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LIVING WELL WITH Diabetes

A Guide for Patients and Families



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Please visit www.kramesurvey.com to provide your
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Only your doctor can diagnose and treat a medical problem.
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Resources

The following resources can help you and the people close to you learn more about living a healthier life with diabetes.

American Diabetes Association

www.diabetes.org
800-DIABETES (800-342-2383)

American Heart Association

heart.org

Academy of Nutrition and Dietetics

www.eatright.org

Centers for Disease Control and Prevention

www.cdc.gov

National Diabetes Information Clearinghouse

www.diabetes.niddk.nih.gov

USDA MyPlate

www.choosemyplate.gov



What Are Your Favorite Diabetes Sites?

The groups listed on this page are only a few of many online resources. You can search for other sites using keywords on a specific topic, such as "A1C" or "insulin." If you don't have Internet access at home, many public libraries let you search online for free. Write the addresses (URLs) of your favorite sites here:

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You Can Live Well with Diabetes!

You've been given this workbook because you have diabetes. Diabetes is a **chronic** (lifelong) condition. It takes work to manage, and it's not always easy. But it can be done! This workbook will help you get started. It can help as you make daily decisions to manage your diabetes. Read on to find tips and tools you can use to live a healthier life.

What Is Diabetes?

When you have diabetes, your body has trouble using a sugar called **glucose**. As a result, the sugar level in your blood becomes too high. (See page 5 to learn how this happens.) Over time, high blood sugar leads to health problems throughout the body. Anyone can develop diabetes. It can affect people of all ages and backgrounds. But there are some common risk factors for diabetes. These include:

- Family history of diabetes
- Lack of physical activity
- Being overweight
- Being older than age 40
- Being African American, Native American, Hispanic, Asian American, Asian Indian, or Pacific Islander



★ How This Workbook Can Help

This book is not homework. It's full of tools to help you create a diabetes management plan and take control of your health. Use the chapters to learn skills and tips. Use the spaces provided to write down your plan and goals. Share the workbook with your healthcare provider and your loved ones. And keep it handy so you can refer to it whenever you need to, now and in the future.

Injection (shot): Using a needle and syringe to put liquid medications into the body.

Insulin: A hormone produced by the pancreas that enables glucose to enter cells.

Insulin resistance: A condition in which cells do not respond properly to insulin.

Lancet: A device that uses a tiny needle to prick the skin for a drop of blood.

Lipids: Fatlike substances in the blood.

Liver: An organ that stores and releases glucose when needed.

Nerves: Fibers that convey signals to and from the brain.

Pancreas: An organ that makes insulin and releases it into the bloodstream.

Pedometer: A device worn on the body that counts how many steps are taken.

Periodontal disease: Infection of gum tissue. Also called gum disease.

Peripheral arterial disease (PAD): Damage to the arteries that supply blood to the legs and feet.

Plaque: Fatty deposits that build up inside arteries and reduce blood flow.

Podiatrist: A doctor who specializes in foot care.

Registered dietitian: An expert in food and nutrition.

Retinopathy: An eye disease that leads to damage of blood vessels in the eyes.

Saturated fat: A type of fat that comes from animals. It increases LDL ("bad") cholesterol.

Stroke: A condition in which blood flow to the brain is cut off due to blockage or a torn blood vessel.

Syringe: A device that uses a small needle to inject liquid medications into the body.

Target range: The level of blood sugar a patient is told to aim for as often as possible.

Trans fat: Fat produced when liquid oil is made into a solid fat. It increases LDL ("bad") cholesterol.

Triglycerides: Building blocks of fats.

Type 1 diabetes: A chronic condition in which the pancreas cannot produce insulin.

Type 2 diabetes: A chronic condition in which the body's cells are resistant to insulin. The pancreas may not produce enough insulin to overcome this resistance.

Urine albumin: A test that checks for small amounts of protein in the urine.

Glossary

A1C: A test to measure glucose buildup in the blood over a period of several months.

Artery: A blood vessel that carries oxygenated blood from the heart to the rest of the body.

Blood glucose meter: A device that tests the amount of glucose in the blood.

Blood pressure: The force created by blood flow as it presses against blood vessel walls.

Blood vessels: Tubes that carry blood throughout all parts of the body.

Carb: 15 grams of carbohydrates; equal to one carbohydrate serving.

Carbohydrate: A nutrient in food that is broken down into glucose during digestion.

Cardiovascular: Pertaining to the heart and blood vessels.

Cholesterol: A waxy, fatlike substance used by the body to build cell walls. If too much is present, it can build up and block arteries.

Chronic: Lifelong or ongoing. A chronic condition, such as diabetes, can be managed with treatment but not cured.

Comorbidity: A disease or disorder occurring alongside, or at the same time as, another.

Complications: Serious health problems that develop over time due to high blood sugar.

Diabetes: A condition in which the body cannot produce insulin or use it properly.

Diabetes educator: An expert in teaching people how to manage diabetes.

Endocrinologist: A doctor who specializes in how hormones work in the body.

Estimated Average Glucose (eAG): A number value assigned to A1C test results.

Glucagon: A hormone that quickly raises blood sugar levels.

Glucose: A simple form of sugar that is used to fuel the body's cells.

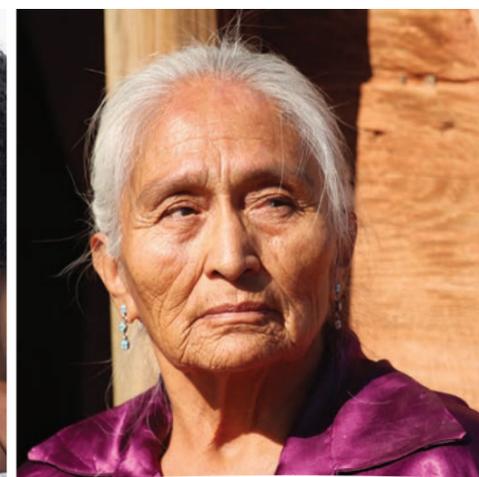
Heart disease: A condition that affects the heart's ability to function.

High blood pressure (hypertension): Blood pressure that is higher than the normal range.

Hormone: A chemical released by special cells that tells other cells what to do.

Hyperglycemia: A condition in which there is too much glucose in the blood.

Hypoglycemia: A condition in which there is not enough glucose in the blood.



CHAPTER 1

Getting Started, Learning More

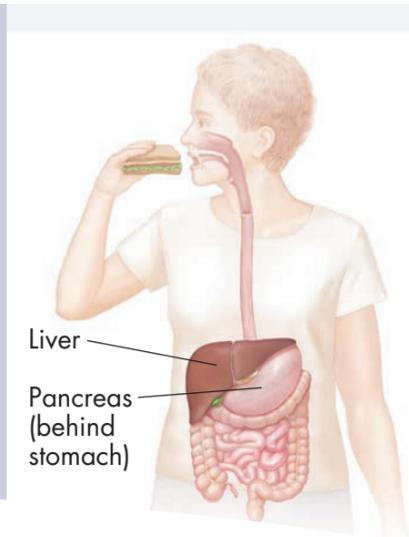
You may have had diabetes for a while. Or you may have just learned you have it. Know that you don't have to learn everything about diabetes care all at once. You can take it step by step. This workbook can help. Also know that you don't have to go it alone. Your healthcare providers can help teach you what you need to know. It's up to you to put what you learn into practice. You CAN do it!

Common Questions About Diabetes

Question	Answer
<i>Can I still eat sugar?</i>	All foods can fit into a healthy meal plan. More about eating well starts on page 18.
<i>Can I still play sports?</i>	Yes! In fact, activity is an important part of your management plan. See page 29.
<i>Will I have to give myself shots?</i>	Not necessarily. Learn more about diabetes medications starting on page 35.
<i>What if I feel overwhelmed?</i>	Taking care of your emotional health is a priority. Learn more on page 44.

Understanding Diabetes

The body takes glucose from food and burns it for energy. A hormone called **insulin** is needed to help the body use glucose. With diabetes, the body doesn't make enough insulin. Or the body cannot use the insulin it makes. Either way, glucose builds up in the bloodstream.

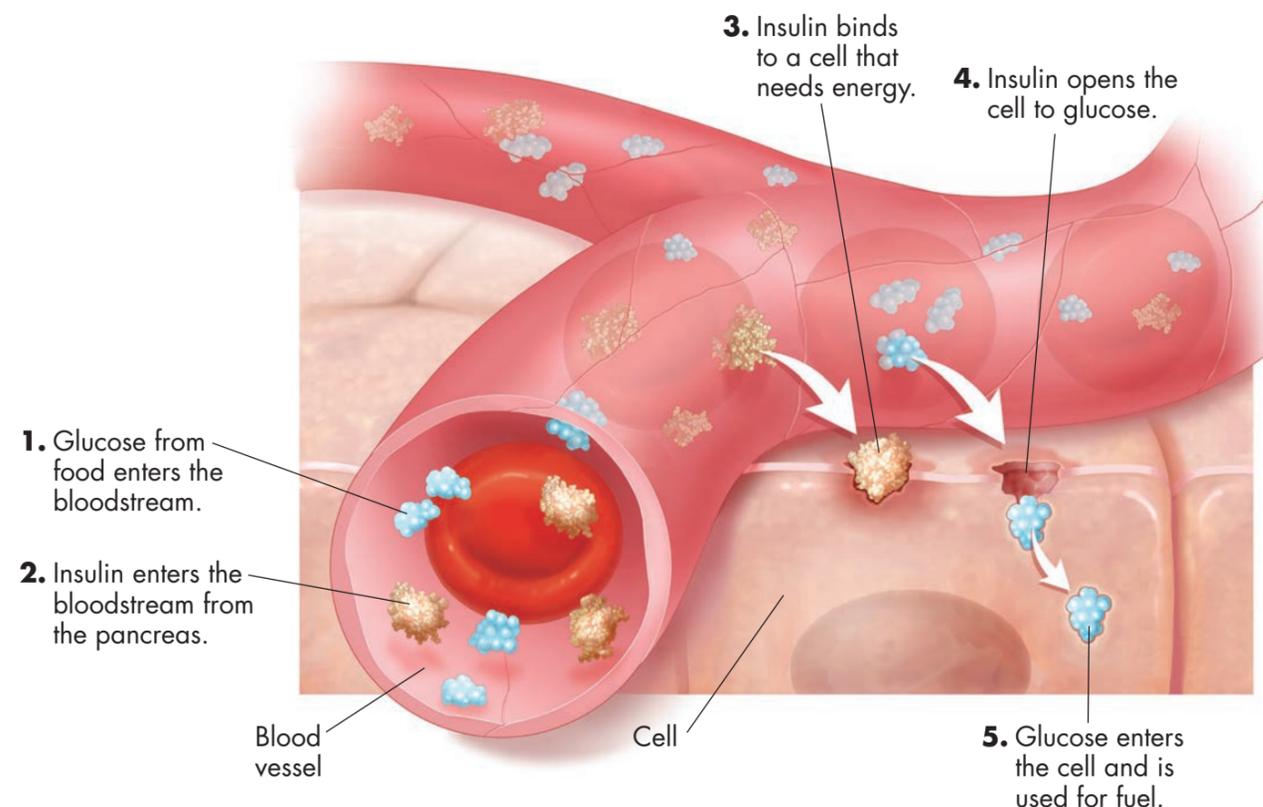


How the Body Gets Energy

The digestive system breaks food into the sugar glucose. Most of this glucose is sent into the bloodstream. Glucose travels to cells to be used as fuel for the body. The pancreas makes the hormone insulin, which allows glucose to enter the cells. Think of insulin as a key. When insulin reaches a cell, it unlocks a doorway in the cell wall. This creates an opening that allows glucose to enter the cell.

Your body breaks down the food you eat into glucose. Some glucose is stored in the liver. Insulin, which is made in the pancreas, allows the body to use glucose.

A healthy balance of insulin and glucose circulates in the bloodstream.



My Diabetes Kit Bag

Keep track of your blood sugar supplies and medications by creating a diabetes kit bag. A small makeup or travel bag makes an ideal carry case. Include the supplies shown below, as needed. Don't forget to include any medications you take for other conditions.

- 1 Log book
- 2 Meter
- 3 Insulin pen
- 4 Fast-acting sugar
- 5 ID card
- 6 ID bracelet (wear daily)
- 7 Diabetes medication
- 8 Lancet
- 9 Test strips
- 10 Syringe
- 11 Insulin



! In Case of Disaster

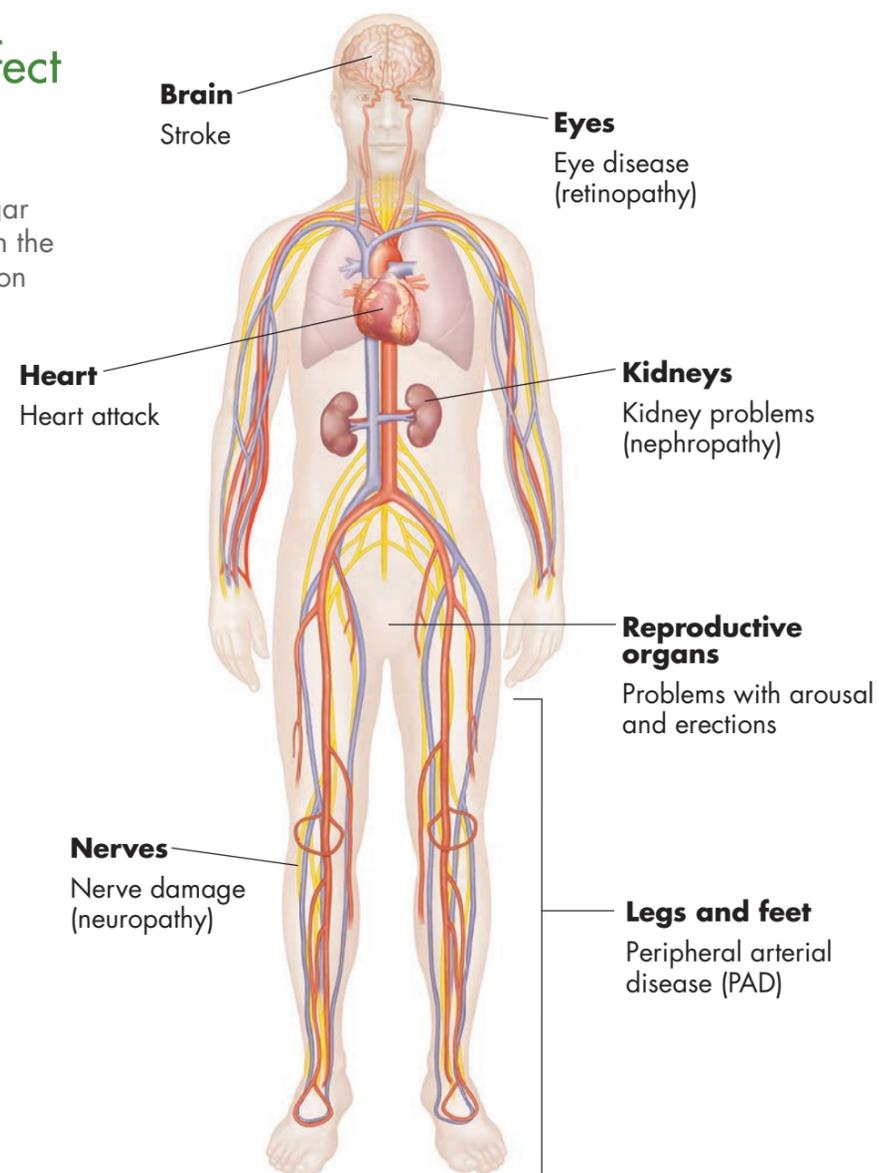
Be prepared for an emergency. Keep an insulated, waterproof diabetes disaster kit ready. Include all the same items as in your diabetes kit bag. A disaster kit should also contain your medication names and prescription numbers, phone numbers for your doctor and pharmacy, and copies of recent lab results. Be sure to update this kit at least twice a year.

Why High Blood Sugar Is a Problem

Over time, too much sugar in the blood damages blood vessels, both large and small. This damage leads to complications that affect the whole body. Diabetes is especially hard on the heart. If you have diabetes, your risk for diseases of the heart and blood vessels is much higher than someone without diabetes. However, you can control this risk. By managing diabetes and keeping blood sugar at a healthy level, you can help protect your body and your future.

Diabetes Can Affect the Whole Body

Diabetes and high blood sugar can lead to problems through the whole body. The most common ones are shown at right.



My Health Goals

The chart below gives you target goals. Keep in mind that your goal numbers may be different. Talk to your healthcare provider about what your goal numbers should be. Then fill out the chart below.

Know Your Goal Numbers

Tests	ADA (American Diabetes Association) Targets	Current Numbers	My Goal
Blood sugar			
• A1C or eAG	Less than 7.0% or lower than 154 mg/dL		
• Premeal blood sugar	80–130 mg/dL		
• Postmeal blood sugar	Lower than 180 mg/dL		
Blood pressure	Lower than 140/90 mmHg		
Blood lipids			
• LDL ("bad" cholesterol)	Lower than 100 mg/dL		
• HDL ("good" cholesterol)	Men: Higher than 40 mg/dL Women: Higher than 50 mg/dL		
• Triglycerides	Lower than 150 mg/dL		
Urine albumin	Lower than 30 mg		
Weight			
Next checkup date: _____			

Data supported by: Standards of Medical Care in Diabetes. *Diabetes Care*, January 2015;38(1):S1-S90.

This information is not intended as a substitute for professional healthcare.

Always follow your healthcare provider's instructions.

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My Blood Sugar Log

Make copies of this log to record your daily blood sugar readings. Bring your recent logs to all doctor's appointments. Make extra copies of the chart before you use it for the first time.

		Breakfast		Lunch		Dinner		Nighttime (if needed)		
		Before	2 hours after	Before	2 hours after	Before	2 hours after	At bedtime	Middle of night	
Day	Time	Number	Time	Number	Time	Number	Time	Number	Time	Number
Sun										
Mon										
Tues										
Weds										
Thurs										
Fri										
Sat										

Comments: _____

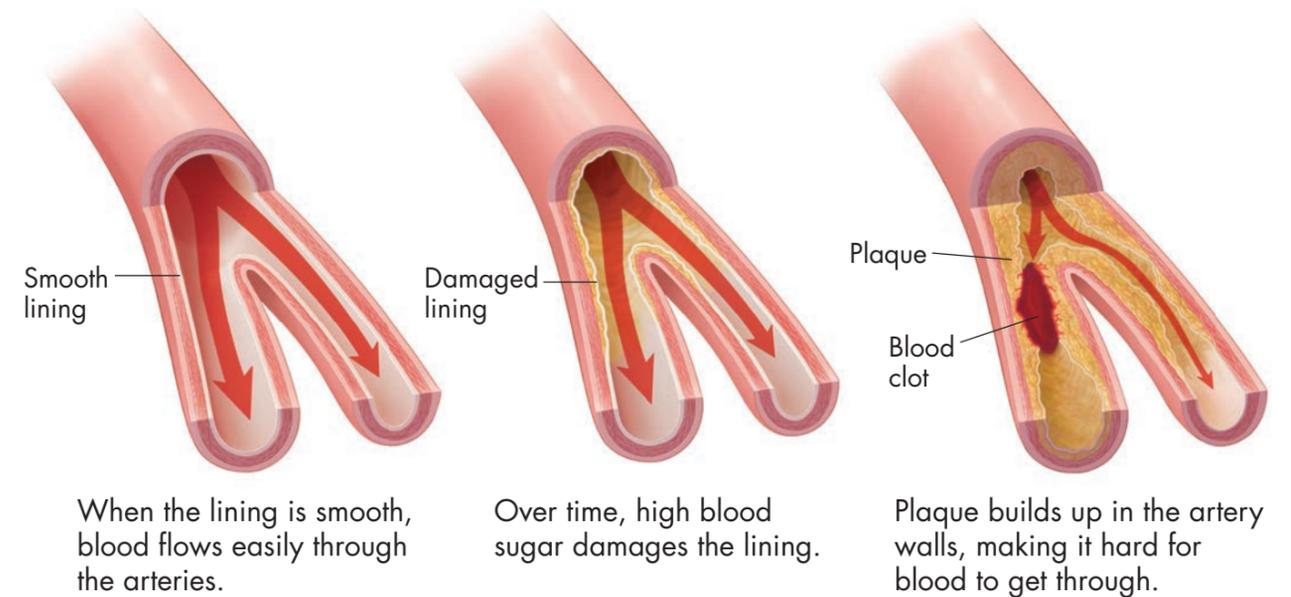
This information is not intended as a substitute for professional healthcare. Always follow your healthcare provider's instructions.
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Diabetes and the Heart

Having diabetes and high blood sugar raise a person's risk for developing **cardiovascular** (heart and blood vessel) disease. Cardiovascular disease can lead to problems with the blood vessels that include heart attack or stroke.

High Blood Sugar Damages Artery Walls

The buildup of glucose in the blood affects the lining of **artery** walls. (An artery is a type of blood vessel. A vein is another type.) Arteries carry blood from the heart to the rest of the body. When arteries are healthy, the lining is smooth. But when you have high blood sugar, the artery lining becomes damaged over time. This allows the buildup of **plaque** (fatty materials, such as cholesterol) in the arteries.



How Heart Attack and Stroke Happen

The buildup of plaque narrows arteries. This means that any blockage, such as a blood clot, can cut off blood flow. When this happens, heart attack and stroke can occur. Many people with diabetes also have other cardiovascular risk factors, such as high blood pressure or high cholesterol. These problems increase the chance of heart attack or stroke even further. But managing your risk factors, including your blood sugar, can help delay or prevent these problems. Read on to learn about managing your blood sugar.

Living Life with Diabetes

You know that managing diabetes can help you stay healthy and live your life. Still, some people find that daily diabetes management feels like a lot to handle. It affects daily routine at home, school, and work. Change isn't always easy. But with practice, managing your diabetes can become part of your life. You're not alone. Your healthcare team is there to support you. People in your life can help support you, too.



Acknowledge Your Feelings

Hearing that you have diabetes can be a shock. You may feel sad, guilty, or even afraid. These feelings are natural and understandable. Give yourself time to adjust to the news and to the changes that the diagnosis will bring. Know that they will improve with time and as you learn more about how to take care of yourself. Talk to your healthcare team about how you're feeling. They can help you feel less overwhelmed and more ready to plan for a healthy future.



CHAPTER 7

Your Diabetes Toolkit

This chapter gives you tools to help you manage your diabetes every day. Make copies of the charts and logs so you can use them more than once.

! Recognizing Depression

Many people feel sad or down when they first hear that they have diabetes. Feelings like these are normal. But frequent feelings of helplessness or hopelessness are a symptom of depression. Depression is a serious problem, but it can be treated. If you feel overwhelmed, or if you are having trouble sleeping or eating, talk to your healthcare provider. Don't wait!

Notes for Family and Friends

When someone you love has diabetes, it can mean big changes in your life. It's likely that you will be called on as a helper, caregiver, or source of emotional support. Diabetes can be stressful for the whole family. Remember, taking care of yourself is just as important as taking care of your loved one.

To Help Your Loved One

It may be hard to watch someone you love cope with a chronic condition every day. You can help by:

- Learning as much as you can about diabetes and preventing complications. This will help you understand why your family member is making so many changes.
- Learning the signs of high and low blood sugar and how to treat them. Know when to call the doctor in an emergency.
- Learning to be patient. At first, diabetes management can be confusing or frustrating.
- Asking how you can be most helpful.



To Help Yourself

Caring for someone else can take an emotional toll on you. Don't forget to make time to focus on yourself. This is not selfish! Your emotional health is important. Some of these suggestions may help:

- Understand that some things are out of your control. You can be supportive, but you can't manage your family member's condition for them.
- Take time to relax. See page 44 for techniques that you can use.
- Ask for and accept help from others when you need to take breaks. Don't feel guilty—we all need time to ourselves.
- Be aware of how you react to stress. If you become easily upset, stop for a moment. Take deep breaths, count to 10, or go for a walk to calm down.
- Look for support groups for caregivers. Some of the resources listed on page 64 may help.

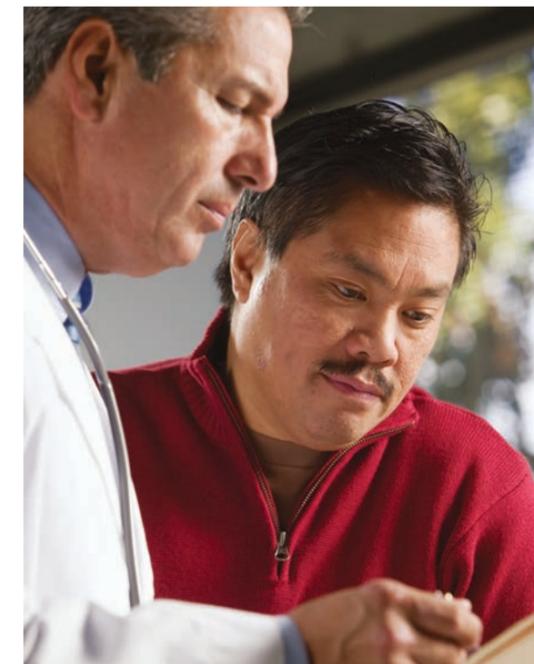
Get Support!

Managing your blood sugar is mostly up to you. But you don't have to go it alone. A team of healthcare experts will teach you how to manage diabetes and the health risks it brings. Your family and friends can also provide support. Think about what kind of help you will need. Then decide whom to ask for that support.

Your Healthcare Team

Your diabetes healthcare team will work with you to create a management plan. Team members may include:

- A **primary care provider**, often your regular doctor, who can refer you to specialists as needed.
- An **endocrinologist**, a doctor who specializes in diabetes.
- A **registered dietitian**, an expert in food and nutrition, to teach you how food affects your blood sugar.
- A **diabetes educator**, often a nurse, to teach you how to manage and live with diabetes.
- A **health psychologist or social worker**, to help you with the emotional aspects of managing your condition.
- A **pharmacist**, who fills your prescriptions and explains your medications.



Your Family and Friends

Family and friends can support your efforts to take care of your health. They may be concerned about your condition and worried about complications. Or, it may be hard for them to understand all the changes you are making. But the important people in your life can help you succeed. People who care about you want to help. Think about the people who can support you, and the specific ways they can help. Then ask for the support you need. Your family and friends can help you stay focused and confident as you learn to manage diabetes.

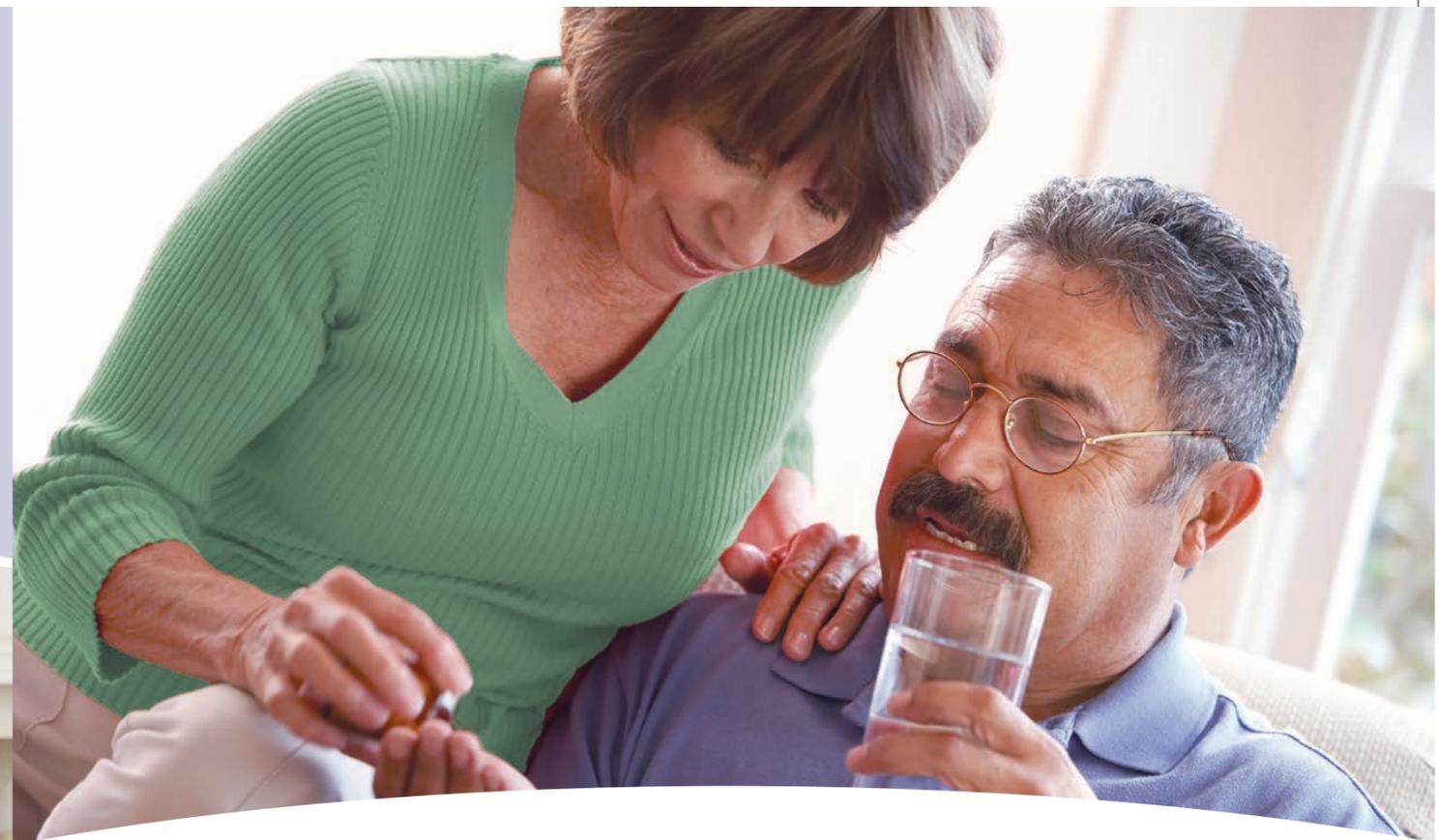


You're In Charge

Your healthcare team may be experts on diabetes, but you are the expert on you. No one else can manage your blood sugar for you. So work closely with your healthcare team to create a management plan that you can stick with. Remember: As your life changes, your plan will need to change too. In fact, anytime your plan isn't working as intended, talk to your healthcare team about making changes. This can help to protect your health, now and in the future.

Designing a Management Plan

The rest of this workbook focuses on what you'll need to create your diabetes management plan. Each section gives you information and tips you can use every day. Use the fill-ins and checkboxes to mark ideas that you would like to try. In chapter 7, you'll find your diabetes toolkit. It contains a blank blood sugar log, a chart to record your health goals, and a medication chart. You'll also find a glossary of diabetes terms and resources for learning more about diabetes management.



Ask for Help!

When you're sick, try to get plenty of rest. Only do as much as you comfortably can. You may need to ask family or friends for help with daily tasks. This may include cooking and cleaning, running errands, or picking up medications if you're almost out of them. Those close to you should learn to recognize the signs of low blood sugar. These include confusion, sleepiness, or difficulty concentrating. Make sure family and friends know how to treat low blood sugar if needed.

★ Reasons to Manage Your Diabetes

Managing diabetes can be challenging. But making the effort is worth it for your health and your future. Below are just a few of the benefits. Can you think of any more? Write them in, too.

- Have more energy and a sense of well-being
- Miss fewer days of work, school, or other regular activities
- Feel more in control
- Reduce your risk for serious complications

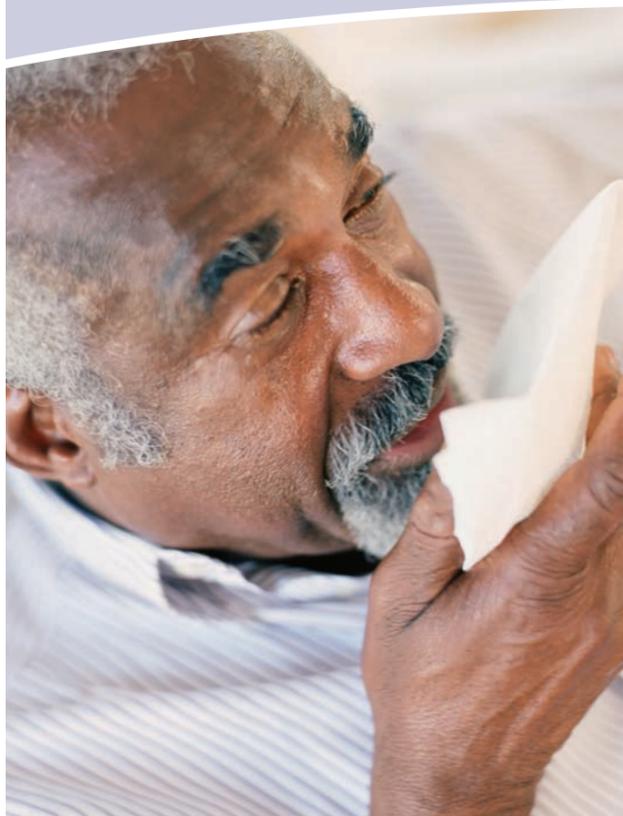
! When to Call the Doctor

Call the doctor right away if you:

- Have vomiting or diarrhea for more than 6 hours.
- Have blood sugar above 240 for more than 1 day.
- Have moderate to large ketones for 2 or more checks.
- Have a fever of 100.4°F (38°C) or higher.
- Have symptoms of ketoacidosis (very dry mouth, thirst, fruity-smelling breath, trouble breathing).

When You're Sick

Having the flu, or even a cold, can make it hard to keep your blood sugar in your target range. You may not feel well enough to be active or eat regular food. Your diabetes healthcare team can help you develop an action plan for sick days. Follow all instructions from your healthcare provider closely.



If Your Blood Sugar Changes

Your blood sugar can rise quickly when you are sick. High blood sugar may also be a sign of infection. So it's important to check your blood sugar often. Try to stick to your meal plan. If you have trouble eating solid foods, try soup, applesauce, or yogurt. And be sure to drink plenty of water and other sugar-free fluids to stay hydrated.

If You Can't Eat

Your body needs carbohydrates in order to function. If you can't eat at all, you will need to drink liquids with sugar. This includes fruit juice, regular soda, and sports drinks. Talk to your diabetes team about taking in the right amount of liquid carbohydrates. This will help keep your blood sugar from going too high or too low. Continue to drink water to stay hydrated.

Adjusting Your Insulin Dosage

Even if you can't eat, don't stop taking insulin when you are sick. If your blood sugar is high, you may need to adjust your dosage. If you adjust your insulin dosage, be sure to check your blood sugar often. This is to make sure your blood sugar doesn't go too low. If your blood sugar falls below 70, take action! Eat or drink at least 15 grams of fast-acting sugar, such as glucose tablets or juice. Follow the directions on page 15 for treating low blood sugar.



CHAPTER 2

Monitoring Your Blood Sugar

Monitoring your blood sugar is the basis of diabetes management. In this section, you will learn:

- The importance of checking your blood sugar.
- How to know if your treatment plan is keeping your blood sugar where you want it to be.
- What to do when your blood sugar is too high or too low.

Checking Blood Sugar

The first step in managing diabetes is learning to check (**monitor**) the level of glucose (sugar) in your blood. This will help you make daily decisions about diabetes management. Monitoring isn't hard to do. If you don't know, ask your diabetes team to show you how. Keep a record of your numbers (**readings**). This shows how food, activity, stress, and medication affect your blood sugar every day.

Using a Blood Glucose Meter

You can check your blood sugar at home, at work, and anywhere else. Ask your diabetes team to help you select a **blood glucose meter**. This meter measures the amount of glucose in your blood. You'll use a lancet to draw a tiny drop of blood. The drop is placed on a small strip that goes into the meter. The meter then gives you a reading that tells you the level of your blood sugar. With today's meters, you can test just about anywhere you go.



Aim for Your Target Range

Your diabetes team will help you figure out your ideal **target range**. Your blood sugar should be in this range as often as possible. Staying in this range helps you feel your best and reduces your risk for complications. Your range is based on your personal factors and goals. For a general range, see page 59.



Target Range

Before a Meal

Between _____ and _____

After a Meal

Between _____ and _____

On the Road

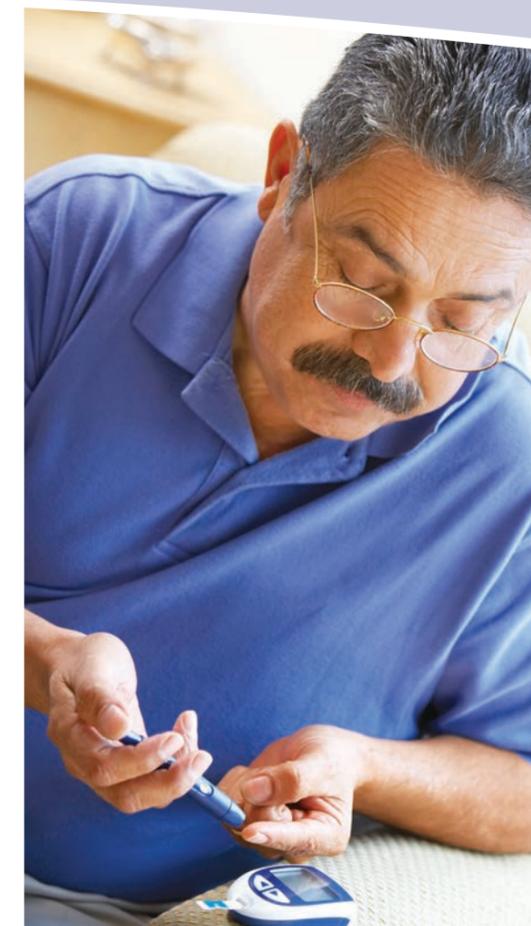
Changes in your normal routine might make it harder to follow your meal plan and medication schedule. But with a little planning, you can manage diabetes anywhere you go. A diabetes "kit bag" can help you stay organized. See page 61 for a list of supplies to include.

When You're Driving

Medications that can cause low blood sugar may affect your ability to drive safely. Always check your blood sugar before you get behind the wheel. If your blood sugar is lower than 100, eat or drink a snack to raise it to a safe level. If you feel symptoms of low blood sugar while driving, pull over so you can take action. Keep your diabetes supplies where you can reach them, not in the back seat, glove compartment, or trunk. Store medications, especially insulin, away from direct heat, such as sunlight. In case of emergency, always carry identification that says you have diabetes.

When You're Traveling

Be prepared to manage your blood sugar everywhere you go. If you are flying, check with the airline for guidelines or contact the Transportation Security Administration (TSA). Carry your travel kit, with your supplies clearly labeled. Keep it with you at all times, not inside checked baggage! Make sure you have identification with you that says you have diabetes. Remember to drink plenty of water to stay hydrated. Check your blood sugar often. And ask your diabetes team for advice if you are traveling across time zones.



Diabetes and Intimacy

Intimacy and sexual function are an important part of life. But over time, high blood sugar can contribute to physical problems that affect intimacy. The good news is that these problems can be treated. Talk to your healthcare provider.



If You Have Problems with Sex

Diabetes can lead to problems with sexual function in both men and women. In men, this may include trouble having erections, known as erectile dysfunction (ED). Women may have problems with arousal or orgasms. In any case, don't hesitate to talk to your healthcare provider. It may be that your diabetes management plan needs to be changed or adjusted. Your doctor might also prescribe a medication that can help with a specific sexual issue.



Track Your Readings

Every time you check your blood sugar, use a log to keep track of your readings (see page 58). Your management plan will outline how often you should check. Some people should check four times a day, others less often. Be sure to write down all your numbers. Use your log to record things that might have affected your blood sugar. This may include being sick, being very active, being stressed, or eating special foods on a holiday.

Sample Blood Sugar Log

Day	Breakfast		Lunch		Dinner		Nighttime (if needed)									
	Before	2 hours after	Before	2 hours after	Before	2 hours after	At bedtime	Middle of night								
	Time	Number	Time	Number	Time	Number	Time	Number								
Sun	7 am	144	9 am	185	12 pm	124	2 pm	230	5:30 pm	152	7:30 pm	180	10:30 pm	129		
Mon																
Tues																
Weds																

★ If You're Thinking of Pregnancy

If you could possibly get pregnant, you must plan ahead. High blood sugar can affect an unborn baby. This means that blood sugar levels should be as close as possible to normal before and during pregnancy. Your treatment plan is likely to need adjustment. So talk to your healthcare provider right away if you are thinking of getting pregnant. If you do become pregnant, be prepared to keep your blood sugar tightly managed. This is vital for a safe pregnancy and healthy baby.



What Do the Readings Mean for You?

Keeping track of your blood sugar readings helps you identify patterns. These patterns may mean your plan needs adjusting to keep your blood sugar in your target range. Be sure to take your log book with you every time you see your healthcare provider. And be honest! There are no "good" or "bad" numbers. The readings just tell you if you need to make changes in order to protect your health.

How the A1C Test Helps

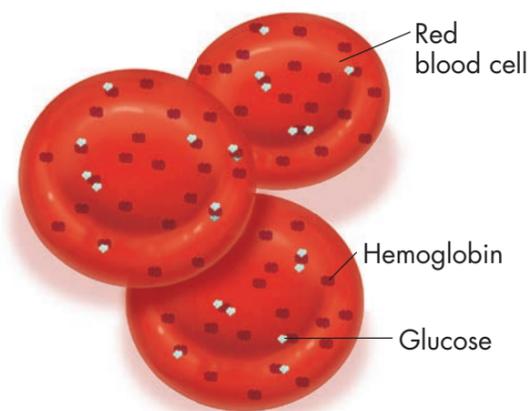
You use a meter to track your blood sugar every day. But you also need to know if your treatment plan is keeping you healthy over time. An A1C (**glycated hemoglobin**) test can help. This test measures your average blood sugar level over a few months. If your level stays too high, your treatment plan may need to be adjusted.

Your A1C Goal

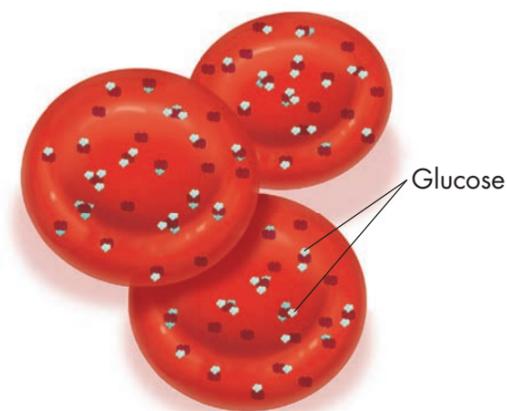
An A1C test result can be reported as a percentage. It can also be reported as a number, called an estimated Average Glucose or **eAG**. Your healthcare provider will help you figure out your target goal. Most people aim for an A1C lower than 7%. This is an eAG of less than 154 mg/dL. Your goal will depend on your age, general health, and other factors. An A1C that is close to target means that your blood sugar is well controlled.

The A1C Test

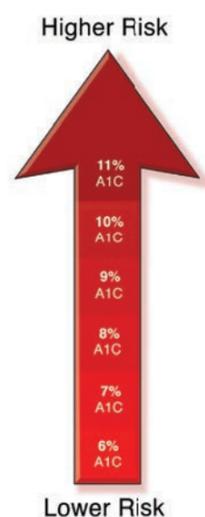
The A1C is a blood test. It measures how much glucose is stuck to a protein (called **hemoglobin**) inside the red blood cells. You will likely have an A1C test every 3 to 6 months. Talk with your healthcare provider to schedule an A1C. And don't forget to follow up on the results.



A normal A1C result means that a healthy amount of glucose is inside red blood cells.



A high A1C result means that too much glucose is inside red blood cells.



A higher A1C test result means you have a greater risk for developing complications.

Choose a Quit-Smoking Product to Help

Using a quit-smoking product makes you much more likely to quit for good. Some products can be bought over the counter. Others require a prescription. Talk to your healthcare provider about these products. They can help you make a decision about which to try.

Over the Counter	How It Works	Length of Treatment	Possible Side Effects
Nicotine Patch*	<ul style="list-style-type: none"> Gives you nicotine through the skin at a constant rate Ask your doctor about combining the patch with nicotine gum or nasal spray 	Take smaller and smaller doses over about 2 months	<ul style="list-style-type: none"> Skin rash, itching Trouble sleeping Nausea
Nicotine Gum*	<ul style="list-style-type: none"> Gives you nicotine through the mouth 	Take smaller and smaller doses over about 2 to 3 months	<ul style="list-style-type: none"> Sore mouth or jaw Indigestion, hiccups Dizziness, nausea
Nicotine Lozenges*	<ul style="list-style-type: none"> Gives you nicotine through the mouth 	Take smaller and smaller doses over about 3 months	<ul style="list-style-type: none"> Sore mouth Belching, hiccups Dizziness, nausea, weakness

Prescription Only	How It Works	Length of Treatment	Possible Side Effects
Nicotine Nasal Spray*	<ul style="list-style-type: none"> Gives you nicotine through the nose Works more quickly than other nicotine products 	Use for 3 to 6 months	<ul style="list-style-type: none"> Irritated nose, eyes, throat Coughing, sneezing Anxiety, restlessness
Nicotine Inhaler*	<ul style="list-style-type: none"> Nicotine is breathed in through the mouth 	Use for up to 6 months; take smaller and smaller doses over about 3 months	<ul style="list-style-type: none"> Mouth and throat irritation Coughing
Bupropion SR	<ul style="list-style-type: none"> Reduces withdrawal symptoms and urges Does not contain nicotine 	Start 2 weeks before you quit, then take for 2 to 6 months	Behavioral changes, including depression, hostility, and suicidal thoughts and actions
Varenicline	<ul style="list-style-type: none"> Blocks withdrawal symptoms and urges Does not contain nicotine 	Start 1 week before you quit, then take for 3 months	Behavioral changes, including depression, hostility, and suicidal thoughts and actions

All products conflict with certain other medications or medical conditions. If you have questions, ask your pharmacist or doctor.

*These products contain nicotine. Don't smoke while using a nicotine product. Doing so could give you a dangerous overdose of nicotine.

Quitting Smoking

If you smoke, quitting is one of the most important changes you can make for your health. Smoking increases your chances of developing cardiovascular disease. It also makes complications of diabetes more likely. Quitting helps reduce this risk. After you quit, you may feel better, have more energy, and notice less shortness of breath. Quitting smoking isn't easy, but millions of people have done it. You can, too!

Have a "Quit Plan"

Quitting takes patience and a plan. You'll boost your chances of success by forming a "quit plan" ahead of time. For your plan:

- Pick a date to quit. Write it on the calendar and below.
- Decide who you will ask to support you.
- Write a list of the reasons that you want to quit. Think of as many reasons as you can. Keep this list with you and read it often. Add to it when you think of something new.
- Plan how you'll deal with urges to smoke.



My Quit Date:

Track Your Triggers

Do certain emotions, such as frustration, trigger your urge to smoke? How about specific people or places? Make a list of the situations that make you want to smoke. Then think about ways you can avoid or deal with these situations.



Ask your healthcare provider for advice on products to help you quit smoking.

Get Support

Quit-smoking classes coach people through the process of quitting. Telephone counseling can also help keep you on track. Ask your healthcare team to point you to a class or counselor. Also talk to your healthcare provider about the quit-smoking products on the next page. Good social support and assistance from medications have been shown to help people quit smoking—and stay quit.

No Safe Tobacco

Maybe you don't smoke cigarettes. But you use e-cigarettes, chewing tobacco, or snuff. Or you smoke a pipe, cigars, cloves, or bidis. Beware: All forms of tobacco contain nicotine, which harms your body. No delivery method is safe.

Treating Low and High Blood Sugar

Many things can raise or lower blood sugar. Food, exercise, medications, stress, and illness are some factors. Extreme highs and lows can be dangerous! But very high or low blood sugar may or may not always cause obvious symptoms. This is why checking blood sugar is so vital. Ask your healthcare provider which numbers outside your target range are dangerous for you.

Low Blood Sugar

Hypoglycemia usually means blood sugar lower than 70. A drop in blood sugar can happen very quickly. You might have:

- Sweating or cold, clammy skin.
- Dizziness, shakiness, or a tingling feeling.
- Headache or a hard, fast heartbeat.
- Confusion or irritability.

If you experience episodes of severe hypoglycemia, your healthcare provider may tell you to raise your target blood sugar.

If You Feel Symptoms

Always check your blood sugar right away. If it's too low:

- 1 Eat or drink 15 to 20 grams of **fast-acting sugar**. This could be 3 or 4 glucose tablets or ½ cup (4 oz) of fruit juice.
- 2 Check your blood sugar again after 15 minutes. If it's still low, repeat step 1. Check again after another 15 minutes. If it returns to normal, eat a snack or meal to keep your blood sugar in a safe range. If it's still too low, call your healthcare provider right away.

High Blood Sugar

Hyperglycemia means that your blood sugar may be around 200 or higher. You might experience:

- Increased thirst.
- Increased need to urinate.
- Increased tiredness.
- Blurred vision.

If You Feel Symptoms

Always check your blood sugar right away. If it's too high:

- 1 Drink water or other sugar-free liquids to stay hydrated.
- 2 If you take insulin, you may need to take an extra dose. Ask your healthcare provider for instructions.
- 3 Check at least every 4 hours to make sure your blood sugar is going down. Call your healthcare provider if it doesn't go down after 2 checks, or if symptoms get worse.



Ask your healthcare team what symptoms indicate a blood sugar emergency.

Make Checking a Priority

You can't always have perfect blood sugar. But make the effort to keep your blood sugar in your target range as often as possible. Check your blood sugar every day as directed. And make sure you get an A1C test every 3 to 6 months. This will help you and your healthcare team decide if your diabetes management plan needs to be changed.

Overcoming Barriers

Are you remembering to check your blood sugar as often as you planned? If not, what's stopping you? Write down your barriers. Be specific. For each barrier, think of a solution that you can stick with. Write it down in the space provided. Then refer back to this chart whenever you need a reminder.

Example:

Change I want to make: *Remember to test my blood sugar 2 hours after eating.*

What's stopping me: *I forget when I get too busy at work.*

Ways to improve: *Set an alarm to go off when I need to check my blood sugar. Or, pick an activity I do every day and always check at that time, such as during a break.*

Change I want to make: _____

What's stopping me: _____

Ways to improve: _____

Change I want to make: _____

What's stopping me: _____

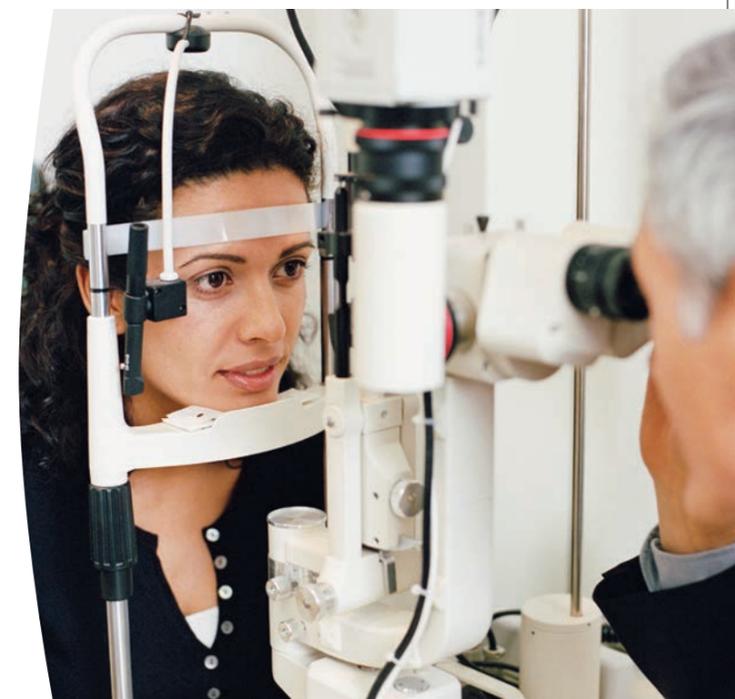
Ways to improve: _____

Eye Care

Diabetes can lead to **retinopathy**. This is a condition caused by changes in the retina, the part of the eye that senses light. If not treated, retinopathy can lead to blindness.

Preventing Eye Problems

- See an eye care specialist (**ophthalmologist** or **optometrist**) at least once a year. Do this even if your eyes feel fine and you have no trouble with your eyesight.
- Call the doctor if you have new dark spots in your vision, poor vision in dim light, or eye pain or pressure.

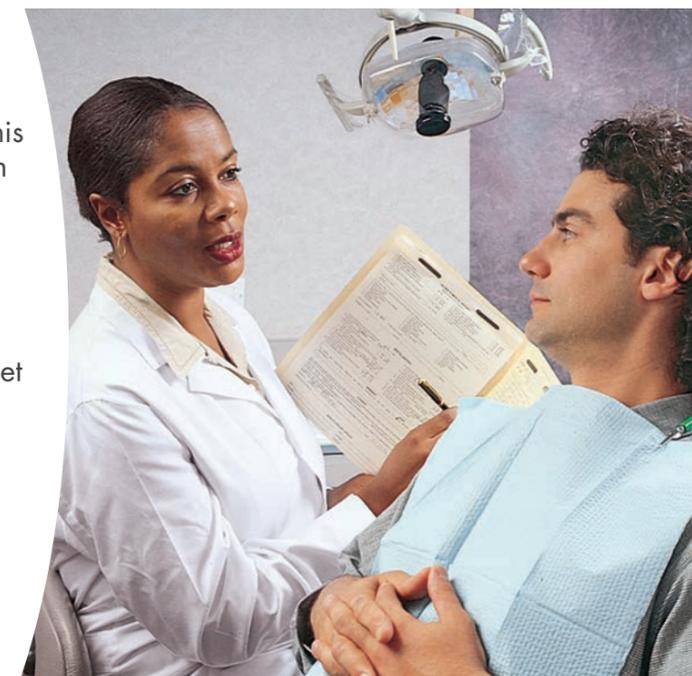


Gum Care

People with diabetes are at risk for infection that destroys gums and the bones that hold the teeth. This is called **periodontal** (gum) disease. The infection can also enter the bloodstream, affecting the heart and other organs.

Preventing Gum Problems

- Brush your teeth at least twice a day. Don't forget to floss at least once a day.
- See a dentist at least twice a year.
- Be sure to tell anyone who works on your teeth that you have diabetes.
- Call your dentist if you have gums that are red, swollen, tender, or bleeding. Also call if your teeth loosen or shift position or your gums pull away from your teeth.



Checking for Problem Sleep

People with type 2 diabetes may be more likely to have a problem called **sleep apnea**. With this, breathing stops for short periods throughout the night. Sleep apnea often causes loud snoring at night and sleepiness during the day. It can also lead to serious health problems if it's not treated. If you suspect you might have sleep apnea, ask your doctor about testing.

Reducing Your Risk of Complications

You've learned that healthy eating and daily activity help protect organs, such as your heart. To further reduce your risk of complications, monitor your feet, eyes, and gums. These are all places where high blood sugar can cause problems. Talk to your healthcare provider to learn more.



Use a mirror to inspect the soles of your feet for injuries.

Foot Care

Over time, high blood sugar affects nerves and blood vessels that supply the legs and feet. This means you may not be able to feel if you have a cut or infection. Wounds on your feet may be slow to heal, and may infect easily. Because of this, you need to pay close attention to your feet. Check them daily. Ask a family member for help if you have trouble seeing your feet, especially the bottoms. Remove your shoes and socks every time you see the doctor so your feet can be examined.

Preventing Foot Problems

- Inspect your feet every day for cuts, cracks, sores, or swelling. Look for color changes. Watch for cuts and scrapes that are slow to heal, itch, feel warm, ooze fluid, or smell bad. If you notice any of these problems, contact your healthcare provider right away.
- Wash your feet in warm (not hot) water and dry thoroughly, especially between toes. Don't soak your feet.
- Talk to your doctor if you need help cutting and filing your toenails safely.
- Ask your healthcare provider for a referral to a **podiatrist** (a specialist in foot health).

CHAPTER 3

Creating a Meal Plan

The food you eat plays a big role in managing your blood sugar. In this section, you will learn:

- How different foods affect blood sugar levels.
- How to create a meal plan and put it into action.
- How to stick to your meal plan away from home.

Making a Plan for Healthy Eating

A key part of managing blood sugar is a plan for balancing food with medication and activity. You don't have to stop eating the foods you like. But you do need to know how food affects your blood sugar. Ask to meet with a registered dietitian (an expert on food and nutrition). The dietitian will teach you the skills you need to plan healthy meals.

Keeping a Food Diary

Before you see the dietitian, you may be asked to keep a food diary for a week or two. Write down all the foods you eat and when you eat them. Bring this list with you when you see the dietitian. It will help the dietitian get to know your eating habits.

Working with the Dietitian

You may work with a dietitian one-on-one or in a group class. The dietitian will help you design a meal plan. This plan will be based on your likes and dislikes and your needs. The dietitian will help you learn how the foods you eat affect blood sugar. You'll also learn how to judge serving and portion sizes of the foods you eat. Create a plan you can live with. This will help you keep your blood sugar in your target range while still enjoying your meals.



18 Living Well with Diabetes

Staying Healthy

Managing your blood sugar helps reduce your risk of complications. But don't forget the rest of your body! See your doctor for regular checkups and any tests and immunizations that are recommended.

Have Regular Checkups

Get regular checkups with your doctor. Keep up-to-date on the tests and immunizations listed below. Ask what other tests you might need based on your age, health, and gender (such as cancer screenings).

Keep an Eye on Risk Factors

Certain risk factors increase the likelihood of having complications from diabetes. So certain tests should be done regularly. Have these tests done as often as stated below or as recommended by your doctor. Then work with your doctor to fill in your My Health Goals chart on page 59.

- A1C: Every 3 to 6 months
- Blood pressure test: every time you visit the doctor
- Cholesterol and blood lipids: at least once a year
- Urine albumin: at least once a year

Stay Up-to-Date on Immunizations

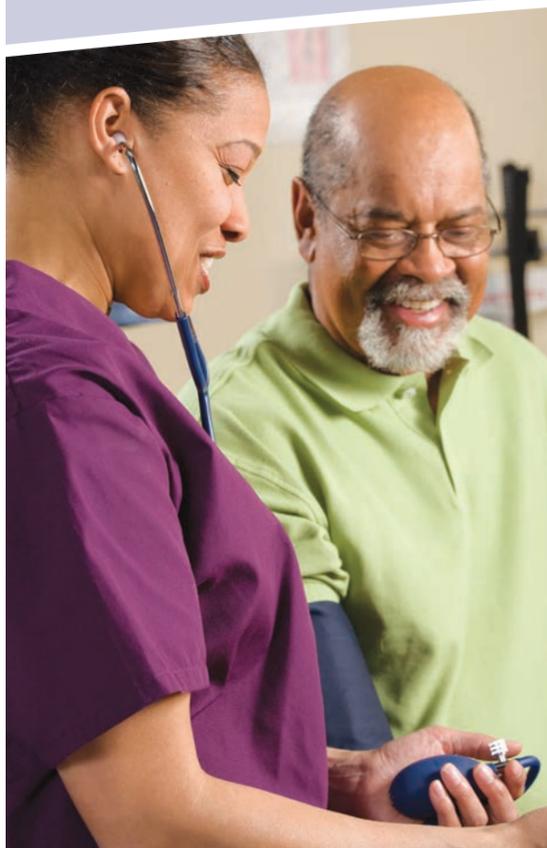
To help stay healthy, have these immunizations as often as stated below (unless told otherwise):

- Flu shot: Once a year, in the fall.
- Pneumonia shot: At least once, then as directed by your doctor.
- Hepatitis B: As soon as possible if you're younger than 60, or as recommended by your doctor if you're 60 or older.



Managing Cardiovascular Risk Factors

Page 7 of this workbook explains how diabetes and cardiovascular disease are linked. In addition to high blood sugar levels, many people with diabetes have high blood pressure and unhealthy cholesterol levels too. If not controlled, these factors increase risk for cardiovascular disease even more. But you can make changes to lower your risk.



If You Have High Blood Pressure

High blood pressure is the measure of the force in the blood vessels as the heart pumps blood. If this level is too high, it can damage blood vessels. The effects of high blood pressure and high blood sugar together can cause even more damage.

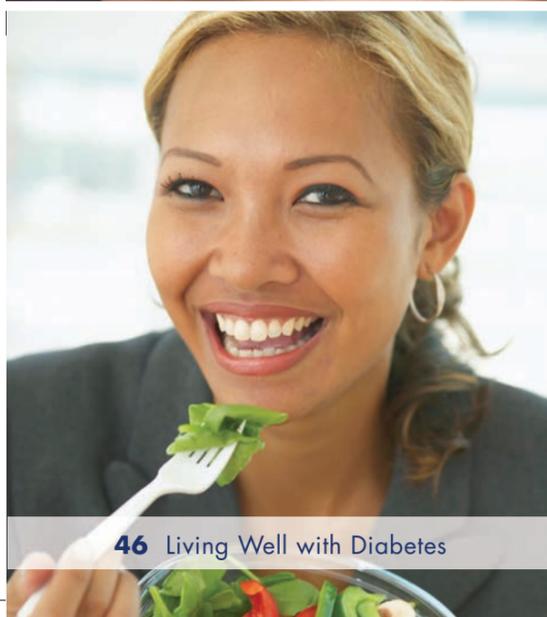
If You Have Unhealthy Cholesterol Levels

Lipids are fats in the blood. Cholesterol is one type of blood lipid. Some lipids are healthy. Others contribute to blocked arteries and heart disease. Having diabetes makes you more likely to have unhealthy cholesterol levels. Unhealthy cholesterol levels are a big factor that leads to cardiovascular disease.

What You Can Do

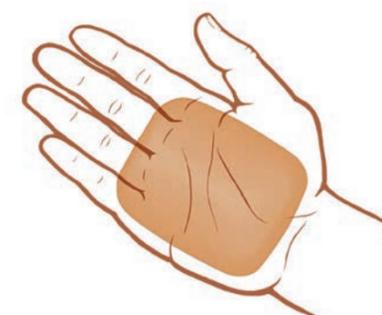
The good news: Many of the things that help you control blood pressure and cholesterol are things you're already doing to control diabetes. These include:

- Healthier eating (see chapter 3)
- Being more active (see chapter 4)
- Taking medications (see chapter 5)
- Quitting smoking (see page 50)

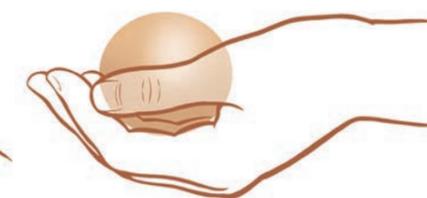


Learning About Serving Sizes

A serving size is a fixed amount of a food that provides a certain amount of nutrients. Learning about serving sizes will help you decide how much of a food to eat at a meal. The dietitian may show you how to use measuring cups or spoons. This can help you get used to the size of a serving. Once you feel comfortable, you can learn to "eyeball" the serving sizes of the foods you eat.



2 to 3 ounces is the size of your palm or a deck of cards.



1/2 cup is the size of your cupped hand or a golf ball.

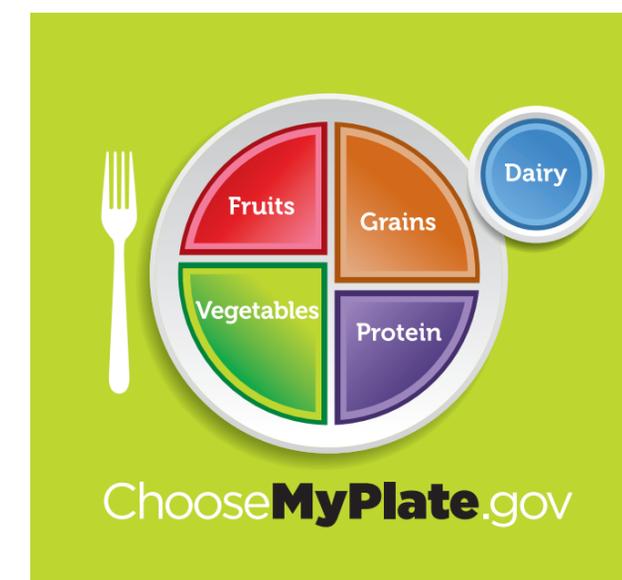


1 cup (or a medium-sized piece) is about the size of your fist.

Using MyPlate

MyPlate is a visual food guide that can help you choose the best types and right amounts of food to eat. Keep these tips in mind as you fill your plate:

- Cover half your plate with vegetables and fruit.
- Split the other half between grains and protein.
- Choose low-fat or fat-free milk and dairy products.



How Carbohydrates Affect Blood Sugar

Just as a car needs the right type of fuel (gas) to run, you need the right kind of fuel (food) to function. To sustain energy, your body needs food that contains carbohydrates. But carbohydrates raise blood sugar levels higher and faster than other kinds of food.

What Foods Contain the Most Carbohydrates?

You need to eat carbohydrates every day. But the more you eat, the higher your blood sugar may rise. To help keep your blood sugar in your target range, learn which foods contain carbohydrates. Then decide how these foods fit into your meal plan. The main types of carbohydrates are starches, sugars, and fiber (a type of carbohydrate that doesn't raise blood sugar). Keep in mind that with diabetes, the important number is the total carbohydrates in a food. The amount of sugar is less important.



Starches

Starches are found in grains, some vegetables, and beans. Grain products include bread, pasta, cereal, and tortillas. Starchy vegetables include potatoes, peas, corn, lima beans, yams, and squash. Kidney beans, pinto beans, black beans, garbanzo beans, and lentils also contain starches.



Sugars

Sugars are found naturally in many foods. Sugar can also be added to foods when they're processed. Foods that contain natural sugar include fruits, fruit juices, and dairy products. Added sugars are found in most desserts, processed foods, candy, regular soda, and fruit drinks. Foods that don't taste sweet, like crackers and condiments, often have added sugar.



Fiber

Fiber comes from plant foods. Most fiber isn't digested by the body. Instead of raising blood sugar levels like other carbohydrates, it actually keeps blood sugar from rising too fast. Fiber is found in fruits, vegetables, whole grains, beans, peas, and many nuts.

Making Change Work for You

Having diabetes means changes to your life. Everyone handles change a little differently. If you are having trouble adjusting, the following tips can help.

Prepare for Slow, Steady Progress

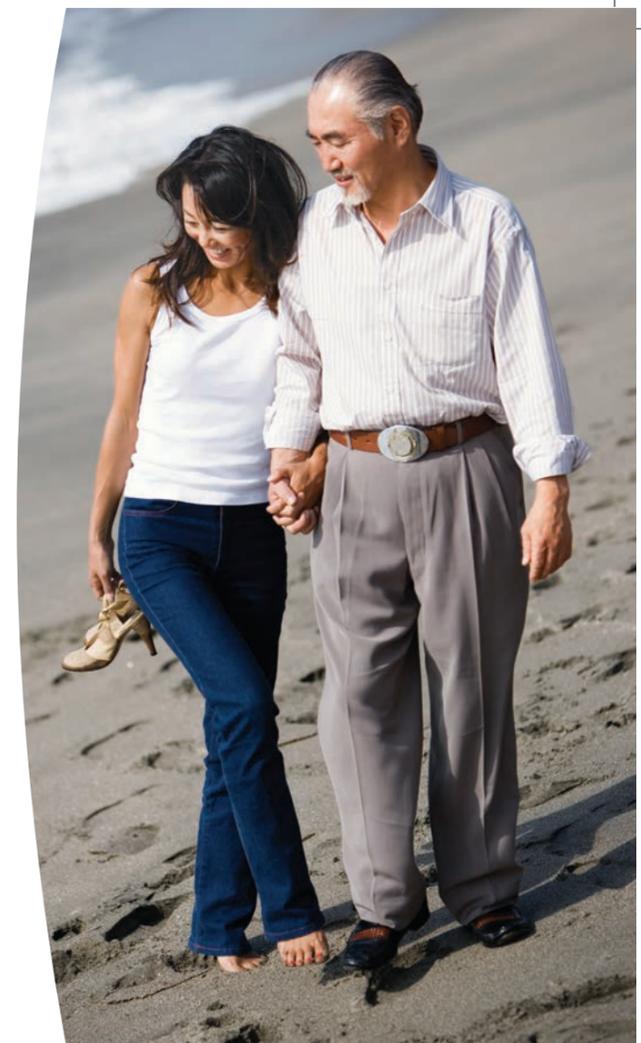
Change doesn't happen overnight, but small changes add up. You may not see the benefits of the changes you make right away. But over time, you'll feel better and be able to do more in your daily life.

Ask for Support

Changes such as meal plans and taking insulin can have a big impact on your life. Tell the people close to you how they can help you stay on track. You might want to join a diabetes support group. There, you can talk with people who have many of the same concerns, fears, and goals.

Acknowledge New Emotions

It's common to resist or feel angry or scared. You're not alone. Share your feelings with your healthcare team and people close to you. Acknowledging new emotions is the first step toward accepting them.



Caring for Your Emotional Health

Living with a chronic condition takes focus and concentration every day. You don't get "days off" from diabetes management. This may leave you feeling tired or "burned out." Some days will be harder than others. To help fight burnout, take care of yourself as a whole person, not just a person with diabetes. The tips on these pages can help.

Dealing with Stress

Everyone feels stressed at times. But for people with diabetes, managing stress is even more important. This is because stress can actually increase blood sugar. So, think about what causes stressful feelings. Then, find ways to limit or avoid stressful situations. To combat stress, try:

- **Physical activity**, a natural stress reliever (and it helps to lower blood sugar).
- **Making time to do things you enjoy**, such as hobbies or spending time with family and friends.
- **Talking** to a counselor or a close friend.



Take Time to Relax

To fight stress, take time out every day to relax your body and clear your mind. Talk to your healthcare provider to learn more about the following relaxation techniques:

- **Yoga, tai chi, meditation, and prayer** are all ways of relaxing the mind and body.
- **Deep breathing** can help to release physical tension.
- **Visualization** (picturing a relaxing scene in your mind) is a great way to recharge your mental batteries.



Enjoying Your Life

Don't forget to have fun! Make time every week for at least one activity you like. Are there some things you like to do but haven't done in a while? Write them below.

Learn About Carb Counting

To figure out how many carbohydrates you are eating every day, you can learn a technique called "carb counting." This system helps you keep track of the carbohydrates you eat at each meal. Ask your healthcare team if this technique should be part of your plan. There are different ways to do carb counting. The chart below can tell you more.



BASIC Carbohydrate Servings	ADVANCED Carbohydrate Grams
<ul style="list-style-type: none"> • When you count carbohydrate servings, one serving of a starch, fruit, or dairy product counts as one "carb." • Each carb is about 15 grams of carbohydrate. For example: <ul style="list-style-type: none"> 1 slice of bread = 1 starch serving = 15 grams of carbohydrate 1 apple = 1 fruit serving = 15 grams of carbohydrate 1 cup milk = 1 dairy serving = 15 grams of carbohydrate • The dietitian will help you determine how many carbohydrate servings to have at each meal and snack. • This method is a good way to get started with carb counting. 	<ul style="list-style-type: none"> • When you count carbohydrate grams, you use the "Nutrition Facts" label on packaged foods. The label tells you the actual carbohydrate amount (in grams) in a food. • A dietitian can help you determine how many grams of carbohydrate to have at each meal. If you take insulin, you will also learn how to adjust your mealtime insulin based on your carbohydrate intake. • This is the most accurate method of counting carbs. But it may be a little harder than counting carbohydrate servings.

Carb Counting Quick Reference

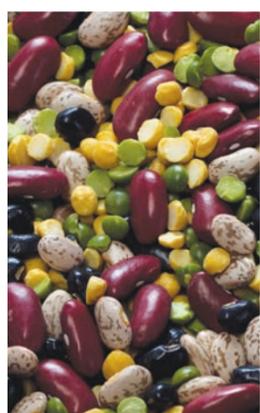
If you are counting carbs, 15 grams of carbohydrate equal one carb serving. The "Nutrition Facts" label will tell you the grams of carbohydrate in a packaged food (see page 25 to learn about reading food labels). For foods with no labels (such as fresh fruit, bakery items, or restaurant meals) this chart can help. Learn how much of a food equals one carb serving. The chart below lists one carb serving of some common foods. Keep in mind that the foods contain differing amounts of calories as well as fat, sodium, and other nutrients.



Grains (starches)

1 carb serving

Bagel	¼ large (1 oz)
Bread (most types)	1 oz
Chips (tortilla or potato)	9–13 chips (¾ oz)
Crackers (saltine)	6 crackers
Matzoh	¾ oz
Muffin (4 oz)	¼ muffin (1 oz)
Oats (cooked)	½ cup
Pasta (cooked)	⅓ cup
Pita bread (6-inch)	½ pita
Popcorn	3 cups
Pretzels	¾ oz
Rice (white or brown, cooked)	⅓ cup
Snack foods (most types)	¾–1 oz
Tortilla (6-inch, corn or flour)	1 tortilla



Starchy Vegetables and Beans

1 carb serving

Beans (such as pinto) and peas (such as black-eyed)	½ cup
Baked beans	⅓ cup
Corn	½ cup
Lentils (cooked)	½ cup
Peas (green)	½ cup
Potato (baked with skin)	¼ large (3 oz)
Potato (boiled or mashed)	½ cup (3 oz)
Winter squash	1 cup

Source: The Official Pocket Guide to Diabetic Exchanges, 3rd edition. American Diabetes Association, 2011.

CHAPTER 6

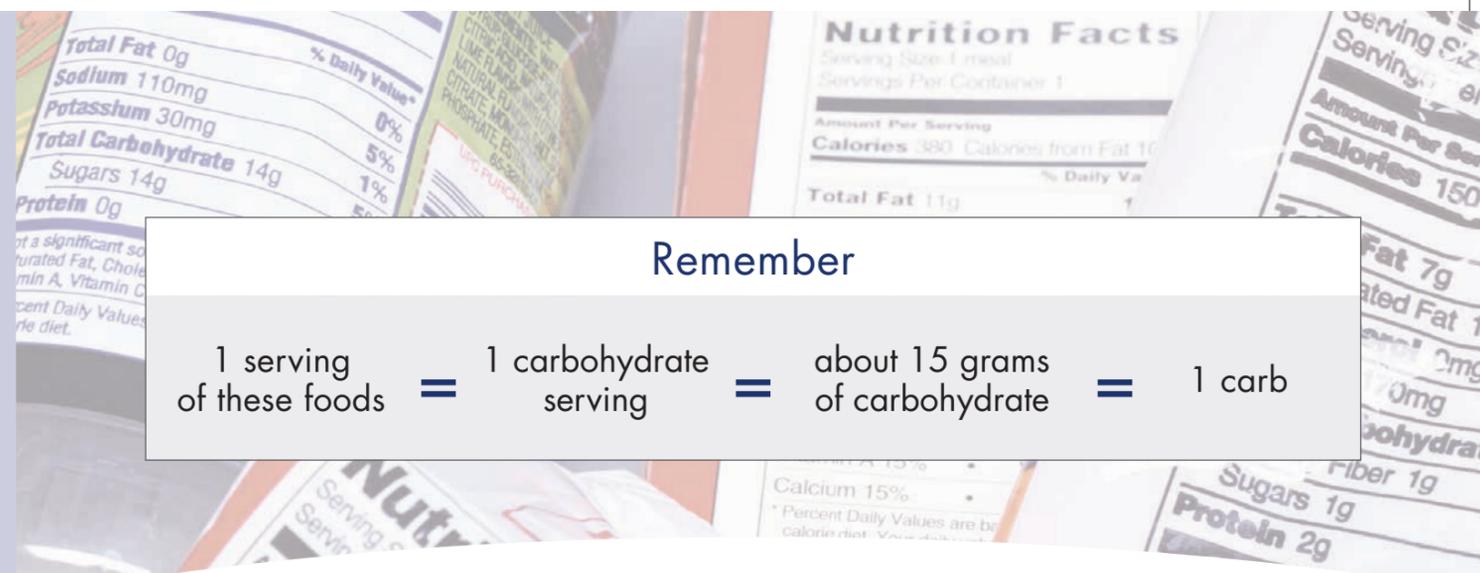
Maintaining Your Overall Health

Living well with a chronic condition means taking care of your whole body. In this section, you will learn:

- How to maintain your emotional health.
- The importance of managing high blood pressure and cholesterol
- How to keep healthy with regular tests and immunizations.
- What you can do to protect your eyes, gums, and feet.
- If you smoke, tips for quitting.
- How to manage changes in your daily routine, such as sick days and travel.

Your Medication Plan

Many people with diabetes take several medications. It is important that you understand what you're taking and how it works. Also, it's essential that your medication plan fits your needs. Ask your healthcare team about the medications you take. Also be sure they know any concerns or problems you have with your medication plan. Together, you can get answers and find solutions.



Remember

1 serving of these foods = 1 carbohydrate serving = about 15 grams of carbohydrate = 1 carb

Know What You're Taking

Know about the medications you take. For each medication, know the answers to the questions below. If you don't know, be sure to ask your healthcare provider.

- What is the name of the medication? (Find out the brand name and the generic name, if any.)
- What does the medication do?
- How often should I take this medication? At what time of day?
- How much of the medication should I take?
- Do I need to follow any special instructions while taking this?
- Are there any activities or foods I should avoid when taking this medication?



Make Your Medication Plan Work For You

A medication plan that fits your needs is one that you can follow. Be sure to have your concerns addressed. Don't let confusion, cost, or frustration keep you from better health.

- Talk with your healthcare provider or pharmacist if you feel you can't afford your medications. There are often ways they can help. Do not take a lower dosage than prescribed to save money.
- Don't change your dosage or stop taking any of your medications on your own. Always talk to your doctor first.
- Ask for help and suggestions if you can't remember to take your medications or have any issues with taking them.



Fruits

1 carb serving

Apple or pear (unpeeled)	4 oz
Applesauce (unsweetened)	½ cup
Banana	4 oz
Blackberries or blueberries (whole)	¾ cup
Canned fruit (without added sugar)	½ cup
Cantaloupe or honeydew melon (cubed)	1 cup
Fruit juice (100% juice)	½ cup
Grapes	17 small (3 oz)
Mango	5½ oz or ½ cup
Nectarine	5 oz
Orange	6½ oz
Peach	6 oz
Plum	5 oz
Raisins or other dried fruit	2 Tbsp
Raspberries (whole)	1 cup
Strawberries (whole)	1¼ cups



Dairy and Dairy Substitutes

1 carb serving

Ice cream	½ cup
Milk (fat-free, 1%, 2%, whole)	1 cup
Rice milk (sweetened, low-fat)	½ cup
Rice milk (plain, fat-free)	1 cup
Soy milk (fat-free or low-fat, unflavored)	1 cup
Yogurt (fat free, plain or sugar free)	6 oz
Yogurt (whole, plain or sugar free)	1 cup

Planning Your Meals

You'll work with a dietitian to design a meal plan. Your plan needs to fit with your eating habits and schedule. Planning what and when you eat helps keep your blood sugar in your target range. Aim to eat foods from all the food groups every day.



Eat from All the Food Groups

Eating from all the food groups gives your body the nutrients it needs to work properly. The six food groups are: grains, vegetables, fruits, meat and beans, dairy, and oils. Work with the dietitian to include a variety (many types) of foods from each group. Variety can keep you from getting bored with your plan.

If You Want to Lose Weight

If you want to lose some weight, reduce the amount of calories you take in. To help do this:

- Reduce your portion sizes (review page 19). Portion sizes have gone way up over the past 20 years. Eating less at each meal will help with weight loss.
- Reduce the amount of regular soda, sports drinks, and fruit juice that you drink. Instead, drink plenty of water and other sugar-free liquids.
- Add more vegetables to your meals. These tend to fill you up and give you nutrition with fewer calories.
- Choose healthy fats like olive oil, avocado, and nuts. And choose them in moderation.

★ Timing Meals

When it comes to blood sugar management, when you eat is as important as what you eat. You may want to eat several small meals spaced evenly through the day to stay in your target range. Pay attention to what keeps your blood sugar steady. And don't wait until late in the day to get most of your calories. Doing so can cause your blood sugar to get too far out of range.

Taking Medications Safely

The tips below can help you stick with your medication routine.

- Hold on to the instructions that come with each medication.
- Do not share medications.
- Know what to do if you miss a dose. If you don't, call your doctor or pharmacist.
- Call your doctor right away if you notice any side effects. But don't stop taking your medications unless told to do so.
- Check with your pharmacist when you fill a new prescription or buy an over-the-counter medication, vitamin, supplement, or herbal remedy. Ask whether the new drug is safe to take with the rest of your medications.
- Ask your pharmacist to print a list of all of your medications for you. Bring this list with you to doctor's visits. If you use more than one pharmacy, be sure each of the pharmacies has a full list of your medications.



Before you start taking a new medication, ask the pharmacist whether it can interact with other medications you take.

♥ Notes for Family and Friends

Diabetes medications can sometimes cause low blood sugar. It's important that you learn to recognize the signs of low blood sugar (hypoglycemia), which can come on quickly. (Review "Low Blood Sugar" on page 15.) You may need to be prepared to provide glucose tablets or another fast-acting sugar. In some cases, a special injection (of a hormone called glucagon) is needed if severe hypoglycemia occurs. You may need to learn how to inject this medication in an emergency.

Managing Your Medications

You may take more than one medication for diabetes and related conditions. For your health, taking your medications on time and as directed is essential. These pages can help you set a routine and stick to it.

Stick to a Routine

Taking diabetes medications at the right times will help keep your blood sugar steady. Like a meal routine, a medication routine can help you stay in your target range. Use a pill organizer and a daily schedule to keep yourself on track. If you are having trouble, ask a family member or friend to help. And be sure to ask your doctor or pharmacist what to do if you miss a dose.

Tips for Taking Medications

The tips below can help you stick with your medication routine.

- Refill your prescriptions before they run out. Check the brand and dosage to make sure they are correct.
- Prepare a small travel kit (see page 61) so you can take your medications with you everywhere you go.
- Ask family or friends for help if you are having trouble remembering to take your medications.
- Make filling your pill organizer part of your weekly routine. Ask a family member to help you stay organized.

A pill organizer can help you keep track of the medications you take each day.



Putting Your Meal Plan into Action

Consult your meal plan before you go to the store. Decide ahead of time what you want to cook. This helps you stay on track while you shop. At the grocery store, read food labels to help you make the healthiest choices. If you don't do the shopping, be sure the person who does understands your needs.

When You're Shopping

Look for the "Nutrition Facts" label on packaged foods. It tells you how much of the food makes up one serving. It also tells you how much carbohydrate and calories are in each serving. This will help you decide if the food fits into your meal plan.

- Look for brightly colored fruits and vegetables.
- Buy lean meats, such as chicken, turkey, and fish.
- Avoid processed, high-calorie snack foods.
- Look for whole-grain foods and low-fat dairy products.

Nutrition Facts	
Serving Size 1 cup (240g)	
Servings Per Container 2	
Amount Per Serving	
Calories 100	Calories from Fat 20
% Daily Value*	
Total Fat 2g	3%
Saturated Fat 0g	0%
<i>Trans</i> Fat 0g	
Cholesterol 0mg	0%
Sodium 70mg	3%
Total Carbohydrate 17g	6%
Dietary Fiber 3g	12%
Sugars 5g	
Protein 4g	
Vitamin A 70%	• Vitamin C 20%
Calcium 15%	• Iron 8%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

Serving size. This tells you how much of the food makes up one serving. If you eat more than one serving, all the other values increase.

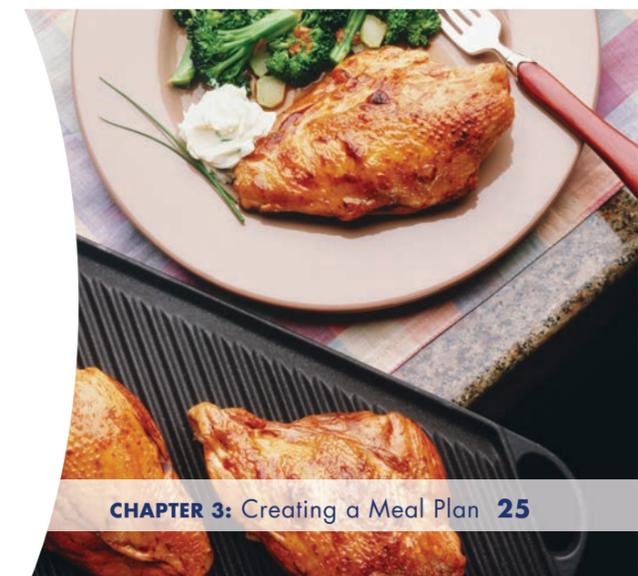
Calories. The number of calories in each serving. Eating too many calories can lead to weight gain.

Total carbohydrate. This tells you the grams of carbohydrate in one serving. If you count carbs, this number helps you fit the food into your meal plan.

When You're Cooking

Use the following tips to help you prepare healthier meals at home:

- Trim fat off meats before cooking.
- Broil, steam, bake, or grill meats and vegetables instead of frying.
- Use olive or canola oil instead of butter or lard for cooking.
- Don't cook meat and vegetables in cream- or butter-based sauces.



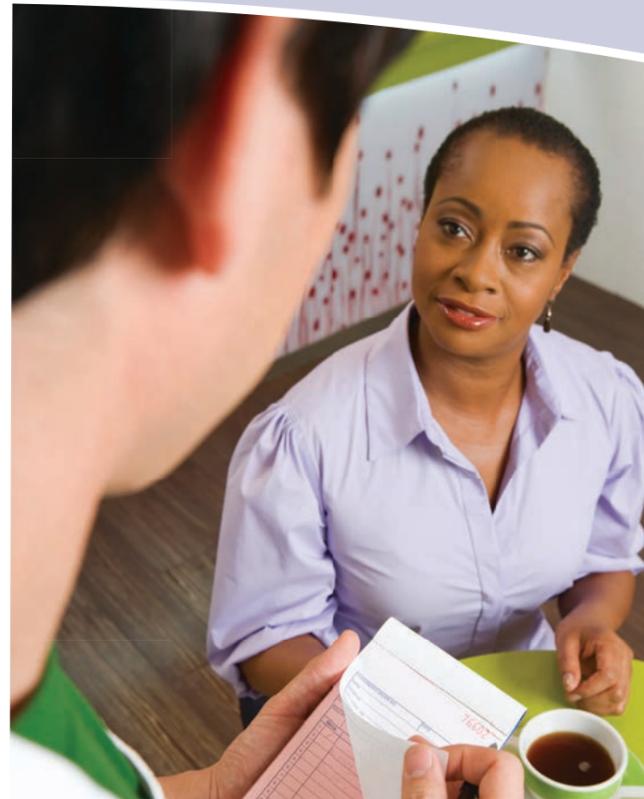
Eating Away from Home

You may not always have control over what is available to eat or how it's prepared. But you can choose which foods to eat and how much to eat at once. You can follow your meal plan, even when you eat away from home.

At a Restaurant

At restaurants, use the following tips to help you stick to your meal plan:

- Ask how food is prepared. Avoid fried or breaded foods, or ones sautéed in butter or cream.
- Ask if sauces and dressings can be served on the side, and use them sparingly.
- Most restaurants serve large portions. Eat half your meal and take the rest home.
- At a buffet, remember the portion-size plate diagram on page 19. Devote at least half your plate to vegetables and green salad, and ¼ each to starch and protein.
- Split a dish or dessert with a friend or family member.
- Skip the bread or chips basket before the main meal.



★ A Note About Alcohol

Drinking alcohol can cause your blood sugar to fall quickly. If you do drink alcohol, **never** drink on an empty stomach. This can cause dangerously low blood sugar. And be aware that alcohol adds calories. You may have to adjust your meal plan if you decide to have a drink. Ask your healthcare provider or pharmacist if any of the medications you take interact with alcohol.

Taking Other Medications

In addition to diabetes medications, you may need to take medications for other health issues. These include medications to help prevent or treat heart disease and related issues. They also include medications for health problems you have. Know how to take these medications correctly. Also be sure that your doctor and all of your healthcare providers know all of the medications you're taking.

Heart Medications

When you have diabetes, you are at increased risk for problems with blood vessels in the heart and the rest of the body. If you have conditions like high blood pressure or high blood cholesterol, your risk is even greater. To help protect your heart and blood vessels, you may be given medications to treat these problems.

Be Aware of Drug Interactions

Medications prescribed for different health problems can interfere with each other. Over-the-counter medications, vitamins, supplements, and herbs can also interact with medications you take. To help prevent interactions:

- Be sure to tell all your doctors and other healthcare providers about every type of medication you're taking. This includes remedies for headaches, allergies, colds, and even constipation. It also includes herbs and supplements.
- Never add a vitamin, herb, or supplement to your medication plan without talking to your doctor first. This includes supplements that promise to treat your diabetes. These are unlikely to work as promised. They can even be harmful.
- Ask your doctor or pharmacist if there are any medications you need to avoid.
- Read the warning labels and directions on all medications you take.
- If you get a new medication or change pharmacies, be sure the pharmacist has a list of all of the medications you're taking.



You may be prescribed medication to control high blood pressure or other conditions.

If You Need to Use Injections

Insulin and certain other diabetes medications are given by injection. Injections allow medication to go into your body without being destroyed in the stomach. Giving yourself shots every day might seem overwhelming at first. But they can help you feel better and keep your blood sugar on target.

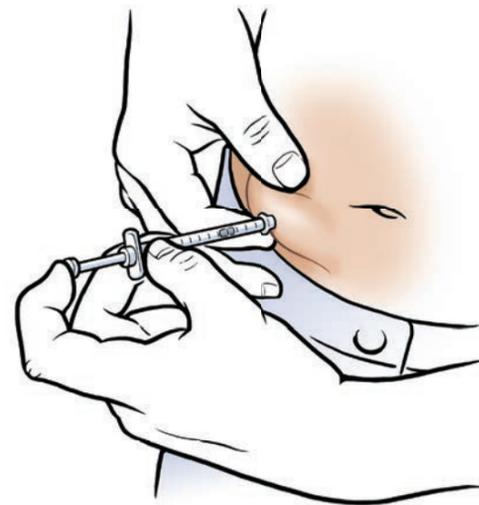
Understanding Insulin

You may need to take insulin to replace what your body doesn't make. Insulin is taken by injection. Otherwise, it would be broken down by the digestive system before it reached the bloodstream. People with type 1 diabetes need to begin taking insulin right after diagnosis. People with type 2 diabetes may need insulin as well. Taking insulin can give you greater flexibility in your daily blood sugar management. You will learn how to adjust your dosage based on your blood sugar goals, meal plan, and activity level. Talk with your healthcare provider about the types of insulin. You may need to use more than one type.

Getting Familiar with Shots

Your diabetes educator will help you practice giving yourself shots until you feel more comfortable. You may find that giving yourself shots is easier than you thought. And with practice, it can become part of your everyday routine.

Ask your healthcare team to show you the correct way to give yourself shots.



★ Managing Injections Anywhere You Go

You won't always be home when it's time for insulin shots. Be prepared to inject insulin no matter where you are. Most injection devices can be used discreetly, even at the dinner table. You can also choose private locations to perform injections, such as a public restroom or your parked car.

Holidays and Special Occasions

Parties and holidays often involve special or traditional foods and drinks. You can eat foods that aren't normally part of your meal plan. Be sure to adjust your meal plan or insulin dose accordingly. Ask your healthcare provider to show you how. Remember to check your blood sugar often to see how different foods affect you. If you fast for religious reasons, talk to both your healthcare provider and clergy about safer ways to fast.



📌 Social Situations: When It's Hard to Say "No"

Well-meaning family and friends may not always understand your meal choices. This can be especially true at parties or other social gatherings. You don't have to eat or drink something that affects your blood sugar just to be polite. If you find yourself eating or cooking to please others, try the tips below:

- You can accept any food and drink that is offered. But you don't have to put it in your body. Just holding a drink or small plate of food is often enough. This will usually keep people from insisting that you have another helping or another drink.
- Plan ahead. Bring a dish to share that you know you will enjoy. Then you won't have to feel deprived if most of the offered food doesn't fit into your meal plan.
- At home, you can cook different side dishes or prepare traditional foods in healthier ways. Talk with your family about the benefits these changes can bring.

Are there other ways to stick with your meal plan at social gatherings? Write in your ideas:

Notes for Family and Friends

A family member with diabetes may choose to make changes in his or her eating habits. Your support during this time is very important. Ask how involved your family member wants you to be. And remember: Change can be difficult! The person with diabetes needs to be the one to decide on making changes. Your role is to be supportive and encouraging.

Ways You Can Help

Choose to change your own eating habits, too. Eating healthier is better for the whole family. More ways you can help:

- Ask if your family member wants to be reminded about his or her meal plan. If so, give gentle reminders. Try not to nag or judge.
- Buy and keep healthier foods in the house.
- Explore new ways of cooking and eating. Try new recipes. Look for healthier takes on old favorites.
- Keep in mind that food can be a very emotional topic.
- Believe in your loved one's ability to make changes. Saying "I know you can do it" goes a long way.



Types of Diabetes Medications

	Drug Class	How the Medication Works
Oral	Alpha-glucosidase inhibitors	These pills slow down the digestion of certain carbs. This can help keep blood sugar levels from rising too much after meals.
	Biguanides	Biguanides decrease the liver's glucose production and decrease insulin resistance in liver, muscle, and fat cells. They may also improve blood lipid (fat) levels.
	DPP-4 inhibitors	DPP-4 inhibitors increase the body's release of insulin in response to a rise in glucose levels.
	Glinides*	Glinides cause a burst of insulin to be released when you eat a meal. They are short-acting for mealtime use.
	SGLT2 inhibitors*	These medications help reduce the amount of glucose in the blood. They do this by triggering the kidneys to send glucose out of the body in the urine.
	Sulfonylureas*	Sulfonylureas stimulate the pancreas to produce and release more insulin. These drugs can be long-acting and may stay in the body for up to 72 hours. (Most last 24 hours or less.)
	Thiazolidinediones	These medications help decrease insulin resistance in muscle and fat cells. They also help decrease production of glucose in the liver and improve blood lipid (fat) levels.
Injected	Insulin*	Insulin is taken by shot or pump. It regulates blood sugar if the pancreas can't produce enough insulin. You may need to take more than one type. Some types are short-acting, for mealtime use. Others work over longer periods.
	Other injectable hormones	These medications are also taken as shots. They are versions of natural hormones that regulate insulin production in the pancreas and the release of glucose into the bloodstream.

*Medications in these classes can cause low blood sugar. See page 15 to learn about treating low blood sugar.
 Note: This chart does not imply endorsement of any type or brand of diabetes medication. It does not list side effects, adverse reactions, interactions, or precautions for these medications. Only a doctor can recommend or prescribe these medications.

Medications for Diabetes

Like healthy eating and physical activity, taking medication can help you manage diabetes. Diabetes medications improve your ability to keep your blood sugar in your target range. These medications are powerful tools that can keep you healthier by delaying or preventing complications. Many people take one or more medications to help manage their blood sugar.



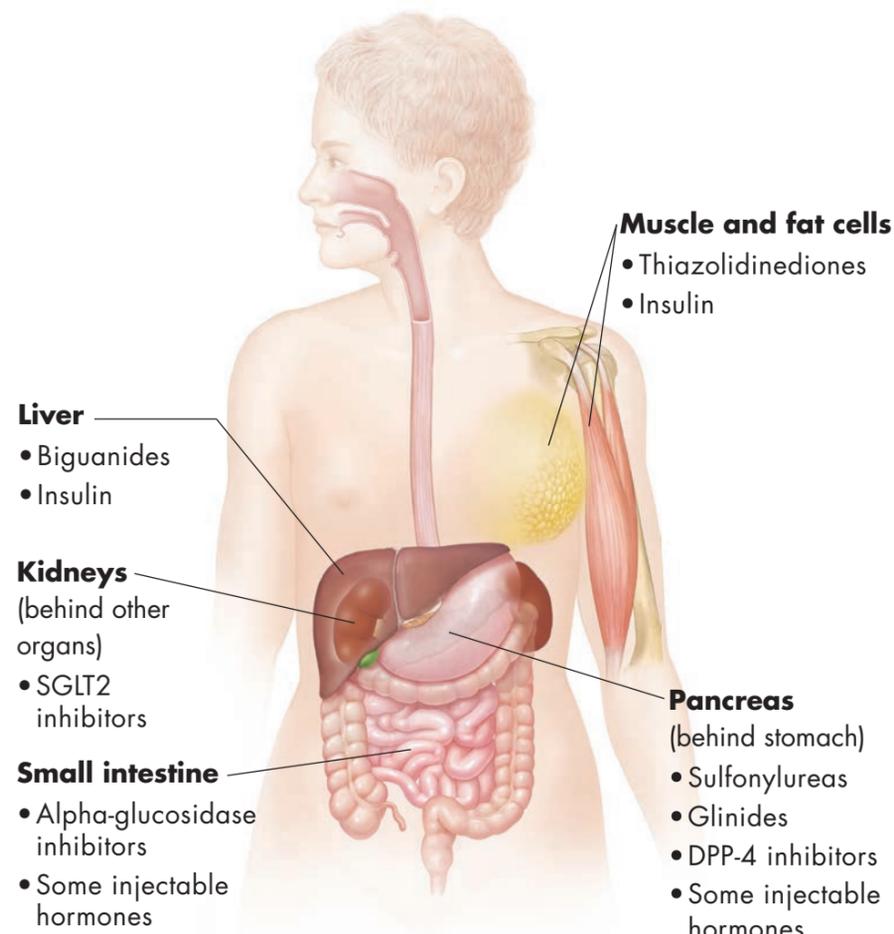
Taking Medication

Diabetes medication may be taken as pills. It may also be given through injection. Insulin may be given by injection or an insulin pump.



Where the Medications Work

Diabetes medications are grouped into separate drug classes. Medications in the same class work in similar ways. Drugs in different classes act on different parts of the body. For instance, some medications increase insulin sensitivity in cells. Others prevent the liver from making and releasing too much glucose. And some cause carbohydrates to break down more slowly in the digestive tract. The diagram below shows where each class of diabetes medication works.



CHAPTER 4

Adding Activity into Your Life

Getting active is a great way to help manage your blood sugar. In this section, you will learn:

- Losing even a little weight can lower your blood sugar.
- Walking and other activities help manage diabetes.
- You can overcome barriers that stop you from meeting your activity goals.

Getting Active

Being physically active every day can help you manage your blood sugar. That's because an active lifestyle can improve your body's ability to use insulin. Activity can help delay or prevent complications of diabetes. And it's a great way to relieve stress. If you haven't been exercising, be sure to consult your healthcare provider before getting started.

How Much Activity Do You Need?

If activity is new to you, start slow and steady. Begin with 10 minutes of activity daily. Work up to a goal of getting 150 minutes of activity a week. Spread this over *at least* 3 days a week. Choose activities that get your heart beating faster (such as walking, jogging, swimming, or biking). You don't have to do a day's exercise all at once. You can break it into periods of 10 minutes or more spread throughout the day. Also, know that too much sitting has been shown to hurt your health. Limit sitting to no more than 90 minutes at a time. Take breaks to get up and move around.



CHAPTER 5

Taking Medications

Most people with diabetes need medication to help keep their blood sugar in their target range. In this section, you will learn:

- How different medications work to help manage blood sugar.
- Where different diabetes medications work in the body.
- How to develop a daily medication routine.

★ If You Want to Lose Weight

If you are overweight, weight loss actually improves your ability to keep your blood sugar in your target range. A good starting goal is to lose 7% to 10% of your body weight. If you weigh 200 pounds, this means losing 14 to 20 pounds. Even this amount of weight loss can help you meet your blood sugar goals. Other benefits of weight loss: It helps relieve stress, improve your mood, and give you more energy. Talk with your healthcare team about setting a healthy weight-loss plan for you.

Overcoming Roadblocks

Many people want to be as active as possible. But being active every day can be a challenge. You may find yourself making excuses or getting distracted. If so, what's keeping you from reaching your activity goals? Use the chart below to write down your specific roadblocks. Then fill in ideas that can help you stay on track.

What You Can Do

Identify Your Barriers

"I don't want to walk in my neighborhood after dark."

"I'm too tired to be active when I get home from work."

"In the winter, it's too cold to exercise outside!"

Solutions to Keep You Moving

Find an indoor mall near you. Take a friend or family member with you. You can also walk up and down the stairs at home.

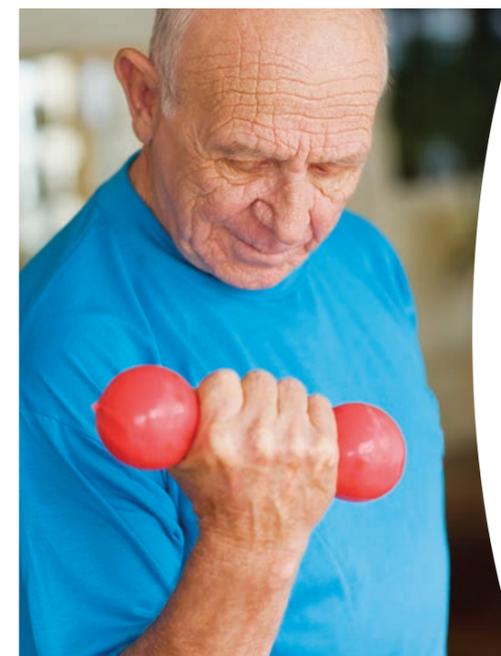
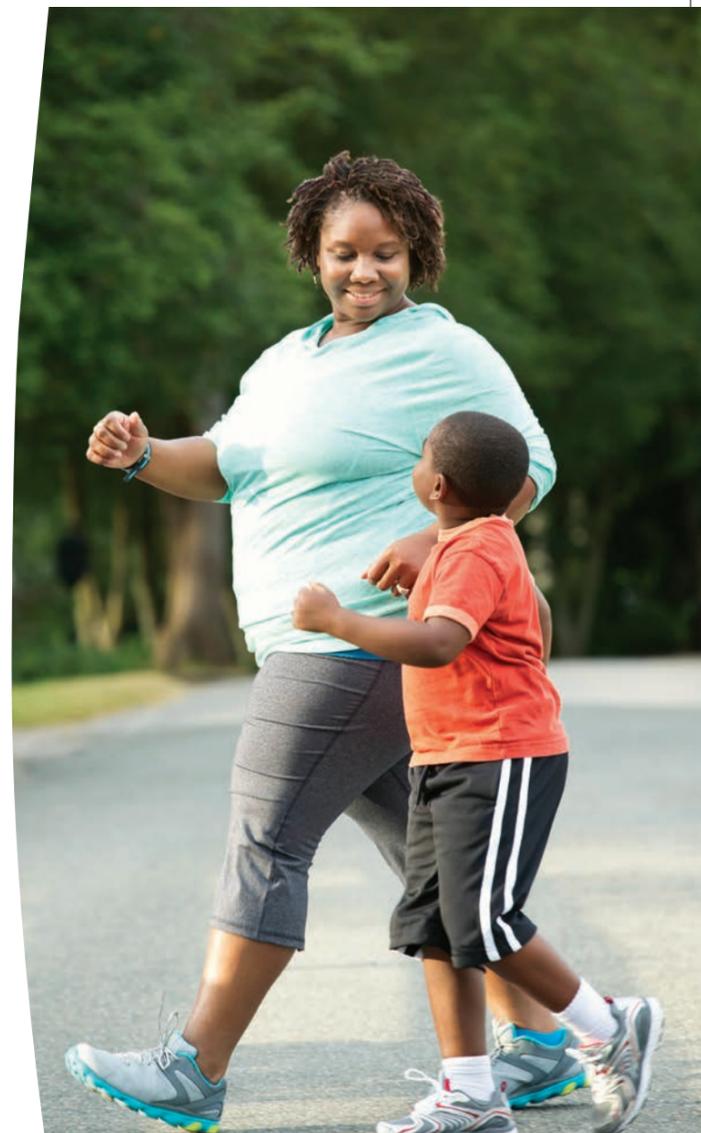
Take breaks for short walks during the day. Three 10-minute walks will boost your energy and help you meet a 30-minute goal.

Stay inside and dance to your favorite music. Follow a workout video online or on a DVD. Or try a video game that makes you get up and move.

Get Walking!

You don't have to join a gym or own pricey sports equipment. Just get out and walk. Your goal is to walk briskly to make your heart beat faster. This helps your heart and blood vessels. The more you walk, the easier it gets. Make it part of each day. Walk with a friend or a group to keep it fun and interesting. Try taking several short walks to meet your activity goal. And to track how many steps you take daily, you might want to use a pedometer. Clip this small device to your clothes, and it will keep a tally of the steps you take each day. Remember: With every step, you're doing a little more to help your body use insulin.

A step counter can help you track your activity and set goals.

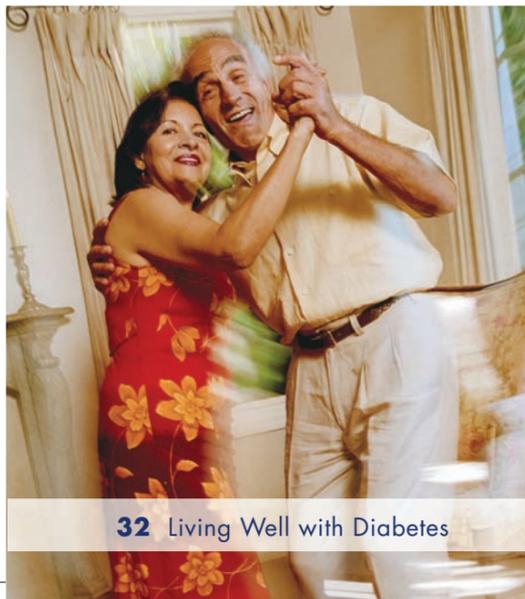


Build Strength

To feel your best, add strength (also called resistance) training to your routine. This means working out with weight machines, resistance bands, or free weights. Strength training helps build muscle and increases endurance. It may also improve heart health and help you manage your weight. Check with your healthcare provider before starting. Then aim to do strength training at least 2 days a week.

Sticking with It

Help make activity a lifelong habit. The key is finding activities that you enjoy. You may enjoy getting into a routine. Or you may want to vary your activity to keep from getting bored. Try to work extra amounts of activity into your daily routine. See the lists below for ways to do this. Check off at least two ideas that you would like to try.



What You Can Do

Work Activity into Your Day

Small bits of activity add up! Explore ways to move a little more all day long. Here are some ideas to get you started:

- Take the stairs instead of the elevator or escalator whenever possible.
- Walk to see a neighbor or colleague instead of calling, texting, or e-mailing.
- Ride a bike to run errands.
- Walk 1 or 2 stops farther before getting on the bus.
- Park farther away from store entrances.

Make Activity Fun

Choose physical activities you enjoy that fit into your routine. Some examples include:

- Walking the dog around the neighborhood or in a park.
- Hiking or biking with your kids or grandkids.
- Joining a social group that walks or does other activities.
- Putting on your favorite music and dancing at home.
- Doing yardwork (gardening, mowing the lawn, or raking leaves).

Staying Safe

Being active may cause blood sugar to drop faster than usual. This is especially true if you take insulin or other medications that lower blood sugar. But there are things you can do to help reduce the risk of lows.

- Always carry or wear identification that says you have diabetes. Carry a cellphone in case of emergency.
- Drink plenty of water before and during activity.
- Keep a fast-acting sugar (such as glucose tablets) on hand in case of low blood sugar.
- Skip activity if you're sick.



A medical ID bracelet that says you have diabetes can help keep you safe in an emergency.

Other Safety Tips

To help avoid injuries and prevent harm:

- Include friends and family when you can. Being active with a "buddy" is safer than being alone.
- Dress appropriately for the weather.
- Use the right safety equipment for the activity (such as a bicycle helmet).
- Wear closed-toe shoes that fit your feet well.

Activity and Blood Sugar

Physical activity is important when you have diabetes. But you need to keep an eye on your blood sugar level. Check often if you have been active for longer than usual, or if the activity was unplanned. Make it a habit to check your blood sugar before being active. Check again several hours later (blood sugar may decrease for a few hours after activity). Use your log book to write down how activity affected your numbers. If you take insulin, you may be able to adjust your dose before a planned activity. This can help prevent lows. Talk to your healthcare provider to learn more.