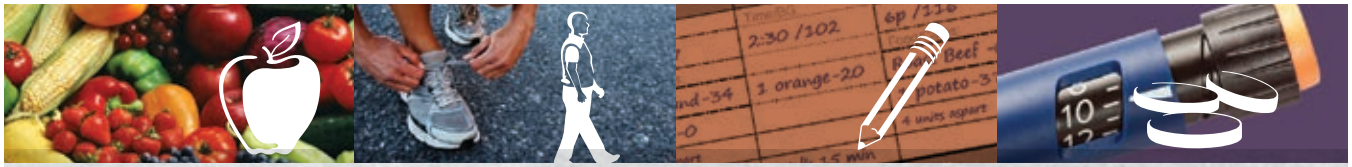
Self-Care Skills for the Person with Diabetes



VA/DoD Clinical Practice Guideline for Management of Diabetes Mellitus. Version 5, 2017

Contact Information

Health Care Provider:

Name: _____

Number: _____

Other Health Care Team Members:

Name: _____

Number: _____

Name: _____

Number: _____

Pharmacy (Refill):

Name: _____

Number: _____

Depending on your facility, your diabetes team may also include for example: diabetes educator, dietitian, counselor, exercise therapist.

Knowing the members of your health care team and working with them will help you control your diabetes.

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When You Have Diabetes

Diabetes does not have to be managed alone. This workbook provides information to help you and your family manage your diabetes. Diabetes is a chronic (lifelong) condition that makes it difficult for your body to regulate the sugar (glucose) in your blood. Without treatment, it can result in high levels of glucose in your blood and serious health problems. Diabetes is the leading cause of blindness, kidney disease, and amputation. It is often associated with high blood pressure, obesity, high cholesterol, heart disease, and stroke. Anyone can develop diabetes.

To help control your blood glucose you will need to learn how to:

- Make healthier food choices
- Start and maintain an active lifestyle
- Monitor your blood glucose
- Take your medications correctly
- Manage sick days
- Take charge of your health

Your healthcare team will advise you what your blood glucose target level should be and how to check your blood glucose level on your own. Your provider will also test your blood glucose level with a hemoglobin A1c test (also called A1c). The A1c shows what your average blood glucose was for the past 3 months. The results from your blood glucose check and the A1c test will tell you whether your diabetes care plan is working or needs adjustment.

What is Diabetes?

Our bodies use glucose (sugar) for energy. Most of the glucose we need comes from the food we eat. Once the food is digested, insulin — a hormone made by the pancreas— is needed to move the glucose from the bloodstream into the body's cells. When you have DIABETES, your body has trouble using the GLUCOSE because insulin is either absent or does not work well to move the glucose into the cells. As a result, the glucose level in your blood becomes too high.

There are different types of diabetes

Type 1 Diabetes. Your pancreas does not make insulin and cannot move glucose into the body's cells. Insulin injections or an insulin pump are needed.

Type 2 Diabetes. This is the most common ype of diabetes. Being overweight, poor diet, and lack of exercise increases the risk for developing Type 2 diabetes. With this type of diabetes, the pancreas cells are not responsive to the insulin and/or not producing enough insulin. Management of Type 2 diabetes may include oral or injectable medication, diet, and exercise. Sometimes a person with Type 2 diabetes will also need insulin therapy.

Your Diabetes Care Team and Shared Decision Making

Many people believe that the provider manages their diabetes. The truth is that the person living with diabetes manages their own diabetes. The healthcare team is there to help to determine the best tools to help you manage your blood sugar. How you take care of your diabetes is a shared decision between you and your provider.

Use the **SHARE** approach:

S. Your provider should Seek your participation.

H. Your provider should **Help** you explore and compare treatment options.

A. Your provider should **Assess** your values and preferences.

R. You and your provider should **Reach** a decision.

E. You and your provider should **Evaluate** if the plan works.

Eating Healthy

You can make a difference in your blood glucose control through your food choices. You do not need special or diet foods. The food that is good for you is good for your whole family.

Know Your Nutrients

Carbohydrates

Proteins

Fats

Carbohydrates

- The main food source of energy to keep you and your body moving
- The main food that raises blood glucose levels
- A food you want to distribute over the day and be careful not to overeat

Carbohydrates are found in:

- Fruits
- Starchy vegetables (such as corn, potatoes, peas, and beans)
- Breads and cereals
- Pastas and rice
- Milk, yogurt, ice cream
- Sugary foods, sweetened drinks, juices, and many snack foods (such as chips and candy)

Proteins

Keeping a proper level of protein in your diet builds muscles, helps your body heal, and gives it energy

Proteins are found in:

- Chicken
- Eggs
- Peanut butter
- Beef
- Cheese
- Nuts
- Fish and shellfish
- Tofu

Fats

- Helps to provide energy
- Supports several bodily functions (absorption of vitamins)

Fats are found in:

- Canola or olive oil
- Avocado
- Nuts and seeds
- Bacon, butter or margarine (saturated fats that are not heart healthy)

What Does the Food Label Tell Me?

Food labels can be found on most food packages. This picture shows an example of a food label and explains how this information can help you make healthy food choices.

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.

Serving Size
The nutrition values listed on the label are based on one serving size. Always check for the serving size when reading a label.

Total Carbohydrate
Includes total grams of starch, sugar and anything that will become sugar when it is digested.

Sugar Alcohol
Sugar alcohols are reduced-calorie sweeteners that have fewer carbohydrates. They still raise your glucose and may have undesired side-effects (bloating, diarrhea).

Servings per Container
There are 8 servings in this example. Products often contain more than 1 serving in a package.

Fat
Choose low-fat foods and limit saturated fats and trans fat. Low-fat foods have 3g of fat or less for every 100 calories.

Fiber
Choose foods with 3 grams or more of fiber. High fiber foods can help control blood glucose. Whole grains and vegetables contain fiber (aim for 30 - 35 grams daily).

Using the Plate Method

Use the picture of the Healthy Plate to remind yourself of how to eat a healthy, balanced meal.

One cup of milk or yogurt (low fat)

1/2 cup of fresh or canned fruit

Fill **1/4** of your plate with a starchy choice such as 1/2 cup of mashed potatoes or 1/3 cup rice or pasta

Fill **1/4** of your plate with lean meat, chicken or fish; about 3 ounces

Fill **1/2** of your plate with non-starchy vegetables such as broccoli, carrots, cauliflower, and salad

Margarine or oil in cooking or at the table

Controlling portion sizes

Use the size of familiar objects to remind you of size portions:

- Vegetable or salad portion similar to the size of baseball or light bulb (1/2 cup)
- Starchy carbohydrates portion similar to the size of a computer mouse (1/2 cup)
- Protein (cooked meat) portion similar to the size of a deck of cards (2 - 3 ounces)
- Fat portion similar to the size of a dice (1 tsp)

Using portions will help you feel satisfied, help control your blood glucose levels, and maintain your weight.

Healthy Portion Sizes

Fats & Oils Group

- Oils like canola or olive oil (1 tsp)
- Margarine or butter (1 tsp)
- Mayonnaise (1 tsp)
- Nuts and seeds (1 oz)
- Salad dressing (1 Tbsp)
- Cream cheese, sour cream, butter, shortening, lard, or meat fat (1 Tbsp) (not heart healthy)

Protein Group

- 2 to 3 ounces of cooked meat, poultry, or fish
- 1/2 to 3/4 cup tuna in water
- 1/2 to 3/4 cup cottage cheese
- 2 to 3 ounces cheese (try to use low fat)
- 2 tablespoons of peanut butter count as 1 ounce of meat

Non-starchy Vegetable Group

- 1 cup raw vegetables
- 1/2 cup cooked vegetables
- 1/2 cup tomato or vegetable juice

Carbohydrates

Milk Group

- 8 ounces milk (low fat)
- 6 ounces yogurt (low fat unsweetened)

Starch Group

- 1 slice bread or 1 small roll
- 1/2 small bagel or English muffin
- 1/2 hamburger or hot dog bun
- 1 small piece of corn bread
- 3/4 cup of dry cereal (unsweetened)
- 1/2 cup cooked cereal
- 1 small waffle or small pancake
- 1/3 cup cooked noodles or rice
- 1/2 cup white or sweet potato or 1/2 small baked potato
- 1/2 cup corn or 1 small corn on the cob
- 1/2 cup beans or peas (except for green beans)
- 4 to 6 crackers
- 3 graham cracker squares
- 3 cups popcorn

Fruit Group

- 1/2 cup fruit juice
- 1 small piece of fresh fruit
- 1/2 cup canned fruit
- 1/4 cup dried fruit

Food Changes You Can Make

- Eat a wide variety of foods every day, and try new foods
- Try to distribute your carbohydrate intake evenly throughout the day
- Eat high-fiber foods, such as vegetables, fruits, whole grains, and beans
- Use less added fat, sugar, and salt
- Do not skip meals or go longer than 3 - 5 hours without eating
- Drink plenty of water or sugar-free beverages, avoid sugared drinks or juices
- Choose healthy fats such as nuts, seeds, avocado or olive oil in place of fried foods and saturated fats
- Use alcohol only with the advice of your health care provider and never drink on an empty stomach (can cause blood glucose to go too low)
- If you are overweight, decrease fat intake and decrease portion sizes
- Use the Plate Method to guide your food choices and portions through the day

Your diabetes educator or dietitian will help you learn more about which foods contain carbohydrates and help you choose a meal plan that will help you keep your blood glucose in target range.

Eating a healthy diet and exercising work together to improve your blood glucose control and overall health.

My Healthy Eating Plan

Ask yourself:

What is my goal for eating healthier?

What change(s) will help me reach my goal?

Monitoring your blood sugar before and 2 hours after a meal can help identify meal patterns that may need adjustment. Only you can spot the changes you are ready to make to your diet and lifestyle. Developing new habits takes time; be patient and keep trying until you succeed. Start with a small goal and work your way up! You can do it!

Now write your plan by filling in the blanks

1. What I will do:

Example: I'll use the plate method to plan my meals

2. When I will do it:

Example: I'll start with my evening meals at home.

3. What I need to get ready:

Example: I'll add more vegetable choices to my grocery list.

4. What might get in the way of my healthy eating:

Example: I don't eat at home.

5. If that happens, I will do this instead:

Example: I'll try to choose something on the menu that resembles a healthy plate.

6. Here's when I will start:

Example: On the first of the next month.

Being Active

Engaging in regular physical activity improves blood glucose control by helping insulin to work better.

- Benefits include weight loss, lowering blood pressure, lowering cholesterol, and increasing strength
- Being active may decrease how much diabetes medication you will need
- Being active can help prevent or delay the onset of the problems that can occur with poor glucose control (heart, kidney, and eye or nerve disease)

Be safe!

- Get approval from your primary care provider before starting any new activity
- Start and increase your chosen activity slowly
- Wear appropriate shoes for the chosen activity
- Choose a safe area
- Carry a cell phone
- Carry a fast acting carb, (glucose tablets or candy) if you are on insulin or taking medicine that increases insulin production
- Drink plenty of water, especially on hot days
- Wear a visible form of identification that lets people know you have diabetes (medical-alert bracelet, or necklace), or carry a diabetes care-card

Make physical activity a regular part of your day

- Aim for at least 150 minutes of moderate activity per week with no more than two days off between activities
- Choose an activity that you enjoy:
  - Household activities like vacuuming, gardening, or washing the car
  - Leisure activities like brisk walking, biking, swimming, dancing, walking the dog, playing ball, golfing, or bowling
  - Structured activities like going to the gym, weight training, and aerobic exercise class
- Find a time that works for you. If needed, time can be split up in 10 minute increments throughout the day. For example, 10 minutes before work, at lunch time, or in the evening after dinner.

Remember, the benefits of regular activity will last a lifetime!

Here is a sample 12-week walking schedule from the National Heart, Lung and Blood Institute:

- Before starting this or any other activity plan, get approval for the activity from your health care provider
- Try to walk at least five times each week. Always start with a five-minute, slower paced walk to warm up, and end with a five-minute, slower paced walk to cool down

Week	Warm-up	Brisk Walking	Cool-down	Total minutes
1	5 minutes	5 minutes	5 minutes	15 minutes
2	5 minutes	7 minutes	5 minutes	17 minutes
3	5 minutes	9 minutes	5 minutes	19 minutes
4	5 minutes	11 minutes	5 minutes	21 minutes
5	5 minutes	13 minutes	5 minutes	23 minutes
6	5 minutes	15 minutes	5 minutes	25 minutes
7	5 minutes	18 minutes	5 minutes	28 minutes
8	5 minutes	20 minutes	5 minutes	30 minutes
9	5 minutes	23 minutes	5 minutes	33 minutes
10	5 minutes	26 minutes	5 minutes	36 minutes
11	5 minutes	28 minutes	5 minutes	38 minutes
12	5 minutes	30 minutes	5 minutes	40 minutes

My Active Lifestyle Plan
Getting Started

Ask yourself: What is my goal? What change(s) will help me reach my goal?

Make your chosen activity fun! It should be something you enjoy and is within your ability to do. Only YOU can spot the changes you are ready to make. In time, your chosen activity will become routine for you. Be patient and keep trying until you succeed. You can do it!

Now write your plan by filling in the blanks:

1. Here's what I will do:

Example: I'll take a brisk walk 5 days a week for 30 minutes.

2. Here's when I will do it:

Example: I'll walk after breakfast.

3. Here's what I need to get ready:

Example: I'll need comfortable shoes.

4. This might get in the way of my plan:

Example: If it's raining, I won't be able to walk outside.

5. If that happens, I will do this instead:

Example: I'll go to the recreation center and walk around inside.

6. Here's when I will start:

Example: I'll start my walks on Monday.

Monitoring

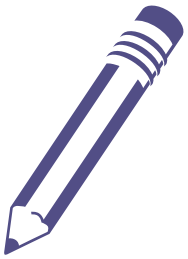
Blood glucose monitoring helps you to understand how foods, physical activity, and diabetes medicine affect your glucose levels. Monitoring also tells you when your glucose is too low or too high.

Glucose Testing Tips

- Wash hands with warm soapy water to clean surface and promote blood flow
- To reduce pain, prick the sides of the tips of the fingers, avoid the center pads
- Rotate test sites between all fingers or alternate sites
- Keep a log book of your readings and bring it to each provider visit. Bring your glucose meter with you. Your provider may be able to download the information directly from the device
- For meter problems, call the phone number on the back of the meter
- Teach family members how to check your glucose, if you are unable to do so

Your health care team will work with you to determine how often and when you need to check to best manage your diabetes

- You may be asked to check before or after meals, activity, or medications
- You may need to check more often if you are sick or on certain diabetes medications
- Your health care team will help you identify your blood glucose goals (target range)



My blood glucose target range is: _____ to _____

Here's what I will do:

1. I will check my blood glucose _____ times a day
2. Here's when I will do it:

   Example: Before meals and at bedtime.

3. Here's what I need to get ready:

   Example: I'll need my meter and strips.

4. This is what I will do to remind myself:

   Example: Ask a friend or family member to remind me.

"Low Blood Sugar" or Hypoglycemia

In general, hypoglycemia, or a "low blood sugar", is any reading below 70 mg/dL. If you are taking insulin or other diabetes medications, you may be at greater risk for symptoms of hypoglycemia.

What are the symptoms?

- Weakness
- Headache
- Blurred vision
- Shakiness
- Irritability or Anxiety
- Fast heart beat
- Sweating
- Hunger / Light-headedness

What causes low blood sugar?

- Delayed meals
- Not eating enough
- Drinking alcohol on an empty stomach
- Too much diabetes medicine
- Unplanned strenuous activity

What Do I Do When I Have Low Blood Sugar?

If your blood sugar drops below 70, follow the 15-15 rule "Check - Treat - Repeat":

Check your blood sugar

Treat if less than 70, eat or drink **15** grams of fast-acting carbohydrate

Examples: tube of glucose gel, 3 - 4 glucose tablets, half a cup of regular soda or orange juice, or a full cup of low fat milk.

Repeat checking your blood sugar after **15** minutes (Be patient, wait the full 15 minutes).

If still less than 70, eat another **15** grams fast acting carbohydrate

Do your best to wait 15 minutes so you don't over treat.

Repeat the above steps until your blood sugar rises above 70.

When you start to feel better, take time to rest. Eat a small snack if your next REGULAR meal is more than a half hour away. *If you have type 1 diabetes, ask your provider about obtaining a glucagon kit.*

You can prevent hypoglycemia!

- Eat every 3 - 5 hours
- Don't exercise without checking your blood sugar first
- If your blood sugar is less than 110, eat a snack before exercising
- Take your medications as your provider has instructed
- Teach family or friends how to treat low blood sugar
- Do not drive if your blood sugar is less than your target range

Tips

- Always carry a source of sugar/ carbohydrate (hard candy, glucose tablets or gel)
- Wear a diabetes alert bracelet or necklace and carry a card in your wallet or purse
- For repeated low blood sugars, contact your health care team

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.

If you become unconscious or confused, have family or friends call 911

Call 911

"High Blood Sugar" or Hyperglycemia

Hyperglycemia or high blood sugar is any glucose reading above your goal range. Persistent hyperglycemia (above 250 mg/dL) will increase the risk of diabetes-related complications, produce unwanted symptoms, and may result in serious illness such as ketoacidosis or life-threatening dehydration.

What are the symptoms of high blood sugar?

- Urinating more often, especially at night
- Fatigue or low energy
- Increased hunger
- Blurred vision
- Increased thirst
- Dry skin

What can cause a high blood sugar?

- Eating too much food or sugary liquids
- Not taking enough diabetes medication
- Forgetting to take diabetes medicine
- Taking medications such as steroids
- Illness/infection
- Not exercising
- Stress

What to Do When I Have a High Blood Sugar?

- Drink plenty of sugar-free/calorie-free fluids (water is best)
- Take your diabetes medicines as prescribed
- Do not skip meals when your blood sugars are high
- Determine, if you can, what caused your high blood sugar

For Type 1

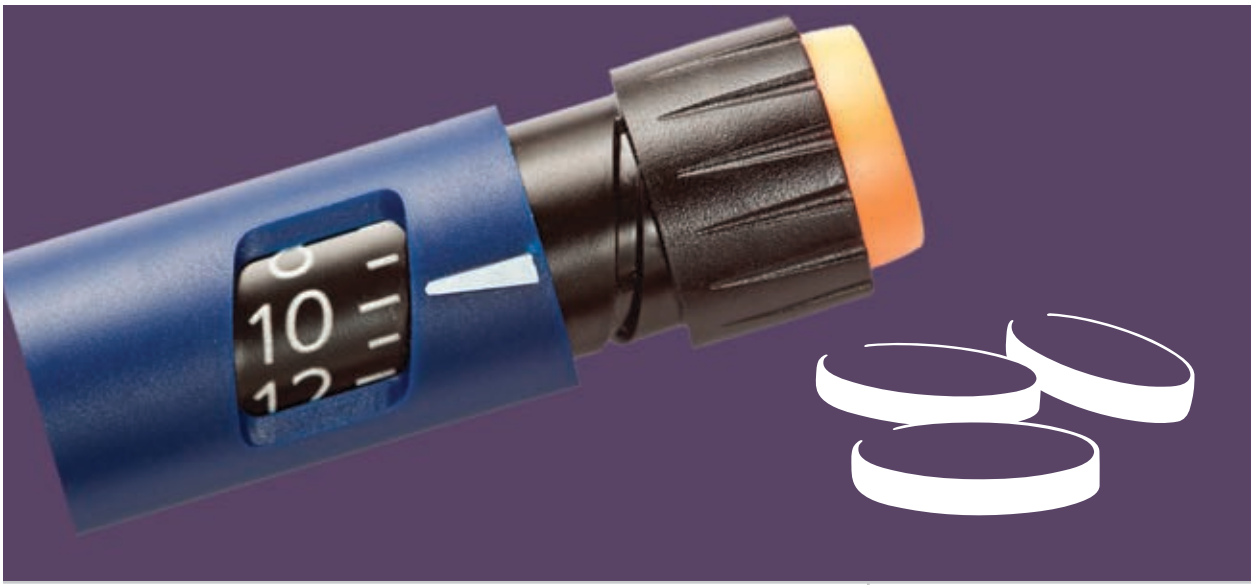
- If blood sugar is less than 250, physical activity can help lower your glucose; corrective action may be appropriate as discussed with/directed by your provider
- If blood sugar is greater than 250, take corrective action as discussed with/directed by your provider; continue to monitor about every 4 hours until less than 200
- Check for urine ketones. If moderate or high, call your provider and drink sugar-free fluids (water is best). When blood glucose is high, the body produces ketones (learn more about ketones on page 35).

For Type 2

- If blood sugar is less than 300, physical activity can help lower your glucose; corrective action may be appropriate as discussed with/directed by your provider
- If blood sugar is greater than 300, take corrective action as discussed with/directed by your provider. Continue to monitor about every 4 hours until less than 200. Check your blood sugar before meals and at bedtime until less than 200.

If your blood sugar does not go down, you have severe abdominal pain, vomiting, confusion, or shortness of breath, contact your healthcare team.

Many of the symptoms of high blood sugar are the same as low blood sugar. It is important to check your blood sugar before treating.

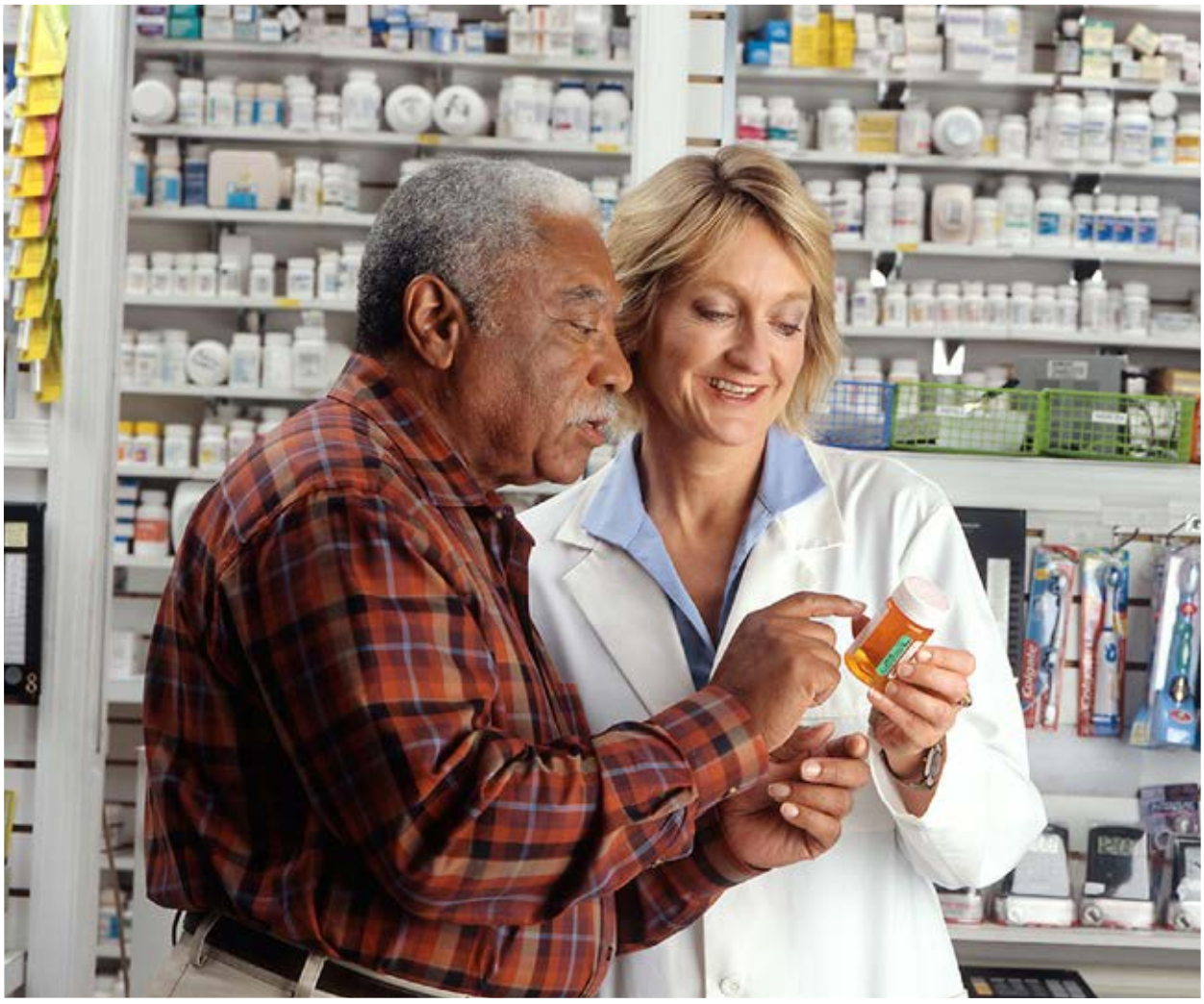


Medications

Along with physical activity and meal planning, your health care provider may prescribe pills, injections, or both to help control your blood glucose. Each medication works in a different way.

Tips for Taking Medications Safely

- You should take medications as prescribed. Never stop taking medication on your own
- If you experience any side effects, talk to your healthcare team. You and your healthcare provider may need to change the dose or try a new one
- Keep a list of your medications, dosages, when to take and the reason you take them
- Tell your health care provider about **ALL** prescription medications, over-the-counter medications, dietary supplements or vitamins that you take
- Talk about any allergies you have and tell your health care provider if you are breastfeeding or pregnant



Diabetes Oral Medication (Pills)

Class: Sulfonylureas

Main Site of Action: Pancreas

How it Controls Blood Glucose: Stimulates pancreas to release more insulin

Generic: Glyburide, Glipizide, Glimepiride

Brand Names: Amaryl, Dymelor, Glucotrol XL, Glynase, Micronase

Side Effects: Hypoglycemia

Class: Biguanides

Main Site of Action: Liver

How it Controls Blood Glucose: Keeps liver from releasing too much glucose

Generic: Metformin

Brand Names: Glucophage

Side Effects: Stomach cramps, diarrhea

Class: SGLT2 Inhibitors

Main Site of Action: Kidney

How it Controls Blood Glucose: Stimulates kidney to filter more sugar into the urine

Generic: Canagliflozin, Dapagliflozin, Empagliflozin, Ertugliflozin

Brand Names: Invokana, Farxiga, Jardiance, Steglatro

Side Effects: Increased urination, urinary tract or yeast infections, dehydration, mild weight loss, high potassium level, lower blood pressure, dizziness

Class: DDP-4 Inhibitors

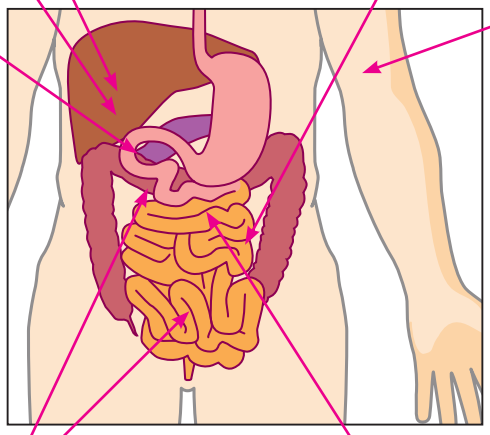
Main Site of Action: Pancreas and liver

How it Controls Blood Glucose: Stimulates pancreas to release more insulin and keeps liver from releasing too much glucose

Generic: Saxagliptin, Sitagliptin, Linagliptin, Vildagliptin, Alogliptin

Brand Name: Onglyza, Januvia, Trajenta, Galvus, Nesina

Side Effects: Rare, headache, sinusitis, abdominal or joint pain



Class: Thiazolidinediones (TZDs)

Main Site of Action: Muscle

How it Controls Blood Glucose: Stimulates uptake of insulin

Generic: Actos, Avandia

Brand Name: Pioglitazone, Rosiglitazone

Side Effects: Fluid retention, weight gain. May take up to 12 weeks to see effect.

Class: Meglitinides

Main Site of Action: Pancreas

How it Controls Blood Glucose: Stimulates pancreas to release more insulin

Generic: Repaglinide, Nateglinide

Brand Names: Prandin, Starlix

Side Effects: Hypoglycemia

Class: Alpha-glucosidase inhibitors

Main Site of Action: Intestine

How it Controls Blood Glucose: Slows the digestion of some carbohydrates. After-meal blood glucose peaks are not as high

Generic: Acarbose, Miglitol

Brand Name: Precose, Glyset

Side Effects: Gas, diarrhea

Class: GLP-1 Agonists, "Incretin Mimetics" (Injection)

Main Site of Action: Liver, stomach, pancreas, intestine

How it Controls Blood Glucose: Slows stomach emptying, stimulates pancreas to release more insulin and keeps liver from releasing too much glucose

Generic: Exentide, Liraglutide, Dulaglutide, Semaglutide, Lixisenatide

Brand Name: Byetta/Bydureon, Victoza, Trulicity, Ozempic, Adlyxin

Side Effects: Nausea, diarrhea, vomiting, weight loss

Insulin

Insulin helps keep blood glucose levels on target by moving glucose from the blood into your body's cells.

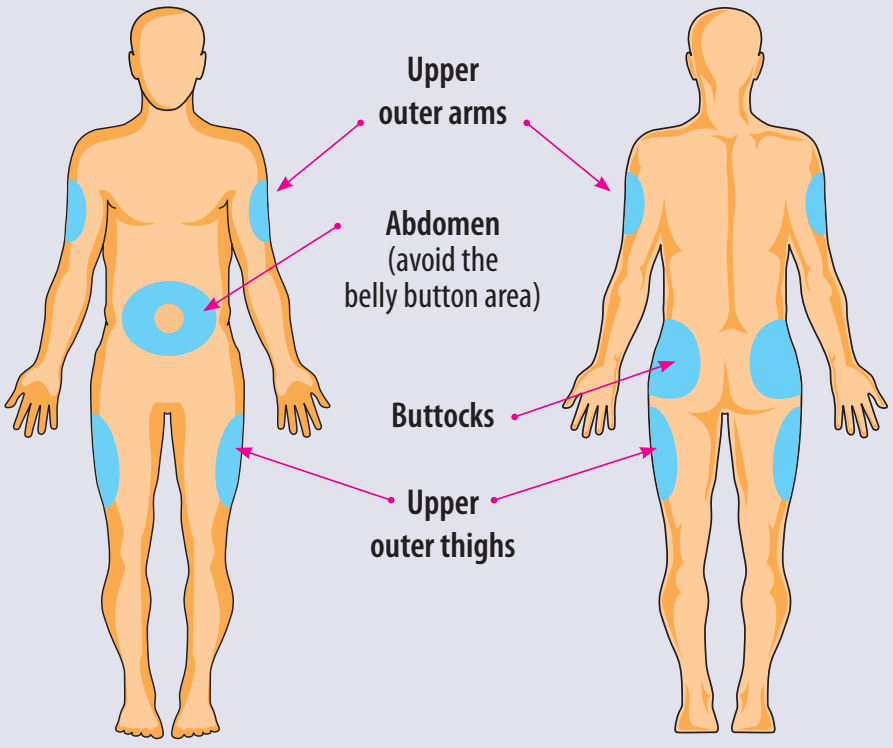
There are many different types of insulin and schedules for injections. Your health care team will help you decide the best choices for you.

Insulin is given as an injection using a syringe or pen-like device, or an insulin pump.

A member of your health care team will teach you about the insulin you will be taking, about the device to use, what dose, when to give the injection, and when to monitor blood glucose. It is important to monitor your blood glucose according to your provider's instructions. This will help establish if you are on the right dose and if not, make the necessary changes.

Where to inject the insulin

- **The fatty tissue of the abdomen, outer arms, thighs, or buttocks**
- **Rotate injections within the same site for at least a week before another site is used**



How to Use an Insulin Pen

Reminders:

- *Always use a new needle for each injection*
- *Be careful not to bend or damage needle before use*
- *Review the appropriate technique with your health care team*
- *Wash hands thoroughly.*

Inspect insulin — if cloudy, roll to mix

Image 1:

Pull off pen cap, clean rubber end of the pen with alcohol pad

Check for discoloration/crystals — if found, DO NOT USE and call your pharmacy

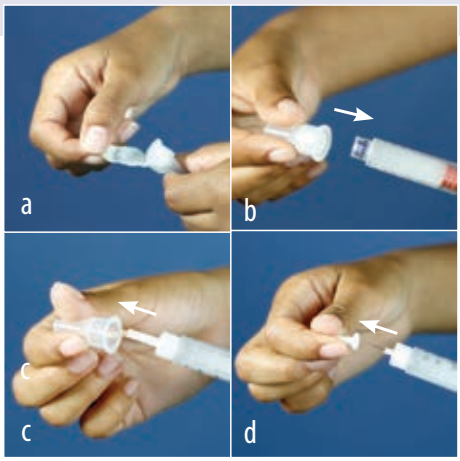


Image 2:

a. Remove protective cap from new disposable needle

b. Screw it onto your pen

c. Pull off outer needle cap and keep for later

d. Pull off inner needle cap and dispose of it

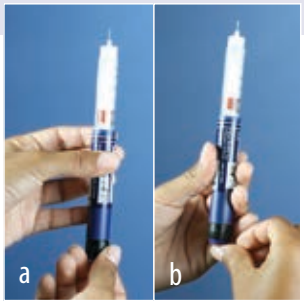


Image 3:

a. Hold pen in upright position and turn the dose selector to select 2 units

b. Hold pen with needle pointing upwards and then lightly tap side of pen to remove air bubbles, press the push button and watch for insulin drop to appear

Image 4:

Turn selector to select your dose of insulin

Your pen is now ready to use

Image 5:

Chose your injection site (abdomen, arm, or thigh) and keep each injection at least one finger's width from the last injection

Clean area with soap and water or alcohol pad and let dry

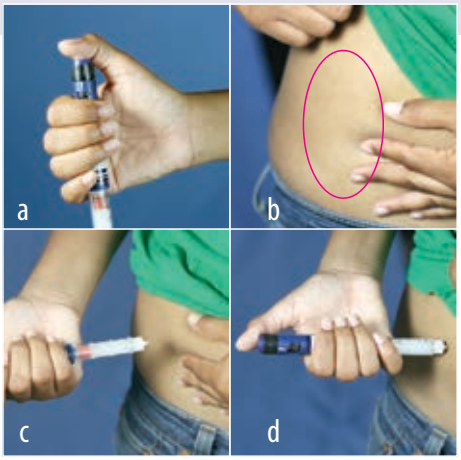


Image 6:

a. Hold insulin pen as shown

b. LIGHTLY pinch up skin

c. Inject at 45 - 90° angle

d. Wait 6 - 10 seconds BEFORE removing the needle from your skin (this ensures absorption of the insulin)

After injecting, apply gentle pressure to the site — **NO RUBBING**

Image 7:

Put outer cap over needle, unscrew, and dispose

Record the date, time, dose, and location of your injection in your log book, as a reminder of where, and when you gave your insulin

How to Use an Insulin Syringe

Reminders:

- *Always use a new needle for each injection*
- *Be careful not to bend or damage needle before use*
- *Review the appropriate technique with your health care team*
- *Wash hands thoroughly.*

Image 1:

Inspect insulin — if cloudy, roll to mix. Clean rubber end of the pen with alcohol pad

Check for discoloration/crystals — if found, DO NOT USE and call your pharmacy

Image 2:

Pulling back plunger, measure the same amount of air into the syringe as the dose of insulin needed

Image 3:

Clean top of insulin vial with alcohol pad, let dry, and then push needle through the rubber stopper and inject the air into the vial

Image 4:

While the syringe is attached to the vial, turn upside down as shown

Image 5:

Pull the plunger down to measure out your dose of insulin, (have someone double check for you if possible to ensure getting the RIGHT dose)

Image 6:

Pull the needle out of the vial

Image 7:

Choose your injection site (abdomen, arm, or thigh) and keep each injection at least one finger's width from the last injection site

Clean with soap and water or an alcohol pad — let dry

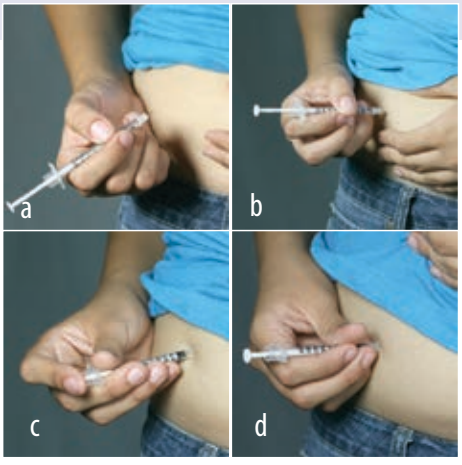


Image 8:

a. LIGHTLY pinch up skin

b. Inject at 90° angle

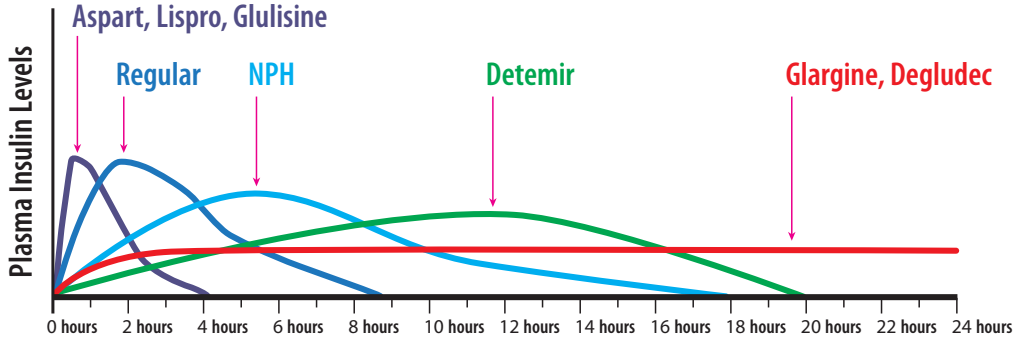
c. Push the plunger down to inject the insulin

d. Wait 6 - 10 seconds BEFORE removing the needle from your skin (this ensures absorption of the insulin)

After injecting apply gentle pressure to the site — **NO RUBBING**

Discard the syringe in a hard plastic container. Record the date, time, dose, and location of your injection in your log book, as a reminder of where and when you gave your insulin

How insulin works



Insulin Types

Type of Insulin & Brand Names	Begins working in	Most effect in	Lasts	How it helps to manage blood glucose
Rapid-acting				
Aspart (Novolog®)	10 – 20 min	40 – 50 min	3 – 5 hours	Rapid-acting insulin covers insulin needs for meals eaten at the same time as the injection
Glulisine (Apidra®)	15 – 30 min	30 – 90 min	3 – 4 hours	
Lispro (Humalog®)	15 – 30 min	30 – 90 min	3 – 5 hours	
Short-acting (Prandial)				
Regular (Novolin R®, Humulin R®)	30 – 60 min	2 – 5 hours	5 – 8 hours	Short-acting insulin covers insulin needs for meals eaten within 30 - 60 minutes
Regular U-500 (Humulin R U-500®)	30 – 45 min	2 – 4 hours	5 – 8 hours	U-500 is used if more than 200 units of insulin are needed daily. It is 5 times more potent than regular insulin.
Intermediate-acting (Basal)				
NPHw (Novolin N®, Humulin N®)	60 – 90 min	2 – 4 hours	20 – 24 hours	Intermediate-acting insulin covers insulin needs for about half the day or overnight. Can be combined with Rapid- or short-acting insulin
Long-acting (Basal)				
Glargine (Lantus®)	60 min	No Peak	20 – 24 hours	Long-acting insulin covers insulin needs for about one full day. Can be combined, when needed, with rapid- or short-acting insulin
Detemir (Levemir®)	60 – 120 min	6 – 8 hours	10 – 24 hours	
Degludec (Tresiba®)	60 min	9 hours	42+ hours	
Premixed products (Meal time + Long acting)				
NPH/Regular 70/30 (Novolin 70/30®)	30 – 60 min	2 – 12 hours	10 – 24 hours	Generally used twice a day before mealtime.
Insulin protamine aspart/ aspart 70/30 (Novolog Mix®)	10 – 20 min	1 – 3 hours	10 – 16 hours	
Insulin protamine lispro/ lispro 75/25 or 50/50 (Humalog® mix 75/25 or Humalog mix 50/50™)	15 – 30 min	1 – 6 hours	10 – 16 hours	

The main side effect of insulin is a low blood glucose. Review the 15-15 Rule on page 19 and always carry a rapid-acting carbohydrate such as glucose tablets or juice with you. Sometimes insulin can lead to a very severe low blood glucose that causes unconsciousness or seizures. Glucagon may be required to raise the blood glucose to a safe level when this happens.

Storing your Insulin

- Check storage guidelines for your insulin. This is usually in the product package insert or can be obtained from your pharmacy
- Once a vial or insulin pen is used, mark it with the date that it should be discarded. Some pens, insulin cartridges, and mixed insulin products may expire in less than 28 days. Check with your pharmacist
- Unopened insulin should be stored in a refrigerator at a temperature of 36 - 46º F. **Do not freeze**
- Opened insulin may be stored at room temperature below 86º F
- Never use insulin beyond the expiration date stamped on the vial, pen, or cartridge
- Keep insulin out of direct sunlight and away from heat or extreme cold

My insulin is called: _____

I take: _____ units before breakfast

_____ units before lunch

_____ units before dinner

_____ units at bedtime

I will use a: _____ to give my insulin.

I need to check my blood glucose: _____
(how often?)

I have reviewed the 15-15 rule to treat hypoglycemia.

I will carry _____ with me at all times to treat a low blood glucose.

Sick Day Management

When you have diabetes and get sick, your blood glucose levels may go up. They may also rise because of other conditions such as surgery, injury, and emotional stress.

When you have a cold or flu or if you have a fever for a day or two your body needs glucose that it can use for energy to help fight the illness.

If you're feeling too sick to eat, your body will get its energy by releasing glucose from stored supplies in the liver, making your blood glucose level rise.

Keep taking your insulin or diabetes medication when you're sick to control your blood glucose levels even though you may be eating less than normal.

Maintain Your Insulin Therapy Regimen

- Unless your provider tells you otherwise, continue taking the same number of insulin units or other medication you normally would, even if you are sick to your stomach or not eating
- Continue to monitor your blood glucose. You may need to monitor more frequently.

Keep Eating

- Try to eat your usual meals or snacks, if possible. If you can't stick to your usual diet, follow these guidelines for replacement foods: carbohydrates every 4 - 6 hours
- If you're having a hard time swallowing, eat soft foods with the same amount of carbohydrates as your regular foods
- If you're sick to your stomach or vomiting, drink enough liquids to equal the amount of carbohydrates that you would normally eat

(Each item equals 15 grams of carbohydrate)

Food Item	Amount
Apple or pineapple juice	1/2 cup (4 oz.)
Soda (regular, not diet)	1/2 cup (4 oz.)
Jell-O® (regular, not sugar-free)	1/2 cup
Popsicle® (regular, not sugar-free)	1/2 twin
Sherbet	1/4 cup
Saltine crackers	6 squares
Milk	1 cup (8 oz.)
Ice cream (vanilla)	1/2 cup
Pudding (sugar-free)	1/2 cup
Pudding (regular)	1/4 cup
Thin soup (examples: vegetable, chicken noodle)	1 cup
Thick soup (examples: cream of mushroom, tomato)	1/2 cup
Macaroni, noodles, rice, mashed potatoes	1/2 cup (cooked)

*Use of trade names is for identification only and does not imply endorsement by the VA/DoD

Short-term Illness Can Often Be Managed at Home by Following These Simple Guidelines:

Type 1 Diabetes

Check blood sugar every 2 - 4 hours. If your blood sugar is above 250 and urine ketones are positive, or if your blood sugar is constantly very high, (above 300) after 2 - 3 checks, call your health care team immediately or go to the hospital or clinic.

Type 2 Diabetes

Check blood sugar every 4 - 6 hours. If blood sugars remain elevated (above 300) and do not respond to medications, call your health care team for instructions.

Illness and Medications

A general rule is to continue taking all your diabetes medications even if you are sick. Discuss with your provider if you will need to make any changes to your medications when ill, especially if you are unable to tolerate food or drink.

Your health care provider may need to give you medication for infection, nausea, vomiting, diarrhea or replace fluid you have lost through dehydration. It is very important to drink fluids.

Avoid Dehydration

High blood sugar, fever, diarrhea, vomiting can lead to loss of too much body fluid. Dehydration may cause the following symptoms:

- Dry mouth
- Decreased urination or dark urine
- Thirst
- Dry, flushed skin

Try to drink fluids every hour while you are awake. It may be easier to keep down if you take small sips of fluids every 5 - 15 minutes.

Test and Monitor for Ketones

Testing ketones is typically for Type 1 diabetes only. Sometimes a provider may ask someone with Type 2 to test for ketones if they are at high risk. Be alert for the following symptoms when you're sick:

- Pains in the stomach
- Fast breathing
- Fruity breath
- Diarrhea
- Vomiting

These symptoms could mean that your blood sugar levels are dangerously high, which indicate that you could be progressing into a condition called diabetic ketoacidosis (DKA). DKA is the result of the buildup of harmful waste products called ketones in the blood. DKA occurs when not enough insulin is available to process glucose for energy and the liver will begin producing ketones from fat. If ketone levels in the blood become too high, immediate medical attention is required.

- To be safe, check your urine for ketones every four hours when you are sick, and report their presence to your provider immediately
- The provider will need accurate records of your ketone readings in order to give you proper advice

When to Call Your Health Care Team

Call

You don't need to call every time you have a mild stomach bug or the sniffles, but do call for advice if:

- Your fever is 100º F or more
- You are vomiting and/or have diarrhea for more than 6 hours
- Your blood sugar is over 250 for 24 hours
- Your blood sugar is over 300 for two tests in a row (in a 2 to 8-hour period)
- You find ketones in your urine

When to get care immediately:

Call 911

- You cannot keep food and fluids down
- You have trouble breathing
- You have signs of dehydration, such as:
  - Drowsiness or confusion
  - Dry eyes or mouth
  - Irregular or fast breathing, fast or pounding heartbeat, and low blood pressure
  - Leg cramps
  - Weakness or dizziness

If you have to go to the hospital or emergency room, immediately tell doctors and nurses you have diabetes. Always wear your diabetes identification bracelet or necklace in case you're not able to talk to the doctors or nurses.

Living Well With Diabetes

Maintaining good health when living with diabetes means paying attention to your entire body and your mind. Preventing or delaying complications will help you to protect your health for years to come.

Care of Your Heart

High blood glucose harms blood vessels, which can cause heart problems. Heart and blood flow problems are made worse by smoking, high blood pressure, and high cholesterol. Heart and blood vessel disease can lead to heart attacks and strokes. It also causes poor blood flow (circulation) in the legs and feet.

- Check your blood pressure
- If your blood pressure is higher than 140/80, talk to your health care team
- Eat foods that are low in salt and fat
- Exercise most days of the week and be as physically active as you can
- Don't smoke! If you do smoke, this is the time to quit
- Lose weight if you are heavy:
  - Dropping even a few pounds will help keep your heart from working too hard
  - If you need help to start, ask your provider or dietitian for a plan to lose weight
  - Consider joining a community weight loss program. Ask your health care team for programs in your area
- Relax – staying calm helps keep your blood pressure and blood sugar under control
- Take your medicine. If you are on medication to lower your blood pressure or cholesterol, take it every day as instructed
- Ask your health care team about taking aspirin for your heart
- Don't use tobacco

Care of Your Kidneys

Diabetes can damage the small blood vessels in the kidneys. This prevents them from clearing the waste out of your blood and can lead to chronic kidney disease.

- Keep your blood glucose in the recommended range as discussed with your provider
- Keep your blood pressure in the recommended range as discussed with your provider
- Talk to your health care team about a urine test for protein at least once a year
- Ask your health care team about medicines and food that can affect your kidneys

Care of Your Eyes

Diabetes can harm the blood vessels in your eyes. This can lead to eye disease and even blindness. Early treatment of eye problems can help save your sight.

- Keep your blood glucose in the recommended range as discussed with your provider
- Keep your blood pressure in the recommended range as discussed with your provider
- Have a dilated eye examination by an eye care professional at least every two years even if your vision is not bothering you. Your provider may recommend every year if you are at a greater risk or have eye disease
- Watch for problems. Report blurry vision, flashes of light in your eyes, blind spots, "things" floating in your eyes, or changes in your vision to your health care provider
- Don't use tobacco. Smoking can cause high blood pressure, which can make eye problems and kidney problems worse

Care of Your Feet

Because diabetes affects nerves, it can make it hard to feel pain in your feet and legs. You may not know if, or when, you have been hurt. Diabetes can also cause problems with circulation. This makes it hard for cuts and sores to heal and can cause infection.

- Call your provider if you see signs of trouble such as pain or swelling in your feet, a cut or burn that becomes red or sore, calluses, corns, and in-grown toenails can all lead to bigger problems
- Exercise. Staying active improves blood flow to your legs and feet
- Check your feet every day. Look for cuts, sores, and blisters. Put lotion on dry spots to prevent cracks. Use a mirror to see the bottom of your feet or ask a family member or friend to help you
- Keep your feet clean. Wash your feet every day with mild soap and warm water. Test the water first to make sure it is not too hot. Dry your feet well, especially between your toes
- Cut your toenails straight across. Use clippers, not pointed scissors, and be careful not to cut the skin. Never cut corns and calluses. If you have hard or thick toenails, ask your provider if a foot specialist should cut them for you
- Always wear socks and shoes (not sandals). Cotton socks help keep your feet dry. Comfortable shoes help your blood flow. Never go barefoot
- Wear good shoes. Before you put on your shoes, feel around inside or shake the shoe to find any small objects that could cut your feet
- Don't use tobacco

Care of Your Emotional Health

Managing emotional health is just as important as managing your physical health. This is true for all people. Everyone feels stressed at times. Stress can aggravate any medical condition and make control difficult.

Living with diabetes is a daily task. Every aspect of your day, what you eat, your lifestyle and activities, stressful situations — fear, anger, despair, and depression, will have an effect on your diabetes.

Stress increases blood glucose levels and in people with diabetes can lead to poor blood glucose management.

Learning ways to take care of your *whole self* will help your diabetes management. Think about what causes stressful feelings. Then, find ways to limit, alter, or avoid stressful situations.

To combat stress try:

- Exercising as a natural stress reliever (and it helps to lower blood glucose)
- aking time to do things you enjoy — such as reading, walking, or spending time with friends or family
- Making time to relax — yoga, tai chi, meditation, and prayer are all ways of relaxing the mind and body
- Picturing a relaxing scene in your mind
- Using deep breathing techniques to release physical tension

Strategies for coping with stress:

- Have a support network of family and/or friends
- Be assertive and learn to say "no" when appropriate
- Be curious, ask questions, and ask for help
- Learn what triggers the most stress for you, and try to alter those situations
- Challenge yourself with small short term goals and work your way up

Recognizing depression

Many people feel sad or down when they first hear that they have diabetes. Feelings like these are normal. But frequent feelings of helplessness or hopelessness are a symptom of depression. Depression is a serious problem, but it can be treated. If you feel overwhelmed, or if you are having trouble sleeping or eating, talk to your health care provider, your minister, or a counselor. Don't wait!

You Can Live a Full Life and Enjoy Traveling with Some Advance Planning

Safe Travel Preparedness

While traveling, diabetes can be more of a challenge but with a little bit of planning, you can manage diabetes anywhere! Using a small makeup or travel bag to pack your "Diabetes Tool Kit" can help you stay organized.

Your Toolkit suggestions

Here are some travel tips:

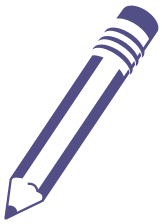
- Carry a list of your medications, doses, allergies, and medical problems in your wallet
- Remember to adjust medication for time zone changes
- Wear a medical-alert bracelet or necklace and carry your diabetes care-card
- If traveling by airplane, check with the airline about carrying your insulin syringe
- Request an aisle seat if you need frequent rest room breaks
- Pack medication in your carry on luggage. Keep them with you, do not store in overhead bin

What to Pack:

- Pack twice the amount of diabetes medication and supplies than you usually need
- Easy to carry snacks such as string cheese, nuts, or jerky
- Medical insurance card
- Comfortable shoes — you will likely be walking more than usual, so be attentive to your feet

Keep Track of Your Diabetes Health

Ask your provider to help you set goals to stay healthy



	My Last Result	My Goal	My Target
A1c			
Blood Pressure			
Cholesterol			
LDL			
HDL			
Weight			
Urine Test (eGFR)			

My Last Exam/Vaccine

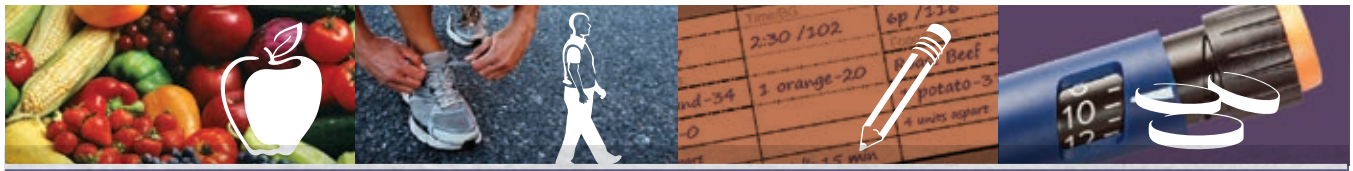
Ask your provider about:

	Date
Eye exam (dilated)	
Foot exam	
Dental exam	
Pneumonia vaccine	
Flu vaccine	
Other _____	

Thanks to the members of the VA/DoD Diabetes Guideline and Toolkit Working Groups, the patients, and others who contributed to the design of this book.

This edition of the "Self-Care Skills for the Person with Diabetes" is based on the VA/DoD Management of Diabetes Mellitus Clinical Practice Guideline, revised in 2017. The guideline includes evidence-based recommendations for screening and management of patients with diabetes.

The full text of the Guideline can be found at:
https://www.qmo.amedd.army.mil or
http://www.healthquality.va.gov



VA/DoD Clinical Practice Guideline for Management of Diabetes Mellitus. Version 5, 2017