



For People With Diabetes

# Living a Healthier Life



*diabetes*

This health information is being provided for general educational purposes only. Your health care provider is the single best source of information regarding your health. Please consult your health care provider if you have any questions about your health or treatment.

**Remember—you are the center**  
of a healthier life with diabetes.

All the elements of good care begin and end with you.

## CONTENTS

<b>A Circle of Help to Live a Healthier Life</b>	3
<b>“You Have Diabetes”</b>	3
<b>Diabetes, Glucose, and Insulin</b>	4
<b>Types of Diabetes</b>	5
<b>Type 1 &amp; Type 2 Diabetes</b>	6
<b>Gestational Diabetes</b>	7
<b>High and Low Blood Sugar</b>	8
<b>Symptoms of...</b>	8
<b>What to Do About Low Blood Sugar</b>	9
<b>A 2- to 3-Month Look—the A1C Test</b>	10
<b>Physical Activity</b>	11
<b>Taking Your Medicine</b>	12
<b>Coping With Stress</b>	13
<b>Injections</b>	13
<b>Traveling With Diabetes</b>	14
<b>Managing Your Diabetes</b>	15

## A Circle of Help to Live a Healthier Life

All the elements of good care begin and end with you.



### “You Have Diabetes”

For many people, receiving this diagnosis can create questions, concerns, and anxiety; and that’s no surprise. Diabetes often seems like it is a great unknown. But you are not alone. Thanks to recent advances, managing diabetes—and its effects on your health—is a goal within reach, especially if you work closely with your health care team.

Educating yourself is a good start, as you learn about what diabetes is and the importance of controlling the amount of sugar (also called glucose) in your bloodstream. You will also discover how managing your diet, physical activity, stress, and medicine all work together to help control blood sugar.

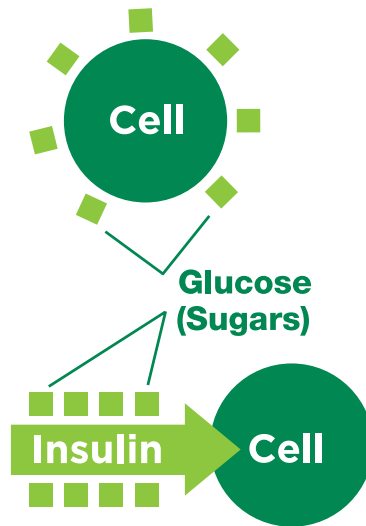


## Diabetes, Glucose, and Insulin

When you have diabetes, you have too much sugar in your bloodstream. When you consume sweetened foods and carbohydrates (breads, pasta, etc), the body breaks them down into sugars.

### Here's what happens:

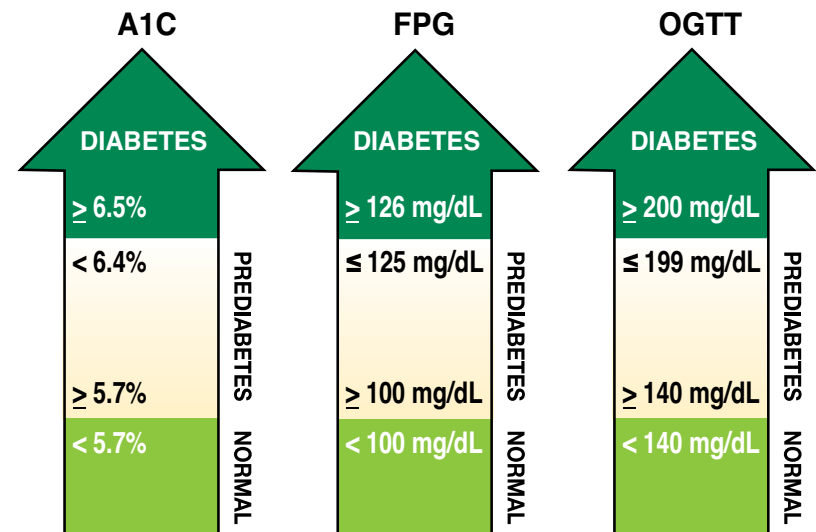
1. You eat, and the food breaks down into sugar, or glucose. This sugar goes into your bloodstream.
2. Your body senses that blood sugar levels are rising. It tries to produce insulin, which normally moves sugar from the bloodstream into the cells, where it is used for energy.
3. Your body cannot produce enough insulin or cannot use the insulin it does produce.
4. Without enough insulin, the extra sugar stays in your bloodstream instead of going into your cells, building to a level that is higher than normal.
5. Your cells don't get the energy they need, and the higher level of sugar in your blood puts you at risk for the complications of diabetes.



## Types of Diabetes

**Prediabetes** Before a patient gets type 2 diabetes, they almost always have prediabetes. This is when blood glucose levels are higher than normal, but not high enough to be diagnosed as diabetes.

Your health care provider may refer to prediabetes as impaired glucose tolerance (IGT) or impaired fasting glucose (IFG) depending on what test was used when it was detected. If you have prediabetes, you are at higher risk of developing type 2 diabetes and cardiovascular disease.



**Type 1 Diabetes** is usually diagnosed in children and young adults. Type 1 diabetes is when the body does not produce enough insulin. Insulin is a hormone that is needed to convert sugar, starches, and other foods into energy. If you have type 1 diabetes, insulin injections are needed to control your blood sugar.

### Risk Factors

- A family history (also called a genetic tendency)
- Immune system irregularities
- Chemical reactions in the body
- Recent sickness caused by some types of viruses



**Type 2 Diabetes** is the most common form of diabetes. It is when your body does not use insulin properly (also called insulin resistance). Your pancreas makes extra insulin at first, but then, over time, can't keep up and is unable to produce enough insulin. Type 2 diabetes is managed by lifestyle changes in diet, exercise, stress levels, and medications for diabetes.

### Risk Factors for developing type 2 diabetes, all quite different from those of type 1

- Women who have given birth to a baby that weighs over 9 pounds
- A family history of diabetes, or being from ethnic groups more prone to diabetes (Asian American, African American, Latino, Native American, and Pacific Islander backgrounds)
- Being overweight
- Age 45 and older
- An inactive lifestyle

**Gestational Diabetes** occurs around the 24th week of pregnancy and usually goes away after the birth. In gestational diabetes, the mother's increased levels of hormones may change the way her body normally responds to insulin. It appears only in women who have never had type 1 or type 2 diabetes and increases the chance of developing type 2 diabetes in the future.





## High and Low Blood Sugar

If you have diabetes, getting your blood sugar under control and keeping it that way is an important goal. Sometimes, people don't even realize that their blood sugar level has changed (too high or too low), because they don't feel anything or experience any immediate symptoms. It is important that patients with diabetes check their blood sugar levels regularly.

Keeping your blood sugar at a healthy level—daily and over the long term—can help you reduce your risk of developing diabetes-related complications. Together, with your health care team, you can learn to take special care of yourself.

### Symptoms of...

#### High Blood Sugar (Hyperglycemia)

- Getting up at night to go to the bathroom
- Increased thirst
- Increased hunger
- Moodiness
- No energy
- Irritable
- Tired
- Depressed

#### Low Blood Sugar (Hypoglycemia)

- Shakiness
- Dizziness
- Sweating
- Hunger
- Headache
- Seizure
- Tingling sensations around the mouth
- Pale skin color
- Sudden moodiness or behavior changes, such as crying for no apparent reason
- Clumsy or jerky movements
- Difficulty paying attention, or confusion

## What to Do About Low Blood Sugar

If you think you have low blood sugar, test your blood. If your blood sugar is below 70 mg/dL, most health care providers want you to treat it with some form of sugar or simple carbohydrate.

### Some choices are

- **3 to 4 glucose tablets (check the Nutrition Facts label for carbohydrates per tablet; most tablets are 4-5 grams—at least 15-20 grams are needed). Note: this is a good, quick source of glucose.**
- **½ cup (4 oz) of juice or regular soda (not diet)**
- **8 ounces of nonfat or 1% milk**
- **2 tablespoons of raisins**
- **Hard candies, jellybeans, or gumdrops (see package to determine servings size)**
- **1 tablespoon of honey, sugar, or corn syrup**

Then, test your blood sugar again 15 to 20 minutes later. If it is still low, repeat the above steps.

### Blood sugar levels that are high for a long time can cause medical problems down the road.

Keeping your blood sugar at a healthy level—daily and over the long term—can help you reduce your risk of developing diabetes-related complications. Together, with your health care provider and health care team, you can learn how to take special care of your eyes, feet, and heart, and ways to combat everyday illness. You'll also discover new, healthy ways of eating and how to build exercise into your day. Smoking is particularly dangerous for people with diabetes. If you smoke, consider discussing ways to quit with your health care team.

## A 2- to 3-Month Look—the A1C Test

An A1C is a blood test done by your health care provider or in a lab. The result shows your average blood sugar level over the past 2 to 3 months. An A1C over 8% means your average blood sugar—counting both before meals and after meals—has been over 200 mg/dL. You should discuss your A1C goals with your health care provider. Many patients with diabetes may have an A1C goal of less than 7%. However, your individual goal may be more or less depending on your age and/or health history. For example, some seniors may have a goal of less than 8% depending on health history.

Talk to your health care provider about your A1C level. If you are not sure whether your health care provider is doing an A1C test, ask about it. Find out what your numbers are. Keep a record of them to track your progress and how well you are doing. And have the A1C test at least 2 times every year to help make sure of good control.

### Did you know...

*the sugar in your blood goes up when you eat. How much it goes up depends on:*

- The amount you eat
- What you eat
- The amount of insulin your body produces in response to food



## Physical Activity

Regular exercise plays a big part in keeping your blood sugar under control, in helping to reduce the risk of complications, and in keeping you healthier.

### Exercise Lowers Your Blood Sugar Levels

Blood sugar is stored in muscles. When you are active, your muscles work harder, and, as they work, they use the stored blood sugar. As the blood sugar stored in muscles runs low, blood sugar is “pulled” from the blood to be used as energy.

150 minutes of moderate-intensity aerobic exercise (brisk walking is recommended).

If you do not exercise regularly, start slowly—but do start. Try working up to 30 minutes of activity, 5 times a week. Make it part of your ordinary routine—when you go to the mall, park far away; use the stairs instead of the elevator; when you mop or garden, do it with gusto!



## Taking Your Medicine

Watching what you eat and exercising regularly are basic steps to managing type 2 diabetes. If diet and lifestyle changes alone are not enough, your health care provider may prescribe medicines which are also powerful tools in controlling your blood sugar. When you are first started on your diabetes medication, your health care provider may need to adjust the type or dose until the treatment that works best for you is found. Your particular treatment plan may work well for months or years. However, over time your diabetes may progress and your health care provider may need to make a change. This happens in diabetes—and it does not mean that you've done anything wrong.

Oral medications that your health care provider prescribes can help control your blood sugar in different ways.

### Some medicines may:

- **Help your body's insulin work more effectively**
- **Increase the amount of insulin your body produces**
- **Slow the breakdown of the sugars and starches you eat**
- **Reduce the amount of sugar your liver releases**

Diabetes oral medications help your body make more insulin, or use it better. Over time, your body makes less insulin, and you may need to add another oral medication or insulin to treat your diabetes.

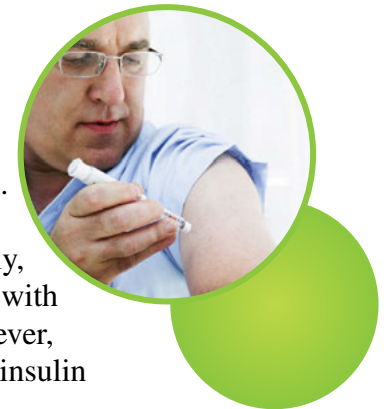
## Coping With Stress

Everyone is stressed from time to time—the grocery line is too long, nobody listens, the job is hectic—and you have diabetes, an added stress. These pressures can affect your blood sugar in many ways.

On a normal day, your blood sugar rises in response to stress. And that's just on a normal day! An extraordinary day—you're moving, starting a new job, visiting family—these can cause even more stress. Many people react to stress by eating more or eating less wisely, by exercising more or exercising less, causing blood sugar to go up and down in an uncontrolled way. Even getting sick can be stressful to your body and can send your blood sugar out of control. Since there's no hiding from all stress, it's important to find a way to handle it. Decide on an action plan with your health care provider to handle stress. See a counselor to discuss problems. Consider exercise! Having a plan to combat stress is the best defense against it.

## Injections

Your health care provider may prescribe insulin injections to keep your blood sugar from getting too high. The extra insulin replaces the insulin your body is no longer making naturally, or is unable to use effectively. Patients with type 1 diabetes only take insulin. However, patients with type 2 diabetes may take insulin along with other diabetes medicines.



## Traveling With Diabetes

It is important to plan and prepare for your trip whether you are driving, cruising, or flying. If you are planning a long trip, schedule an appointment with your health care provider.

### You May Need...

- Immunization shots (if you are leaving the country)
- A letter explaining your medication, if you have allergies, or have food sensitivities
- A prescription for any medication or devices you are taking
- Medical ID (worn as a bracelet or necklace) in case of an emergency



### What to Pack

- Twice as much medication as you need, and always keep your medication and supplies with you in your carry-on bag
- Blood and urine testing supplies (batteries for all meters)
- Other medications or medical supplies (antidiarrheal, antinausea drugs)
- Well-wrapped airtight snacks, hard candy, or glucose tablets

### Other Tips

- If you are flying, request a special low-sugar, low-fat, or low-cholesterol meal 2 days before your flight
- Think about how to keep your insulin refrigerated and where you are storing it (not in the glove compartment or trunk)
- If crossing time zones, consult with your health care team about the timing of your insulin injections while you travel
- Check your medication amounts at least 1 week prior to leaving
  - Work with your pharmacist to ensure you have enough for your trip

## Managing Your Diabetes

Below is a helpful list detailing some of the things you can do to help manage your diabetes. Begin by checking off what you've already been doing and review the next steps you can take to achieve your diabetes goals. Review this list in a week or so to see how many more things you can now check. Remember, even one or two things can make a big difference in managing your diabetes.

### Remember to

- Test your blood sugar as directed
- DO NOT** smoke. If you do smoke, discuss ways with your health care provider to help you quit.
- Examine your feet for cuts, calluses, and ulcers
- Take your medications as prescribed
- Work with your health care team to monitor your ABC (A1C, blood pressure, cholesterol)
- Make healthy lifestyle choices with your diet
- Get regular eye checkups
- Set an exercise goal and make a plan
- Discuss with your health care team: any symptoms you have had of low or high blood sugar, your daily blood sugar diary, a list of your physical activity, and a list of foods eaten
- Check and maintain a healthy weight
- Work with a diabetes educator
- Check your cholesterol and blood pressure levels