Living with Diabetes

Nancy J. Gal and Linda B. Bobroff

Diabetes is a disease that affects more than 26 million Americans. Although there is no cure for type 1 or type 2 diabetes, diabetes can be managed with the proper care. If you have diabetes, the best way to live well is to learn about the disease and work with your doctor to develop a healthy living plan that is right for you.

What is diabetes?
Diabetes is a disease in which your body is not able to use food properly. Normally, most of the food you eat is changed into glucose (sugar), which is the body’s main energy source. For your body to use this energy, the glucose must get into the cells. Insulin, a hormone made in the pancreas, is the “key” that helps glucose get into your cells.

If you have diabetes, insulin is not made in your body, or it does not work right. This causes glucose to build up in your blood, which can lead to serious health problems. Having high blood glucose levels over time causes most of the health complications of diabetes.

Who gets diabetes?
Anyone can get diabetes, but some people have a greater chance than others. People at high risk for diabetes include the following:

- Blood relatives of people with diabetes
- Women who have had babies weighing 9 pounds or more at birth

Figure 1. Anybody can get diabetes, so it is important to make sure you follow a healthy diet and have your blood glucose levels checked regularly by your doctor.

Credits: Cade Martin, Public Health Image Library

- Women who had gestational diabetes when pregnant
- African Americans, Hispanics, and Native Americans
- People with high blood pressure
- People with very high blood cholesterol
- People who are obese
- People over age 45


2. Nancy J. Gal, MAg, Extension agent IV, Marion County Extension Service, and Linda B. Bobroff, Ph.D., RD, LD/N, professor, Department of Family, Youth, and Community Sciences; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611

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Types of Diabetes

Type 1 Diabetes
In type 1 diabetes, the pancreas stops making insulin. It usually develops before the age of 30. People with type 1 diabetes must take insulin to live. Eating well and being physically active also are important.

Type 2 Diabetes
With type 2 diabetes, the pancreas doesn’t make enough insulin and/or the insulin it makes doesn’t work right. Management includes eating well, being physically active, losing weight, and taking medications if needed.

Gestational Diabetes
The increased production of hormones during pregnancy can keep insulin from doing its job effectively. In gestational diabetes, the pancreas doesn’t produce enough insulin to overcome this insulin resistance and blood glucose levels rise. After the baby is delivered, blood glucose usually normalizes; however, women who get diabetes during pregnancy are at increased risk for developing type 2 diabetes later in life.

How do you know if you have diabetes?
The two tests most commonly used to determine if you have diabetes are the fasting plasma glucose (FPG) test and the hemoglobin A1C (A1C) test. The FPG test measures glucose in the plasma (the liquid part of blood) at a specific point in time. A1C is an indicator of average blood glucose levels over the previous two to three months. Table 1 shows the normal values for each test compared to values that indicate pre-diabetes and diabetes.

Table 1. Classification of blood glucose levels

<table>
<thead>
<tr>
<th></th>
<th>Fasting Plasma Glucose mg/dl*</th>
<th>Hemoglobin A1C %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Less than 100</td>
<td>Less than 5.7</td>
</tr>
<tr>
<td>Pre-diabetes</td>
<td>100 – 125</td>
<td>5.7 – 6.4</td>
</tr>
</tbody>
</table>

*mg/dl = milligrams of glucose per deciliter (100 milliliters) of blood

All adults should have their blood glucose checked on a regular basis. If you have diabetes, it is important to begin treatment as soon as possible. Early diagnosis and treatment are the keys to preventing or forestalling the severe health complications of this disease. People with pre-diabetes can significantly reduce their risk of getting diabetes by eating a healthful diet and being physically active.

Possible Health Problems
Many people with diabetes live long healthy lives. However, if diabetes is poorly controlled, it can cause serious health problems like blindness, heart disease, and kidney disease. You can delay or prevent these problems by keeping your blood glucose levels under good control.

What is “good control”?
Good control of your blood glucose means keeping it as close to normal as you can. Ask your doctor what your blood glucose goal is. For most non-pregnant adults with diabetes the goals for blood glucose are as follows:

Table 2. Blood glucose goals

<table>
<thead>
<tr>
<th></th>
<th>Before meals: 70 – 130 mg/dL</th>
<th>After meals: less than 180 mg/dL</th>
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</thead>
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Blood glucose goals may be different for people with other illnesses or conditions. Also, children with diabetes and persons over age 65 may have different blood glucose goals. Ask your doctor what the best blood glucose range is for you.
Managing Your Diabetes

You can manage your diabetes with a healthy living plan. You and your health care team can put together a plan that works for you. To keep your blood glucose level as close to the normal range as possible, you need to take good care of yourself by:

- Eating well
- Staying active
- Taking medicine if needed
- Recording blood glucose levels
- Communicating with your doctor

Eating Well

Eating well can help you keep your blood glucose as close to normal as possible. It also will help in controlling your weight. There is no one diet for all people with diabetes. To eat well, follow an eating plan that works for you. It’s best to work with a Registered Dietitian (RD), preferably one who is a Certified Diabetes Educator (CDE).

Select foods that you enjoy and that contain the nutrients you need for good health. In the MyPlate graphic, food groups are arranged on a plate and glass. The food groups in MyPlate are as follows:

- Vegetables
- Fruits
- Grains
- Protein (foods)
- Dairy

Each food group in the MyPlate food guide has a slogan about selecting a healthy diet. See how much of this advice you follow now, and think about changes you might make:

- Make half your grains whole.
- Vary your veggies.
- Focus on fruits.
- Get your calcium-rich foods.
- Go lean with protein.

For a healthy diet that will help you manage your diabetes, select foods that are high in nutrients and low in solid fats, cholesterol, added sugars, and sodium. It will be easier to follow a healthy diet if you get help from your family or friends in trying new foods and recipes. Be adventurous!

The Idaho Plate Method has been used in diabetes education for years. It differs somewhat from MyPlate because of the important focus on the carbohydrate content of foods for persons with diabetes. Starchy vegetables like potatoes, corn, and peas are grouped with grain foods and make up one-quarter of this plate. Half of the Idaho plate contains non-starchy vegetables, like salad greens, broccoli, green beans, cabbage, or beets.

Persons with diabetes should space out carbohydrate intake throughout the day. Fruits, starchy vegetables, dairy foods, and grain foods all contain carbohydrates. The last page of this fact sheet contains several resources that provide the carbohydrate content of foods. Eating the right amount of carbohydrates throughout the day will help you control your blood glucose levels.

Using MyPlate guidelines or the Idaho Plate Method are just two meal planning tools your dietitian may suggest.
There are others that may work better for you. Only you and your dietitian can decide what works best for you.

**Staying Active**

Being physically active is important for blood glucose control. Staying active also will help you feel better and manage your weight, which reduces risk of health complications. Just like regular meals and snacks, regular physical activity will help you to control your blood glucose. Choose activities that you enjoy, and try exercising with a friend or family member.

**Taking Medicine if Needed**

Taking medicines often is part of diabetes care. If you take diabetes medications, be sure to take them as prescribed. Let your doctor know if you take other prescription drugs and any over-the-counter medications or dietary supplements.

**Recording Blood Glucose Levels**

Keeping track of your blood glucose is critical for good control. Your doctor or diabetes educator will show you how to use your blood glucose meter and tell you when to check your blood glucose.

For more information about diabetes medicines and blood glucose monitoring, see the publication FCS8542/FY520 Living with Diabetes: The Right Approach at [http://edis.ifas.ufl.edu/](http://edis.ifas.ufl.edu/fy520).

**Talking with Your Doctor**

You are an important part of your health care team, which ideally should include a doctor, nurse, registered dietitian (RD), and a certified diabetes educator (CDE). Regular visits to your health care provider allow you to check your progress and make changes as needed.

Your doctor will review the medicines you are taking and make any necessary changes in your regimen. Be sure to mention any concerns that you have.

Make the most of your doctor visits by being prepared. Keep a journal of what you do to manage your diabetes and how you have been feeling. Write down questions as you think of them. Take your journal to your appointment and discuss your feelings and concerns with your doctor.

Some points you may want to share with your health care provider include the following:

- Your usual eating habits
- Your daily activities
- Daily medications, including types, dosages, and when taken
- New medicines you started since your last visit (including herbals, over-the-counter medications, or prescriptions by other doctors)
- Your blood glucose numbers (ask what time of day and how often you should test)

**Summary**

Although there is no cure for diabetes, it is a disease that can be managed. You can help prevent health problems by taking an active role in your own wellness.

Take control of your blood glucose and your health by taking good care of yourself.

**For More Information**

American Diabetes Association
1701 North Beauregard Street
Alexandria, VA 22311
1-800-342-2383

Medic Alert Foundation International
2323 Colorado Avenue
Turlock, CA 95382
1-800-633-4298


**Local Resources**

- Cooperative Extension Service
- Health Department
- Local Hospitals

(Check the web or telephone book for phone numbers.)