Self-Care Skills for Patients with Diabetes

VA/DoD Clinical Practice Guideline for the Management of Type 2 Diabetes Mellitus in Primary Care

VA/DoD Evidence-Based Practice

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For the Provider/Educator

Teaching tips

- Consider patient readiness for learning: attitude, physical conditioning, attention span, learning ability, health literacy, and numeracy (the ability to understand and work with numbers)
- Schedule timing and duration of teaching sessions for maximum effectiveness
- Focus on most important knowledge and skills for that particular patient
- Offer learning through multiple methods to maximize effectiveness (see, hear, touch, discuss, perform)
- Provide reinforcement material for patient to refer back to after the teaching session

Components of the flip chart

- **Patient Pages Include:**
  - Questions for patients ("*Do you know...*")
  - Simple graphics
- **Educator Pages include:**
  - Script for educator
  - Check for understanding questions
  - Red flags, to help spot misconceptions

When using the flip chart to teach patients, remember

- This tool should be tailored to fit the needs of each patient; he or she may not need, or be ready for, all information
- The "What to teach your patient" sections are intended as an overview and may be summarized and tailored to fit the needs of each patient with diabetes
- This flip chart is not intended as comprehensive diabetes self-management education (DSME)

Diabetes Care Team

Do you know...

- It takes a team to manage diabetes?
- You are the key member of the team?
- You manage your diabetes?
- You should speak up and share your needs and expectations with your healthcare team?
- You and your provider should consider the pros and cons before you decide which treatment would be best?

SHARE

1: Speak up!

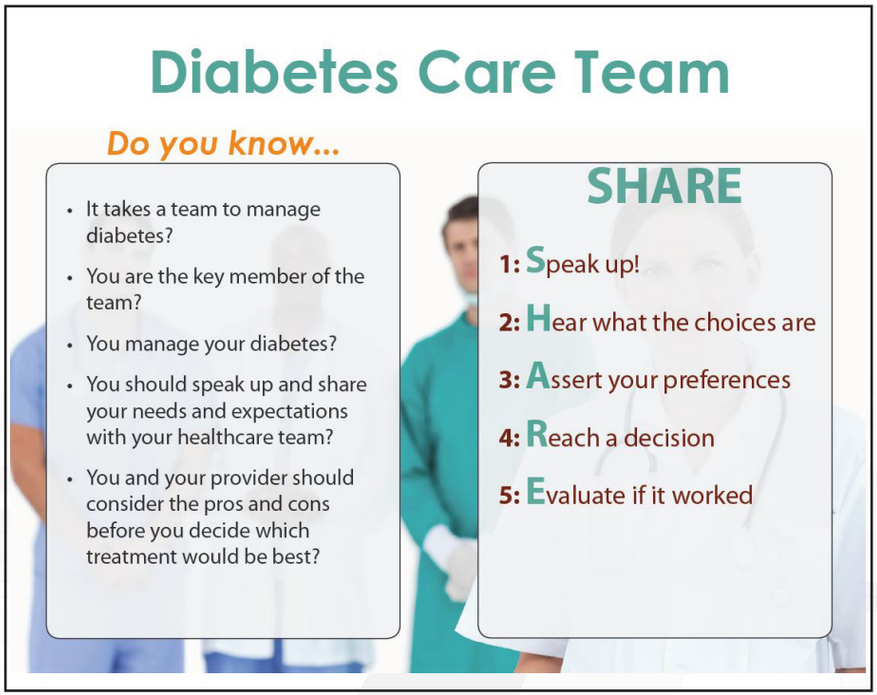
2: Hear what the choices are

3: Assert your preferences

4: Reach a decision

5: Evaluate if it worked

What your patient sees:



Checking for Understanding:

- Verbalizes interest to learn about diabetes.
- States importance of talking with healthcare professional.
- Expresses confidence that provider/healthcare team listens to and values opinion.
- Identifies potential barriers to manage their diabetes.
- Recognizes that treatment plan may need to change.

Red Flags

- Believes they should do "whatever the provider says".
- States unable to talk to provider.
- Does not believe his provider will listen to him.
- Verbalizes lack of confidence to take care of self.

What to teach your patient:

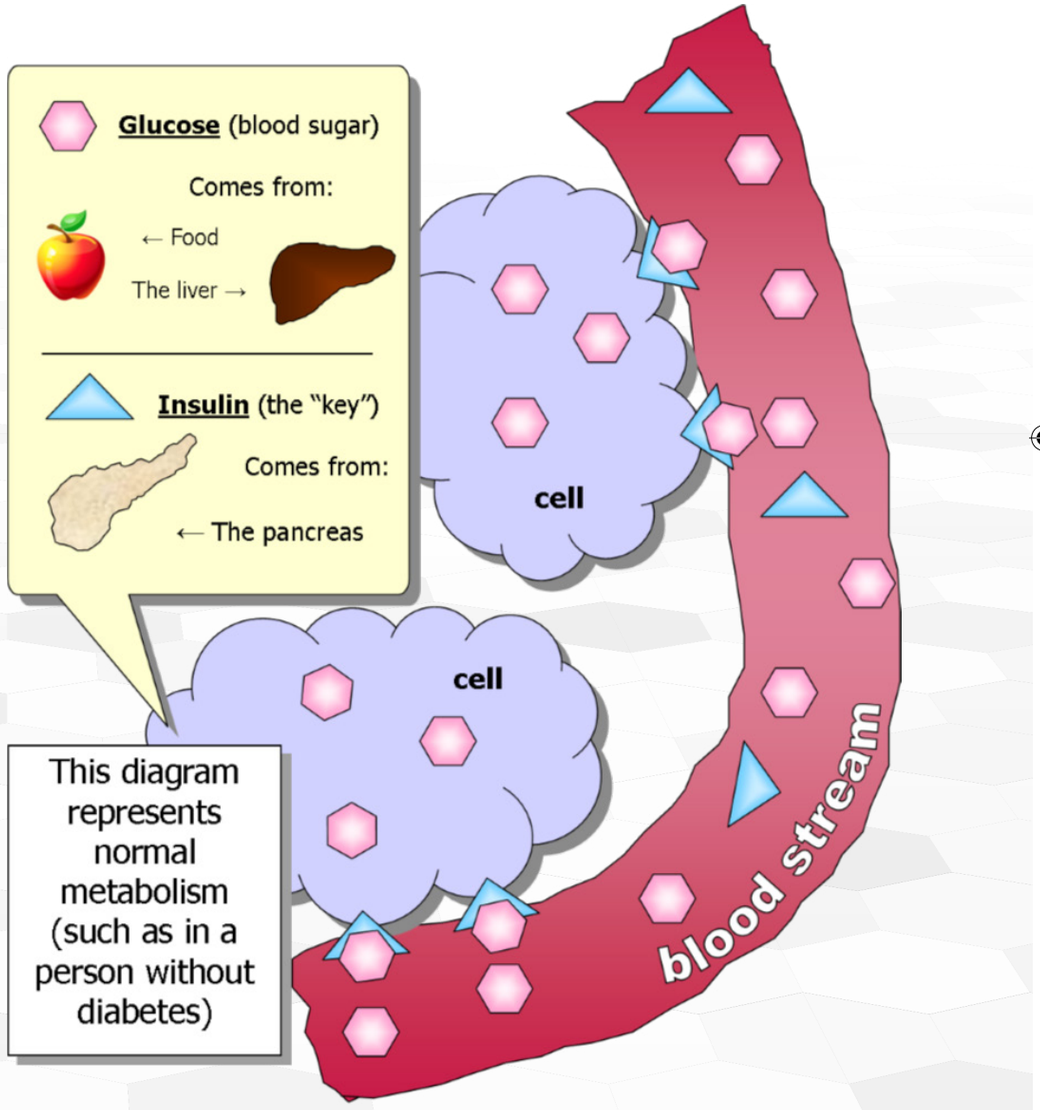
Many people believe that the provider manages their diabetes. The truth is that the person living with diabetes manages his or her diabetes. The healthcare team is there to help you . Your provider should talk with you to determine the best tools to help you manage your blood sugar. Recommendations may include lifestyle changes (diet and exercise) or to take medications. If you are unsure, talk with your provider. How you take care of your diabetes is a shared decision between you and your provider. **Use the S.H.A.R.E. Approach:**

1. **S:** Your provider should Seek your participation. Your role is to Speak up so your provider is aware of your personal needs, perspective, and willingness to manage your diabetes.
2. **H:** Your provider should Help you explore and compare treatment options. Your role is to Hear what choices there are for managing your diabetes. Ask questions, look at the pros and cons of each recommendation. Consider the cost, the time or effort to accomplish the tasks, and your willingness to do it.
3. **A:** Your provider should Assess your values and preferences. Your role is to Assert your preferences and values. Let your provider know what is important to you, even if it is different from what he/she feels is important. Talk about how you feel about diabetes, your likes and dislikes, what you are willing to try, how much you can take on, and what your priorities are. It is important to keep an open mind as you discuss what treatment options there are and be willing to at least try to see if one may work for you.
4. **R:** You and your provider should Reach a decision. Determine together what treatment options to try and make a plan. The plan should not only include what you will be doing, but what tools (medications, meter, etc) you will need, and how long you should try the treatment.
5. **E:** You and your provider should Evaluate if the plan works. Keep track of your progress, check your blood sugars (as agreed with your provider), and follow-up with your provider on a regular basis to see if your plan worked or if you may need to try something different.

Understanding Diabetes

Do you know...

- What is diabetes?
- What type of diabetes you have and the differences between the types of diabetes?
- How diabetes can affect you now and later?
- What actions can help you control your diabetes?



What your patient sees:

Understanding Diabetes

Do you know...

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- How diabetes can affect you now and later?
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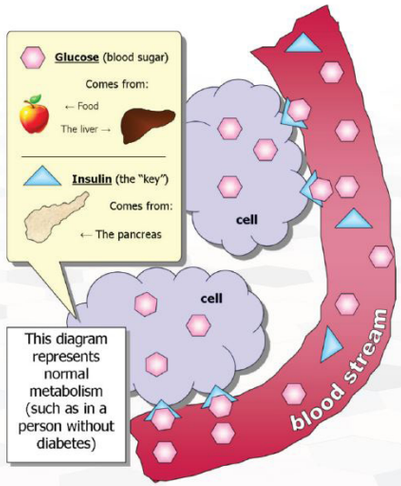


Checking for Understanding:

- Can accurately state type of diabetes he/she has.
- Associates common diabetes-associated complications with poor control.
- Verbalizes understanding of importance of knowing about aspects of diabetes.
- Expresses actions and habits that will promote good diabetes control.

Red Flags

- Does not know type of diabetes he/she has.
- Expresses lack of control over own health status (fatalism).
- Expresses misconceptions about diabetes treatment for his/her specific type.

What to teach your patient:

1. Your body needs to have sugar (or glucose) in the blood to make energy. Diabetes is a condition in which there is too much sugar, in the blood. We can measure too much sugar in the blood from blood tests.

   Blood glucose travels to the cells where it is burned as energy once inside the cells. Your body needs this fuel in the cells to survive. In order to get inside the cells, your body needs a "key". This key is called insulin. Insulin is made by beta cells in the pancreas.

   In diabetes, the blood glucose level is too high either because the pancreas is not making enough insulin to allow all the sugar to get into the cells, or the insulin that is being made is not working correctly. Sometimes it is a combination of both.

2. There are several types of diabetes, but most have one of two main types. In type 1 diabetes, the pancreas stops making insulin altogether. A person with type 1 diabetes must take insulin for life. Yet the insulin taken usually works very well to control blood sugar levels.

   About 90% of people with diabetes, have type 2 diabetes. In type 2 diabetes, the body does not use the insulin effectively. This is called insulin resistance. A person may be able to diet and exercise to keep their blood glucose levels within target range. It may also be necessary to take oral medication to help the body's own insulin work better. Sometimes, he or she may also need to take insulin to control type 2 diabetes if the body is not making enough.

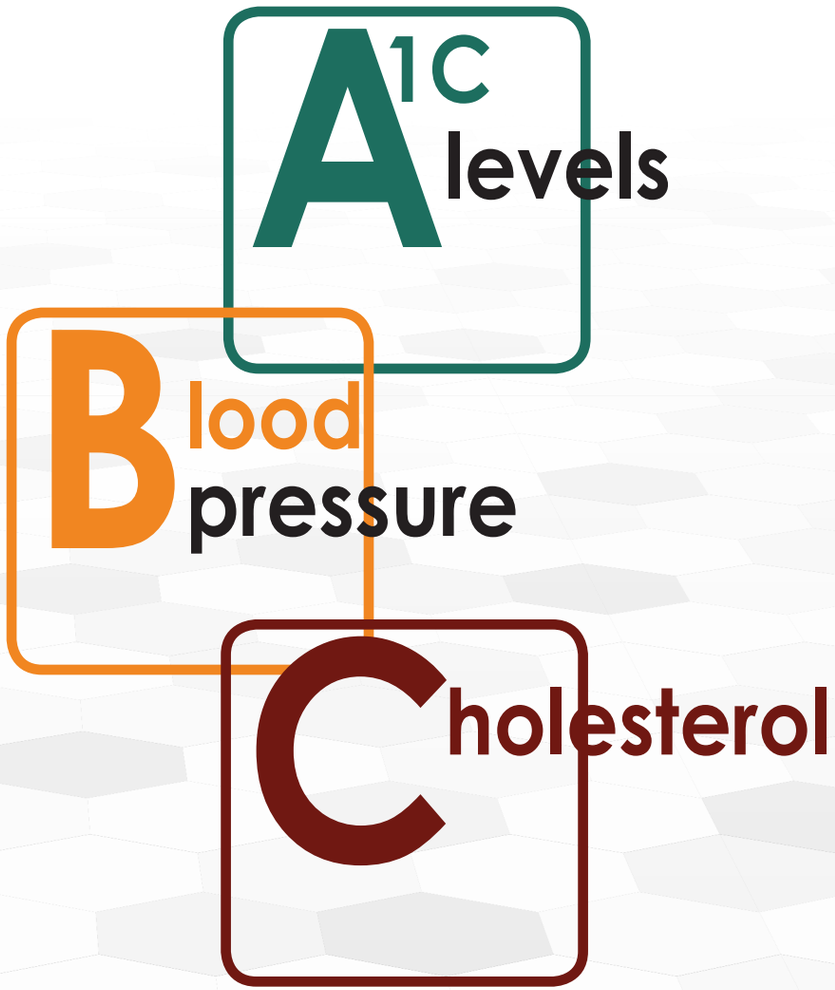
3. If blood glucose is not well controlled, it can cause health problems all over the body, such as damage to the nerves, kidneys, heart, feet, eyes, and teeth. The good news is that complications can often be prevented, delayed, or lessened, with good control.

4. The key to diabetes control is to have a good understanding of what affects your blood glucose levels. Some important tools for managing your diabetes are: diabetes education, making up your mind to do this, and good support from family and your health care team. Learning what you can do is the first step in controlling your diabetes.

Risk Reduction

Do you know...

- What happens to the heart, nerves, kidneys and other organs when blood sugar stays high?
- Why it is important to manage your blood pressure?
- Why it is important to treat high cholesterol?
- The importance of not smoking?
- The importance of good foot care?
- The importance of regular eye exams?



What your patient sees:

Risk Reduction

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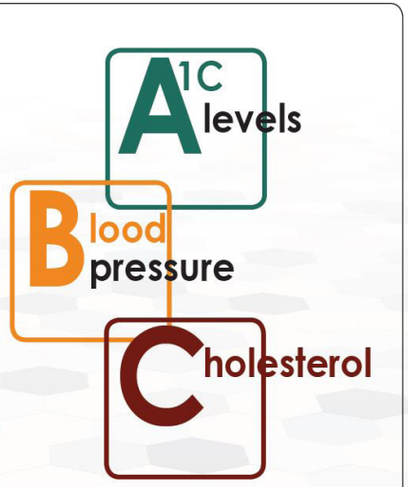


Checking for Understanding:

- Identifies risk for complications related to prolonged high blood sugar.
- States importance of taking blood pressure medicine daily.
- Knows the role of diet and exercise in managing cholesterol levels.
- If a smoker, expresses desire to quit.
- Articulates steps in proper foot care.

Red Flags

- Is not concerned about blood sugar because "feels fine."
- States he/she does not need to take prescribed medication because blood pressure is fine.
- Believes statins are more damaging than high cholesterol.
- Expresses no desire to quit tobacco products.
- Worn shoes, sandals, evidence of poor foot care.

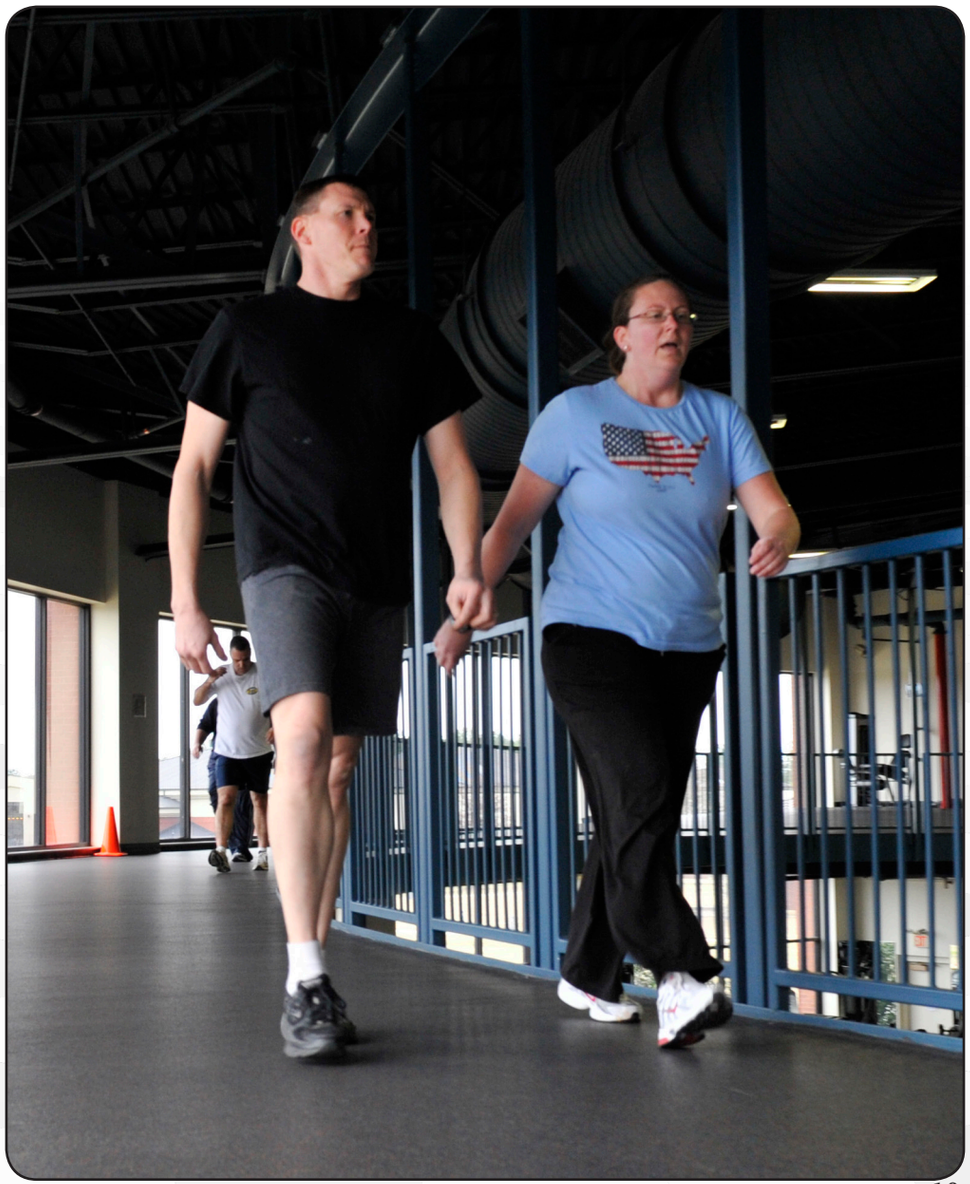
What to teach your patient:

1. Long-term high blood glucose levels can cause inflammation and subsequently damage to blood vessels and nerves that cause the complications of diabetes. Some of the more common complications include: heart disease, eye disease, kidney disease, neuropathies, and limb amputations. Prevention is key. Strive to keep the hemoglobin A1c (HbA1c) within the desired range as agreed upon by you and your provider.
2. High blood pressure increases the risk of heart disease, stroke, kidney and eye disease, aa well as, other problems. Diabetes and high blood pressure together increase the risk of health problems even more. Your provider will help you determine the best blood pressure range for you, how often to monitor and if you need medications to help mange your blood pressure. Diet and exercise are important tools to help manage high blood pressure.
3. Desired cholesterol levels vary according to the risk for heart disease. Insulin plays a role in managing blood cholesterol, especially triglycerides. Diabetes increases the risk of heart disease, paired with high cholesterol, that risk becomes greater. Diet and exercise are very effective tools to manage high cholesterol levels. Your provider may also recommend a statin or other cholesterol medication to decrease your risk of heart disease.
4. Smoking puts a person at risk for heart disease and cancer, paired with diabetes that risk increases. It is best to stop smoking or using tobacco products. If you would like to know more about tobacco cessation, we have resources that can help you quit. [Note: discuss the local resources available for tobacco cessation.]
5. Diabetes is the leading cause of non-traumatic amputations in the United States. Damage to nerves and blood vessels in the legs are the primary cause of foot problems. People with diabetes can lose the feeling in their feet and not realize there is an injury, ulcer, or infection, which if not treated, may require hospitalization. Your provider should perform a comprehensive foot exam at least annually. You should examine and care for your feet every day. Look for any injuries or signs of infection. [Note: discuss proper foot care. See foot care brochure: *Take care of your feet for a Lifetime.*]

Physical Activity

Do you know...

- Why it is important to be physically active?
- How physical activity will impact your blood sugar?
- How much physical activity you need?
- What type of exercise is best?
- What steps to take before beginning a program?
- How to overcome barriers to being physically active?

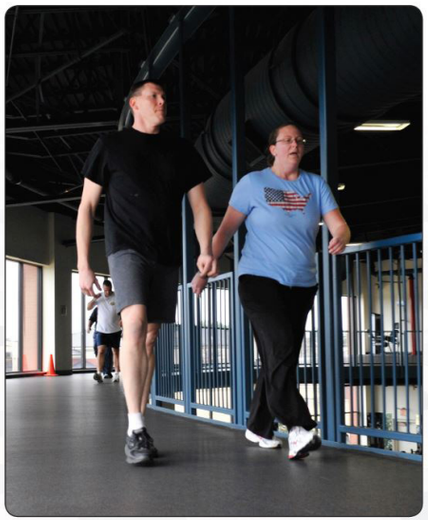


What your patient sees:

Physical Activity

Do you know...

- Why it is important to be physically active?
- How physical activity will impact your blood sugar?
- How much physical activity you need?
- What type of exercise is best?
- What steps to take before beginning a program?
- How to overcome barriers to being physically active?



Checking for Understanding:

- Correctly lists benefits of being physically active.
- States lowering effect of exercise on blood glucose.
- Expresses appropriate plan for physical activity that includes at least 30 minutes on most days of the week.
- Identifies potential barriers to physical activity and plan for addressing these barriers.

Red Flags

- Does not believe physical activity has any benefits.
- States he/she experiences hypoglycemia when physically active.
- Believes excessive amounts of exercise is needed.
- Exercises in lieu of taking medication.

What to teach your patient:

1. Engaging in physical activity improves blood glucose by helping insulin work better. Benefits include weight loss, lower blood pressure, lower cholesterol and increased strength, better rest and an increased sense of well being.
2. Because physical activity helps insulin to work better, it will lower your blood sugar. Because of this, you need to be prepared to treat low blood sugar if you take insulin or any medication that can drop blood sugar too low. Carry a fast-acting carb such as hard candy or glucose tablets if you are at risk for hypoglycemia.
3. If you have type 1 and blood glucose is above 300 mg/dL, exercise may not be safe. Check with your provider. He or she may want you to check for ketones before engaging in physical activity.
4. It is recommended that you try to be physically active every day. At a minimum, you should aim for 150 minutes of moderate exercise per week, with no more than two days off between activities. Strength building exercises, such as lifting weights, is recommended twice a week in addition to the 150 minutes of aerobic activity.
5. Find ways to be physically active that you enjoy! Biking, gardening, walking, dancing, golfing and many other activities can give you the exercise you need. Moderate exercise is any activity that will noticeably increase your heart and breathing rate, but still allow you to carry on a conversation. Don't be afraid to break a sweat!
6. In some cases you may need to check with your medical provider before beginning an exercise program. Some of these include: If you have had surgery, are severely overweight, have any serious health condition such as heart disease, COPD, or any sort of musculoskeletal problems.
7. It is not hard to find excuses to avoid being physically active. The key to a successful activity plan is commitment and good planning. Find a way to plan it into your schedule. If you exercise outside, have a back up plan for rainy days (such as walking at the mall). Be sure to include a warm up and cool down to prevent injury. Take a partner to make the activity more enjoyable. If you lack time due to a busy schedule, find time to exercise and work it into your schedule: take a five minute stair break every hour, walk on your lunch break, or plan an after-dinner walk.

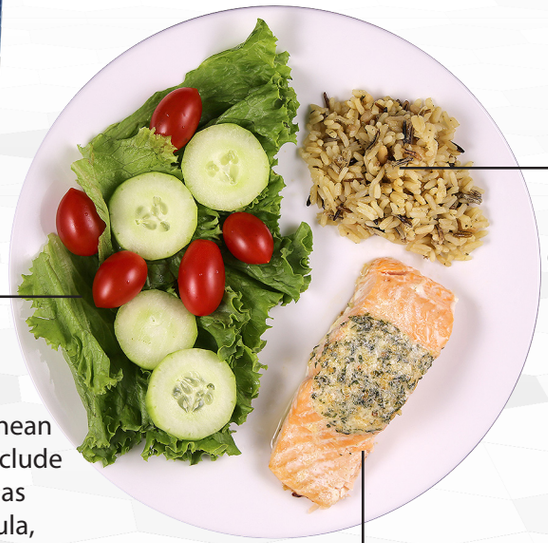
Healthy Eating

Do you know...

- How you should eat when you have diabetes?
- How often should you eat?
- How to recognize foods that affect your blood sugar the most?
- How to create a Mediterranean-style plate?
- Do you know an easy way to "measure" portions?
- How to choose healthy carbohydrates?

Drink plenty of water

Eat a variety of whole fruits, 3 - 4 servings per day



Healthy choices include barley, bulgur, oats, polenta, rice, quinoa, whole-grain breads and pasta, couscous, potatoes, sweet potatoes, beans, and legumes.

Some Mediterranean diet examples include vegetables such as artichokes, arugula, beets, broccoli, Brussels sprouts, cabbage, carrots, celery, cucumbers, eggplant, leafy greens, green beans, kale, leeks, mushrooms, okra, onions, peppers, radishes, spinach, tomatoes, turnips, and zucchini.

Choose fish or poultry more often and beef, pork, eggs, and cheese less often.

Use healthy fats, in particular Olive Oil. Other healthy fats can come from avocados, nuts and seeds. LIMIT SATURATED FAT!

*Saturated fat is found in animal products

What your patient sees:

Healthy Eating

Do you know...

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- How often should you eat?
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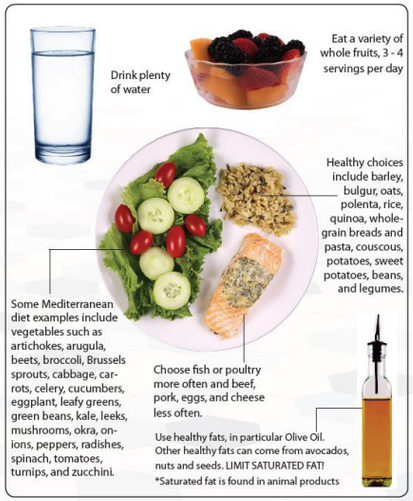

Checking for Understanding:

- States the importance of eating balanced meals of healthy foods throughout the day.
- Understands not to skip meals.
- Can identify foods that are made up of carbohydrates.
- Understands carbohydrates have the biggest impact on blood sugar.
- Can identify examples of foods that should be placed on each part of the plate.

Red Flags

- States he or she can never have anything "good" or favorite foods again.
- Advocates for use of fad diets.
- Eats out excessively.
- Drinks beverages containing sugar.
- Eats a lot of processed and refined foods.

What to teach your patient:

1. People with diabetes should eat three balanced meals of healthy foods from all the food groups. Food intake should be spread evenly throughout the day. You may want midday or evening snack depending on what medications you are taking.
2. Foods are made up of three types of nutrients: carbohydrates, protein, and fat. Carbohydrates supply energy to body cells and have the greatest impact on blood sugar. Foods that have carbohydrates are mainly starches, fruits, milk, and sweets. Starches include bread, pasta, starchy vegetables (corn, potatoes, peas and some beans), cereal, and grains. Sweets should be avoided or eaten less often because of their high carbohydrate content.
3. The Mediterranean-style Diet is one approach, effective for improving blood glucose, weight, cholesterol and blood pressure. Using a divided 9-inch plate can help control carbohydrate amount and portions.
4. Half the plate should contain non-starchy vegetables. One quarter will contain protein, . The last quarter should be whole grains, legumes and starches.
5. Another approach to controlling blood glucose is a low carbohydrate diet. Your provider or a dietitian can help determine which approach is most appropriate for you and how much carbohydrate you should have at each meal.
6. Whether you follow a low carbohydrate diet or the Mediterranean-style diet, dietary fiber is beneficial for diabetes, cardiovascular disease and weight loss. Increase dietary fiber slowly by adding whole grain products, fruits, vegetables and legumes. Leave the skin on vegetables and fruits, as it is high in fiber. Eat more fresh foods and less processed and refined foods.
7. Drink plenty of water. Beverages should be limited to sugar–free options. Avoid fruit juice and sweetened drinks.
8. For healthy weight: decrease fat intake and control portion sizes!
9. Always ask your health care provider if alcohol is OK. The Mediterranean diet includes 5 ounces of red wine daily.

The Nutrition Facts Label

Do you know...

- How reading nutrition facts panels (food labels) can help you to better manage your diabetes?
- What to do if your serving size is different from the serving size on the nutrition facts label?
- Why it is important to evaluate the grams of total carbohydrates, rather than only the grams of sugar?
- Where to find nutrition information for foods without packages (produce, seafood, bulk grains, etc.)?

Servings per container

Serving size

Nutrition Facts

8 servings per container

Serving size **2/3 cup (55g)**

Amount per serving

Calories **230**

	% Daily Value*
Total Fat 8g	**10%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**13%**
Dietary Fiber 4g	**14%**
Total Sugars 12g	
Includes 10g Added Sugars	**20%**
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Total Carbohydrate
Look at this number first.

Added Sugars
Limit added sugars to less than 10% per day.

Dietary Fiber
Fiber goes through the body undigested, so it does not raise blood glucose levels the way added sugar or starches will. Increase the dietary fiber 20 - 35 grams per day.

Ingredients are listed in descending order by weight, so the ingredient that weighs the most is listed first, and the ingredient that weighs the least is listed last.

Ingredients: Bulgur Wheat, Sauce (Water, Half and Half [Milk, Cream], Parmesan Cheese [Pasteurized Skim Milk, Cultures, Salt, Enzymes], Cheddar Cheese [Pasteurized Milk, Cultures, Salt, Enzymes], Olive Oil, Butter, Sugar, Xanthan Gum, Spice), Lentils, Corn, Green Beans, Red Beans, Potatoes.

Contains: Wheat, Milk

What your patient sees:

The Nutrition Facts Label

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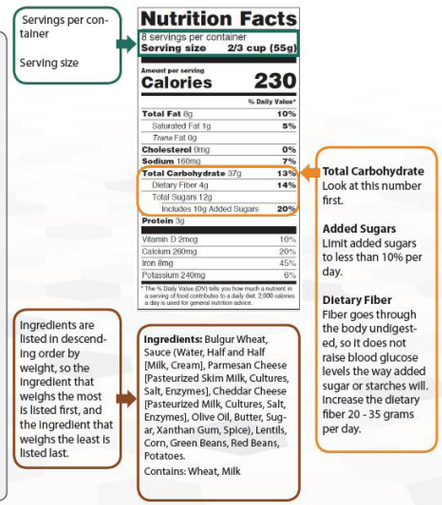


Checking for Understanding:

- Correctly identifies serving size, carbohydrate and fiber content, and added sugars as key points on label.
- Understands the difference between "total sugars" and "added sugars."
- Can identify foods to increase dietary fiber.
- Identifies healthy and unhealthy ingredients on the food label.

Red Flags

- Only counts sugars on label and not total carbohydrates.
- Often drinks sugary beverages.

What to teach your patient:

1. Read the nutrition facts labels on foods and beverages. Note the item's serving size and total carbohydrate. Serving size is based on the amount you might typically eat or drink at one time--it is not a recommendation of how much to eat. Remember it is the total carbohydrate that impacts blood glucose.

2. The nutrition facts label includes "Added sugars." These include sugars that are added during the processing of foods as well as sugars from syrups, honey, and concentrated fruit or vegetable juices. Consume less than 10 percent of your total daily calories from added sugar. This equals less than 50 grams of added sugar based on a 2,000/day calorie diet.

3. Dietary fiber is good for your blood sugar and overall health. Like sugars and starches, dietary fiber is a type of carbohydrate. However, unlike sugars and starches, the human body does not break down dietary fiber, so it does not contribute any calories and does not have the same effect on your blood glucose.
   - Make an effort to consume between 20-35 grams of fiber each day.
   - Add fiber to your diet by eating whole grain products, fruits, vegetables, and legumes. Increase your fiber intake gradually, and remember to drink 6-8 glasses of water per day to avoid constipation.

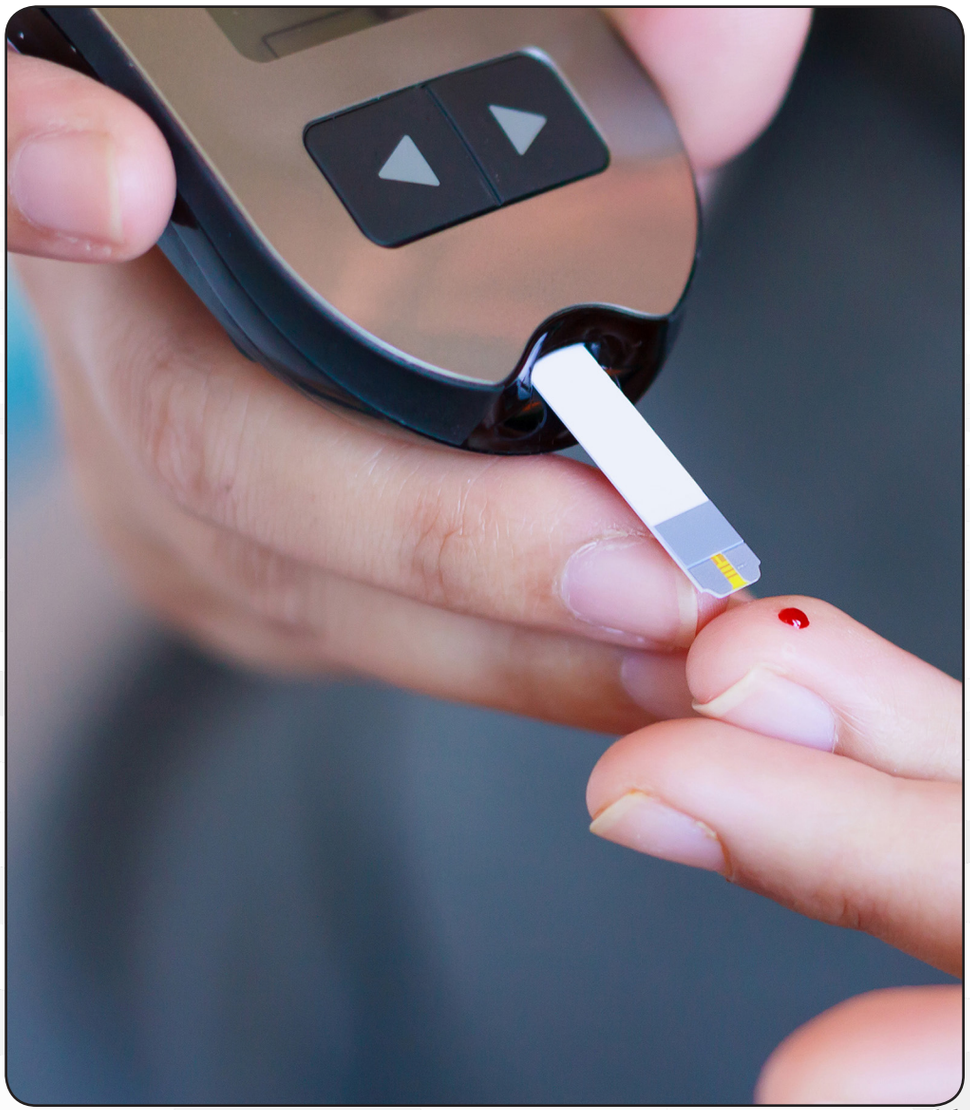
4. Ingredient list. Although the ingredient list is not part of the Nutrition Facts label, it is a helpful tool. Ingredients are listed in descending order by weight, so the ingredient that weighs the most is listed first, and the ingredient that weighs the least is listed last.
   - Look for foods with heart-healthy ingredients, such as whole-wheat flour, soy and oats. Monounsaturated fats (e.g., olive, canola or peanut oils) may also promote heart health.
   - Avoid unhealthy ingredients, such as hydrogenated or partially hydrogenated oil.
   - For foods without packages, look for nutrition information on a nearby sign. If you can't find a nutrition label for one of these foods, talk to the store manager. There are also many phone apps that can provide nutrition information. Talk to a dietitian or your health care team for suggestions.

5. Use the 5% and 20% quick label-reading guide for other nutrients on the label. This guide can show how a food fits into your daily diet. 5% Daily Value or less is low. 20% Daily value is high. For example, you may want to consume a lower sodium diet. Choose foods with a low % Daily Value for sodium if you want to consume less sodium. If you want to eat a high amount of a nutrient, choose foods with a 20% Daily value of that nutrient.

Checking Blood Sugar

Do you know...

- Why you need to check your blood sugar?
- How to check your blood sugar?
- Your blood glucose (sugar) target range?
- When and how often to check?
- How to get supplies?



What your patient sees:

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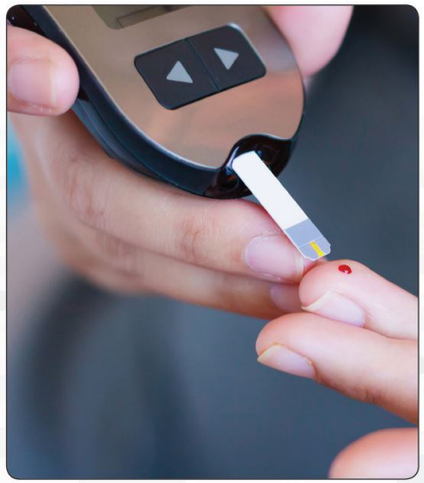


Checking for Understanding:

- Demonstrates BG testing procedure with proper technique.
- Verbalizes importance of regular checking.
- Can identify BG values that are in and out of target range.
- Has a meter and can state how to obtain supplies.

Red Flags

- Does not check blood sugar.
- Only checks at times blood sugar will be in target range.
- Cannot demonstrate proper procedure for checking blood sugar.
- Blood glucose values do not match HbA1c range.

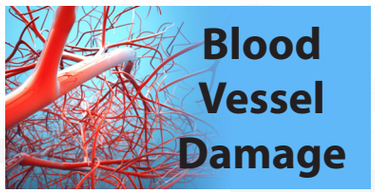
What to teach your patient:

1. It is important to check you blood glucose as directed so you will know if you are in your target range. Your blood sugar levels, which can be checked using a blood glucose meter, will tell you if your blood sugar is in good control or not. Talk with your provider about what is your safe target range of blood sugar.
2. All meters require a small sample of blood and the sample is easiest to obtain from the sides of your fingertips. Look at your meter instructions for alternative sites for blood sampling, such as the palm or forearm.
    - Clean the site before checking blood glucose by using soap and water, then drying well. Rubbing your hands together while washing will improve blood flow and make sampling easier.
    - Some meters need to be coded/calibrated with each new supply of test strips. Follow the manufacturer's instructions to code your meter if needed.
    - Do not share your meter with anyone else.
    - Change the lancet in your lancet device each time you test your blood sugar. Use a new test strip for each test.
    - Record your numbers. Take your meter and log book with you each time you visit your health care provider.
    - PATIENT TO DEMONSTRATE TESTING WITH OWN METER.
3. Your health care provider will discuss the target range that works best for you.
4. Your provider will tell you how often you should check your blood sugar. If you take insulin, you may be instructed to check your blood sugar just before you take your insulin so that you can adjust your dose if needed. It is a good idea to check your blood sugar before you go to bed each night and first thing in the morning. Other times to test may include just before a meal and/or two hours after.
5. Checking before you drive can help ensure your blood sugar is safe (at least 100 mg/dL) to operate a car. When you are sick you may need to check more often. Also, test your blood sugar if you are experiencing symptoms because the symptoms of high and low blood sugar can be similar.

High Blood Sugar
(Hyperglycemia)

Do you know...

- How high is too high?
- How to recognize high blood sugar?
- What causes high blood sugar?
- What to do about high blood sugar?



High blood sugar (hyperglycemia) can lead to a host of problems including:

- Retinopathy
- Heart attack
- Stroke
- Amputations
- Nephropathy
- Neuropathy

What your patient sees:

High Blood Sugar
(Hyperglycemia)

Do you know...

- How high is too high?
- How to recognize high blood sugar?
- What causes high blood sugar?
- What to do about high blood sugar?

High blood sugar (hyperglycemia) can lead to a host of problems including:

- Retinopathy
- Heart attack
- Stroke
- Amputations
- Nephropathy
- Neuropathy

Checking for Understanding:

- Can clearly identify own signs or symptoms of hyperglycemia.
- Can state reasons that his or her blood sugar may be high (not taking meds, eating too much, no activity, illness, etc.).
- Can state when to contact their provider for hyperglycemia.
- Can describe how to check ketones when needed.

Red Flags

- Cannot identify blood glucose values that are above target range.
- Believes it is better to keep blood glucose high, to avoid lows.
- Constant thirst, urination, and fatigue.

What to teach your patient:

1. High blood sugar is also called hyperglycemia, which means "too much sugar in the blood". Your provider will discuss your target ranges with you.
2. Some signs of high blood sugar include thirst, having to urinate frequently, hunger, dry skin or mouth, and slow healing of wounds. Some people also feel tired, nauseous, or have a headache.
3. If your blood sugar is higher than your target range, you may need adjustments in your medication, diet, activity level, or a combination of these factors. If you notice a trend of high blood sugars, you should contact your provider.
    - Illness and infection can also cause blood sugars to become too high. This is because the stress of illness and infection make the liver put extra sugar into your blood. Other kinds of stress can also cause your blood sugar to go higher. If you think a high blood sugar may be due to infection or illness, you need to contact your provider right away.
4. To prevent and treat high blood sugar, take your diabetes medication correctly every day. Your provider will tell you if your diabetes medication is the kind you can adjust at home on your own.
    - Exercising may help your blood sugar come down. Your provider can give you more information on whether and when you should exercise to lower your blood sugar. In cases of very high blood sugar, exercise may not be safe.
    - Carbohydrates in foods will raise blood sugar. If your pre-meal blood sugar is already high, eating fewer carbohydrates than you normally eat may help lower it.
    - If you have high blood sugars that are not coming down, you need to check ketone levels. You can measure ketone levels in the blood with certain meters, similar to how you check your blood sugar.

Low Blood Sugar
(Hypoglycemia)

Do you know...

- How low is too low?
- How to recognize low blood sugar?
- What causes low blood sugar?
- What to do about low blood sugar?
- How to use a glucagon kit?

Rule of 15

- Eat or drink 15 grams of carbohydrate
- Wait 15 minutes and check blood sugar
- If still low, eat or drink another 15 grams of carbohydrate
- Check again after 15 minutes

Glucose tablets, liquids and gels provide a pre-measured 15 gram dose of carbohydrate

3 to 4 ounces of juice is about 15 grams of carbohydrate

Glucagon kit (available by prescription only)

What your patient sees:

Low Blood Sugar
(Hypoglycemia)

Do you know...

- How low is too low?
- How to recognize low blood sugar?
- What causes low blood sugar?
- What to do about low blood sugar?
- How to use a glucagon kit?

Rule of 15

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- Check again after 15 minutes

Glucose tablets, liquids and gels provide a pre-measured 15 gram dose of carbohydrate

3 to 4 ounces of juice is about 15 grams of carbohydrate

Glucagon kit (available by prescription only)

20

Checking for Understanding:

- Can clearly identify own signs or symptoms of low blood sugar.
- Can state reasons that his or her blood sugar may drop (not eating, exercise, etc.).
- Has a plan to treat low blood sugar at all times & places.
- Confirms friends and family are aware of risks and know how to help with lows.

Red Flags

- Does not carry any glucose source despite being at risk for hypoglycemia.
- History of severe lows on insulin, but does not have a glucagon kit and/or does not have someone who knows how to use it.
- Purposely keeps blood sugar high to avoid hypoglycemia.

What to teach your patient:

1. Like blood sugar that is too high, blood sugar that is too low is also not good for the body. Low blood sugar is also called hypoglycemia, which means "too little sugar in the blood". Your provider will set your target ranges. Hypoglycemia is defined as blood sugar less than 70 mg/dL.

2. Common signs and symptoms of low blood sugar include sweating, shakiness, confusion, hunger, tiredness or weakness and even headache. It is important to identify your own personal signs and symptoms of hypoglycemia, since you may experience signs or symptoms besides those that have been named. If you feel strange in any way, check your blood sugar.

3. Low blood sugar is caused when there is more insulin in the blood than needed to balance out the sugar. This can be the result of too much of certain diabetes medications, not enough food (such as in skipping or delaying a meal) or greater-than-normal activity. Other issues like illness or kidney problems may also cause low blood sugar.

4. Treatment for hypoglycemia is based on the "Rule of 15". This rule reminds a person with low blood sugar to eat or drink 15 grams of quick carbs and then recheck the blood sugar in 15 minutes. The steps should be repeated if the blood sugar is still less than 70 mg/dL.

    - Some items that contain about 15 grams of quick carbs include ½ cup (4 oz.) of fruit juice or regular soda, 4 glucose tablets, 1 tube of glucose gel, about 5 pieces of hard candy or 10 jelly beans.

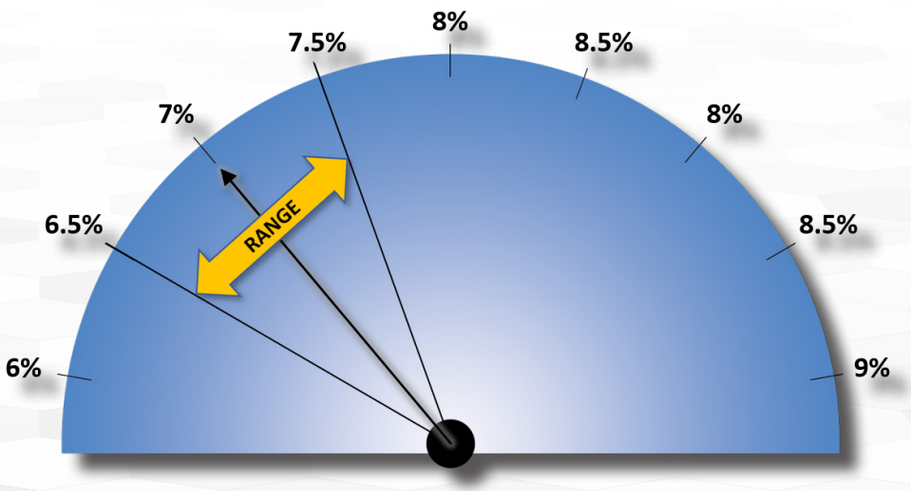
5. In extreme case of hypoglycemia, it is possible to become unconscious. In such cases, family or friends should not attempt to give you anything by mouth. A better option is to use a glucagon kit. Glucagon is a hormone that is given by injection. It signals the liver to release stored glucose into the blood stream. To get this kit you need a prescription. Instructions are shown in picture form on the inside of the kit, but it is a good idea to have your "support person" (family member or friend) look over the kit before an emergency arises. If you do have to receive glucagon, you'll need a snack right afterward as the glucose from your liver may not last long. Also, be sure to refill your prescription for glucagon if you do use it, so that you will always have an emergency kit available.

Hemoglobin A1c

Do you know...

- Why your hemoglobin A1c (HbA1c) level is used to monitor blood glucose control over the past 3 months?
- Why your HbA1c may vary and reflect a range?
- What factors may cause your HbA1c to vary?
- Why you and your health care provider should **both discuss** and agree on your target HbA1c?

Hemoglobin A1c (HbA1c) reflects your average blood sugar over the past three months.



Talk with your healthcare provider to make sure that you both agree on your target HbA1c to help avoid problems with dangerous low blood sugars

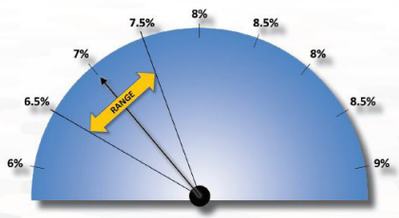
What your patient sees:

Hemoglobin A1c

Do you know...

- Why your hemoglobin A1c (HbA1c) level is used to monitor blood glucose control over the past 3 months?
- Why your HbA1c may vary and reflect a range?
- What factors may cause your HbA1c to vary?
- Why you and your health care provider should **both discuss** and agree on your target HbA1c?

Hemoglobin A1c (HbA1c) reflects your average blood sugar over the past three months.



Talk with your healthcare provider to make sure that you both agree on your target HbA1c to help avoid problems with dangerous low blood sugars

22

Checking for Understanding:

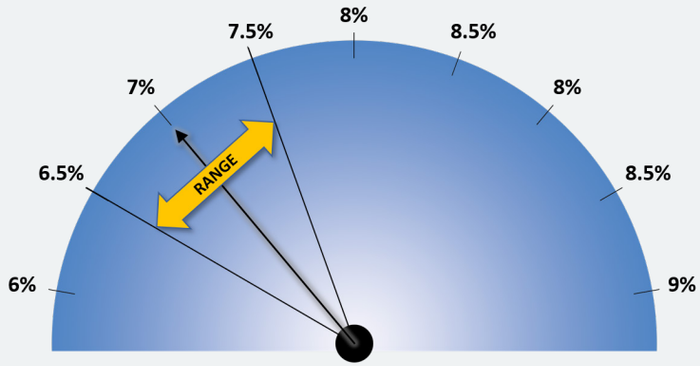
- Can accurately state that the HbA1c is a test that reflects average blood sugar over the past three months.
- Verbalizes understanding that HbA1c test can vary and too low a reading can reflect dangerous low blood sugars.
- Engages in desire to discuss safe HbA1c range with provider.

Red Flags

- Does not know HbA1c test measures average blood glucose for 3 months.
- Does not know that too low an HbA1c test can mean the possibility of low blood sugars.
- Expresses the belief that only the provider sets an HbA1c goal without patient input.
- Does not understand that all lab tests have some error.

What to teach your patient:

1. What You Should Know About the Hemoglobin A1c (HbA1c) test.
2. Consider a speed dial on a car is similar to a HbA1c test result. Speed dials are not 100% accurate and can be off one way or the other. You could be going faster than the speed dial says or slower (within an amount of error). For example, when the speed dial reads "35 mph" it might be 35 plus or minus 3 mph. To be on the safe side, you decide to drive at 32 mph.
3. Lab tests like the HbA1c vary, like the speed dial example. The HbA1c is a test that reflects average blood sugar over the past three months. The results can be off one way or the other. Your real HbA1C could be lower than what the lab test says, or higher. Every lab test has some amount of error. The speed dial graphic below shows how this might apply to your HbA1c level.



4. The speed dial says 7.0. However, many labs use a test where the results can be plus or minus 0.5%. Even though the test says your result is 7.0, your real HbA1c could be anything between 6.5% and 7.5%. Most of the time, this amount of error is not that important. However, if you are at risk for low blood sugar (hypoglycemia), it is important to know that your glucose levels may be lower than what the HbA1c shows.
5. HbA1c is influenced by many factors, including age, race/ethnicity and anemia/hemoglobinopathies.
6. Talk with your healthcare provider to make sure that you both agree on your target HbA1c to avoid problems with dangerous low blood sugars.

Diabetes Medications

Do you know...

- What diabetes medications you take?
- How to get your medication?
- What your doses are?
- When to take it?
- Possible side effects?
- To contact your health care team if you have repeated lows?

What your patient sees:

Diabetes Medications

Do you know...

- What diabetes medications you take?
- How to get your medication?
- What your doses are?
- When to take it?
- Possible side effects?
- To contact your health care team if you have repeated lows?

Checking for Understanding:

- Associates name brand with generic name.
- Can explain how the medication lowers blood sugar.
- Recognizes common side effects of the medication.
- Knows the correct time to take medication and what to do if a dose is missed.
- Has a plan for timely refills.

Red Flags

- Does not consider possible side effects (hypoglycemia).
- Does not remember doses or states inappropriate times.
- States will skip medications at inappropriate times.
- Is not sure where or how to get medication.
- Forgets medications often when eating out.

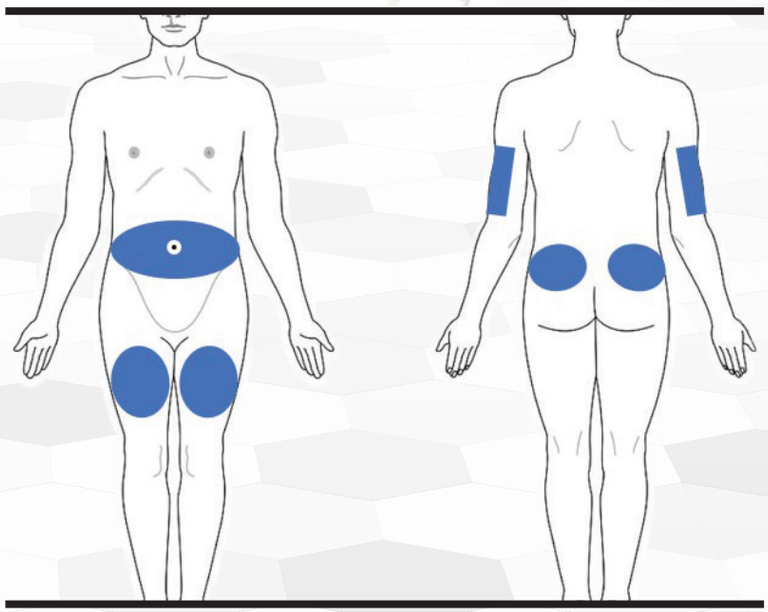
What to teach your patient:

1. GIVE THE PATIENT AN APPROPRIATE MEDICATION HANDOUT; FILL IN ANY APPLICABLE INFORMATION IF NEEDED.
2. FOCUS ON ACTION, SIDE EFFECTS AND CONSIDERATIONS OF ONLY THE MEDICATIONS THE PATIENT IS PRESCRIBED (REFER TO MEDICATION HANDOUT).
3. ANSWERS TO "DO YOU KNOW" QUESTIONS WILL BE SPECIFIC TO THE PATIENT'S MEDICATION AND SITUATION.
4. There are many different medications for diabetes. They work in different ways. Medications are grouped in "classes" according to how they lower blood sugar in the body.
5. Be aware of possible side effects. If hypoglycemia is a possible side effect, be sure that you time your meals and medication appropriately. If you notice that you experience hypoglycemia more than one time, notify your provider as you may need a different medication or dose.
6. If you do experience negative side effects, talk to your provider. There may be a better medication option for you.
7. Certain medications may not be appropriate for all patients. Let your provider know about any medical conditions you have, such as kidney, liver, or heart problems. Also, talk to your provider about other medications you are taking so that he or she can select a diabetes medication that will not interfere with your other medications.
8. Do not change your dose or skip medication without checking in with your provider.
9. Use a "reminder" system to help you to remember to take your medication at the correct times (pill organizer, calendar, checklist, alert or alarm on your mobile device).
10. To prevent running out of your medication, have a plan to get refills. Many pharmacies will deliver your medication or call you to remind you when it is time for a refill.

Taking Your Insulin

Do you know...

- What kind(s) of insulin you take?
- When to take insulin (and when not to take it)?
- How much to take?
- How to take?
- Where you have enough fat for the best injection site?
- How to store insulin and how long you can use it?



Ask your healthcare professional where the best place is for you to inject your insulin.

What your patient sees:

Taking Your Insulin

Do you know...

- What kind(s) of insulin you take?
- When to take insulin (and when not to take it)?
- How much to take?
- How to take?
- Where you have enough fat for the best injection site?
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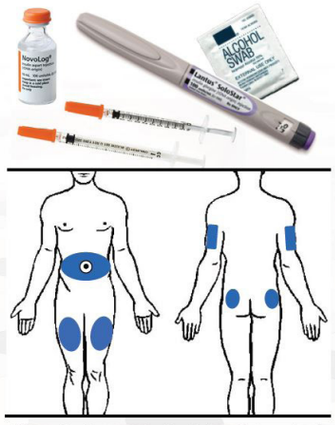


Ask your healthcare professional where the best place is for you to inject your insulin.

Checking for Understanding:

- Correctly states prescribed insulin dose.
- Explains duration of action in general terms.
- Verbalizes understanding that basal insulin should not be skipped if not eating.
- Demonstrates insulin injection with pen or syringe using proper technique.
- Verbalizes importance of rotating injection sites.

Red Flags

- Mixes up names of insulin.
- Does not remember doses.
- States will skip insulin at inappropriate times.
- Misses steps in demonstrating insulin injection technique.
- States using insulin beyond expiration date or usage time.

What to teach your patient:

1. GIVE THE PATIENT APPROPRIATE INSULIN HANDOUTS: INJECTION TECHNIQUES, INSULIN OVERVIEW, ETC.
2. There are different kinds of insulin. Some act over a full day and others give a quick burst to match what you are eating.
3. Long-acting, or "basal" insulin (i.e. Lantus®), works all day long but is generally not enough to control blood sugar when you eat. Therefore, you usually do not skip this insulin if you have to skip a meal. Basal insulin should be taken at the same time every day.
4. Quick-acting insulin, or "bolus" insulin (i.e. NovoLog® or Regular), gets into your blood stream quickly and last for a few hours, just like your food. It is therefore a good match for mealtimes. Take NovoLog® 5-15 min. before your meal and take Regular 30 min. before. If you skip or delay a meal, you should skip or delay your bolus insulin as well.
5. Quick-acting insulin can also be used to quickly bring down a high blood sugar. This is called "correction insulin". Your provider will tell you if, when and how much correction insulin you should take.
6. Insulin should be stored in the refrigerator before it is opened. It should never be frozen. After you have begun using a pen or vial, it should be kept at room temperature. Avoid storing insulin vials and pens in direct sunlight or above the stove.
7. Always check the packaging for an expiration date and to see how long you can use it once it has been opened. Most insulin should be thrown away 28 days after first use; some are even less.
8. Before injecting your insulin, make sure the site is clean. Rotate sites to prevent scarring or bulges in the skin that prevents insulin from working well. The diagram shows some appropriate injection sites. Be sure the site you pick would allow you to pinch an inch, so the insulin goes into fat and not muscle.
9. Do not reuse or recap syringes or pen needles. Dispose of used needles in accordance with the laws for your state.
10. Anyone taking insulin should be prepared to treat hypoglycemia.
11. Demonstrate how you would give an insulin injection. (ASK PATIENT TO DEMONSTRATE INSULIN INJECTION)

Sick Days

Do you know...

- How often to check your blood sugar when sick?
- How to take your diabetes medicine if you are sick or not eating?
- What foods you can eat if you are sick?
- When to call your health care provider?
- When and how to check for ketones?

What your patient sees:

Sick Days

Do you know...

- How often to check your blood sugar when sick?
- How to take your diabetes medicine if you are sick or not eating?
- What foods you can eat if you are sick?
- When to call your health care provider?
- When and how to check for ketones?

Checking for Understanding:

- Can explain when and how to check urine or blood ketones.
- Lists signs of dehydration.
- States the importance of taking diabetes medication.
- States alternative foods for sick days.
- Verbalizes understanding of when to call the provider or seek emergency medical care.

Red Flags

- States he/she will not take any diabetes medication if sick.
- States he/she checks blood sugar less often when sick.
- Cannot state association between illness and high blood sugar.
- Cannot list actions to prevent dehydration.

What to teach your patient:

1. Check blood sugar more often when ill, especially when you are not eating. Check blood sugar about every four hours.

2. Do not stop taking all your diabetes medication when you are sick, unless instructed to do so by your provider. Illness usually causes high blood sugar. Therefore, you will likely need all or part of your diabetes medication, even if you are not eating.

   People with Type 1 diabetes should never skip basal insulin even if not eating. Your provider may recommend a different dose, but skipping it all together can quickly lead to higher blood sugars.

3. It is important to eat when sick. If you are nauseous and do not feel like eating, you can substitute "sick day" food and drinks such as regular ginger ale, regular Jello®, Gatorade®, applesauce, crackers, yogurt, or popsicles.

4. Contact your provider if you have a high fever, are vomiting or have diarrhea for more than a day, have changes in your vision, or experience any major change in how you feel.

   If you are unable to keep any fluids down, have signs of dehydration (discussed below), or if you have any trouble breathing or any change in your mental status, you should seek medical help immediately.

5. For repeated high blood sugars above 250 mg/dl, you may need to check urine or blood ketones. Ketones are an acid that is left over when the body burns fat instead of glucose. If there are ketones in the blood or urine, it means that the insulin is not working to convert glucose to energy in the cells. High ketone levels can make you very sick. You should call your provider if you have blood or urine ketones, especially if you have type 1 diabetes. If you are unable to reach your provider and you have high blood sugar and high ketones, you should go to the emergency room.

6. One of the most important goals when sick is to prevent dehydration. Signs that you may be dehydrated include dry mouth, thirst, decreased urination, very dark urine, dry flushed skin that does not snap back when pinched (called "tenting").

7. To prevent dehydration, take small sips of fluid every 10 to 15 minutes. You should drink a total of about 1 cup (8 oz.) of fluid per hour when you are sick.

Follow Up!

Do you know...

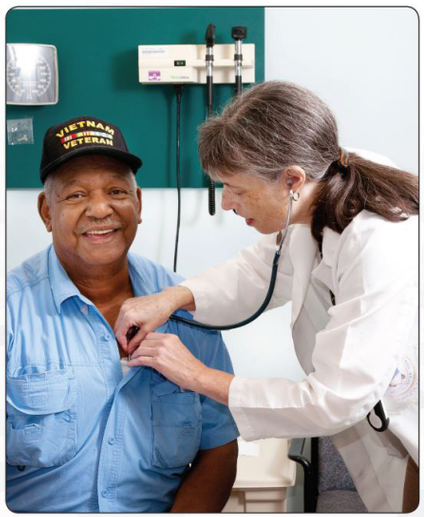
- When you should see your provider?
- What things to discuss with your provider?
- When to call for help?
- Who to call if you have problems?
- How to follow-up for more diabetes education?
- Your Hemoglobin A1c goal?

What your patient sees:

Follow Up!

Do you know...

- When you should see your provider?
- What things to discuss with your provider?
- When to call for help?
- Who to call if you have problems?
- How to follow-up for more diabetes education?
- Your Hemoglobin A1c goal?



Checking for Understanding:

- Can name situations in which medical attention should be sought.
- Can show you the name and number of whom to call for help.
- Verbalizes importance of following up with provider.
- Can repeat when and where to get further diabetes education.

Red Flags

- States he/she has "heard it all before" or "already knows it all".
- Has no interest in managing his/her diabetes.
- Has no regular provider with which to follow up.
- Seems unclear on when and who to call for help.

What to teach your patient:

1. If you have been hospitalized, you should follow up with the provider who helps you manage your diabetes soon after discharge.
2. Talk to your provider and healthcare team about your diabetes control, that is, your blood sugars, especially high and low blood sugars. Discuss your A1c and any other lab values. Talk to the care team about medications and any problems you may be having, including infections or wounds that won't heal. Ongoing contact with your health care team through virtual or tele-health visits can also be beneficial.
3. PROVIDE PATIENT WITH NUMBER TO CALL IN CASE OF EMERGENCY HEALTH SITUATIONS (EXCESSIVE HYPERGLYCEMIA, REPEAT HYPOGLYCEMIA, SIGNS OF INFECTION, ETC).
4. A family member that lives with you should be informed about your diabetes and know how to help you if you need it. If you live alone, make sure you have a loved one, neighbor or friend you can call who lives close by, in case you need help. Participating in peer support programs, including online groups or chat communities, may increase your awareness of disease processes, and decrease the feeling of isolation often associated with a chronic medical condition.
5. As a person with diabetes, YOU have to be your own best advocate! Being an advocate for yourself means having a good knowledge of the disease, your treatment plan, and how diabetes affects you. It is important to have these diabetes self-management skills, which support you in working with your healthcare team. This process of shared decision making allows more control for you, and supports the direction of your diabetes care, and achieve the goals you agree upon.
6. Typically, only "survival skills education" is provided in the hospital or when you are first diagnosed. But there is a lot more you need to know about diabetes. You should seek diabetes education soon after diagnosis, and every so often as a need arises. It is important to maintain current understanding and self-management skills. Even if you have had diabetes education in the past, the science of diabetes is always changing, and education refreshers can have great benefits!
7. Specialty trained diabetes educators (CDEs) give patients the support and tools they need to manage their diabetes. They are eager to help with patients' individual diabetes management needs.

NOTE: Patients may need a referral from their provider for outpatient education. Also, insurance coverage for diabetes education can vary. The center where diabetes education is offered can assist patients with the process of obtaining outpatient education.

Links to More Information for the Person with Diabetes

- **Getting started with My Plate**, US Department of Agriculture (2017)
  http://www.choosemyplate.gov/
- **Low Blood Glucose**, US Department of Health & Human Services (2016)
  https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/low-blood-glucose-hypoglycemia
- **15-15 Rule**, National Institutes of Health. US National Library of Medicine (2015)
  https://www.nlm.nih.gov/medlineplus/ency/imagepages/19815.htm
- **National Institute of Diabetes and Digestive and Kidney Diseases**
  https://www.niddk.nih.gov/health-information/diabetes
- **Centers for Disease Control and Prevention (Division of Diabetes Translation)**
  https://www.cdc.gov/diabetes/home/index.html

- End of Patient Presentation -

What your patient sees:

Links to More Information for the Person with Diabetes

- **Getting started with My Plate**, US Department of Agriculture (2017) http://www.choosemyplate.gov/
- **Low Blood Glucose**, US Department of Health & Human Services (2016) https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/low-blood-glucose-hypoglycemia
- **15-15 Rule**, National Institutes of Health. US National Library of Medicine (2015) https://www.nlm.nih.gov/medlineplus/ency/imagepages/19815.htm
- **National Institute of Diabetes and Digestive and Kidney Diseases** https://www.niddk.nih.gov/health-information/diabetes
- **Centers for Disease Control and Prevention (Division of Diabetes Translation)** https://www.cdc.gov/diabetes/home/index.html

- End of Patient Presentation -

32

Checking for Understanding:

- Verbalizes understanding that not all online diabetes-related information is accurate and reliable.
- Knows to discuss online information with health care provider(s).
- Recognizes .gov and .edu websites as generally good sources of information.
- Understands how to evaluate online sources of diabetes information.

Red Flags

- Thinks all online information is accurate and reliable.
- Has equal (or more) trust in internet sources versus their health care team.
- Does not differentiate between .gov, .edu, and .com web addresses.

What to teach your patient:

1. Some online sources of diabetes-related information are trustworthy, but others are confusing, inaccurate, or misleading, or they may be missing important information.
2. Don't rely completely on online resources when making decisions about your health. If you have questions about diabetes-related information found online, discuss it with your health care provider.
3. Ask yourself these 5 questions when checking out online sources of health information:
   - Who runs or created the site or app? Can you trust them?
   - What is the site or app promising or offering? Do its claims seem too good to be true?
   - When was its information written or reviewed? Is it up-to-date?
   - Where does the information come from? Is it based on scientific research?
   - Why does the site or app exist? Is it selling something?
4. Web addresses often change without notice. If a web address no longer works, use key words to search for the information using Internet Explorer, Google Chrome, or other web browsers.
5. A Web address that ends in ".gov" means it's a government-sponsored site; ".edu" indicates an educational institution. These are generally regarded as good sources of information.
6. The following websites (see web addresses on previous page) are excellent resources that may help you to better manage your diabetes:
   - Getting started with My Plate, US Department of Agriculture (2017)
   - Low Blood Glucose, US Department of Health & Human Services (2016)
   - 15-15 Rule, National Institutes of Health. US National Library of Medicine (2015)
   - National Institute of Diabetes and Digestive and Kidney Diseases
   - Centers for Disease Control and Prevention (Division of Diabetes Translation)

Additional Information for the Educator

About this Flip Chart

- This tool should be tailored to fit the unique needs of your patient; he/she may not need nor be ready for all information.
- The "What to Teach the Patient" sections may be summarized by you, the qualified educator.
- The flip chart is not intended as comprehensive diabetes self-management education (DSME).
- Originally developed by T. Swigert, MSN, RN, CDE and staff at The Diabetes Center of Excellence, Wilford Hall Medical Center, Lackland AFB, TX, 2011.
- Updated in 2018 by VA and DoD subject matter experts.

Provider Websites

VA/DoD Diabetes CPG and Toolkit

http://www.healthquality.va.gov

https://www.qmo.amedd.army.mil

National Diabetes Education Program

https://www.niddk.nih.gov/health-information/communication-programs/ndep

Centers for Disease Control: Diabetes

https://www.cdc.gov/diabetes/home/index.html

National Institute of Diabetes and Digestive and Kidney Diseases

https://www.niddk.nih.gov/health-information/diabetes

Agency for Healthcare Research and Quality

https://www.ahrq.gov/professionals/education/curriculum-tools/shareddecisionmaking/tools/index.html

References

- See the VA/DoD Clinical Practice Guidelines, Management of Diabetes Mellitus in Primary Care (2017), for further references.