



# **Healthy Living with Diabetes**

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Healthy living is a way to manage diabetes. To have a healthy lifestyle, take steps now to plan healthy meals and snacks, do physical activities, get enough sleep, and quit smoking or using tobacco products.

Healthy living may help keep your body's <u>blood pressure</u>, <u>cholesterol</u>, and blood glucose level, also called blood sugar level, in the range your primary health care professional recommends. Your primary health care professional may be a doctor, a physician assistant, or a nurse practitioner. Healthy living may also help <u>prevent</u> or <u>delay health</u> problems from diabetes that can affect your heart, kidneys, eyes, brain, and other parts of your body.

Making lifestyle changes can be hard, but starting with small changes and building from there may benefit your health. You may want to get help from family, loved ones, friends, and other trusted people in your community. You can also get information from your health care professionals.

# How can I plan what to eat or drink when I have diabetes?

What you choose to eat, how much you eat, and when you eat are parts of a meal plan. Having healthy foods and drinks can help keep your blood glucose, blood pressure, and cholesterol levels in the ranges your health care professional recommends. If you have overweight or obesity, a healthy meal plan—along with regular physical activity, getting enough sleep, and other healthy behaviors—may help you reach and maintain a healthy weight. In some cases, health care professionals may also recommend diabetes medicines that may help you lose weight, or weight-loss surgery, also called metabolic and bariatric surgery.

## Choose healthy foods and drinks

There is no right or wrong way to choose healthy foods and drinks that may help manage your diabetes. Healthy meal plans for people who have diabetes may include

- dairy or plant-based dairy products
- fruits ♂
- nonstarchy vegetables ☑

Try to choose foods that include nutrients such as vitamins, calcium NIHC, fiber NIHC, and healthy fats C. Also try to choose drinks with little or no added sugar C, such as tap or bottled water, low-fat or non-fat milk, and unsweetened tea, coffee, or sparkling water.

Try to plan meals and snacks that have fewer

- foods high in saturated fat NIH ☑
- foods high in sodium, a mineral found in salt ♂
- sugary foods &, such as cookies and cakes, and sweet drinks, such as soda, juice, flavored coffee, and sports drinks

Your body turns carbohydrates NIHC, or carbs, from food into glucose, which can raise your blood glucose level. Some fruits, beans, and starchy vegetables—such as potatoes and corn—have more carbs than other foods. Keep carbs in mind when planning your meals.

You should also limit how much alcohol you drink. If you take <u>insulin</u> or certain <u>diabetes medicines</u>, drinking alcohol can make your blood glucose level drop too low, which is called <u>hypoglycemia</u>. If you do drink alcohol, be sure to eat food when you drink and remember to check your blood glucose level after drinking. Talk with your health care team about your alcohol-drinking habits.



Try to choose foods that include nutrients such as vitamins, calcium, fiber, and healthy fats.

#### Find the best times to eat or drink

Talk with your health care professional or health care team about when you should eat or drink. The best time to have meals and snacks may depend on

- what medicines you take for diabetes
- what your level of physical activity or your work schedule is
- whether you have other health conditions or diseases

Ask your health care team if you should eat before, during, or after physical activity. Some diabetes medicines, such as <u>sulfonylureas</u> or insulin, may make your blood glucose level drop too low during exercise or if you skip or delay a meal.

### Plan how much to eat or drink

You may worry that having diabetes means giving up foods and drinks you enjoy. The good news is you can still have your favorite foods and drinks, but you might need to have them in smaller portions or enjoy them less often.

For people who have diabetes, carb counting and the plate method are two common ways to plan how much to eat or drink. Talk with your health care professional or health care team to find a method that works for you.

#### Carb counting

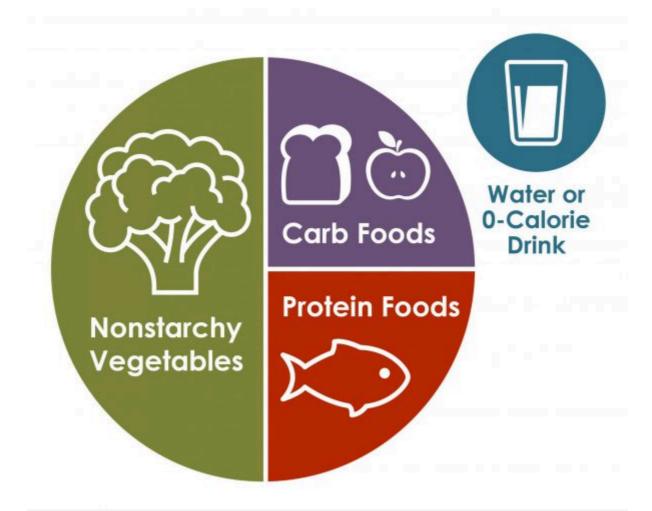
Carbohydrate counting , or carb counting, means planning and keeping track of the amount of carbs you eat and drink in each meal or snack. Not all people with diabetes need to count carbs. However, if you take insulin, counting carbs can help you know how much insulin to take.

#### Plate method

The plate method & helps you control portion sizes without counting and measuring. This method divides a 9-inch plate into the following three sections to help you choose the types and amounts of foods & to eat for each meal.

- Nonstarchy vegetables—such as leafy greens, peppers, carrots, or green beans—should make up half of your plate.
- Carb foods that are high in fiber—such as brown rice, whole grains, beans, or fruits—should make up one-quarter of your plate.
- Protein foods—such as lean meats, fish, dairy, or tofu or other soy products—should make up one quarter of your plate.

If you are not taking insulin, you may not need to count carbs when using the plate method.



Source: Centers for Disease Control and Prevention

The plate method may help you control your blood glucose without counting carbs.

Work with your health care team to create a meal plan that works for you. You may want to have a diabetes educator or a registered dietitian on your team. A registered dietitian can provide medical nutrition therapy  $\mathcal{C}$ , which includes counseling to help you create and follow a meal plan. Your health care team may be able to recommend other resources, such as a healthy lifestyle coach, to help you with making changes. Ask your health care team or your insurance company if your benefits include medical nutrition therapy or other diabetes care resources.

# Talk with your health care professional before taking dietary supplements

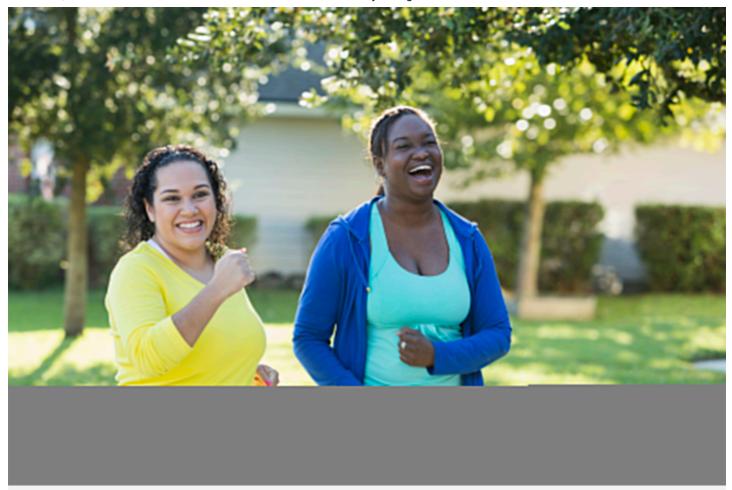
There is no clear proof that specific foods, herbs, spices, or dietary supplements NIHZ\*—such as vitamins or minerals—can help manage diabetes. Your health care professional may ask you to take vitamins or minerals if you can't get enough from foods. Talk with your health care professional before you take any supplements, because some may cause side effects or affect how well your diabetes medicines work.

# How can physical activity help manage my diabetes?

Research shows that regular physical activity helps people manage their diabetes and stay healthy. Benefits of physical activity may include

- lower blood glucose, blood pressure, and cholesterol levels
- better heart health
- · healthier weight
- better mood and sleep
- better balance and memory

Talk with your health care professional before starting a new physical activity or changing how much physical activity you do. They may suggest types of activities based on your ability, schedule, meal plan, interests, and diabetes medicines. Your health care professional may also tell you the best times of day to be active or what to do if your blood glucose level goes out of the range recommended for you.



Physical activity may help you manage your diabetes and stay healthy.

### Do different types of physical activity

People with diabetes can be active, even if they take insulin or use technology such as insulin pumps.

Try to do different kinds of activities. While being more active may have more health benefits, any physical activity is better than none. Start slowly with activities you enjoy. You may be able to change your level of effort and try other activities over time. Having a friend or family member join you may help you stick to your routine.

The physical activities you do may need to be different if you are age 65 or older  $\mathcal{C}$ , are pregnant  $\mathcal{C}$ , or have a disability or health condition  $\mathcal{C}$ . Physical activities may also need to be different for children and teens  $\mathcal{C}$ . Ask your health care professional or health care team about activities that are safe for you.

#### Aerobic activities

Aerobic activities make you breathe harder and make your heart beat faster. You can try walking, dancing, wheelchair rolling, or swimming. Most adults should try to get at least 150 minutes of moderate-intensity physical activity are each week. Aim to do 30 minutes a day on most days of the week. You don't have to do all 30 minutes at one time. You can break up physical activity into small amounts during your day and still get the benefit.<sup>1</sup>

## Strength training or resistance training

Strength training or resistance training may make your muscles and bones stronger. You can try lifting weights or doing other exercises such as wall pushups or arm raises. Try to do this kind of training two times a week.<sup>1</sup>

#### Balance and stretching activities

Balance and stretching activities NIHC may help you move better and have stronger muscles and bones. You may want to try standing on one leg or stretching your legs when sitting on the floor. Try to do these kinds of activities two or three times a week.<sup>1</sup>

Some activities that need balance may be unsafe for people with nerve damage or vision problems caused by diabetes. Ask your health care professional or health care team about activities that are safe for you.



If you can, try to do different types of physical activities. Start slowly with activities you enjoy.

## Stay safe during physical activity

Staying safe during physical activity is important. Here are some tips to keep in mind.

### **Drink liquids**

Drinking liquids helps prevent dehydration NHC, or the loss of too much water in your body. Drinking water is a way to stay hydrated. Sports drinks often have a lot of sugar and <u>calories</u>, and you don't need them for most moderate physical activities.

#### Avoid low blood glucose

Check your blood glucose level before, during, and right after physical activity. Physical activity often lowers the level of glucose in your blood. Low blood glucose levels may last for hours or days after physical activity. You are most likely to have low blood glucose if you take insulin or some other diabetes medicines, such as sulfonylureas.

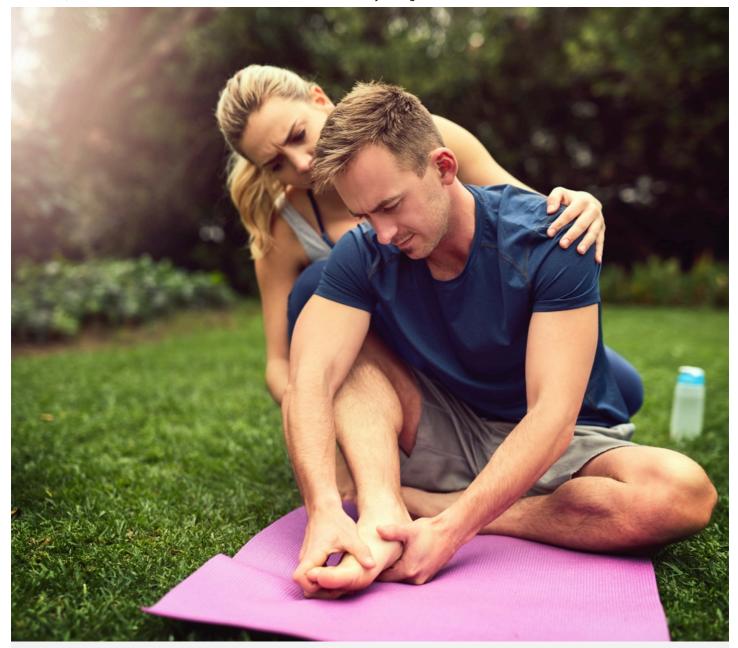
Ask your health care professional if you should take less insulin or eat carbs before, during, or after physical activity. Low blood glucose can be a serious medical emergency that must be treated right away. Take steps to protect yourself. You can learn how to treat low blood glucose, let other people know what to do if you need help, and use a medical alert bracelet.

#### Avoid high blood glucose and ketoacidosis

Taking less insulin before physical activity may help prevent low blood glucose, but it may also make you more likely to have high blood glucose. If your body does not have enough insulin, it can't use glucose as a source of energy and will use fat instead. When your body uses fat for energy, your body makes chemicals called ketones.

## Take care of your feet

People with diabetes may have problems with their feet because high blood glucose levels can damage blood vessels and nerves. To help prevent foot problems, wear comfortable and supportive shoes and take care of your feet before, during, and after physical activity.



Take care of your feet before, during, and after physical activity.

# What can I do to reach or maintain a healthy weight?

If you have diabetes, managing your weight may bring you several health benefits. Ask your health care professional or health care team if you are at a healthy weight or if you should try to lose weight.

If you are an adult with overweight or obesity, work with your health care team to create a weight-loss plan. Losing 5% to 7% of your current weight may help you prevent or improve some health problems and manage your blood glucose, cholesterol, and blood pressure levels.<sup>2</sup> If you are worried about your child's weight and they have diabetes, talk with their health care professional before your child starts a new weight-loss plan.

You may be able to reach and maintain a healthy weight by

- · following a healthy meal plan
- consuming fewer calories

- being physically active
- getting 7 to 8 hours of sleep each night<sup>3</sup>

If you have type 2 diabetes, your health care professional may recommend diabetes medicines that may help you lose weight.

Online tools such as the Body Weight Planner may help you create eating and physical activity plans. You may want to talk with your health care professional about other options for managing your weight, including joining a weight-loss program that can provide helpful information, support, and behavioral or lifestyle counseling. These options may have a cost, so make sure to check the details of the programs.

Your health care professional may recommend weight-loss surgery if you aren't able to reach a healthy weight with meal planning, physical activity, and taking diabetes medicines that help with weight loss.

If you are pregnant, trying to lose weight may not be healthy. However, you should ask your health care professional whether it makes sense to monitor or limit your weight gain during pregnancy.

# Should I quit smoking?

Both diabetes and smoking —including using tobacco products and e-cigarettes—cause your blood vessels to narrow. Both diabetes and smoking increase your risk of having a heart attack or stroke, nerve damage, kidney disease, eye disease, or amputation. Secondhand smoke can also affect the health of your family or others who live with you.

If you smoke or use other tobacco products, stop. Ask for help . You don't have to do it alone.

# How can I take care of my mental health?

Feeling stressed, sad, or angry can be common for people with diabetes. Managing diabetes or learning to cope with new information about your health can be hard. People with chronic illnesses such as diabetes may develop anxiety or other mental health conditions .

Learn healthy ways to lower your stress NIHC, and ask for help from your health care team or a mental health professional. While it may be uncomfortable to talk about your feelings, finding a health care professional whom you trust and want to talk with may help you

- lower your feelings of stress, depression, or anxiety
- manage problems sleeping or remembering things
- see how diabetes affects your family, school, work, or financial situation

Ask your health care team for mental health resources for people with diabetes.

Sleeping too much or too little or may raise your blood glucose levels. Your sleep habits may also affect your mental health and vice versa. People with diabetes and overweight or obesity can also have other

health conditions that affect sleep, such as sleep apnea NHC, which can raise your blood pressure and risk of heart disease.



Having diabetes can be stressful. Talk with your health care professional or health care team if you need help.

# Clinical Trials for Healthy Living with Diabetes

NIDDK conducts and supports clinical trials in many diseases and conditions, including diabetes. The trials look to find new ways to prevent, detect, or treat disease and improve quality of life.

## What are clinical trials for healthy living with diabetes?

Clinical trials—and other types of clinical studies NIHC?—are part of medical research and involve people like you. When you volunteer to take part in a clinical study, you help health care professionals and researchers learn more about disease and improve health care for people in the future.

Researchers are studying many aspects of healthy living for people with diabetes, such as

- how changing when you eat may affect body weight and metabolism
- how less access to healthy foods may affect diabetes management, other health problems, and risk of dying
- whether low-carbohydrate meal plans can help lower blood glucose levels
- which diabetes medicines are more likely to help people lose weight

Find out if clinical trials are right for you NIHC.

Watch a video of NIDDK Director Dr. Griffin P. Rodgers explaining the importance of participating in clinical trials.



# What clinical trials for healthy living with diabetes are looking for participants?

You can view a filtered list of clinical studies on healthy living with diabetes that are federally funded, open, and recruiting at ClinicalTrials.gov NIHC. You can expand or narrow the list to include clinical studies from industry, universities, and individuals; however, the National Institutes of Health does not review these studies and cannot ensure they are safe for you. Always talk with your primary health care professional before you participate in a clinical study.

## References

[1] Office of Disease Prevention and Health Promotion, US Department of Health and Human Services. *Physical Activity Guidelines for Americans.* 2nd ed. US Department of Health and Human Services; 2018. Accessed March 30, 2023. https://health.gov/paguidelines/second-edition/

[2] ElSayed NA, Aleppo G, Aroda VR, et al. Facilitating positive health behaviors and well-being to improve health outcomes: standards of care in diabetes—2023. *Diabetes Care*. 2023;46(suppl 1):S68—S96. doi:10.2337/dc23—S005

[3] Watson NF, Badr MS, Belenky G, et al. Recommended amount of sleep for a healthy adult: a joint consensus statement of the American Academy of Sleep Medicine and Sleep Research Society. *Sleep.* 2015;38(6):843–844. doi:10.5665/sleep.4716

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# Previous:

Insulin, Medicines, & Other Diabetes
Treatments

Next: Preventing Diabetes Problems

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