

## Diabetes: Your Management Plan

When you have diabetes, it's very important to keep your blood sugar (glucose) in good control. To do so, you need a personal plan to help you manage your diabetes. This patient education sheet tells you how to control your blood glucose level and manage your diabetes.

### What is good control?

Good control of diabetes means that your blood glucose stays at certain levels. These levels are based on guidelines from the American Diabetes Association (ADA). Here are the numbers that show where your blood glucose should be:

#### Self-Test

##### *Before meals:*

Normal is less than 100. Recommended goal is 90 to 130. You need to improve if your level is often under 90 or over 150.

##### *At bedtime:*

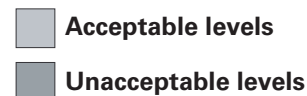
Normal is under 120. Recommended goal is 110 to 150. You need to improve if your level is often under 110 or over 180.

#### A1c Test (A-one-C)

This test measures the amount of hemoglobin with sugar attached. The results show your average blood glucose level over 3 months. The light areas on the chart show the acceptable range for A1C.

A1C (percent)	Blood Glucose *(mg/dL)
4	65
5	100
6	135
7	170
8	205
9	240
10	275
11	310
12	345

\* milligrams of sugar per deciliter of blood



#### *Average blood glucose level over 3 months:*

Normal is 4 to 6 percent. Recommended goal is 7 percent or less.

Goals may vary from person to person. Talk to your doctor or diabetes educator about what goals are best for you.

For more information, see the UPMC patient education sheet [Diabetes: Testing Your Blood Glucose](#).

## Good control is important

Why is good control of your blood glucose so important? Good control of your blood glucose level reduces your chance of getting complications (COM-*pli-KAY-shuns*).

Complications are other health problems you can get from having diabetes. A large research study shows that when people with Type 1 diabetes keep their blood glucose in good control, they are less likely to have complications. The people in the study reduced their risk of eye problems by 76 percent, kidney problems by 56 percent, and nerve problems by 60 percent. The study was called the Diabetes Control and Complications Trial (DCCT).

Another large research study was the United Kingdom Prospective Diabetes Study. This study shows that good control of blood glucose helps people with Type 2 diabetes reduce their risk of eye problems, kidney problems, and heart and blood vessel disease. The research also shows that keeping blood pressure in a good range is important to prevent complications. According to the ADA guideline, recommended blood pressure range is 130 / 80 (read “130 over 80”) or less. For more information about possible complications, see the UPMC patient education sheets [Diabetes: Short-Term Problems](#) and [Diabetes: Long-Term Problems](#).

## Your health care team

It’s important to work closely with your health care team. Your health care team usually includes several members who have training in different fields:

- Your **primary care doctor** provides your exams and makes sure you get all aspects of diabetes care.
- An **endocrinologist** (EN-doh-crin-OL-oh-jist) is a doctor with special training in the care of people with diabetes.
- A **diabetes educator** gives you the skills and information you need to manage your diabetes every day.
- A **dietitian** helps you decide on a meal plan that works best for you.
- A **pharmacist, social worker, exercise specialist, psychologist**, or other specialists help you with specific problems that relate to diabetes.

Talk with your team members anytime you have problems or questions. You are not alone in dealing with your diabetes. You can control your diabetes with help from your health care team. Keep in mind, the most important member of the team is **you**.

## **Your personal plan**

To work toward good control of your blood glucose, you need a plan. Your health care team will help you develop a “self-management plan.” Self-management means that you are responsible to carry out the plan.

Your plan should provide for:

- education
- healthy eating
- exercise
- medicines
- blood glucose testing
- problem solving
- reducing risks
- coping

### ***Education***

Diabetes is a life-long disease. You will always have it, so education about your diabetes is very important. The more you learn about diabetes, the better you can control your blood glucose level and avoid complications. To learn how to manage your diabetes, work closely with your health care team.

### ***Healthy eating***

To control your blood glucose level, you must have healthy eating habits. A healthy diet has other benefits too. Healthy eating can lead to weight loss. Losing small amounts of weight can often make a big difference in your health. Healthy eating can improve your blood glucose, blood pressure, and cholesterol levels.

When you have diabetes, a meal plan is important. A meal plan tells you when to eat, how much to eat, and what kinds of food to eat for meals and snacks. You need to eat a variety of vegetables, fruits, and whole-grain foods. The meal plan can include sugar, salt, and saturated fats, but in a way that fits into the overall plan.

If you take diabetes pills or insulin, your meal plan should have about the same number of calories every day. Meals should be spaced throughout the day. It's important not to skip meals or “double up” on meals.

A dietitian can help with your meal plan. The dietitian will take into account your schedule and foods you like and dislike. Each person is different, so every meal plan is different. For more information, refer to the UPMC patient education sheet [Basic Diabetes Meal Plan](#) or [Basic Carbohydrate Counting](#). You can also refer to [www.mypyramid.gov](http://www.mypyramid.gov).

### ***Physical activity***

For most people with diabetes, exercise is very important. Exercise helps your body use sugar better. As a result, your blood glucose level goes down. An exercise plan can be as simple as taking a walk every day. Get a friend to walk with you. When you do things with a buddy, it's easier. You'll be less tempted to skip a day.

Before you start an exercise program, talk to your doctor. Exercise tends to lower blood glucose level, so your doctor may need to make some changes to your management plan.

### *Medicines*

The two main kinds of diabetes medicine are insulin and pills. If you have Type 1 diabetes, you must take insulin by shots (injection). If you have Type 2 diabetes, you may be able to start with healthy eating and exercise. Most people with Type 2 diabetes also need pills to keep their blood glucose in a good range. Others may need to take insulin. The doctor will help you decide which plan is best for you.

Tell your doctor, diabetes educator, and pharmacist all of the medicines that you are taking. Include prescription and over-the-counter drugs, herbal products, vitamins, and minerals.

**Do not** take any new medicines or herbal treatments until you check with your doctor. For more information about medicines for diabetes, refer to the UPMC patient education sheet [Diabetes: Medicines](#).

### *Home blood glucose tests*

You need to check your blood glucose levels at home. A simple testing meter measures the amount of sugar in a drop of blood. The blood glucose numbers show if your management plan is working. Knowing your blood glucose levels will help you and your health care team decide if your plan needs any changes. You will be able to see how exercise affects your blood glucose. You will be able to see if your medicines need to be adjusted.

Your doctor will tell you how often to check your blood glucose level. Some people check their blood glucose before meals, before and after exercise, when they feel sick, or when they feel their blood glucose is low. Your

doctor also will tell you what to do about the results of the test. For more information, refer to the UPMC patient education sheet [Diabetes: Testing Your Blood Glucose](#).

### *Problem solving*

Having diabetes means you often need to make decisions about your care. The more you know about diabetes and how your daily activities affect your blood glucose levels, the easier it is to make wise decisions. Testing your blood glucose and keeping good track of your readings is essential to know how different activities, food, medication and stress levels affect your blood glucose readings.

Learning what affects your blood glucose levels and what to do when they are higher or lower than desired takes practice. Looking for patterns and trends can help you determine what is causing the blood glucose levels to go high or low, and can help you target what might need some adjusting. For more information, ask your doctor or diabetes educator. Also, refer to the UPMC patient education sheets [Diabetes: Testing Your Blood Glucose](#), [Nutrition and Physical Activity for People with Diabetes](#), and [Diabetes: Short-Term Problems](#).

### *Risk reduction*

To stay healthy with diabetes, it is important to reduce your risk of developing problems. There are several things you can do to reduce your risk. Maintaining a healthy weight, keeping active, healthy eating, and taking medicines as ordered by your doctor can help to control your blood glucose, blood pressure, and cholesterol

levels in the recommended ranges. Having annual eye exams, frequently examining your feet, seeing your doctor regularly, and not smoking are also important. For more information, refer to the UPMC patient education sheet [Diabetes: Health Care Tips](#).

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### ***Healthy Coping***

Dealing with diabetes can be difficult and stressful. Stress can have a negative impact on your immune system, increase your blood pressure and heart rate, and increase your chance of illness. Stress can also affect your blood glucose levels when you have diabetes. Some techniques to help you relax include making quiet time for yourself, listening to soft music, reading a book, and discussing a problem with a friend or family member. Exercise can also help relieve stress and tension. Different things work for different people. You need to practice what works best for you. For more information, refer to the UPMC patient education sheet [Coping with Stress](#).

### **Additional things to consider**

#### ***Changes in lifestyle***

You cannot help the fact that you have diabetes. But you can do a lot to help control it. You may need to make some changes in your lifestyle. These changes are important for a long and healthy life and to reduce the chance of complications.

- Follow a healthy meal plan. Space your meals evenly about the same number of hours apart. Eat around the same time each day and about the same amounts.

- Take your medicines, and take them on time.
- Make physical activity a part of your daily life. Chart the effect that exercise has on your blood glucose level. You may need to make some changes to keep your blood glucose from going too high or too low. For example, you may need to adjust your schedule for exercise, for meals and snacks, or for medicines.
- Do not smoke. Talk to your doctor or other members of your health care team if you need help to quit smoking.
- Talk to your doctor about the use of alcohol. Alcohol may affect your blood glucose level. If you decide to have an occasional alcoholic drink, ask your dietitian how to fit it into your meal plan.

You may not be able to make all of these changes at once. You can work on some of these changes over time. Ask your doctor or diabetes educator to help you set goals that are right for you. As you succeed in making some changes, you can plan new goals.

When you have diabetes, you have to think about the routine things you do every day. But diabetes should not keep you from doing the things you like to do. When you keep your diabetes in good control, you can feel better and avoid getting other problems from diabetes. For more information, refer to the UPMC patient education sheet [Diabetes: Health Care Tips](#).

### *Intensive therapy*

Intensive insulin therapy means that you check your blood glucose many times during the day. Then adjustments are made with medicines, food, and physical activity based on the blood glucose level. These frequent changes keep the blood glucose in tight control. Tight control can help reduce your chance of complications. If you are interested in intensive insulin therapy, talk to your doctor.

### *During pregnancy*

If you have diabetes and plan to become pregnant or think that you might be pregnant, see a doctor. It is best to have good control of your blood glucose before you become pregnant. Good control can reduce your chance of problems during pregnancy. While you are pregnant, it is important to have your diabetes monitored very closely. When you control your blood glucose level, you help keep yourself and your baby healthy.

If you are pregnant, you may be able to control your blood glucose with a meal plan recommended by your doctor, dietitian, or diabetes educator. You also may need to take insulin. Your doctor will help you decide what is best for you. Do not take diabetes pills during pregnancy until you check with your doctor. Most diabetes pills have not been studied enough in pregnant women and may be harmful.

Your diet, medicine, and exercise plans may need changes during each stage of your pregnancy. You must check your blood glucose often during pregnancy. After the birth of your baby, other changes may be needed. If you plan to breast-feed your baby, changes usually must be made to your management plan. Keep in constant touch with your health care team to ensure a successful pregnancy.

A type of diabetes that some women get only while pregnant is called gestational (jess-TAY-shun-ul) diabetes. Gestational diabetes usually goes away after pregnancy.

See the UPMC patient education sheet [Gestational Diabetes](#) for more information.

### **If you have questions**

If you have any questions, call a member of your diabetes care team.

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For help in finding a doctor or health service that suits your needs, call the UPMC Referral Service at 412-647-UPMC (8762) or 1-800-533-UPMC (8762). Select option 1.

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