

# healthline



## Everything You Need to Know About Diabetes

*World Diabetes Day is 14th November 2020. Since this condition is a major contributory factor in deaths from COVID-19, we are featuring it yet again in an effort to increase awareness.*

### DIABETES TYPES

Diabetes mellitus, commonly known as diabetes, is a metabolic disease that causes high blood sugar. The hormone insulin moves sugar from the blood into your cells to be stored or used for energy. With diabetes, your body either doesn't make enough insulin or can't effectively use the insulin it does make.

Untreated high blood sugar from diabetes can damage your nerves, eyes, kidneys, and other organs.

There are a few different types of diabetes:

- Type 1 diabetes is an autoimmune disease. The immune system attacks and destroys cells in the pancreas, where insulin is made. It's unclear what causes this attack. About 10 percent of people with diabetes have this type.
- Type 2 diabetes occurs when your body becomes resistant to insulin, and sugar builds up in your blood.
- Prediabetes occurs when your blood sugar is higher than normal, but it's not high enough for a diagnosis of type 2 diabetes.
- Gestational diabetes is high blood sugar during pregnancy. Insulin-blocking hormones produced by the placenta cause this type of diabetes.

A rare condition called diabetes insipidus is not related to diabetes mellitus, although it has a similar name. It's a different condition in which your kidneys remove too much fluid from your body.

Each type of diabetes has unique symptoms, causes, and treatments. Learn more about how these types differ from one another.

### SYMPTOMS OF DIABETES

Diabetes symptoms are caused by rising blood sugar.

### **General symptoms**

The general symptoms of diabetes include:

- increased hunger
- increased thirst
- weight loss
- frequent urination
- blurry vision
- extreme fatigue
- sores that don't heal

### **Symptoms in men**

In addition to the general symptoms of diabetes, men with diabetes may have a decreased sex drive, erectile dysfunction (ED), and poor muscle strength.

### **Symptoms in women**

Women with diabetes can also have symptoms such as urinary tract infections, yeast infections, and dry, itchy skin.

### **Type 1 diabetes**

Symptoms of type 1 diabetes can include:

- extreme hunger
- increased thirst
- unintentional weight loss
- frequent urination
- blurry vision
- tiredness

It may also result in mood changes.

### **Type 2 diabetes**

Symptoms of type 2 diabetes can include:

- increased hunger
- increased thirst
- increased urination
- blurry vision
- tiredness
- sores that are slow to heal

It may also cause recurring infections. This is because elevated glucose levels make it harder for the body to heal.

### **Gestational diabetes**

Most women with gestational diabetes don't have any symptoms. The condition is often detected during a routine blood sugar test or oral glucose tolerance test that is usually performed between the 24th and 28th weeks of gestation.

In rare cases, a woman with gestational diabetes will also experience increased thirst or urination.

### **The bottom line**

Diabetes symptoms can be so mild that they're hard to spot at first. Learn which signs should prompt a trip to the doctor.

## CAUSES OF DIABETES

Different causes are associated with each type of diabetes.

### ***Type 1 diabetes***

Doctors don't know exactly what causes type 1 diabetes. For some reason, the immune system mistakenly attacks and destroys insulin-producing beta cells in the pancreas.

Genes may play a role in some people. It's also possible that a virus sets off the immune system attack.

### ***Type 2 diabetes***

Type 2 diabetes stems from a combination of genetics and lifestyle factors. Being overweight or obese increases your risk too. Carrying extra weight, especially in your belly, makes your cells more resistant to the effects of insulin on your blood sugar.

This condition runs in families. Family members share genes that make them more likely to get type 2 diabetes and to be overweight.

### ***Gestational diabetes***

Gestational diabetes is the result of hormonal changes during pregnancy. The placenta produces hormones that make a pregnant woman's cells less sensitive to the effects of insulin. This can cause high blood sugar during pregnancy.

Women who are overweight when they get pregnant or who gain too much weight during their pregnancy are more likely to get gestational diabetes.

### ***The bottom line***

Both genes and environmental factors play a role in triggering diabetes. Get more information here on the causes of diabetes.

## DIABETES RISK FACTORS

Certain factors increase your risk for diabetes.

### ***Type 1 diabetes***

You're more likely to get type 1 diabetes if you're a child or teenager, you have a parent or sibling with the condition, or you carry certain genes that are linked to the disease.

### ***Type 2 diabetes***

Your risk for type 2 diabetes increases if you:

- are overweight
- are age 45 or older
- have a parent or sibling with the condition
- aren't physically active
- have had gestational diabetes
- have prediabetes
- have high blood pressure, high cholesterol, or high triglycerides
- have African American, Hispanic or Latino American, Alaska Native, Pacific Islander, American Indian, or Asian American ancestry

### ***Gestational diabetes***

Your risk for gestational diabetes increases if you:

- are overweight
- are over age 25
- had gestational diabetes during a past pregnancy
- have given birth to a baby weighing more than 9 pounds

- have a family history of type 2 diabetes
- have polycystic ovary syndrome (PCOS)

### ***The bottom line***

Your family, environment, and preexisting medical conditions can all affect your odds of developing diabetes. Find out which risks you can control and which ones you can't.

## **DIABETES COMPLICATIONS**

High blood sugar damages organs and tissues throughout your body. The higher your blood sugar is and the longer you live with it, the greater your risk for complications.

Complications associated with diabetes include:

- heart disease, heart attack, and stroke
- neuropathy
- nephropathy
- retinopathy and vision loss
- hearing loss
- foot damage such as infections and sores that don't heal
- skin conditions such as bacterial and fungal infections
- depression
- dementia

### ***Gestational diabetes***

Uncontrolled gestational diabetes can lead to problems that affect both the mother and baby.

Complications affecting the baby can include:

- premature birth
- higher-than-normal weight at birth
- increased risk for type 2 diabetes later in life
- low blood sugar
- jaundice
- stillbirth

The mother can develop complications such as high blood pressure (preeclampsia) or type 2 diabetes. She may also require cesarean delivery, commonly referred to as a C-section.

The mother's risk of gestational diabetes in future pregnancies also increases.

### ***The bottom line***

Diabetes can lead to serious medical complications, but you can manage the condition with medications and lifestyle changes. Avoid the most common diabetes complications with these helpful tips.

## **TREATMENT OF DIABETES**

Doctors treat diabetes with a few different medications. Some of these drugs are taken by mouth, while others are available as injections.

### ***Type 1 diabetes***

Insulin is the main treatment for type 1 diabetes. It replaces the hormone your body isn't able to produce.

There are four types of insulin that are most commonly used. They're differentiated by how quickly they start to work, and how long their effects last:

- Rapid-acting insulin starts to work within 15 minutes and its effects last for 3 to 4 hours.
- Short-acting insulin starts to work within 30 minutes and lasts 6 to 8 hours.

- Intermediate-acting insulin starts to work within 1 to 2 hours and lasts 12 to 18 hours.
- Long-acting insulin starts to work a few hours after injection and lasts 24 hours or longer.

### ***Type 2 diabetes***

Diet and exercise can help some people manage type 2 diabetes. If lifestyle changes aren't enough to lower your blood sugar, you'll need to take medication.

These drugs lower your blood sugar in a variety of ways. You may need to take more than one of these drugs. Some people with type 2 diabetes also take insulin.

### ***Gestational diabetes***

You'll need to monitor your blood sugar level several times a day during pregnancy. If it's high, dietary changes and exercise may or may not be enough to bring it down.

According to the Mayo Clinic, about 10 to 20 percent of women with gestational diabetes will need insulin to lower their blood sugar. Insulin is safe for the growing baby.

### ***The bottom line***

The drug or combination of drugs that your doctor prescribes will depend on the type of diabetes you have — and its cause. Check out this list of the various medications that are available to treat diabetes.

## **DIABETES AND DIET**

Healthy eating is a central part of managing diabetes. In some cases, changing your diet may be enough to control the disease.

### ***Type 1 diabetes***

Your blood sugar level rises or falls based on the types of foods you eat. Starchy or sugary foods make blood sugar levels rise rapidly. Protein and fat cause more gradual increases.

Your medical team may recommend that you limit the amount of carbohydrates you eat each day. You'll also need to balance your carb intake with your insulin doses.

Work with a dietitian who can help you design a diabetes meal plan. Getting the right balance of protein, fat, and carbs can help you control your blood sugar. Check out this guide to starting a type 1 diabetes diet.

### ***Type 2 diabetes***

Eating the right types of foods can both control your blood sugar and help you lose any excess weight.

Carb counting is an important part of eating for type 2 diabetes. A dietitian can help you figure out how many grams of carbohydrates to eat at each meal.

In order to keep your blood sugar levels steady, try to eat small meals throughout the day. Emphasize healthy foods such as:

- fruits
- vegetables
- whole grains
- lean protein such as poultry and fish
- healthy fats such as olive oil and nuts

Certain other foods can undermine efforts to keep your blood sugar in control. Discover the foods you should avoid if you have diabetes.

### ***Gestational diabetes***

Eating a well-balanced diet is important for both you and your baby during these nine months. Making the right food choices can also help you avoid diabetes medications.

Watch your portion sizes, and limit sugary or salty foods. Although you need some sugar to feed your growing baby, you should avoid eating too much.

Consider making an eating plan with the help of a dietitian or nutritionist. They'll ensure that your diet has the right mix of macronutrients. Go here for other do's and don'ts for healthy eating with gestational diabetes.

### **DIABETES DIAGNOSIS**

Anyone who has symptoms of diabetes or is at risk for the disease should be tested. Women are routinely tested for gestational diabetes during their second or third trimesters of pregnancy.

Doctors use these blood tests to diagnose prediabetes and diabetes:

- The fasting plasma glucose (FPG) test measures your blood sugar after you've fasted for 8 hours.
- The A1C test provides a snapshot of your blood sugar levels over the previous 3 months.

To diagnose gestational diabetes, your doctor will test your blood sugar levels between the 24th and 28th weeks of your pregnancy.

- During the glucose challenge test, your blood sugar is checked an hour after you drink a sugary liquid.
- During the 3 hour glucose tolerance test, your blood sugar is checked after you fast overnight and then drink a sugary liquid.

The earlier you get diagnosed with diabetes, the sooner you can start treatment. Find out whether you should get tested, and get more information on tests your doctor might perform.

### **DIABETES PREVENTION**

Type 1 diabetes isn't preventable because it's caused by a problem with the immune system. Some causes of type 2 diabetes, such as your genes or age, aren't under your control either.

Yet many other diabetes risk factors are controllable. Most diabetes prevention strategies involve making simple adjustments to your diet and fitness routine.

If you've been diagnosed with prediabetes, here are a few things you can do to delay or prevent type 2 diabetes:

- Get at least 150 minutes per week of aerobic exercise, such as walking or cycling.
- Cut saturated and trans fats, along with refined carbohydrates, out of your diet.
- Eat more fruits, vegetables, and whole grains.
- Eat smaller portions.
- Try to lose 7 percent Trusted Source of your body weight if you're overweight or obese.

These aren't the only ways to prevent diabetes. Discover more strategies that may help you avoid this chronic disease.

### **DIABETES IN PREGNANCY**

Women who've never had diabetes can suddenly develop gestational diabetes in pregnancy. Hormones produced by the placenta can make your body more resistant to the effects of insulin.

Some women who had diabetes before they conceived carry it with them into pregnancy. This is called pre-gestational diabetes.

Gestational diabetes should go away after you deliver, but it does significantly increase your risk for getting diabetes later.

About half of women with gestational diabetes will develop type 2 diabetes within 5 to 10 years of delivery, according to the International Diabetes Federation (IDF).

Having diabetes during your pregnancy can also lead to complications for your newborn, such as jaundice or breathing problems.

If you're diagnosed with pre-gestational or gestational diabetes, you'll need special monitoring to prevent complications. Find out more about the effect of diabetes on pregnancy.

## **DIABETES IN CHILDREN**

Children can get both type 1 and type 2 diabetes. Controlling blood sugar is especially important in young people, because the disease can damage important organs such as the heart and kidneys.

### ***Type 1 diabetes***

The autoimmune form of diabetes often starts in childhood. One of the main symptoms is increased urination. Kids with type 1 diabetes may start wetting the bed after they've been toilet trained.

Extreme thirst, fatigue, and hunger are also signs of the condition. It's important that children with type 1 diabetes get treated right away. The disease can cause high blood sugar and dehydration, which can be medical emergencies.

### ***Type 2 diabetes***

Type 1 diabetes used to be called "juvenile diabetes" because type 2 was so rare in children. Now that more children are overweight or obese, type 2 diabetes is becoming more common in this age group.

About 40 percent of children with type 2 diabetes don't have symptoms, according to the Mayo Clinic. The disease is often diagnosed during a physical exam.

Untreated type 2 diabetes can cause lifelong complications, including heart disease, kidney disease, and blindness. Healthy eating and exercise can help your child manage their blood sugar and prevent these problems.

Type 2 diabetes is more prevalent than ever in young people. Learn how to spot the signs so you can report them to your child's doctor.

## **TAKEAWAY**

Some types of diabetes — like type 1 — are caused by factors that are out of your control. Others — like type 2 — can be prevented with better food choices, increased activity, and weight loss.

Discuss potential diabetes risks with your doctor. If you're at risk, have your blood sugar tested and follow your doctor's advice for managing your blood sugar.

Written by Stephanie Watson

Medically reviewed by Marina Basina, M.D.

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