



VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE MANAGEMENT OF TYPE 2 DIABETES MELLITUS IN PRIMARY CARE

**Department of Veterans Affairs
Department of Defense**

Patient Guide

QUALIFYING STATEMENTS

The Department of Veterans Affairs and the Department of Defense guidelines use the best and most recent information that is available at the time they are published. Guidelines provide information that providers, healthcare team members and patients can use to provide better care for diabetes. They do not define a standard of care and you should not use them in this way. They are also not the only way to manage diabetes.

This Clinical Practice Guideline is based on a complete and organized review of both clinical studies and studies about how diseases affect the health and illness of groups of people. A panel of experts in a number of clinical fields developed this guideline. The Guideline clearly explains how different care options relate to health outcomes. To do this, the experts rated both the quality of the clinical studies and the strength of the recommendations.

It is normal for providers to vary in how they treat patients with diabetes because they take into account the needs of each patient, the available resources, and the limits that are unique to their healthcare setting or type of practice. Healthcare professionals should assess how well these Guidelines apply to each patient, and their clinical setting or situation. Patients can use the information in this Guideline to understand the different ways that diabetes can be treated. This will help you discuss treatment options with your provider and team. Working together, you can create a personalized diabetes care plan that meets your needs and makes it easier for you to manage your diabetes.

These guidelines do not represent Department of Veterans Affairs or TRICARE policy. The Guideline recommendations for specific tests and/or treatments do not guarantee coverage of the patient's care by civilian providers or healthcare facilities. You can find more information on current TRICARE benefits at www.tricare.mil or by contacting your regional TRICARE Managed Care Support Contractor.

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You have diabetes. What do you do now?

Diabetes is a chronic disease but you can manage diabetes by working with your healthcare provider and other members of your healthcare team. You and your healthcare team will make decisions together to come up with a treatment plan that is right for you.

What is diabetes mellitus?

We get glucose (also called sugar) from most of the carbohydrates (foods like breads, pasta, milk, and fruits) we eat. Our bodies use this sugar to give us the energy we need to live. People have a gland in the abdomen called the pancreas which makes insulin. Insulin is a hormone that flows through the blood and brings sugar into the cells of the body to provide energy. Therefore, when there is not enough insulin or when the body can't use insulin as it should, the level of sugar in our blood goes up. Diabetes mellitus is a disease where the blood sugar (also called blood glucose) is higher than normal.^[1] Some people who have diabetes do not make enough or do not make any insulin at all. This is called Type 1 diabetes. People with Type 2 diabetes cannot use insulin in the right way. When people first have Type 2 diabetes, they make more insulin to make up for the body not using it as it should. If Type 2 diabetes lasts for a long time, the pancreas may start to make less insulin. There are many reasons why some people get Type 2 diabetes. It can often be caused by too much fat tissue, especially around the waist. Less commonly, diabetes occurs from taking cortisone-like medications for a long time or from being pregnant.

What are the signs and symptoms of diabetes?

In the beginning, there are no outward signs of Type 2 diabetes. But when the disease becomes worse, patients start to notice some signs. For example, they may feel hungry, tired, the need to urinate often, thirsty, have dry mouth, vision problems, or weight loss.^[2,3] If you have these symptoms, it is important to call your healthcare provider. If diabetes lasts for a long time, patients may notice symptoms of complications or long-term problems. For example, they can have yeast infections, no feeling in the feet or legs, poor wound healing, heart problems, kidney problems, or eye problems.^[4] You cannot know if you have diabetes on your own. Only a healthcare provider can know if you have diabetes.

How is diabetes treated?

It is important to talk with your healthcare provider and team about your goals for blood sugar and hemoglobin A1c (a test that lets patients and their healthcare team know about their diabetes control over 2 to 3 months) levels. Your healthcare provider will consider your present health, your preferences, and what is important for you now and in the future. Type 2 diabetes is treated with medications and changes in your physical activity, weight, and diet.^[5] Some patients may also need insulin or other injections.^[5] Patients often need to monitor their blood sugar.^[5] In addition to the hemoglobin A1c test, your healthcare provider will also do some other important tests. African American patients who have diabetes may have higher hemoglobin A1c test results even if their blood glucose measures are the same as other races. When African American patients work with their providers and teams to set hemoglobin A1c goals, they need to take this into account. Since the medications for the treatment of diabetes are rapidly changing, talk to your provider often about your medication(s).

Your provider or dietitian may suggest a Mediterranean diet. [Table 1](#) shows some components of the Mediterranean diet.

Table 1: Summary of Dietary Recommendations in the Mediterranean Diet*

Food	Goal
<i>Recommended</i>	
Olive Oil	≥ 4 tbsp. per day
Tree nuts and peanuts	≥ 3 servings per week
Fresh fruits including natural fruit juices	≥ 3 servings per day
Vegetables	≥ 2 servings per day
Seafood (primarily fatty fish)	≥ 3 servings per week
Legumes	≥ 3 servings per week
Sofrito†	≥ 2 servings per week
White meat	In place of red meat
Wine with meals (optional)	Discuss with provider
<i>Discouraged</i>	
Soda drinks	< 1 drink per day
Commercial baked goods, sweets, pastries‡	< 3 servings per week
Spread fats	< 1 serving per day
Red and processed meats	< 1 serving per day

*Adapted from Estruch, et al. (2013) [6]

† Sofrito is a sauce made with tomato and onion, and often includes garlic, herbs, and olive oil.

‡ Commercial bakery goods, sweets, and pastries include cakes, cookies, biscuits, and custard, and do not include those that are homemade.

If you do not see a dietitian, additional tools to plan food choices and menus are on the United States Department of Agriculture website, <http://www.choosemyplate.gov/>.

[Table 2](#) shows some advice on physical activity for adults and older adults.

Table 2. Key Physical Activity Guidelines for Adults & Older Adults [7]

All Adults	Older Adults
Avoid inactivity. Some physical activity is better than none and adults who participate in any amount of physical activity gain some health benefits.	Be as physically active as abilities and conditions allow when unable to do 150 minutes of moderate-intensity aerobic* activity a week.
For substantial health benefits, do at least 150 minutes (2 hours and 30 minutes) a week of moderate intensity or 75 minutes (1 hour and 15 minutes) of vigorous aerobic* physical activity, or an equivalent combination of moderate and vigorous intensity aerobic* activity.	Do exercises that maintain or improve balance if at risk of falling.
Do muscle-strengthening activities that are moderate or high intensity and involve all major muscle groups on 2 or more days a week, as these activities provide additional health benefits.	Consider level of fitness before determining level of activity.
For additional and more extensive health benefits, increase aerobic physical activity to 300 minutes (5 hours) a week of moderate intensity, or 150 minutes a week of vigorous intensity aerobic* physical activity, or an equivalent combination of moderate and vigorous intensity activity as additional health benefits are gained by engaging in physical activity beyond this amount.	Understand how chronic conditions affect ability to do regular physical activity safely.

*Aerobic activity should be performed in episodes of at least 10 minutes, and preferably, it should be spread throughout the week.

Who is at risk for diabetes?

The risk for diabetes increases as people get older.[1] People of Asian, African, Native American, or Pacific Islands descent are more likely to get diabetes.[1] Being overweight and having little physical activity can lead to diabetes. People at risk for diabetes also often have high blood pressure and cholesterol problems. Women with diabetes when pregnant are also at risk for diabetes later in their life. Not all people with these risk factors will develop diabetes. It is important for everyone to work with their healthcare provider and team to prevent diabetes.

How can I best take care of myself if I have diabetes?

To live well with diabetes, work closely with your healthcare provider to choose the best treatment plan for you. Your healthcare provider and team want you to let them know about your goals and preferences so that they can work with you to create a treatment plan that’s right for you. Make sure to keep your appointments with your healthcare provider. It is also very important to take your medicines and to measure your blood sugar as discussed with your healthcare provider. You should also see your eye healthcare provider on a routine basis. Increasing physical activity will also help most people who have diabetes. Even light activity, such as walking, taking stairs, vacuuming the house, and dancing will help you control diabetes. You can also join diabetes education classes to get updates on new treatments.

When is low blood sugar an emergency?

Low blood sugar can make you feel light-headed, sweaty, shaky, or confused. If you feel any of these things, **you should check your blood sugar immediately**. These signs usually happen when blood sugar

drops under 70 mg/dL. If your blood sugar is low, drink 4 ounces of a drink containing sugar such as fruit juice or regular soda/pop, or eat four glucose tablets. Then check your blood sugar again 15 minutes later. If your blood sugar is still under 70 mg/dL, you may have to drink more fruit juice or soda/pop or eat more glucose tablets. Let your provider and team know if this type of low blood sugar happens to you. Train family members, friends and co-workers to recognize signs and symptoms of hypoglycemia. If you pass out or if you have trouble swallowing, they should call 911.

Other than low blood sugar, when should I contact my healthcare provider?

You should contact your healthcare provider if there are signs of high blood sugar: thirst, headache, blurry vision, or frequent urination. These are medical emergencies, so call your healthcare provider or visit the emergency room. Having chest pain, face drooping, arm weakness, or problems speaking could be signs of a heart attack or a stroke – call 911 immediately. When your blood sugar levels are constantly high, or you experience frequent or severe low blood sugar (any low sugar requiring help from another person), you may need to change your current plan. Contact your healthcare provider to discuss that.

Where Can I Find More Information?

Beware of websites and TV programs that make promises that have not been proven or try to sell products that are not FDA-approved. For reliable information, see the following sites:

National Institute of Diabetes and Digestive and Kidney Diseases: <https://www.niddk.nih.gov/health-information/diabetes#topics>

American Diabetes Association: <http://www.diabetes.org/>

Centers for Disease Control and Prevention: <https://www.cdc.gov/diabetes/home/>

References

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4. American Diabetes Association. Diagnosis and classification of diabetes mellitus. *Diabetes Care*. Revised 2010;33(Suppl 1):S62-S69.
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