risk for the condition may develop it even if they follow a healthy lifestyle. That's one reason it's important to keep up with your health care appointments.

Takeaways

When you have prediabetes, your blood sugar levels are higher than they should be but not high enough to be considered diabetes. People with prediabetes are at higher risk for type 2 diabetes and the other health problems that can come along with it. You may be able to reverse it by making healthy lifestyle changes and, in some cases, by taking medicine to control your blood sugar.

Prediabetes FAQs

How often should I check my blood sugar for prediabetes?

If you're healthy, your doctor will probably test your blood sugar about every 3 years. If you already have prediabetes, they'll probably do it at least once a year. Because prediabetes doesn't usually cause symptoms, regular check-ups are important, especially if you have a family history of diabetes or other risk factors.

Can prediabetes put my vision at risk?

Research shows that it's possible for those with prediabetes to get diabetic retinopathy, a condition that can lead to serious eye damage and sometimes blindness. If you have prediabetes, your doctor may recommend eye exams to check for retinopathy. Tell your doctor if you notice any changes in your vision.