


Staying Healthy With Diabetes

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This information is part of the "Staying Healthy" series of booklets prepared for its members by Blue Cross and Blue Shield of Texas, a Division of Health Care Service Corporation. Other topics include asthma, congestive heart failure and hypertension.



Diabetes is a common, yet costly disease that may cause serious complications, disability or even premature death. Many complications can be prevented with early diagnosis and treatment of the disease. As the fourth leading cause of death in the United States, diabetes reportedly costs billions of dollars each year. Although there is currently no cure for diabetes, it is possible to successfully manage the disease and avoid complications by keeping blood sugar at near-normal levels.

What is Diabetes?

Diabetes is a condition of too much glucose (a form of sugar) in the blood, which harms the body's organs and tissues. High blood sugar in the body is caused by either a lack of insulin (a hormone) or poor utilization of insulin. Insulin, produced in the pancreas (an organ found behind the stomach), helps the body use sugars and starches for energy.

There are two types of diabetes:

- Type 1: the pancreas makes no insulin
- Type 2: the pancreas makes insulin, but the body does not use it effectively

Since most diabetics have Type 2 diabetes, this booklet will discuss its treatment. Certain information also will address care of Type 1 diabetes.

The following are the most serious complications of uncontrolled diabetes:

- Heart disease
- Kidney failure
- Stroke
- Impaired circulation, which can lead to amputation
- Blindness

Who is at Risk for Diabetes?

Diabetes is especially common among Americans who are:

- Age 40 and over
- Obese and inactive
- Related to a diabetic
- Certain racial or ethnic groups (e.g., African Americans, Hispanic Americans, Asian and Pacific Islanders, and Native Americans)

How is Diabetes Diagnosed?

Only a physician, by taking a blood sample, can diagnose diabetes. He or she may ask you not to eat for several hours before performing a fasting plasma glucose (FPG) test, commonly used to diagnose diabetes. A diagnosis of diabetes will be made if there is an FPG of 126 mg/dl or above on two different occasions, according to American Diabetes Association Clinical Practice Recommendations 1998.

Symptoms That Suggest Diabetes

What would symptoms of diabetes feel like and look like? Many diabetics notice some of the following changes in their body before seeing their physician:

- Feeling tired even after adequate rest
- Increased hunger
- Increased urination
- Increased thirst
- Weight loss without dieting

Remember:

If you have even one of the above symptoms, you may be at risk, and should see your physician. Early diagnosis and treatment of diabetes helps reduce or avoid complications.

Goals of Diabetes Treatment

Getting your blood sugar under control and keeping it at near-normal levels will help you:

- Delay or avoid complications from diabetes
- Decrease symptoms of high blood sugar
- Maintain quality of life
- Improve your health

Diabetes Treatment Plan

What can I do?

You need to know how to take care of yourself so you can enjoy a long, healthy life. Your physician and other health care team members, such as dietitians, nurses, diabetes educators and pharmacists, can give you the tools and confidence to manage diabetes successfully. Carrying a medical alert card or wearing a medical alert bracelet lets others know you are diabetic. You play the key role in reducing or avoiding complications. Here are some helpful suggestions:

- Follow the medication schedule given by your physician
- Quit smoking
- Lose weight, as advised by your physician
- Maintain an exercise program
- Check your feet daily for cuts or sores
- Check your blood sugar daily or as determined by your physician
- Keep appointments with your physician and ask questions

What can my physician do?

In 1995, treatment standards were adopted in order to help physicians give the best, most consistent care to diabetics. These standards, known as *Minimum Standards for Diabetes Care Under Managed Care in Texas*, were adopted by a managed care work group from the Texas Diabetes Council and Texas Department of Health. The information listed below is taken from the Diabetes Mellitus Minimum Practice Recommendations Flow Sheet. If these are not already a part of your care, talk with your physician regarding the following recommendations to help reduce or avoid complications:

Exam	Reason	Schedule
Complete history and physical	Review personal and family health problems, diet and exercise	Initial visit
Nutrition counseling	Provide instruction and support regarding the appropriate diet	Initial visit and as needed
Diabetes education	Review diabetic's access to information and support	Initial visit and as needed
Review of management plan	Consider treatment plan adjustment	Every 6 months
Weight	Check for increased body fat	Every visit
Dental inspection	Check for gum disease to avoid tooth loss	Every visit
Foot exam	Check for skin integrity and loss of feeling in feet to avoid complications leading to amputation	Every visit
Blood pressure	Check for high blood pressure to prevent heart problems and stroke	Every visit
HbA1c test	Check average blood sugar level over last 3-4 months	Every 6 months
Protein in urine	Check for kidney damage	Yearly
Lipid profile	Check for high fat levels in blood	Yearly
Retinal exam	Check for eye damage that may lead to blindness	Yearly

What will medications do?

When diet and exercise together are not enough to control blood sugar, medication in the form of pills is introduced in treating Type 2 diabetes. These pills lower the blood sugar by acting like insulin, causing the pancreas to make more insulin or making the body cells sensitive to insulin.

When pills and diet do not work, insulin must be given to control blood sugar. Often, two types of insulin are given together for better blood sugar control: short- and long-acting insulins. Insulin must be injected using small disposable needles, called insulin syringes, which must then be disposed of properly to avoid injury.

With practice and support, daily insulin injections are quickly learned and soon become part of routine self-care. To work best, insulin is given between the fat and muscle layer under the skin in the following areas of the body:

- Front and sides of thighs
- Upper and outer arms
- Abdomen—avoiding the navel or waistline
- Buttocks
- Back

Remember:

- Never skip a dose of medicine
- Never double a dosage if you miss a dose
- Take your medicine at the same time each day
- Never borrow or substitute pills or insulin
- Store your medication properly
- Rotate needle insertion points to avoid lumps or knots
- Never skip a meal

Testing Your Blood Sugar

Testing your blood sugar, using a glucometer, will let you know if the treatment is working. Your physician will tell you how often to test and what results to expect. If you are taking insulin, your blood sugar must be tested before each insulin shot. If you are taking pills, avoid skipping doses.

Sometimes you may have low blood sugar and feel the following:

- Shakiness
- Sweatiness
- Fatigue
- Fast heartbeat
- Numbness or tingling in the mouth or lips
- Blurred vision
- Irritation or confusion

The most common causes of **low blood sugar** are:

- Taking too much insulin or oral diabetes medicine
- Eating meals and snacks at the wrong times
- Skipping meals
- Too much physical activity

The treatment for **low blood sugar** is:

- Stop what you are doing
- Increase your blood sugar by:
 - Eating a piece of fruit or two to three pieces of hard candy or two teaspoons of sugar, OR
 - Drinking half a regular soda or a 4 oz. cup of juice or milk
- Call your physician if your blood sugar does not increase with treatment



You also may have **high blood sugar** and notice the following:

- Increased thirst or hunger
- Increased urination (emptying of bladder)
- Increased fatigue or sleepiness
- Dry or itchy skin
- Blurred vision
- Infection
- Cuts or sores that heal slowly

The most common causes of **high blood sugar** are:

- Taking too little insulin or oral diabetes medicine
- Getting sick or having other kinds of stress
- Overeating
- Lack of normal physical activity

If you have **high blood sugar** and experience any of the above, ask yourself:

- What have I been doing?
- Have I followed my diet?
- Have I been exercising regularly?
- Do I have an unusual amount of stress?

Call your physician if you answer yes to one or more questions and if your high blood sugar continues after following treatment prescribed by your physician.

How To Use a Glucometer

Using a glucometer to find out your blood sugar level is safe, easy and accurate, when used correctly. Always follow the manufacturer's instructions, and log the results to help you and your physician track your progress and make any necessary treatment plan adjustments. The following are some general tips for using a glucometer:

- Make sure the meter is calibrated
- Use test strips made for your meter
- Throw away expired test strips
- Clean the finger area with soap and water before doing the test
- Use a lancet or other suitable device to get a blood sample
- Use a fresh lancet for each finger stick
- Apply the right amount of blood to the test strip
- Wait the right amount of time set by the meter to read the result
- Avoid damaging your meter
- Keep your meter in an easy-to-reach place away from extremes in temperature

Although glucometer tests provide current results, your physician should also test for average blood sugar once during the previous 3- to 4-month period. The HbA1c is a simple test conducted by your physician. Depending on the results, your physician may make changes to your treatment plan. A normal HbA1c below 7.5 percent lets you know your blood sugar has been well managed. If you have not had an HbA1c test then request one from your physician.

When Should I Call My Physician?

It is true that most diabetic care takes place at home, but there are specific instances when you should contact your physician such as:

- Illness such as an infection, fever or cold/flu, nausea and vomiting
- Medication dose is not controlling your blood sugar
- Questions arise about your care that cannot wait until the next office visit
- Chest pain
- Dizziness, blacking out
- Sudden loss of feeling in arms and legs
- Cut or sore on foot is not healing properly
- Feeling down or hopeless for more than 2 weeks

Nutrition

A healthy, balanced diet plays a big part in good diabetes management. You may have heard it said, "diabetics can't eat sweets," but this is not true. You and your dietician can work together to include your favorite foods in your diet in the right amounts. Your physician will know how many calories you need per day for energy, usually between 1500 and 3000 calories. A low-fat, controlled carbohydrate diet will help you avoid complications such as obesity, heart disease, cancer and high blood pressure. The following are general tips when preparing your food:

- Do not fry foods – instead, bake, broil or boil
- Do not cook with fats, oil or lard
- Skim the fat from soups after refrigeration when the fat is on the top
- Remove fat from meat and skin from chicken and other fowl
- Decrease the amount of sauces, gravies and dressings on food
- Choose foods rich in fiber, such as vegetables and grains (oatmeal, cream of wheat)

What should I limit?

- Sugar and foods made with sugar
- Egg yolks (no more than four per week)
- High-fat foods (butter, lard, mayonnaise, cheeses)
- Salt and salty foods

What should I avoid?

- Alcoholic drinks (may cause abnormally low blood sugar/hypoglycemia)
- Cigarette smoking

Remember:

- Eat at the same time each day
- Do not undereat or overeat (this can cause serious blood sugar changes)
- Do not skip meals or snacks
- Drink plenty of water

Exercise, Exercise, Exercise

Type 2 diabetics are often overweight. Too much body fat keeps insulin from controlling the blood sugar. You can work with your physician and diabetes educator to make an exercise plan that works for you. The following are some benefits of regular exercise:

- Decreased body fat
- Lowered blood sugar
- Increased well-being
- Increased strength and muscle tone
- Decreased hunger

When You Are Sick

When you become sick, your body makes more sugar. An illness, such as a cold, flu or an infection, is referred to as a "sick-day." Sick days usually require increased monitoring of your blood sugar. Call your physician for the following:

- Nausea
- Vomiting
- Unable to eat your normal diet
- Can't take your medication

Emotions

Diabetes brings many permanent life changes. One big change is accepting the daily responsibility to care for your own health with a disease that currently has no cure. Sometimes you may become depressed, feeling lonely and overwhelmed. Call your physician if any of the following lasts more than two weeks:

- Feeling hopeless
- Feeling "blue" or sad most of the time
- Lack of energy after adequate rest
- Lack of interest in things you once enjoyed
- Lack of interest in sex
- Sleeping disturbance such as too much or too little sleep

Remember:

You are not alone. Diabetes is a common disease, and others often have these feelings. With proper treatment, encouragement and support you will feel better and be able to care for yourself.

Please seek professional counsel immediately if you have thoughts of taking your life.

Family Concerns

Diabetes, like all chronic diseases, affects not only you but also your entire family. It is important that your family know about your condition and the care you need. Your family might need to help you manage the disease, especially when you are sick. When a low blood sugar attack occurs, it can be an advantage if your family knows how to make the situation better and not worse. Encourage your family to learn about diabetes by:

- Requesting they attend physician visits with you
- Including them in diabetes education classes
- Giving them diabetes educational materials to read, especially concerning "sick-days"
- Telling them of your progress and areas that may be a problem
- Having them assist you in preparing meals
- Showing them how to test your blood sugar and give you medication

School, Work and Play

It is important that the people you regularly associate with know you have diabetes. When problems happen, they can help you manage the situation. Always carry identification that notes your diabetic condition, your physician's name and phone number, and an emergency contact.

Foot Care

Diabetes can slow the body's normal healing process and lead to infection. Also, decreased feeling and sensation may make you unaware that your feet are injured.

Avoid injuries by:

- Always wearing well-fitting shoes with socks
- Washing feet daily with soap and water
- Trimming toenails carefully
- Never going barefoot
- Inspecting your feet daily for blisters or sores
- Checking your shoes daily for foreign objects or tears in the lining
- Avoiding open-toed shoes
- Never treating corns, bunions, blisters or ingrown toenails yourself; seek care from a professional

Remember:

Check your feet daily and visit your physician regularly. Be sure your feet are examined at each visit.



Eye Care

Uncontrolled diabetes can damage your vision or even cause blindness. The good news is that vision problems can be avoided with blood sugar control. A yearly visit to an optometrist or ophthalmologist for a retinal exam can help identify vision problems early.

Remember:

An eye specialist can best determine vision problems with an annual dilated retinal exam. Early diagnosis and treatment are key to saving your sight.

Enjoying Your Life

The right care pays off. Your diabetes will not stop you from enjoying most activities. You can gain the confidence to manage diabetes if you have support from your health care team of physicians, nurses, pharmacists, diabetes educators and dieticians as well as your family, friends and co-workers.

Ongoing diabetes education prepares you for long-term self-care. Many educational resources are available, such as classes taught by diabetes educators, videos, booklets, Internet publications and of course, physicians. The American Diabetes Association (ADA) speaks the language of the diabetic and is a good resource for support and educational materials. Additional sources are listed on the last page of this booklet.

Remember:

It is possible to live a full life with diabetes when you know how to care for yourself.

Questions for Your Physician Visits

Diabetes is a complex disease, and sometimes it is hard to know what it is all about. You may use the following to record questions and answers from your physician visits.

1. Your Question:

Answer:

2. Your Question:

Answer:

3. Your Question:

Answer:

4. Your Question:

Answer:

5. Your Question:

Answer:

6. Your Question:

Answer:

7. Your Question:

Answer:

NOTES:

Information Sources Used in This Booklet

American Diabetes Association

1660 Duke Street
Alexandria, VA 22314
Phone: 1-800-342-2383
www.diabetes.org/ada/moreinfo.asp

Texas Diabetes Council

Diabetes Program at Texas Department of Health
1100 West 49th Street
Austin, TX 78756
Phone: (512) 458-7490
www.tdh.state.tx.us/diabetes/tdh.htm

Clinical Pathways for the Multidisciplinary Home Care Team

Aspen Publishers, Inc.
Permission Department
200 Orchard Ridge Drive, Suite 200
Gaithersburg, MD 20878

Diabetes Control Network

Pfizer U.S. Pharmaceuticals Group

Diabetes and You: Taking Charge of Your Diabetes

Pfizer U.S. Pharmaceuticals Group

Additional Diabetes Resources

National Diabetes Information Clearinghouse (NDIC)

1 Information Way
Bethesda, MD 20892-3560
Phone: (301) 654-3327
e-mail: ndic@aerie.com

Publications Request

Division of Diabetes Translation

National Center for Chronic Disease Prevention and Health Promotion

Centers for Disease Control and Prevention

4770 Buford Highway NE
Mailstop K-10
Atlanta, GA 30341-3717
Phone: (770) 488-5015 or 5000
Fax: (770) 488-5966
e-mail: ccdinfo@cdc.gov
www.cdc.gov/diabetes