You’re In Control

Managing Type 2 Diabetes
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>How You Might Be Feeling</td>
<td>5</td>
</tr>
<tr>
<td>What is Type 2 Diabetes?</td>
<td>6</td>
</tr>
<tr>
<td>What Should I Learn About Diabetes?</td>
<td>7</td>
</tr>
<tr>
<td>Healthy Eating</td>
<td>8</td>
</tr>
<tr>
<td>Losing Weight</td>
<td>12</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>14</td>
</tr>
<tr>
<td>How to Begin Making Changes</td>
<td>16</td>
</tr>
<tr>
<td>How Can I Tell if My Blood Sugar is Too High or Low?</td>
<td>18</td>
</tr>
<tr>
<td>Low Blood Sugar</td>
<td>22</td>
</tr>
<tr>
<td>High Blood Sugar</td>
<td>24</td>
</tr>
<tr>
<td>Pills for Type 2 Diabetes</td>
<td>25</td>
</tr>
<tr>
<td>Insulin for Type 2 Diabetes</td>
<td>26</td>
</tr>
<tr>
<td>Getting Regular Checkups</td>
<td>27</td>
</tr>
<tr>
<td>A Word to Teens</td>
<td>28</td>
</tr>
<tr>
<td>Your Turn</td>
<td>30</td>
</tr>
<tr>
<td>Resources</td>
<td>32</td>
</tr>
</tbody>
</table>
Introduction

Being told you have type 2 diabetes can be upsetting and confusing. What does it mean? What can you do? How will your life be affected?

It might help to know you’re not alone. Millions of people in the U.S. have type 2 diabetes. The good news is that today diabetes can be successfully managed in many ways. In fact, learning you have type 2 diabetes can lead to positive changes and a healthier life.

The main thing to know is that diabetes is a self-managed disease. That means YOU are in control. Studies show that if you manage your diabetes well, you can lower your risk of heart disease, stroke, and many other diabetes-related health problems.

This booklet will explain what type 2 diabetes is and how you can manage it with the help of a health care team. You will learn how to make good choices in what you eat and how you exercise. You’ll also learn about medicines that can help you control your diabetes. By reading this booklet and watching this program, you are taking the first solid steps toward a healthier life.

How You Might Be Feeling...

When you first learn you have diabetes, you may feel overwhelmed, frightened, frustrated, or sad. These are very common feelings!

It may help to know that:
• Diabetes is serious, but manageable.
• If your feelings become overwhelming, you can get help from your health care professional.
• Your job is to learn as much as possible about diabetes so you can make good choices.
• Millions of others just like you have made this change and are living healthier lives with type 2 diabetes.
What is Type 2 Diabetes?

Diabetes is a condition where you have too much sugar (glucose) in your blood. This extra sugar can cause many health problems, such as heart and kidney disease, foot problems, and blindness.

In some people, glucose builds up because their body doesn’t make enough of a substance called insulin. Insulin acts like a “key” to let glucose into parts of the body that need it for fuel. Diabetes can happen if you don’t have enough insulin. It can also occur if your body doesn’t respond to the insulin it does have. Most people with diabetes make at least some insulin, but it no longer works to keep blood sugar under control. This is called type 2 diabetes.

People with type 2 diabetes should exercise, eat a healthy diet, and they may need to lose weight. At some point pills may be needed to help control blood sugar levels. When diet, exercise and pills are not enough to maintain good control, insulin can be used as well.

What Should I Learn About Diabetes?

Here’s what you’ll learn in this booklet:

• What and how much to eat
• When to exercise and why
• How and when to measure your blood sugar with a blood sugar machine (called a blood glucose meter)
• What to do if your blood sugar is too high or too low
• When and how to take pills or insulin
• When to contact your health care professional
Eating right is the most important way to control your blood sugar. Your blood sugar is affected by what you eat, and how much you eat. With diabetes, you should eat smaller portions and fewer sweets and starches. Eating smaller portion sizes will help you lose weight and lower your blood sugar.

Here are some tips to help you eat smaller portions, yet still decrease hunger:

- Put food on a smaller plate.
- Eat more slowly.
- Don’t eat in front of the TV.
- Drink more water.
- Eat more vegetables.
- Walk after eating.
People with type 2 diabetes have to be careful about **carbohydrates** (carbs). Carbs include all types of sugars and starches. Carbs get quickly broken down to glucose in your body. This can make your blood sugar levels rise too high. You can eat some carbs, but not too much.

**Here are some high-carb foods to watch out for:**
- Pasta
- Potatoes
- Rice
- Tortillas
- Sweet desserts
- Candy
- Regular soda
- Fruit juices

In any meal, carbs should be only one-quarter of the food on your plate. Another quarter should be some kind of protein, such as meat, fish, tofu, or eggs. Half of your meal should be non-starchy vegetables. (Fresh fruit is also generally very good for you, but some fruits contain a lot of natural sugar—which is another type of carb. So you may have to watch the amount of fruit you eat.)

How can you tell how many carbs a food has? One way is by looking at the nutrition labels at the grocery store.

Start at the top of the label and decide if the serving size is actually close to what you would consider a single “serving.” For example, a package may say that a “serving” of pretzels is “10 pretzels” but many people eat more than that in a sitting.

Look for the “Total Carbohydrates” line. The US government suggests that adults get 130 grams of carbohydrates each day. If you keep track of your carbs for a couple of days, you'll begin to see how much you are eating. You'll also notice that some foods have many more carbs than others.

Another key thing to look for on labels is fiber. Most people don’t get the recommended 25 grams of fiber every day. Look for foods made from whole grains or foods labeled “high fiber.”

**An important note:** If you live with family members, try to get their support. Your chances of success in eating well are best if everyone in the family is eating the same way.
More than 80% of the people who develop type 2 diabetes are too heavy. That means most people should lose some weight as part of their plan to manage diabetes. Losing weight isn’t easy. But losing 10 percent—or even just 5 percent—of your total body weight can make a big difference.

**Here are some tips:**

- Check with your doctor before you start any diet and before you take any diet supplements.
- Keep a written log of everything you eat.
- Drink plenty of water.
- Choose low-carb and low-fat foods by checking food labels.
- Look at the calorie count on food labels. Just because a food says “low-fat” on the package doesn’t mean it has fewer calories.
- Be realistic. Aim to lose only one-half to one pound each week.
Physical Activity

You don’t have to be an athlete or join a health club to be physically active! Daily walking can really improve your fitness and health. Housework, gardening, shopping and other daily chores all burn calories. Physical activity also helps your body use insulin more efficiently.

The more active you are, the better you can manage your blood sugar levels. You will also keep your heart healthy, you may lose weight, and your mood may be better.

The American Diabetes Association recommends that people with diabetes exercise at least 2 1/2 hours a week. The exercise should be spread over at least three days per week. If that seems like a lot, start low and go slow. Walk 5 minutes a day for a few days. Then build up to 10 minutes, and so on. If the weather isn’t good for walking, try walking in a mall or walk up and down stairs.

Speak with your health care professional before beginning an exercise program. She or he may tell you to check your blood sugar before you exercise—you’ll learn how to do that later in this booklet. If your glucose level is low, have a snack such as a piece of fruit or a few graham crackers. Then test again. If your blood sugar is at a safe level, go ahead and exercise.
How to Begin Making Changes

You don’t have to change everything about your diet and lifestyle overnight! Take one step at a time. Changes are easier to make and more likely to last if you make them one at a time, rather than all at once.

Pick a change that you think is most likely to work. For example, if you drink whole milk, don’t switch straight to skim milk. Take it in steps. First, switch to 2% milk for a week. Then change from 2% to 1% for another week. Finally, move to skim milk. Remember: taking small steps is the best way to make a big difference!

It also really helps to have company while you’re making lifestyle changes. Don’t go it alone. Is there a friend or relative who would like to join you? Look for groups in your area that support losing weight, eating right, or diabetes in general. Your health care professional may be able to point you to some of these groups.
How Can I Tell if My Blood Sugar is Too High or Low?

The only way to know for sure if your blood sugar level is where it should be is to use a blood sugar machine. Also called glucose monitors or meters, these machines give you a number that tells you how much sugar is in your blood. You can use a blood sugar machine by yourself at home, or while you’re out, to measure your blood sugar any time you want.

How often you need to measure your blood sugar depends on how active you are and what types of medicines you are taking. Your blood sugar levels change throughout the day. Ask your health care professional how often you should check your blood sugar. It is especially important to check your blood sugar levels if you feel stressed, if you are sick, or if you change your routine or medication. Checking your blood sugar around a meal can help you see how different foods and portion sizes affect your glucose levels.

Aim for the target!

You and your health care professional should determine the right target for you. In general, doctors recommend that you aim for the following blood glucose level targets:

- Between 90 and 130 mg/dl before a meal
- Less than 180 mg/dl two hours after a meal
There are many types of blood sugar machines. The machines usually “read” your glucose level from a drop of blood that you place on a test strip. Your glucose level shows up as a number on the meter’s screen. Your health care professional or pharmacist can help you pick a machine that is best for you. They can also show you how to use your machine.

Blood sugar machines give you “snapshots” of your glucose level. But you also need to know how you’re doing over a longer period. For that you need a different kind of test: the hemoglobin A1c test (sometimes just called A1c). This test is done in your doctor’s office. It shows what your average glucose level has been over the past 2 or 3 months. Hemoglobin A1c tests should be done 3-4 times each year when you and your doctor are adjusting your diabetes treatment, and at least twice a year after your diabetes is under control. Ask your doctor what your hemoglobin A1c number should be.
You're In Control: Managing Type 2 Diabetes

Low Blood Sugar

Your blood sugar level should not drop below 70.

Low blood sugar may make you feel:

- Shaky or nervous
- Grouchy
- Sweaty
- Dizzy
- Confused
- Tired
- Hungry

If your blood sugar is less than 70, you need to get sugar into your body right away.

Here’s how:

- Chew some glucose tablets or gel. These are usually the best way to treat low blood sugar. You can buy them in most drugstores. Your health care professional will tell you how many to take. They will raise your blood glucose level fast. You will also have less chance of raising your level too high.
- A cup of orange juice
- Regular soft drink (not a diet drink)
- A tablespoonful of sugar or honey

Recheck your blood sugar in 15 minutes to see if it has gone back up. If it has not, take additional sugar and call your doctor.

Sometimes it is possible to get confused when you have low blood sugar, and you may not recognize that you need sugar. Teach your friends and family the signs of low blood sugar, so they can offer you sugar when you need it. If you cannot swallow the sugar, they should not force you. Instead, they should call 911.

Low blood sugar may be caused by many things, including:

- Skipping a meal
- Eating later than usual
- Eating less
- Exercising more than normal
- Taking too much medicine
- Changing your medicines
High Blood Sugar

For most people, a blood sugar level higher than 140 or 150 before meals is too high. Blood sugar levels higher than 200 at any time are too high for everybody.

If your blood sugar is too high, you may:

• Feel thirsty
• Need to pee (urinate) more than normal
• Feel weak and tired
• Get blurry vision

Some people, however, feel well even when their blood sugar is too high.

Your sugar level may get too high if you eat more than normal, skip your medicines, exercise less than normal, are sick, or if you have been under stress.

You and your doctor should make a plan for what to do if your blood sugar is too high. Usually you will need to measure your blood sugar with the glucose machine. You may also need to drink more water or take more medicine. If your blood sugar level stays high, call your doctor.

Pills for Type 2 Diabetes

If diet and exercise changes do not lower your blood sugar levels, there are certain pills that can help. There are many kinds of pills for type 2 diabetes. All of them help your body use the insulin that it has. Some people just take pills. Others need to take both pills and insulin.

Each type of medicine has pluses and minuses. Talk to your doctor. He or she will work with you to find the medicine, or combination of medicines, that is best for you.

Remember to tell your doctor about any other medications, diet supplements, or herbal products that you are using.

Key points:

• Take your pills at the same time each day.
• Don’t skip meals.
• Don’t stop taking your pills unless your doctor tells you to.
• Take your medicines to every doctor’s visit.
• If you are a woman, do not use the pills when you are pregnant. You will use insulin, instead, to keep both you and your baby healthy.
Insulin for Type 2 Diabetes

Sometimes pills are not enough. Some people with type 2 diabetes need to take insulin to help control their blood sugar. Controlling your blood sugar can help prevent bad things from happening to your heart, kidneys, eyes, or feet.

The only way to get insulin into your body is with a shot that you give yourself. Most people who use insulin say that it is very easy and that it does not hurt. You can give yourself insulin with a regular needle and syringe, or with an “insulin pen” that is already filled with insulin. (Never share your needles with anyone, and keep your needles in a safe place away from children.)

Some insulins work fast. These are used to help control your blood sugar after you eat.

Other insulins are long-acting. They give you a steady amount of insulin that lasts all day. Still other types of insulins are a mix of short and long-acting types. Your doctor will prescribe the type of insulin that is best for you.

Getting Regular Checkups

You should keep a regular schedule of checkups with different members of your health care team. This is the best way to catch problems early, before they become serious.

Schedule for Checkups

<table>
<thead>
<tr>
<th>Every 3 months to 6 months</th>
<th>Every 6 months</th>
<th>Yearly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin A1C</td>
<td>Foot inspection</td>
<td>Urine test</td>
</tr>
<tr>
<td>Review of blood sugar levels</td>
<td>Dental exam</td>
<td>Cholesterol check</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Foot pulses and sensation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flu vaccination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pneumonia vaccination (a one-time shot for most people)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Every 2 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye examination by a specialist (if previous exam was normal)</td>
</tr>
</tbody>
</table>
A Word to Teens

Type 2 diabetes is becoming more common in teens, preteens and young adults. The main cause is that more young people are overweight and don’t get enough activity. If you are a teen or young adult, you’ll need to follow the advice in the rest of this booklet just like anybody else with type 2 diabetes. But type 2 diabetes is more complicated for young people—especially teens:

- Hormonal changes during puberty make it harder to keep good control of your blood sugar levels
- Teens are less likely to eat a healthy diet
- Using alcohol or other drugs can lead to dangerous swings in blood sugar levels

Having type 2 diabetes as a young person doesn’t have to be a big deal. But it’s best if you know what you’re doing. If you’re a teen, you can get lots of good suggestions from some of the websites listed in the resources section.
Your Turn

Now you know the basics about type 2 diabetes. You’ve also seen that type 2 diabetes is a self-managed disease. That means you are in control. Think of your doctor and your health care team as your “expert consultants.” They can help you decide how best to manage this disease. Your family and friends may play an important role in supporting you and your efforts to control your diabetes. But in the end, you are the boss. You are the one who will determine your own success and health as a person living with type 2 diabetes.

The good news is that new machines and new medicines are making it easier to control your blood sugar levels. When your sugar levels are in control, you’ll feel better and avoid health problems. By reading this booklet, you’ve taken the first step. The more you know about diabetes, the better you’ll be able to manage this common disease and lead an active, healthy lifestyle.
Globally, the Johnson & Johnson Diabetes Institute is intended to serve as a home for the diabetes family and a trusted place of diabetes learning that becomes a catalyst for diabetes innovation, improved care and better outcomes worldwide. Through the Institute, Johnson & Johnson is opening and operating state-of-the-art instructional facilities around the world to provide health professionals with education and training aimed at improving diabetes patients’ outcomes by working at the community level. In each country, thousands of health care professionals will receive customized training to meet the needs of patients and providers in their region.

There are currently four instructional Johnson & Johnson Diabetes Institutes in operation worldwide (United States, Japan, China, France), with plans for further Institutes to be opened.
Partners

American College of Physicians

The American College of Physicians (ACP) is a national organization of internists—physicians who specialize in the prevention, detection and treatment of illnesses in adults. Established in 1915, ACP is the largest medical-specialty organization and second-largest physician group in the United States. Its membership of 126,000 includes internists, internal medicine sub-specialists, medical students, residents, fellows, and allied health professionals. Members are physicians in general internal medicine and related subspecialties, including cardiology, gastroenterology, nephrology, endocrinology, hematology, rheumatology, neurology, pulmonary disease, oncology, infectious diseases, allergy and immunology, and geriatrics. Internists treat the majority of adults in the United States.

American Nurses Association

The American Nurses Association represents the nation’s 2.9 million registered nurses through its state member associations. The ANA advances the nursing profession by fostering high standards of nursing practice, promoting the rights of nurses in the workplace, projecting a positive and realistic view of nursing, and by lobbying the Congress and regulatory agencies on health care issues affecting nurses and the public.

Credits

You’re In Control: Managing Type 2 Diabetes has been made possible through the expertise, time, and efforts of many individuals.

Sponsor

Johnson & Johnson Diabetes Institute, LLC

Partners

American College of Physicians

Patrick C Alguire, M.D., F.A.C.P.
Director, Education and Career Development

American Nurses Association

Contributors to the Video

Frederic Goldman, M.D.
Instructor of Medicine, Harvard Medical School Healthcare Associates
Beth Israel Deaconess Medical Center, Boston, Massachusetts

Gerald J. Friedman Diabetes Institute, Beth Israel Medical Center, New York City:
Gerald Bernstein, M.D., F.A.C.P.
Director, Diabetes Management Program

Jenny Dejesus, R.N., C.D.E.
Diabetes Educator

Randi Levine, M.S., R.D., C.D.N., C.D.E.
Dietitian

Special Thanks to:

Sherri Shepherd
DISCLAIMER: This guidebook and DVD program is intended for informational purposes only, with the understanding that no one should rely upon this information as the basis for medical decisions. Anyone requiring medical or other health care should consult a medical or health care professional. Any actions based on the information provided are entirely the responsibility of the user and of any medical or other health care professionals who are involved in such actions.

The sponsor (Johnson & Johnson Diabetes Institute, LLC), the partners (American College of Physicians and the American Nurses Association), the producers (Conrad Productions and Alan Weiss Productions), the guidebook author (Stephen Braun), and the DVD scriptwriter (Deborah Gobble), have made reasonable efforts to include timely and accurate information in this guidebook and DVD. Accordingly, the sponsor, producers, writers, and partners make no representations or warranties, express or implied, regarding the accuracy or completeness of the information provided herein and specifically disclaim any liability, express or implied, in connection therewith.
Millions of people in the U.S. have type 2 diabetes. The good news is that today diabetes can be managed in many ways. In fact, learning you have type 2 diabetes can lead to positive changes and a healthier life.

The main thing to know is that diabetes is a SELF-managed disease. That means you are in control! If you manage your diabetes well, you can lower your risk of health problems.

This program will help you make sense of things. You’ll learn:

- What type 2 diabetes is
- How to exercise and eat well
- How to test your blood sugar levels
- What types of medicines might help