

Diabetes and Helpful Information to Know

Diabetes can affect many parts of your body

What is diabetes?

Diabetes means that your blood sugar is too high. A main goal of managing diabetes is to keep your blood sugar controlled.

Diabetes, over time, may lead to:

- Heart disease and stroke
- Kidney disease
- Blindness
- Nervous system problems, such as pain, tingling, or loss of feeling in the hands, arms, feet, or legs.
- Lower-limb amputations or loss of part of the leg

You can help reduce the risk of long-term health problems caused by diabetes. Follow your treatment plan to control your:

- Blood sugar
- Blood pressure
- Cholesterol

Do not be afraid to talk to your health care provider about any problems you are having. He or she may be able to help you solve them.



Major types of diabetes

Type 2 diabetes

- This is the most common type of diabetes. With type 2 diabetes, your body:
 - Does not make enough insulin and/or
 - Cannot use insulin the right way

Most often, this type of diabetes occurs in adults. About 90% to 95% of adults with diagnosed diabetes in the United States have type 2 diabetes.

Type 1 diabetes

- In type 1 diabetes, the body does not make insulin. Although type 1 diabetes is often diagnosed in children and young adults, it can happen at any age. Once a person has type 1 diabetes, it does not go away. About 5% to 10% of adults with diagnosed diabetes in the United States have type 1 diabetes.

The role of blood sugar in your body

Sugar is your body's main fuel. But having too much sugar in your blood can be a problem.

Your body's main source of energy is glucose, a type of sugar. You get this sugar from:

The food that you eat

The sugar that is made in your liver

Your health care provider probably told you that you had diabetes because you had too much sugar in your blood.

If you have diabetes, your body does not:

- Make enough insulin and/or
- Use insulin the right way

Ask your health care provider when and how often you should check your blood sugar.



Blood sugar monitoring

There are several ways to monitor your blood sugar, including:

- **Home blood sugar testing:** This is a blood test you do yourself with a blood sugar meter. The meter measures your blood sugar at that moment.
 - The readings you get from your meter can help you manage your diabetes. Record your test results and go over them at each visit with your health care provider.
 - You can help control your blood sugar levels by checking your blood sugar levels and keeping track of them.
 - Ask your health care provider when and how often you should check your blood sugar.
- **Continuous glucose monitors:** These monitors continually monitor the glucose (sugar) in your blood through an external device that is attached to your body and gives updates in real-time.
 - These devices are used to manage your blood sugar with something called “time in range.” Time in range is the amount of time you spend in the target blood sugar range, which is between 70 mg/dL and 180 mg/dL for most people.
 - According to the American Diabetes



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Association, most people with type 1 and type 2 diabetes should aim for a time in range of at least 70% of readings, meaning roughly 17 out of 24 hours a day to be in range (not high or low). If you use this method, it is important that you and your diabetes team take the time to check time-in-range readings. If you are interested in continuous glucose monitoring, which can be paired with a smartphone, talk with your doctor for more information.

- **The A1C test:** This is a blood test that shows your average blood sugar level over the past 2 to 3 months. The staff at the lab or the health care provider’s office usually does this test.

Blood sugar highs and lows

People with diabetes may have high or low blood sugar at times. Both can be serious if left untreated, so it is important to learn about high and low blood sugar.

What is high blood sugar?

High blood sugar is also called *hyperglycemia* [hy-pur-gly-SEE-mee-uh]. High blood sugar can occur when you:

- Eat too much
- Don't get enough physical activity
- Are sick or under stress
- Miss a dose of your diabetes medication or take certain other medications

What to do if you have high blood sugar?

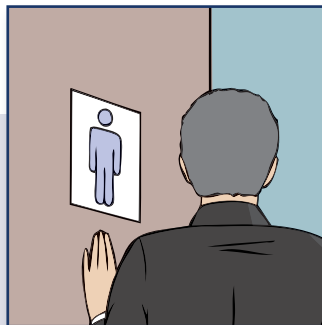
- Regularly check your blood sugar according to your health care provider's instructions.
- If your blood sugar is too high, talk to your health care provider about what to do.

Ask your health care provider when and how often you should check your blood sugar.

Symptoms of high blood sugar include:



Feeling thirsty



Having to urinate more often



Blurred vision



Blood sugar highs and lows

What is low blood sugar?

Low blood sugar is also called *hypoglycemia* [hy-poh-gly-SEE-mee-uh].

Low blood sugar can occur when you:

- Eat later than usual
- Miss a meal or snack
- Do more physical activity than usual
- Take some types of diabetes medicines

The best way to prevent low blood sugar is to detect it so you can treat it early.

Check your blood sugar often: for example, before and after meals, before and after exercise and even during exercise if it is long or intense, and if things around you change, such as a new work schedule or if you travel across time zones. Work with your health care provider to understand what causes your lows and how you may be able to prevent them.

- Remember, low blood sugar can be serious if not treated immediately.
- Symptoms may be mild at first. They may worsen quickly if you do not treat them. If you have symptoms of low blood sugar, test your blood sugar right away.

Common symptoms of low blood sugar

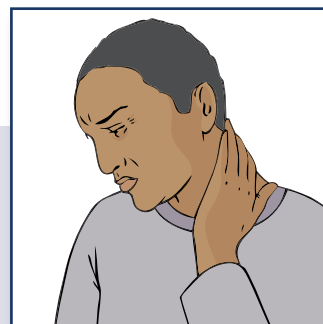
Symptoms may be mild at first. They may worsen quickly if you do not treat them. If you have these symptoms, test your blood sugar right away.



Dizziness or light-headedness



Shakiness



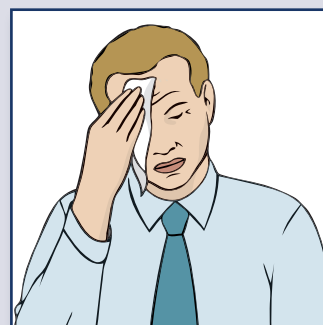
Nervousness or anxiety



Sleepiness



Irritability or impatience



Sweating, chills, or clamminess



Hunger and nausea



Confusion



Weakness or fatigue

What to do if you have low blood sugar

1. If your blood sugar is below 70 mg/dL, or if you have any of the symptoms of low blood sugar, eat or drink 15 grams of glucose or simple carbohydrates. The items below are commonly used:
 - ½ cup of fruit juice or regular soda (not diet)
 - 1 tablespoon of sugar, honey, or corn syrup
 - 5 or 6 pieces of hard candy
 - 1 cup of milk
 - glucose tablets (follow package instructions)
2. Wait 15 minutes. Then check your blood sugar again.
3. If your blood sugar is still below 70 mg/dL, or if you do not feel better, repeat step 1 every 15 minutes until your blood sugar is 70 mg/dL or above.
4. If your next meal is 1 hour or more away, eat a snack once your blood sugar is 70 mg/dL or above.
5. If you still do not feel better, or if your blood sugar stays below 70 mg/dL, call your health care provider right away.



Do not be afraid to talk to your health care provider about any problems you are having. He or she may be able to help you solve them.

Smoking is bad for your health

One of the most important changes you can make in your life is to stop smoking. Quitting can be hard, but it is worth it.

Smoking can affect a person's general health in a harmful way. It has also been linked to serious health problems, such as lung cancer, and reduces the overall health of smokers.

Smoking is also linked to:

- Heart disease: People who smoke are 2 to 4 times more likely to develop coronary heart disease than nonsmokers.
- Stroke: People who smoke are 2 to 4 times more likely to have a stroke than nonsmokers.
- Lung disease such as chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis: People who smoke are 12 to 13 times more likely to die from COPD than nonsmokers.

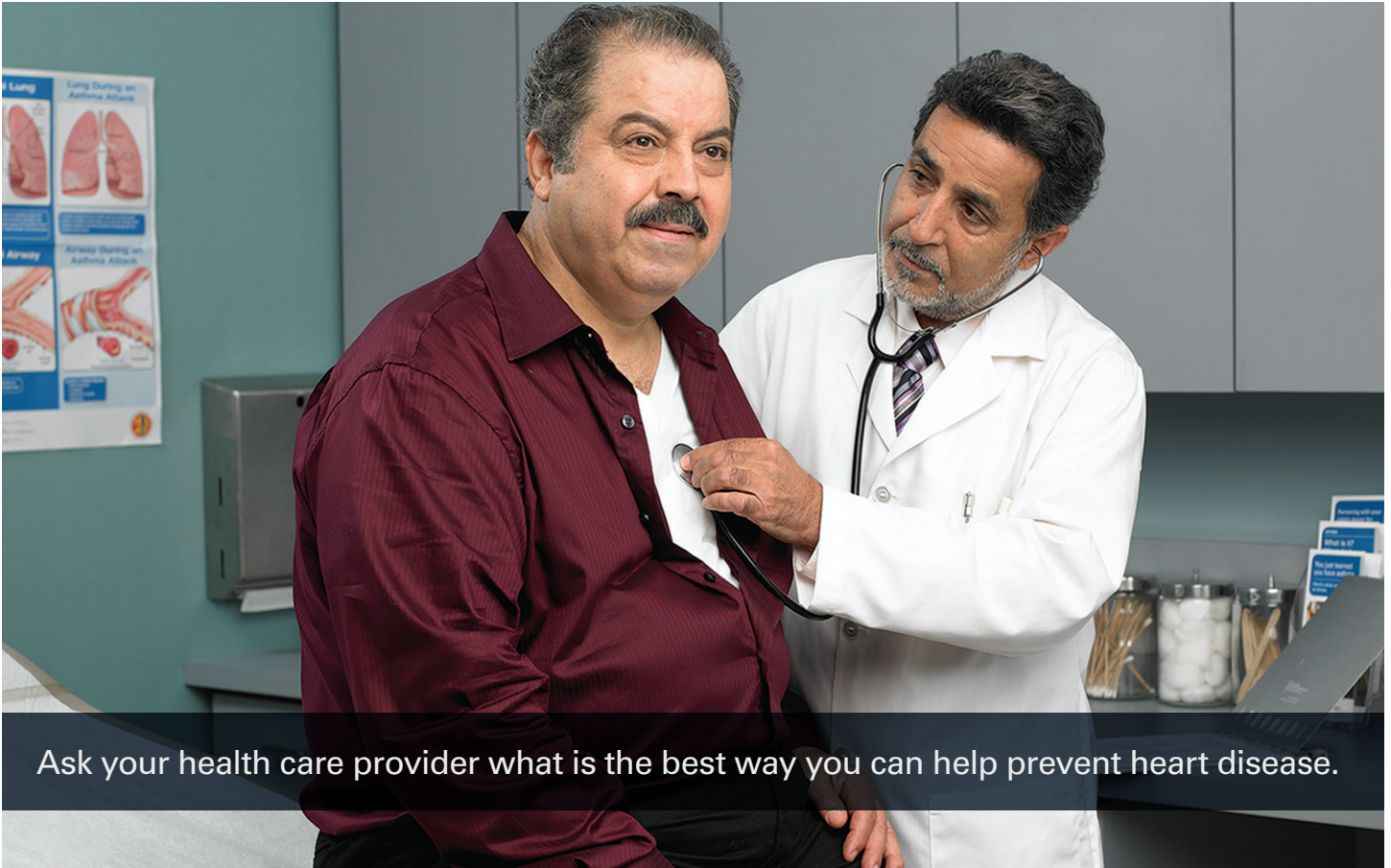
Here are a few tips to help you quit smoking:

1. Find your own reasons to quit.
2. Build support.
3. Throw the cigarettes away.
4. Ask a friend or family member who smokes to quit with you.
5. Choose a quitting strategy.



Target quit date:

Talk with your health care provider about ways to stop smoking. Together, you can make a plan to quit.



Ask your health care provider what is the best way you can help prevent heart disease.

Diabetes and your heart

Diabetes and high blood pressure increase the risk of heart disease

For people with diabetes, cardiovascular disease is the leading cause of death. High blood sugar, high blood pressure, and high cholesterol, which are common in people with diabetes, can contribute to heart disease.

You can help lower your risk of heart disease by doing the following:

- Control your blood sugar, blood pressure, and cholesterol.
- Be physically active for at least 30 minutes on most days of the week.
- Reach and stay at a healthy weight.
- Eat food high in fiber.
- Stop smoking.
- Take your medicines as directed by your health care provider.

Diabetes and stroke

A stroke occurs when blood supply to part of your brain is stopped and brain tissue is damaged.

If you have diabetes, you are more likely to have a stroke or heart disease.

Just having diabetes puts you at risk. Your risk is even greater if:

- You have high blood pressure
- You have cholesterol levels that are not normal
- You smoke
- You have a history of stroke or mini-stroke (also called a transient ischemic attack, or TIA)
- You have family members who have had a stroke or TIAs

How can you help lower your risk of having a stroke?

You can help lower your risk by keeping your blood sugar, blood pressure, and cholesterol in control. You can do this with healthy eating, physical activity, and, if needed, medicine. Quitting smoking is important, too. Every step helps. The closer your numbers are to your goals, the better.

Ask your health care provider about ways you can help reduce your risk for stroke.



What are the warning signs of a stroke?

Typical warning signs of a stroke develop suddenly and can include:

- Weakness or numbness on 1 side of your body
- Sudden confusion or trouble understanding
- Trouble talking
- Dizziness, loss of balance, or trouble walking
- Trouble seeing out of 1 or both eyes
- Double vision
- Severe headache

If you have warning signs of a stroke, call 911 right away. Getting treatment as soon as possible can help prevent permanent damage to your brain.

Diabetes and your eyes

Diabetes can damage your eyes and diabetic retinopathy is the leading cause of blindness among working-age adults.

Diabetes may cause these common eye problems:

- Diabetic retinopathy. This is damage to the retina. The retina is a layer of tissue covering the back of the eye.
- Cataracts. These make your vision cloudy.
- Glaucoma. This is high pressure in your eye, which can damage your vision.

How to help protect your eyes from problems:

- Keep your blood sugar under control.
- Keep your blood pressure and cholesterol under control.
- Have a dilated eye exam every year.
- Stop smoking.

Ask your health care provider about ways to help prevent eye problems.



Normal vision



Blurry vision



Vision with retinopathy*

* You may have retinopathy and still be able to see clearly.

Diabetes and your mouth

If you have diabetes, make sure you tell your dentist. Diabetes can increase your risk for developing oral health problems. You may have red, sore, or swollen gums that bleed when you brush.

People with diabetes are more likely to have problems with their gums.

Prevent plaque build-up on your teeth

Everyone gets plaque on their teeth. Plaque is a sticky film that comes from chewing food, saliva, and germs. It is the main risk factor for cavities and gum disease.

Plaque is filled with germs. High blood sugar in your saliva helps these germs grow. This can lead to infection.

Things you can do to take care of your gums and teeth:

- Brush at least twice a day and floss at least once a day.
- Have your teeth cleaned at a dentist office at least 2 times a year.
- If you smoke, quit.
- Keep your blood sugar under control.



Tell your dentist that you have diabetes.

Ask your dentist how often you need to see him or her.

Diabetes and your kidneys

Diabetes can increase your risk for kidney disease. Your risk is much higher if you are Hispanic/Latino, African-American, or Native American.

Things you can do to help prevent kidney disease:

- Visit your health care provider regularly. Get screened for kidney disease to catch problems early.
- Follow your health care provider's advice. Sometimes exercise, changes to your diet, and medicine can help keep your kidneys healthy.
- Ask your health care provider about ways to:
 - Keep your blood sugar under control.
 - Keep your blood pressure at goal. High blood pressure can lead to kidney disease or make it worse.
 - Lose weight, if you are overweight.
 - Be active every day. Talk to your health care provider before starting any physical activity.



Ask your health care provider to test you for kidney disease and to explain the results.

Diabetes and your nervous system

Diabetes is a leading cause of nerve damage. Nerve damage is also called neuropathy. It can cause tingling, pain, or numbness in your feet and hands. Nerve damage can also cause problems in other parts of your body.

You might have nerve damage if you:

- Have numbness, tingling or pain in the toes, feet, legs, hands, arms, or fingers
- Experience vomiting or indigestion
- Have trouble going to the bathroom
- Feel dizzy or weak
- Sweat more or less than usual
- Lose the desire or ability to have sex

Talk to your health care provider about any numbness, tingling, or pain you may have.

Ways to help protect yourself against nerve damage:

You can do many things to help lower your chance of getting nerve damage. If you already have nerve damage, you can help stop it from getting worse.

Do these steps to keep your body working well:

- Talk to your health care provider, who can diagnose neuropathy based on your symptoms and physical exam.
 - Discuss any problems, including numbness, tingling, pain, problems with digestion, trouble going to the bathroom, or problems having sex.
- Keep your blood sugar, blood pressure, and cholesterol in control.
 - Check your blood sugar regularly.
 - Have your health care provider test your A1C at least 2 times a year.
 - Eat healthy and stay active.
 - Take your prescribed medicines.
 - Control your blood sugar, blood pressure, and cholesterol.
- Have healthy habits
 - If you are overweight, lose weight with diet and exercise.
 - Stop smoking.
 - Limit your alcohol use.

Diabetes and your feet

If you have diabetes, it is very important to take care of your feet. In severe cases, diabetes can lead to the loss of a foot or leg. This is why it is best to try to prevent problems before they happen.

Diabetes can cause 2 different problems in your feet:

- 1. Nerve damage.** The nerves in your legs and feet can be damaged by high blood sugar. This may affect your ability to feel pain, heat, or cold in your legs and feet. You may also have odd feelings or numbness. This nerve damage can lead to a sore or an infection, which may get worse because you do not know it is there.
- 2. Poor blood flow.** This means that too little blood reaches your legs and feet. This makes it hard for a sore or an infection to heal.

Signs of nerve damage to your feet

Call your health care provider right away if you have any of these:

- Cuts or breaks in the skin of your foot
- A change in the color or shape of your foot
- Pain or numbness
- An ingrown toenail
- Athlete's foot, blisters, or plantar warts, which can become infected

How to help protect your feet from problems

Things you can do to protect your feet:

- 1.** Keep your feet clean and protect them from injury.
- 2.** Check the skin on your feet every day.
- 3.** Keep the blood flowing to your legs and feet.



Diabetes and your emotional health

People with diabetes may have extra stresses in their lives.

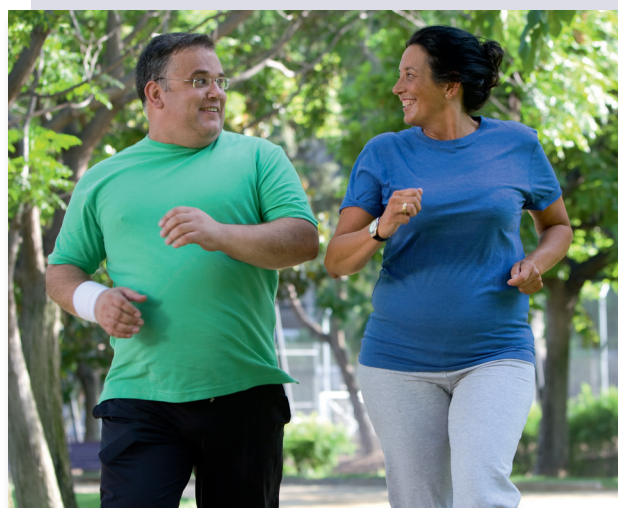
Everyone has different ways of dealing with stress. Here are some ways to help you cope:

- Try deep breathing
- Work in your garden
- Do yoga
- Start a hobby
- Talk with a loved one
- Listen to your favorite music

Getting support can help. Here are some tips:

- Join a support group so you can share your thoughts and feelings with people who have the same concerns. It may help you cope with stress.
- Find people with diabetes who are dealing with similar things.
- Ask your health care provider about seeing a therapist or counselor.

Ask your health care provider about ways to get the support that you need.



Your treatment plan can help you manage your diabetes

Your health care team can help you create a diabetes management plan to help you reach your treatment goals. Your goals may be different from someone else with diabetes.

Your diabetes management plan may include:

- Changes to the food you eat
- An exercise routine
- Taking medicines

Ask your health care provider what else you need to do to keep your diabetes under control.

Tips to help you follow your diabetes treatment plan

After you create a treatment plan with your health care team, you have to follow it. This may help lower the risk of other diabetes-related health problems.

Here are a few tips to help you stay on your treatment plan:

- Take your medicines as prescribed.
- Follow any special instructions. There may be foods or drinks you should not have while taking a certain medicine.
- Monitor your blood sugar level as directed by your health care team.
- Keep track of your blood pressure, blood sugar, and cholesterol numbers. Ask your health care provider for tools to help you.
- Get the tests that your health care provider says you need.
- If your health care provider refers you to a specialist, make an appointment with the specialist.
- Follow your diet and exercise plans.

You should call your health care provider at any time if:

- Your symptoms get worse
- You have problems with your medicine



Things to do to keep track of your treatment

How do I know if my treatment plan is working?

You can track your treatment plan yourself. Look online or ask your team for apps to track your treatment goals at home.

Your health care team may also help you keep track of your treatment goals. They may make changes to your plan if needed.

Your health care team may give you tests to see if your diabetes treatment plan is working. Tests can also find problems you may not know about.

Your Diabetes Care and Management Plan Summary

YOUR NAME: _____

Your Diabetes Tests and Targets

Work with your diabetes care team to set targets together, based on your health care needs.

Test/Exam	How Often	Target Values	Date & Results	Date & Results	Date & Results	Date & Results
<i>Example: A1CTarget</i>	<i>Every 3 to 6 months</i>	<i>6.5</i>	<i>6.8 3/3/22</i>			
A1CTarget	Every 3 to 6 months					
Glucose – Fasting						
Glucose – 2 hours after eating						
Time-in-Range (TIR)						
Blood Pressure	Every clinic visit					
Cholesterol (lipid profile)	Every year					
Eye Exam	Every year					
Foot Exam	Every clinic visit					
Flu Shot	Every year					
Kidney Function (ACR or eGFR)	Every year					
Dental Exam	Every 6 months					

Talk to your health care provider about what your individualized goals should be.

Your Current Medications

Medication Name	Date Prescribed	Dosage	Days of Week Taken	Time of Day Taken	Reason	New or Changed Medication?
<i>Example: Metformin</i>	<i>3/3/2022</i>	<i>500 mg</i>	<i>two times every day</i>	<i>with AM and PM meals</i>	<i>Manage blood glucose</i>	<input checked="" type="checkbox"/> New <input type="checkbox"/> Changed
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Your diabetes and what you eat

Create a meal plan

A diabetes meal plan is a guide that tells you how much and what kinds of food you can choose to eat at meals and snack times. It is designed just for you with your health care provider and/or dietitian.

The right meal plan may help you control:

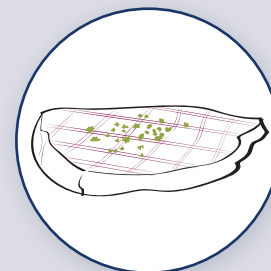
- Your blood sugar (also called glucose)
- Your blood pressure
- Your cholesterol
- Your weight

Talk to your health care provider about making a diabetes-friendly meal plan that is right for you.

The importance of healthy eating



Choose low-fat or fat-free milk, yogurt, and cheese



Eat lean meats, poultry, or fish



Eat whole-grain breads and cereals. Whenever possible, replace refined grains with whole grains.



Add fruits and veggies into every meal



Portion control

What is portion control?

Portion control is knowing and managing how much you eat. This may help you better manage your diabetes.

Manage portion control by dividing the plate

One way to get started is by using a dinner plate and dividing it into portion sizes:

1. Use a 9-inch paper plate. Draw a line down the middle of the plate.
2. Then draw a line in 1 of the halves, making that 2 halves.

Fill the largest section with nonstarchy vegetables, such as:

- Spinach, carrots, lettuce, greens, cabbage (green, red, napa, bok choy, Chinese)

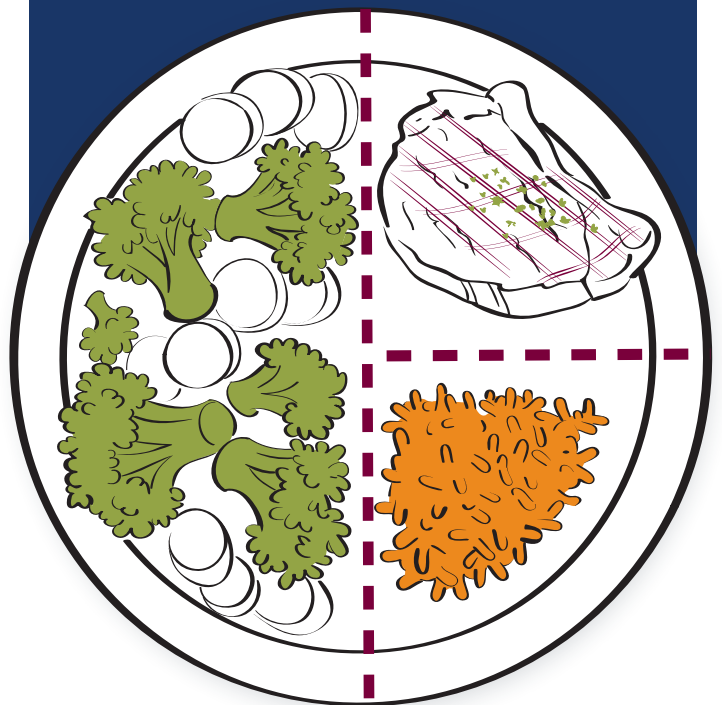
Fill 1 of the small sections with starchy foods, such as

- Brown rice, whole grain products such as bread, pasta, or tortillas, sweet potato, black, kidney, pinto, or garbanzo beans

Fill the other small section with meat or meat substitutes, such as

- Chicken, turkey, eggs, salmon, lean beef or pork, cheese, tofu, plant-based meat substitutes

Try the plate method for your next meal. Start changing how you eat and what you eat, 1 meal at a time.



Physical activity may help manage your diabetes

Exercise is an important part of your diabetes treatment plan. Being more active each day may help you better manage your diabetes. It may help you:

- Burn calories that may help you lose or maintain your weight
- Better control your blood sugar levels
- Lower the chance that you will get heart disease
- Feel better overall

Try to do moderate-intensity aerobic exercise, such as brisk walking, at least 3 days per week, for a total of 150 minutes per week.



Always talk to your health care provider before starting or changing a physical activity plan.

