Diabetes Education Prompt Deck
As a diabetes educator, it is your role to communicate large amounts of complex information to patients with diabetes and help them learn the skills needed to manage their disease on a daily basis. Diabetes educators work in a variety of settings and teach in many different formats—but one thing is the same: **the need for useful, versatile, high-quality teaching tools.**

To accompany this tool and guide, AADE also developed a patient-friendly website with more information about diabetes complications and self-care behaviors. These tools and information, along with interactive patient handouts can also be found at:

*diabeteseducator.org/tipsheets*

*and diabeteseducator.org/goaltracker*
The Prompt Deck is organized into 8 categories:
1. General Diabetes Information
2. Healthy Eating
3. Being Active
4. Monitoring
5. Taking Medication
6. Problem Solving
7. Reducing Risks
8. Healthy Coping

The categories are color coded and each includes 3 types of prompts:

📞 Discussion
❓ Q&A
⭐ Activity

The primary purpose of the Diabetes Education Prompt Deck is to provide diabetes educators with a portable, versatile tool to use when discussing healthy self-care behaviors with patients in one-on-one or group settings.
The **Prompt Deck** can be used in a variety of ways depending on the structure of your classes and your preferred teaching method:

- When appropriate, ask volunteers to draw from the deck in the center of a table and read each prompt aloud (but remember that not everyone is comfortable reading in a group). The cards can be sorted by category and placed in different piles if the educator is using a more structured curriculum.
- The educator can draw and read the prompts while displaying the cards (i.e., holding it up, placing it on the table, using magnets, tape, or pushpins to affix to a wall) in order to reach both the auditory and visual learners in the group.
- After the bulk of the diabetes education information has been delivered, sort the cards and use the Q&A and Discussion prompts as an informal learning assessment.
- Use the deck in any way that will be useful!

This *Educator Guide* is meant to be a handy resource when using the deck. It offers some useful commentary, tips, and notes to think about when using the Prompt Deck in your sessions. However, please note that it is not exhaustive and does not provide all the answers or cover all the topics that you will address in your diabetes education classes.

*The Diabetes Education Prompt Deck and Educator Guide were created with the input from diabetes educators currently in practice and reflect the collected wisdom of multiple disciplines.*
General Diabetes Information

⚠️ Q&A: What health problems are people with diabetes at risk for?
High blood pressure, abnormal lipid levels (high levels of LDL and total cholesterol and low levels of HDL and high triglycerides), heart disease, circulation problems, stroke, diabetic kidney disease, diabetic eye disease, depression, erectile dysfunction, and nerve problems.

⚠️ Q&A: What is diabetes? What are some differences between type 1 and type 2 diabetes?
Diabetes is a group of diseases characterized by high blood glucose levels that result from defects in the body’s ability to produce and/or use insulin.

**Type 1 diabetes** is the result of destruction of the beta cells in the pancreas. This leads to insulin deficiency because the pancreas no longer produces insulin.

**Type 2 diabetes** is from a loss of insulin production and an increase in insulin resistance where the body is not able to use the insulin that is produced.

*Note to Educator:* A more patient-friendly definition could be: Diabetes is a medical condition that prevents your body from using food normally. If you have type 1 diabetes, your body is no longer making insulin; type 2 is where your body may still make insulin, but it doesn’t work like it should. In both types, sugar can build up in the blood causing diabetes and putting you at risk for a number of other complications.
Discussion:

What are you most concerned about with your diabetes?
Possible answers include: the challenges of healthy eating, exercising, taking medications, keeping up with blood glucose checks, multiple healthcare visits, the cost of diabetes management, or the development of other health complications.

Note to Educator: Many people have family members that have had complications, amputations, or have died from diabetes. This can create fear for them. If they bring this topic up, it may be helpful to discuss the advances that have been made in diabetes management including improved ability to monitor blood glucose, better medication options, and more advanced testing methods to detect and potentially prevent the onset, or progression, of complications.

Some patients may be in denial about their diagnosis. They may ask, “How can I get rid of diabetes?” or “I think my labs were a mistake. How accurate are the tests?” or “If I lose some weight will I have to take this medication?”

Let the participants know the importance of continued diabetes education to help them deal with the day-to-day challenges of diabetes. Participation in the class can help them develop successful strategies. Also, remind participants that it isn’t necessary to be perfect or to take on all of the issues of diabetes care at once. Working on one or two changes at a time, focusing on what is most important to them, will likely create success. Emphasize that diabetes management is a lifelong process.
Activity:
Write down three words that come to mind when you think of diabetes. Possible answers will vary.

Note to Educator: Ask volunteers to share a word and why they thought of it. Ask if others have the same feelings.

If the majority of words associated with diabetes are negative, ask participants: “Does anyone have a positive word about diabetes? Has the diagnosis of diabetes created any healthy changes in your life?”
Healthy Eating

🎉 Discussion:
What are some challenges you face when trying to eat healthy?
Possible answers include: portion control, snacking between meals and at night; eating when feeling depressed or stressed; difficulty when eating out, going to parties, and around the holidays; challenges from friends and family members telling them what to eat and what not to eat; and lack of will power.

Note to Educator: Ask if others have the same challenges and if anyone has had successes dealing with these challenges. What have participants done in social situations, at restaurants, and during the holidays to promote success?

🎉 Discussion:
What food-related advice have you received from family and friends since being diagnosed? Have you heard anything that might be a myth or not true?
Possible answers include: People with diabetes can’t have sugar or “white foods”; can’t eat pizza or fruit or desserts; should only note the amount of sugar on the food label; can eat as much as they want of sugar-free and low fat foods; and starches don’t affect blood sugars as much as sugars do.

Note to Educator: Follow up this discussion with asking, “How do you feel when someone tells you how to eat? Do you take their advice at face value, or do you do some research to find out if it’s true?”

🎉 Discussion:
How do you know how many carbohydrates you are eating?
Possible answers include: measuring, eyeballing, the plate method, exchange lists, carbohydrate counting and others.
Note to Educator: It is important to monitor carbohydrate intake with a method that works for each individual. You may encourage eating the same amount of carbohydrate at each meal initially. Also, encourage measuring and weighing foods initially and every few months to recheck amounts.

Many people will start with a simple method (like dividing their plate and filling ½ with non-starchy vegetables, ¼ with lean meat, and ¼ starch), progress to exchange lists, and then move on to carbohydrate counting. It is not necessary for a person to move to a more advanced approach if they are doing well with a particular method. Fine-tuning with use of the glycemic index may be beneficial for some people.

⭐ Activity:
Look at these two food labels. Which frozen meal is a better option based on the total calories, total carbohydrates, protein and fat? Why?
Answer: The frozen meal that has less carbs, less fat, fewer or no saturated or trans fats, and lower total calories would be the better option. Why? Fewer calories promote weight loss, less total carbohydrates keep blood glucose in target ranges, lower sodium helps reduce blood pressure, lower fat helps weight management, promotes healthy cholesterol levels, and helps prevent heart disease and other complications of diabetes.

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
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<tr>
<td>Amount Per Serving</td>
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<tr>
<td>Calories 220</td>
<td>Calories 310</td>
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<tr>
<td>Calories from Fat 35</td>
<td>Calories from Fat 70</td>
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<tr>
<td>Total Fat 4g</td>
<td>Total Fat 7g</td>
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<tr>
<td>Saturated Fat 2g</td>
<td>Saturated Fat 3g</td>
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<td>Trans Fat 0g</td>
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<td>Cholesterol 10mg</td>
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<tr>
<td>Sodium 590mg</td>
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<td>Potassium 780mg</td>
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<td>Total Carbohydrate 35g</td>
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<tr>
<td>Dietary Fiber 4g</td>
<td>Dietary Fiber 4g</td>
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<td>Sugars 4g</td>
<td>Sugars 6g</td>
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<td>Protein 9g</td>
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**Note to Educator:** These sample labels are meant to be a starting point for the topic of label reading. Use your own labels and teaching aids to further explore the topic and teach this skill.

One point to emphasize is the differences between the total carbohydrates listed versus the sugars listed on the label. Why do we look at total carbohydrates rather than sugars? Remind participants that once in the body, all carbohydrates increase blood glucose levels whether they are from sugars or complex carbohydrates. Sugars are included in the total carbohydrates so it is not necessary to look at sugars separately, but it might be good to point out that if an item is mostly sugar, then it is not very nutrient dense.

Ask if your patients have seen sugar alcohols listed on a food label. Sugar alcohols are a type of artificial sweetener where half is digested as carbohydrate and the other half passes through undigested, causing a lower impact on blood sugars than table sugar. Sugar alcohols are mostly found in chewing gums and sugar-free foods. Some people may experience a laxative effect when consuming sugar alcohols.
Activity:
On a piece of paper, draw a circle. Imagine that this is your dinner plate. Now, either write in or draw what you would normally eat for dinner and how much space it takes up on the plate.
Take a moment to ask participants to share their drawings or talk about their typical dinners. Use this prompt as a starting point to discuss the overall size of the plate and how portion control is important in weight and blood glucose management.

One easy, effective method to help participants visualize a healthy, balanced meal is to draw a dinner plate and divide it into fourths. Fill in the plates with:

1/2 of the plate (2 sections) should include non-starchy vegetables. Ask for examples (i.e., broccoli and cauliflower; lettuce and other green, leafy vegetables; cucumbers; green and wax beans; celery; peppers; mushrooms; tomato).

1/4 of the plate filled with healthy starches including whole-grains and starchy vegetables. Ask for healthy examples (i.e., whole wheat breads, cereals, and pastas; rice; potatoes, sweet potatoes, corn, squash, and peas; and low-fat crackers).

1/4 to 1/3 of the plate filled with meats and other proteins. Ask for healthy examples (i.e., skinless chicken and turkey; lean beef and pork; fish and other seafood).
Activity:
Which of these foods is all or mostly carbohydrate, protein, or fat?

Answer: The apple is mostly carbohydrate, the turkey leg is protein, and the butter is fat.

Note to Educator: Ask participants to give examples of other foods that are mostly carbohydrate, protein, or fat.

Use food models, food packages, or pictures of various foods to further expand this topic.

Become familiar with foods commonly eaten by patients of cultural/ethnic groups other than your own, and be sure to update your lists and teaching aids as needed to reflect your patients’ food choices.

Do several different combinations of 1 carb, 1 protein, and 1 fat. After they are correctly identified, ask which has the greatest impact on blood glucose to reinforce the importance of knowing which foods have carbohydrate.

Also, ask if there is a food that has saturated fat and note how it could negatively impact cholesterol. This would include high fat meats and foods that are animal based. ADA guidelines recommend keeping saturated fats <7% of total calories and minimizing intake of trans fats.

*A patient resource is available at diabeteseducator.org/healthy-eating
Being Active

⚠️ Q&A:
True or False? You are not working hard enough if you can carry on a conversation while being physically active.
False. Most people with diabetes (and people without diabetes) will choose to do physical activities at a moderate pace, which can provide important health benefits. This can be checked by performing the “talk test” which is done by trying to speak a sentence while exercising. If a person cannot speak without being short of breath, they are exercising at a vigorous pace. At a moderate pace, someone can talk during exercise, but not sing.

Note to Educator: Recommend that all patients check with their primary care provider before beginning any exercise. Some patients may need a stress test prior to beginning exercise.
*A patient resource is available at diabeteseducator.org/being-active

💡 Discussion:
What is physical activity? Why is it important to diabetes management? Physical activity is any movement performed by the muscles that uses energy (burns calories). This can include housework, yard work, child care, job activities, recreational activities, and exercise. Exercise is a planned physical activity that is done with a goal of improved fitness (cardiovascular function, strength, flexibility, balance, to lower blood glucose, to burn calories, etc.).

Increasing physical activity has many benefits for people with diabetes. The ADA’s Choose to Live: Your Diabetes Survival Guide lists these effects of physical activity:
• Lowers blood glucose, blood pressure and cholesterol.
• Lowers the risk for heart disease and stroke.
• Relieves stress.
• Helps insulin work better.
• Strengthens the heart, muscles, and bones.
• Improves blood circulation and tones muscles.
• Keeps the body and joints flexible.
Note to Educator: Physical activity and exercise can range from easy to hard. Encourage a level that provides health benefits, and set a goal that participants will feel is attainable. The best goal is whatever one will do routinely to help improve their diabetes control. For those who don’t or can’t do exercise, encourage increasing daily activities and emphasize that there are many activities that they can do. For those that cannot stand or walk very long, you can encourage them to learn exercises while seated in a chair.

Encourage all patients to check with their primary care provider before beginning any exercise program.

Discussion:
How much physical activity is recommended for those with diabetes? How much do you do? What have you really enjoyed doing in the past?

The recommendation for physical activity with type 2 diabetes is 150 minutes per week of moderate-intensity aerobic physical activity and/or at least 90 minutes of vigorous aerobic activity per week. This should be done over at least 3 days with no more than 2 days in a row without physical activity.

This can be done in bouts of 10 minutes or more during the day to total 150 minutes per week. Many people will do 30 minutes, 5 days per week. Moderate-intensity physical activity is defined as ballroom dancing, biking, light gardening, tennis, brisk walk, and water aerobics. Vigorous-intensity physical activity is defined as fast dancing, heavy gardening, hiking uphill, martial arts, jogging, basketball, and swimming laps.

Also, people with type 2 diabetes who don’t have contraindications should do resistance exercises 3 times per week. Those with unstable heart conditions or unstable hypertension or with advanced diabetic retinopathy should be evaluated by their provider before participating in resistance training.
Note to Educator: Many individuals have negative associations with exercise, and report that it is often difficult to incorporate it into their lifestyle. Try emphasizing that they can start small and build from there. Also, encourage participants to adopt activities that they will enjoy and can do with friends or family (i.e., walking, bike riding, gardening, tennis, dancing, or volunteering for a community clean-up activity).

Encourage all patients to check with their primary care provider before beginning any exercise program.

⭐ Activity:
Write down one physical activity that you want to try. Write down 2 (or more) things that might prevent you from doing it. Now, list 3 steps to take to make it happen.
Possible answers will vary. Responses can range anywhere from joining a gym to taking a dance class to learning to kayak.

Note to Educator: The point of this activity is to get participants to increase their physical activity by doing something pleasurable. Identifying potential obstacles can help them visualize the activity and make a plan for making it a reality.

It might be helpful to share a personal example to get participants’ thoughts flowing. For example: I’ve always wanted to take a dance class, but I don’t know where they’re offered, I don’t have a partner, and I’m scared that I can’t keep up. Three steps I could take to make this a reality would be: 1. Doing an internet search on dance studios in my area; 2. Asking a friend or loved one to sign up for classes with me or find a class with “no partner necessary”; and 3. Finding videos or tutorials online or on video before the class to get comfortable with some of the moves.

Encourage all patients to check with their primary care provider before beginning any exercise program.
Activity: Where in your community can you go to get physically active? Name as many places and activities as you can in the next minute. Which ones have you done before? Did you like/dislike them and why?

This activity can be done by writing a list on paper or brainstorming verbally. Possible answers will vary: some people may go to a fitness club, a community center, school, recreation center, park, and mall. Have people take turns telling the group an item or two from their list and have others add to the list. This may help others learn about new places in their community that they hadn’t thought of.

Potential activities listed could include: walking (including treadmill), running, biking (outdoor or stationary), aerobics, weight training, cleaning house, gardening, yard work, playing with children, hiking, playing sports (basketball, soccer), water exercise, swimming, using a pedometer to track steps per day, walking the dog.

Note to Educator: Encourage all patients to check with their primary care provider before beginning any exercise.

Activity: Think of some things you can do to be safe while being physically active. Share them with the group.

Possible answers may include: Wear medical ID, exercise with someone, check blood glucose before and after, or bring your meter with you (if there is a likelihood of hypoglycemia—for those taking insulin or insulin secretagogues), bring your cell phone to call for help, tell others where you are going, walk following the rules of the road (facing traffic) with brightly colored or reflective clothes, wear sunscreen and a hat to protect your skin from the sun, ride a bike following the rules of the road (with traffic, with a helmet), and take some form of fast-acting carbohydrate (glucose tabs, table sugar, juice) with you.

Note to Educator: Encourage all patients to check with their primary care provider before beginning any exercise.
Monitoring

Q&A: What is an A1C?
Answer: The Hemoglobin A1C test gives an estimate of blood glucose control over the past 2-3 months. The American Diabetes Association (ADA) advocates an A1C target of 7% (or as close to 6% without experiencing frequent hypoglycemia).

If an individual’s baseline A1C is within target and glucose control is stable, it should be checked at least twice a year.

If an individual’s A1C is above target, or if their diabetes therapy has changed, it should be done at least quarterly (four times a year).

Note to Educator: This might be an opportunity to discuss estimated average glucose (eAG). A helpful article that discusses the A1C test with an A1C chart is available from: http://www.diabetesforecast.org/2013/feb/meet-your-a1c.html?print=t and further discussion about A1C with an interactive A1C calculator is available from: http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/a1c /

Q&A: What steps should you take to get an accurate blood glucose reading?
Answer: Wash and dry your hands completely, make sure your glucose monitor and strips are ready and not expired, code your meter based on the manufacturer’s instructions, prepare the lancet and know where you can check your blood (based on type of monitor), prick your skin, put the blood on the strip, write your results in a log.

Note to Educator: Practice the process with the participants, if appropriate. Spend some time discussing the importance of recording blood glucose numbers so that trends and trouble spots can be detected, and so that individuals can make informed decisions about their diabetes care.
True or False? Checking your blood glucose/blood sugar is a test that you pass or fail.

False. Checking blood glucose gives information that can be used to determine how well medications are working for you and how your choice of foods and physical activity, as well as illness and stress affect your blood glucose. These results can change an individual’s day-to-day management of diabetes and can be discussed with your diabetes educator and other healthcare providers.

Discussion:
How often do you check your blood sugar? Do you keep a record? Do you think this is important?

Possible answers will vary. There is not one answer to how often blood glucose should be checked. Some people may check a few times per week and others may check 4-6 or more times during a day, depending on what the primary care provider has recommended.

Note to Educator: There is no set guideline on testing frequency. Encourage your patients to test more frequently when making changes to their routine or medications, but tell them to talk to their doctor if they want to test more often so that they have the appropriate prescription for testing. Emphasize the importance of keeping a record of blood glucose levels in order to see patterns that could be helpful in adjusting medications, foods, and activity.

*A patient handout is available at diabeteseducator.org/monitoring
Discussion:
Think about a time when you forgot to check your blood sugar or purposefully didn’t do it. What happened? How can you change that in the future?

Possible answers will vary. Participants might say that they forgot to bring their meter when they went out to eat or didn’t want to check it around others. Others may have suggestions about checking in the car before going in to eat or checking it in the restroom. Some may add that having a meter that is small may improve convenience.

Many fear the pain of frequent testing. Discuss finding the right meter and lancing device that best fits their needs. It could help decrease pain if the meter takes a smaller drop of blood or the lancing device was less painful to use.

Note to Educator: Getting patients to discuss their habits or reservations about monitoring their blood glucose can help them address the issue and make a plan to avoid the problem in the future. Some participants may be apathetic towards testing and feel that it doesn’t matter. Hearing from others in the group why they test may help them understand the importance.

Discussion:
What are some diabetes-related health numbers that you should know? How often should they be checked?

Each of the targets below may be different for individuals, based on their diabetes care plan and their primary care provider’s recommendations. Emphasize that these are general recommendations.
**Blood glucose checks:** May be done a few times per week to several times per day based on individual situations and determined by the patient and healthcare provider.

The American Diabetes Association recommends:
- Before meals: 80 to 130 mg/dL (3.9 to 7.2 mmol/L)
- 1- to 2-hours after meals: < 180 mg/dL (< 10 mmol/L)
- A1C: 7% in general; for individuals, as close to 6% as possible without hypoglycemia.

**A1C:** The Hemoglobin A1C test gives an estimate of blood glucose control over the past 2-3 months. The American Diabetes Association (ADA) advocates an A1C target of 7%. If an individual’s baseline A1C is within target and glucose control is stable, it should be checked at least twice a year.

If an individual’s A1C is above target, or if their diabetes therapy has changed, it should be done at least quarterly (four times a year).

**Blood pressure:** Resting blood pressure should be measured at each routine diabetes visit. Target goals for a healthy blood pressure should be below 120/80. Early high blood pressure is between 120/80 and 140/90. High blood pressure is 140/90 or higher.
**Lipids:** Cholesterol and triglycerides should be measured 1 time per year with a fasting blood test for most adults with diabetes.

Targets are: LDL less than 100 mg/dl, HDL greater than 50 mg/dl for women and greater than 40 mg/dl for men, and triglycerides less than 150 mg/dl. For people with cardiovascular disease, the goal of LDL cholesterol may be less than 70 mg/dl.

**Urine albumin:** To check for nephropathy, urine microalbumin should be checked 1 time per year for all adults with type 2 diabetes and for people with type 1 diabetes of 5 years or more. This is done by taking a random spot urine sample. An albumin excretion of <30 µg/mg creatinine is normal, 30-299 µg/mg creatinine is microalbuminuria, and >300 µg/mg creatinine is macroalbuminuria.

**Discussion:**

**What is the test used to catch the first sign of damage to the kidneys? How often should it be done? What does it measure?**

A urine albumin test should be performed 1 time per year to assess people with type 1 diabetes of 5 years or more duration and all people with type 2 diabetes from the time of diagnosis to detect microalbuminuria. This measures the amount of microscopic protein in the urine. This is done by taking a random spot urine sample. An albumin excretion of <30 µg/mg is normal, 30-299 µg/mg is microalbuminuria, and >300 µg/mg creatinine is macroalbuminuria.

A serum creatinine should be done 1 time per year in all adults with diabetes to determine glomerular filtration rate and stage the level of chronic kidney disease. This is done by taking a blood sample.

Two of three urine albumin collections within 3 to 6 months should be abnormal before giving a diagnosis of micro- or macroalbuminuria.
Taking Medications

Q&A:
If you think a medication isn’t working or you’re experiencing side effects, what should you do?
Answer: Participants should contact the healthcare provider that prescribed the medication if they are experiencing side effects or don’t think the medication is working.

Note to Educator: Some patients will stop taking their medication if they think it’s not working, have side effects, or don’t think they need it. This question is meant to draw attention to this behavior and reinforce the need to discuss any changes to medication-taking with a healthcare provider.

Q&A:
True or False? If you forget to take your medications, you double your dose the next time.
False. Each medication works differently. For some medications, the person can take it when they remember if it is within a certain time, but for others, they should wait for the next time they are scheduled to take it. Each medication should be discussed with the healthcare provider who prescribed it to determine what should be done in this situation.

Discussion:
How often do you forget to take your medications? What are some things you can do to help you remember?
Possible answers will vary. Once a discussion is started, ask the group how they can help themselves remember to take their medications. Often people will say that they put a medication near their toothbrush or coffee mug, on their nightstand, tie it to some current routine, or use a pill organizer.
Discussion:
What types of medications are prescribed for diabetes?
How do they work?
Possible answers will vary. This can lead to a discussion of medications and if they act at the pancreas, liver, intestines, at the muscles, etc. It is very common for someone with diabetes to be on multiple medications.

A review of the classes of diabetes medications and what they do might be helpful. Sulfonylureas and Nonsulfonylureas-Secretagogues stimulate insulin release; Biguanides decrease release of glucose from the liver; Thiazolidinediones improve insulin sensitivity; Alpha-glucosidase Inhibitors delay carbohydrate absorption; Incretins produce effects similar to Glucagon-like peptide 1 (GLP-1) and Dipeptidyl Peptidase IV (DPP-4) Inhibitors restore GLP-1 levels and Sodium-Glucose Co-Transporter 2 (SGLT2) inhibitors lower BG by blocking reabsorption of glucose and increasing its excretion in urine.

Discussion:
When you are prescribed a medication, what types of questions do you ask your healthcare provider? Who else might you talk to about a certain medication?

Possible answers include: What does it do? What are possible side effects? How can I minimize side effects? Who should I call if I think I am having a problem with the medication? Should it be taken at a certain time of day, with or without food?

Note to Educator: Other members of the diabetes care team, such as their pharmacist, can be a resource to patients.
Activity:
Name one of your medications. How much are you supposed to take and how often? How does this medication help you?
Allow each person to give an answer and engage others in the group that may be taking the same medications. If the amounts vary, assure each person that more medication doesn’t mean they are not doing well or have “worse diabetes,” but that each person has individual needs to help their body reach healthy blood glucose goals.

Note to Educator: Refer to AADE Quick Guide to Medications for a complete listing of medications, recommended doses and frequency, and action.

*A patient handout is available at diabeteseducator.org/taking-medications
Problem Solving

Discussion:
How do you feel when you have low or high blood sugar?
High blood glucose can cause fatigue, frequent urination, increased thirst, headaches, blurred vision, weight loss, poor healing or recurrent infections, and difficulty concentrating.

Low blood glucose can cause hunger, shakiness, sweating, confusion, sleepiness, anxiety, light-headedness, nervousness, as well as unconsciousness, seizures, and even death.

Note to Educator: Point out that some of the symptoms can be a sign of either high or low blood glucose. Ask the group how they can tell which one it is. A blood glucose check can give this information. If blood glucose is in the normal ranges, other causes should be investigated.

Discussion:
If you are about to go on a trip, what steps should you take to prepare?
Consult the Transportation Security Administration website before air travel to make sure you are following the most current guidelines.

Here are some tips for traveling:

• Get enough medication to cover the planned days of travel and some extra in case of emergency or change of plans.

• Always carry medications and other necessary supplies (glucose checking supplies) on the plane rather than placing them in checked baggage in case the baggage does not arrive on time.

• If participant is traveling for several months or out of the country, get a prescription for any medications that may need to be refilled while you are away. You may need to go to a local healthcare provider to get a local prescription while you are away.
• Carry some foods with you in case you are not able to get to what you might need. Packing granola bars, crackers, and other sources of carbohydrate may be very important when flying. Remember to have some for your return trip home.

• Prepare for the unexpected: delays, lack of access to medications, food, beverages, glucose testing and pump supplies.

• It might also be helpful to request a letter from your healthcare provider to allow you to take sharp objects (syringes, lancets), and a blood glucose monitor, on a plane. Some people may need to bring insulin, ketone testing strips, glucagon kits. If using a pump and CGM, the letter should state the need to have the insulin pump, supplies, insulin, syringes, and related supplies, including BG meter, lancets, testing strips and CGM if applicable. The letter may also state the need to have snacks and beverages including water to stay well hydrated.

話し合いで
**You get the flu and notice that your blood sugar levels are not normal. What do you do?**

Answers will vary. Assure patients that it is common to have blood glucose levels that are higher than usual when you are ill. Being sick is a stress to your body. Even if you cannot eat or drink, blood glucose can go up.

Encourage patients to still take their medications even when they are sick.

Encourage participants to call their healthcare provider, especially if they are vomiting or have diarrhea. If the individual is not able to eat or take medications as usual, a provider can provide specific instructions.

**Note to Educator:** This is a good time to remind people that an annual flu (influenza) vaccine is recommended for all people with diabetes over the age of 6 months old.

Visit [diabeteseducator.org/flu](http://diabeteseducator.org/flu) for a patient handout.
Activity:
Which of these three items can be used to treat hypoglycemia (low blood glucose/low blood sugar)?

Answer: The correct response would be 3-4 glucose tablets. The diet soda would not provide carbohydrate and the peanuts would not quickly raise blood glucose. This can bring up a discussion about what people use to treat hypoglycemia.

A low blood sugar is defined as less than 70 mg/dL. Participants should generally be encouraged to take in 15 grams of fast-acting carbohydrate, wait 15 minutes, and then retest their blood glucose. Examples of 15 grams of carbohydrates include:
- 3 or 4 glucose tablets
- 1 serving of glucose gel—the amount equal to 15 grams of carbohydrate
- 1/2 cup, or 4 ounces, of any fruit juice
- 1/2 cup, or 4 ounces, of a regular—not diet—soft drink
- 5 or 6 pieces of hard candy like Jolly Ranchers, Life Savers, or soft easy to chew and swallow jelly candy like gum drops or jelly beans.
- 1 tablespoon of sugar or honey

Note to Educator: It might be necessary to point out that slower acting carbohydrates (starches) may not work as quickly. Candy bars and other foods with fat should generally be discouraged since they are slower to digest and may not elevate blood glucose as quickly. They also add calories and fat that may promote weight gain and elevated cholesterol. Pointing out that diet soda does not have carbohydrate may be necessary for some people.
Activity:
Does blood glucose typically go up or down when you: Skip a meal? Take diabetes medication? Do physical activity/moderate exercise? Eat meals or snacks? Drink alcohol? Are under a lot of stress? Are ill?

Give several examples by reading them, writing on a board, or showing cards. Use more examples as needed.

- Skip a meal? ↓
- Take diabetes medication? ↓
- Do physical activity/moderate exercise? ↓
  (it may go up for a short period of time after vigorous exercise)
- Eat meals or snacks? ↓
- Drink alcohol? ↑ or ↓
  (so important to check blood glucose and have food available)
- Are under a lot of stress? ↑)
- Are ill? ↑or ↓

Note to Educator: This may be a good time to encourage writing blood glucose values in a log book rather than just keeping them in the meter. The person with diabetes can then start to see patterns of high or low glucose with time of day, activity, food, etc.
Activity:
Think about the next family or social event that you will attend. What challenges may you have with your diabetes care? Write down 2 things that might help you overcome these obstacles.

Possible answers include: challenges for eating healthy, taking medication or checking blood sugar, or dealing with the “diabetes police.” Ask other participants if they have had the same issues and had successful strategies to overcome the challenges.

Note to Educator: It might be useful to share an example from your own life to get the discussion started. For example, when I go visit my family it’s really hard for me to stay active because my mother and sisters don’t like to exercise. Maybe the next time I go home, I could tell my family that I want to go visit a local state park, landmark, museum, or concert. That way, instead of sitting around watching television, we can be active for a few hours out of the day.

*A patient handout is available at diabeteseducator.org/problem-solving
Reducing Risks

❓ Q&A:
Why is it important to have a diabetes eye exam every year?
Answer: High blood sugar can damage the little blood vessels in the back of your eyes. Diabetic eye disease (retinopathy) and its progression can be prevented or delayed through monitoring and early treatment. People with type 2 diabetes should have an initial dilated eye exam within 3 to 6 months after being diagnosed with diabetes and a comprehensive diabetes eye exam annually unless more frequent exams are suggested by the ophthalmologist or optometrist. People with type 1 diabetes who are over 10 years old should have an eye exam initially and every 5 years after the diagnosis of diabetes.

Other problems with the eyes are more common and occur earlier in people with diabetes including glaucoma, cataracts, and other disorders of the eyes.

*Note to Educator:* Some participants may want to talk about having their eye exam or laser surgery and how they did with these procedures.

❓ Q&A:
True or False? Controlling your diabetes can decrease your risk for heart disease, kidney disease, dental disease, and stroke.
True. All complications of diabetes can be delayed or prevented by keeping blood glucoses in target ranges and keeping up with medical checks including blood pressure, cholesterol and triglycerides, kidney function, foot exams, and diabetic (dilated) eye exams.

*Note to Educator:* Be sure to tell patients that even in spite of their best efforts, some people will get complications. Advise them not to feel guilty or feel like they’ve failed if they develop a complication. Emphasize the importance of working with their healthcare provider to minimize the problems that can result from complications.
Discussion:
What are you looking for when you check your feet?
Possible answers include: red areas, open areas, cuts/sores, blisters, discharge on socks, calluses, ingrown toenails, or anything that doesn’t seem normal.

Follow up this question by asking participants if they have had their feet examined and who did the exam.

Note to Educator: Encourage participants to have their healthcare provider perform an annual comprehensive foot exam. This should include a visual inspection and examination of pulses, sensation (using a monofilament), and reflexes.

The Feet Can Last a Lifetime booklet from NDEP (www.ndep.nih.gov) is a good resource for more information.

Discussion:
What are the major chronic complications of diabetes?
How can you prevent or delay these complications?
The major chronic complications of diabetes include those involving the small blood vessels (neuropathy, retinopathy, and kidney disease, erectile dysfunction) and the large blood vessels (heart disease, peripheral arterial disease, and stroke).
Diabetes complications can be prevented or the progression delayed by:
• Maintaining optimal blood glucose control
• Keeping blood pressure in control
• Controlling cholesterol and triglycerides
• Healthy eating and being active
• Avoiding smoking and other types of tobacco
• Having regular diabetic eye exams
• Checking your feet daily and having routine comprehensive foot exams
• Taking daily aspirin unless you have a reason that you and your healthcare provider have discussed
Discussion:
Is it OK to drink alcohol if you have diabetes?
Answer: There are some reasons that people may choose to not drink any alcohol including a history of alcohol abuse, the possibility of a reaction with medications, or personal/religious/social reasons. However, if there is no other basis to avoid alcohol intake, adults with diabetes can drink alcohol in moderation. People who take insulin or diabetes medications that increase insulin produced by the body should practice caution. Some participants may also be taking other non-diabetes medications where alcohol is not recommended.

Drinking alcohol on an empty stomach or when blood glucoses are low could increase the risk of a severe low blood glucose reaction (hypoglycemia). It is important to check blood glucose and have food if it is too low. The blood glucose lowering effects of alcohol can last for hours, so one may need to check blood glucose again before driving or going to sleep.

The general guidelines for safe alcohol intake for adults is the equivalent of 1 or less beverages per day for women and 2 or fewer for men. One drink is equal to 12 oz of beer, a 5 oz glass of wine, or 1 ½ oz of distilled spirits.

Note to Educator: Tell patients that the signs and symptoms of low blood glucose and of being drunk can be similar, so it is important to wear a medical ID for diabetes so people can identify the difference.

Also, mention that some people may see an increase in blood glucose after drinking alcoholic beverages. It is important to consider the extra calories in alcohol and mixers if weight loss or weight maintenance is a goal for an individual’s diabetes management.
Activity:
Having diabetes puts a person at risk for other potential health problems. However, by understanding the risks, one can take proactive steps to lower the chances of developing diabetes-related complications.

Recommended Tests and Target Levels:

A1C: 7%, to be checked a minimum of 2 times per year.
Blood sugar before a meal = 80-130 mg/dL
Blood sugar 1-2 hours after beginning of a meal = Less than 180 mg/dL

Blood pressure should be taken at every health care provider visit.

Healthy blood pressure: below 120/80 Early high blood pressure: between 120/80 and 140/90 High blood pressure: 140/90 or higher

Lipids: HDL (good cholesterol) over 40 mg/dl for men and over 50 mg/dl for women.
Triglycerides: under 150 mg/dl. Lipids should be measured at least once a year.

Microalbuminuria to measure protein in the kidneys: Less than 30 µg/mg creatinine. Persons with type 2 diabetes should be screened at diagnosis and annually thereafter. Persons with type 1 diabetes should be screened five years after diagnosis and annually thereafter.

Retinopathy: Adults with type 2 diabetes should receive initial dilated and comprehensive eye exam at time of diagnosis and on an annual basis. If no retinopathy is discovered for one or more annual eye exams, consider exams every two years.
Neuropathy: Screening for diabetic peripheral neuropathy should take place for adults with type 2 diabetes at diagnosis.

Foot Care: An annual foot exam is recommended for all individuals with diabetes to identify risk factors. Individuals with foot deformities or a history of foot ulcers should be examined at every visit. People who smoke or have a history of prior lower-extremity complications, loss of sensation, structural abnormalities or peripheral artery disease should refer to a foot care specialist for ongoing preventative care.

Have a dental checkup every six months, or as often as indicated by a professional.

Smoking cessation: Assess the person’s smoking history and habits, and whether or not they are ready and willing to quit. Be prepared to assist them to quit smoking by discussing options and resources for smoking cessation.

For a useful interactive tool on Reducing Risks please download or refer your patients to: diabeteseducator.org/reducing-risks

❓ Q&A:
What are the signs and symptoms of kidney disease?
Answer: In the early stages of kidney disease, most people do not experience symptoms. The presence of protein in the urine is the earliest sign of damage to the kidneys from diabetes.

Other symptoms of kidney disease might include edema, loss of sleep, poor appetite, upset stomach, weakness, and difficulty concentrating.
Healthy Coping

❓ Q&A:
True or False? If you are feeling sad or frustrated with your diabetes management, you should keep it to yourself.
False. Depression is more common in people with diabetes than in those without diabetes. And, depression can negatively impact diabetes self-management. If a person with diabetes is feeling sad, frustrated or depressed, they should talk to someone. They may talk to their diabetes educator or other healthcare provider. A referral to a psychologist, social worker, psychiatrist or another mental health professional may be beneficial.

Note to Educator: It is important to acknowledge the feelings of participants and open up a dialogue about healthy ways to cope with negative feelings.

💬 Discussion:
How did you feel when you were first diagnosed with diabetes?
What was your biggest fear?
Possible answers will vary. Some will say that they were devastated, others were just waiting for it to happen, and some will say it was the best thing that could have happened because it was a wake-up-call to change their lifestyle to a healthier one.

When someone offers a feeling or a fear, ask others if they had similar feelings, concerns, or fears. Other potential follow-up questions include: Does anyone have family or friends who had/have diabetes? Did this make you more concerned about getting diagnosed?

Note to Educator: Remind people that we have advances in medications, technology and education that were not available years ago and that they can positively change the course of their diabetes by managing their diabetes and making healthy lifestyle changes.
Discussion:
Who supports you in your diabetes management?
Possible answers will vary. Some typical responses could be spouse or significant other, other family members, a co-worker, a religious leader, or a friend.

Note to Educator: Follow up the responses by asking how the individuals showed/offered support. It also might be helpful to have participants think of people who have not been supportive of their diabetes management efforts. Together, the group might be able to brainstorm ideas for how to deal with the challenging people in your life. Have others had these challenges and had successes with them?

The National Diabetes Education Program has a list of questions for friends and family to ask individuals with diabetes. It’s called Tips for Helping a Person with Diabetes available on their website.

Discussion:
How does stress affect your blood sugar? What do you do to manage your stress?
Stress can cause blood sugars to go up. Physical and emotional stress can increase the release of hormones (cortisol and epinephrine—also known as adrenaline) that increase blood glucose levels, working against insulin. Improving blood glucose to target ranges and learning to manage stress will improve overall health.

Note to Educator: Ask the group what they do to manage stress. Some possible answers may be exercising, meditation, spending time with family and friends or doing something they find relaxing (gardening, shopping, calling a friend). It is important to avoid eating in response to stress because it can cause weight gain and increase blood sugar.
Activity:
Write down three reasons why you want to manage your diabetes and one way you can help make this happen.
Ask for volunteers to tell a reason. Ask if anyone else listed the same reason. Is there a specific thing you are doing to help make this happen?

Note to Educators: It can be helpful to have participants choose one of the AADE7™ Self-Care Behaviors (healthy eating, being active, monitoring, taking medications, problem solving, reducing risks, and healthy coping) and set a specific goal in that area.

*A patient handout is available at diabeteseducator.org/health-coping

Activity:
Think about what you need to do to manage your diabetes at work, at school, or at home with your family. What could get you off track? Make a plan for how to deal with these obstacles.

The discussion may include being prepared with blood glucose testing supplies, medications, hypoglycemia treatments, fitting in exercise or healthy meals and snacks. It is easy to get off track when there isn’t a plan in place.

Note to Educator: Ask the group about specific challenges and what they have done to promote success in difficult situations.
Bibliography


