

The Basics of Diabetes

A Guide for People with Diabetes

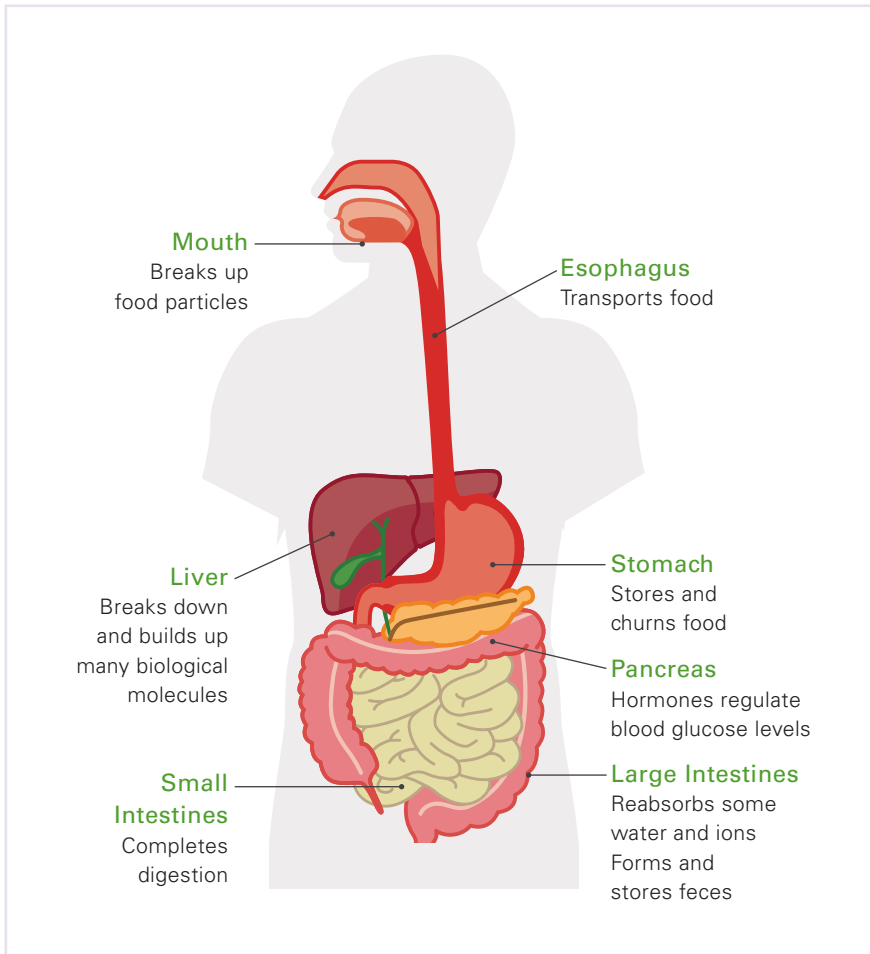


Table of Contents

What is Diabetes?	3	When Should I Call?	22
Types of Diabetes	4	Healthy Eating	23
Self-Monitoring Blood Glucose	5–6	How Should I Plan My Meals?	24
Blood Glucose Diary	7	What About Carb Counting?	25
Hemoglobin A1C	8	How can Nutrition Labels Help Me?	26
Medications	9–10	Exercise	27
Personal Medication List	11	Long-Term Complications	28
Insulin Pen Injection	12–13	Managing Your Diabetes	29
Insulin Bottle and Syringe Injection, One Type of Insulin . . .	14–15	My Diabetes Care Record	30
Hyperglycemia	16–17	Tobacco and Alcohol Consumption . . .	30
Hypoglycemia	18–20	Emotions and Helpful Information . . .	31
Sick Days	21		

Mission Statement

We, Trinity Health, serve together in the spirit of the Gospel as a compassionate and transforming healing presence within our communities.



Did You Know?

- ▶ 30.3 million (9.4%) people in the United States have diabetes
- ▶ Diagnosed = 23.1 million people
- ▶ Undiagnosed = 7.2 million people
- ▶ 23.8% of people with diabetes are undiagnosed

The good news is once diagnosed, diabetes can be readily controlled. This book will help you learn how to manage your diabetes and keep you in the best health possible.

You are not alone!

What is Diabetes?

Diabetes is a condition in which the body is unable to use food properly for energy, resulting in high blood glucose (sugar).

Diabetes causes too much glucose to build up in the blood. To understand diabetes, it is helpful to understand the role of glucose in providing energy to the body's cells.

- Food is broken down into **protein, carbohydrate** and **fat** in the stomach and intestines. These nutrients are absorbed into the blood.
- Carbohydrate is the main nutrient broken down into glucose. Glucose then travels into the body's cells where it is used for energy.
- Glucose needs the help of insulin to get from the blood into the cell. Think of insulin like a key and the cell as a door. When insulin is released from the pancreas, it travels to the cell and unlocks the cell's door so glucose can get in and be used as energy.

Although diabetes is a lifelong condition, people with diabetes can take steps to manage it and prevent serious medical problems.

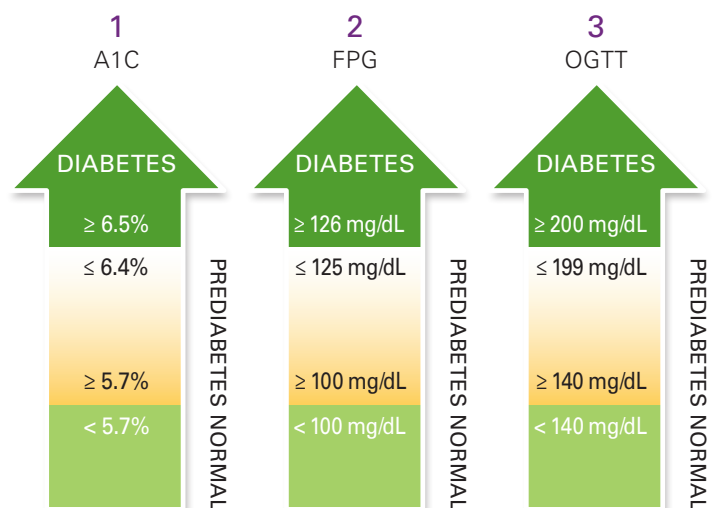


Types of Diabetes

Type 1	<ul style="list-style-type: none"> Pancreas cannot make insulin anymore No insulin in the body Without insulin, the blood contains too much glucose, leading to high blood glucose (sugar) levels
Type 2	<ul style="list-style-type: none"> Body's cells do not use insulin properly (insulin resistance) Pancreas may not make enough insulin With too little insulin and the cells not responding to insulin, the blood contains too much glucose, leading to high blood glucose levels
Gestational	<ul style="list-style-type: none"> Occurs during pregnancy and can go away after the mother gives birth Can put the mother and child at risk for Type 2 diabetes later in life
Secondary & Other	<ul style="list-style-type: none"> Results from other causes such as illness, medications, genetics and other factors Some examples of illnesses that affect the pancreas are cystic fibrosis or HIV/AIDS and long-term steroid use Other forms of diabetes include latent autoimmune diabetes in adults (LADA) and maturity onset diabetes of the young (MODY)
Prediabetes	<ul style="list-style-type: none"> Blood glucose levels are high, but not high enough to be diagnosed with diabetes At risk of getting Type 2 diabetes unless lifestyle changes are made (i.e., diet and exercise)

To be diagnosed with diabetes you must have:

1. A Hemoglobin A1C of 6.5% or higher
2. A fasting (no eating or drinking for at least eight hours) blood glucose of 126 mg/dL or higher on at least two separate occasions
3. A blood glucose level two hours after eating of 200 mg/dL or higher and symptoms of hyperglycemia





Self-Monitoring Blood Glucose

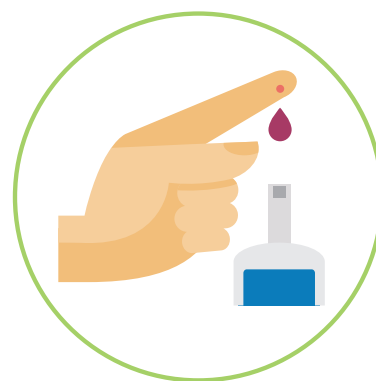
Why is it important to test my blood glucose levels?

Testing (self-monitoring) of blood glucose (sugar) is necessary for everyone with diabetes, including those who control their diabetes with lifestyle changes (diet and exercise) alone.

Blood glucose testing provides immediate feedback on blood glucose control which allows you to take action to keep blood glucose in your target range.

- Testing can show how food choices, physical activity, medications and other factors affect your blood glucose control
- Testing provides quick feedback on changes throughout the day to help prevent dangerous high and low blood glucose levels

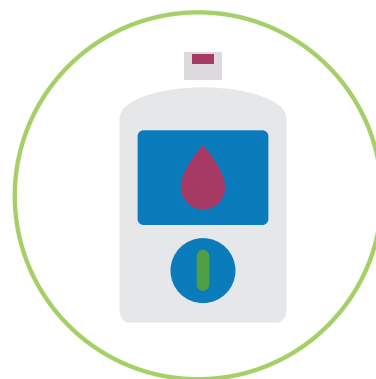
Blood glucose testing can also help you and your doctor notice patterns/ trends over longer periods.



What supplies will I need to test my blood glucose?

- Blood glucose meter (glucometer)
- Test strips
- Lancets
- Lancing device
- Blood glucose diary or log sheet (see page 7)
- Soap and water or an alcohol wipe

Speak with your doctor or insurance company to learn how to get a glucometer and supplies. You can also talk with your nurse while you are in the hospital.



How do I use my glucometer?

A blood glucose meter (glucometer) is a machine that will test your blood glucose levels throughout the day. The instructions below are important and should be carefully followed each time you use the glucometer. See your blood glucose meter user manual for complete instructions.

1. **Prepare:** Ask your doctor or health care provider what area of your body you should use to test your blood glucose. It is usually best to use the sides of your fingers. Wash your hands and dry them well. Clean the area that you will poke.
2. **Insert:** Put the test strip into the glucometer.
3. **Poke:** Take out a new lancet (a miniature needle) which will be used to poke the area for a drop of blood. Poke yourself with the lancet. Gently squeeze the area until a drop forms.
4. **Touch:** Then, touch the drop of blood to the test strip and wait for the glucometer to beep. The result on the screen is your blood glucose level.

When should I test my blood glucose?

The time of day at which you should test your blood glucose depends on many factors, including what medicines you are taking for your diabetes. You may be told to check in the morning, at bedtime or before and after meals. You and your doctor will work together to determine how often and what time(s) of the day you should test.

Write the number that appears on your blood glucometer meter in your log book. This will allow your doctor to see how you are doing with your blood glucose every day.

How do I know if my blood glucose levels* are on target?

Fasting blood glucose (no food or drink for 8–12 hours)	Less than 110 mg/dL
Before meal blood glucose	80–130 mg/dL
Two hours after a meal blood glucose	Less than 180 mg/dL (less than 140 mg/dL in some cases)

*These are recommended blood glucose target goals from the 2017 American Diabetes Association (ADA) Standards of Medical Care in Diabetes and a 2017 Consensus Statement by the American Association of Clinical Endocrinologists (AACE)

Sometimes, your blood glucose target goals will be lower or higher depending on patient specific factors. For example, age, general health, how long you have been diagnosed with diabetes, etc. **Always talk with your health care provider to figure out what personal blood glucose target goals are right for you.**

Blood Glucose Diary

Self-monitoring blood glucose log

Personal Goals		When Should I Test?
Fasting (Waking Up)		
Before Meals		
After Meals		
Bedtime		
A1C		

If your readings are consistently over or under your target, especially if you are under 70 mg/dL, talk to your doctor.

Hemoglobin A1C

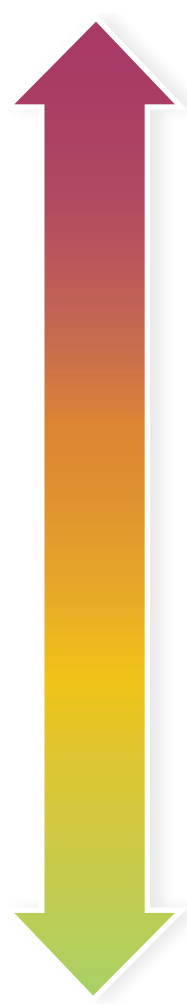
How does the A1C test help?

You should use a meter to test your blood glucose (sugar) every day. It is also helpful to know how well your blood glucose is being controlled over time. The A1C test measures your blood glucose level over the past three months and can show you how your treatment plan is working over time. If your A1C number stays too high, your treatment plans may need to change.

Your A1C Goal

An A1C result is often shown as a percentage. The American Diabetes Association recommends a general A1C goal of less than seven percent. Sometimes, the A1C goal will be lower or higher depending on patient specific factors. For example, age, general health, how long you have been diagnosed with diabetes, etc. Always talk with your health care provider to figure out what personal A1C goal is right for you.

A1C and Average Blood Glucose Score Card



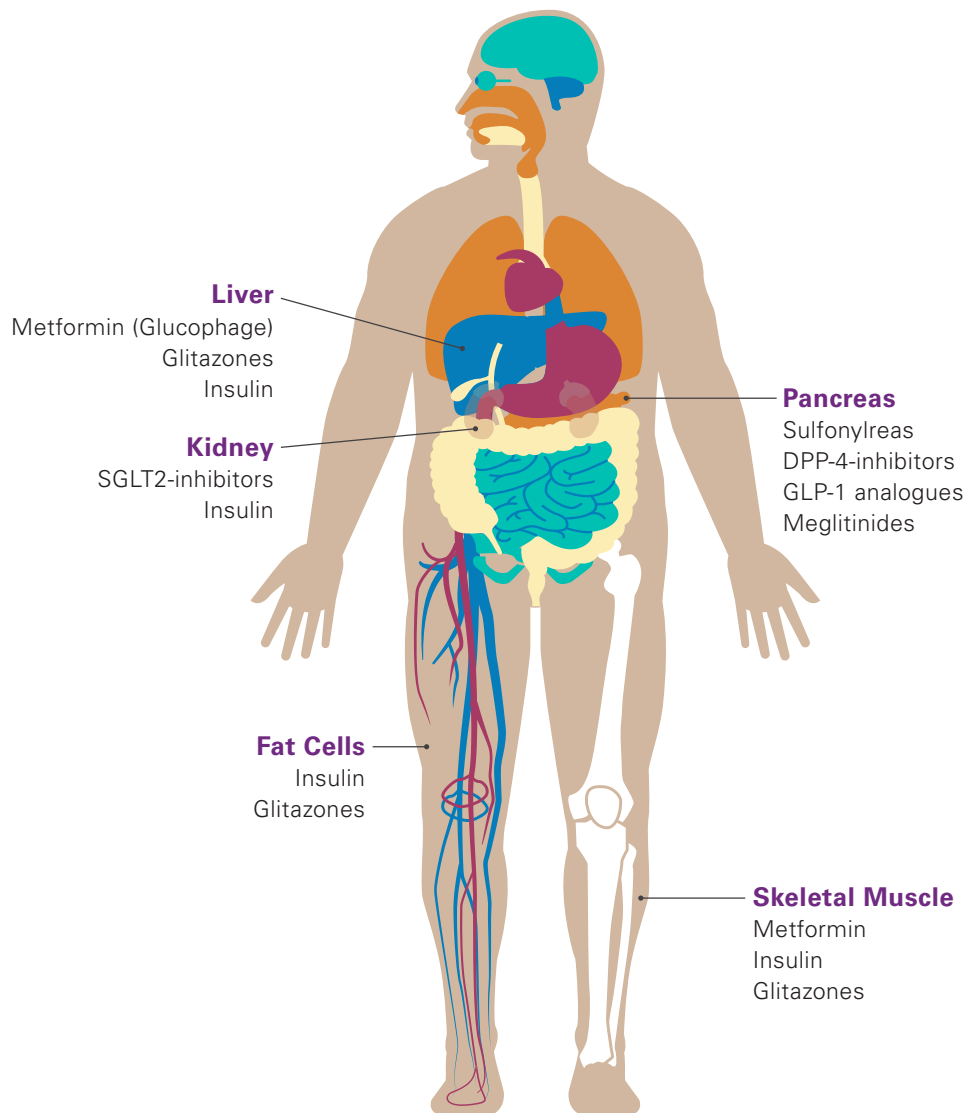
Action Suggested/ Talk to Doctor	HbA1C	Estimated Average Blood Glucose
	14	355 mg/dL
	13	326 mg/dL
	12	298 mg/dL
	11	269 mg/dL
	10	240 mg/dL
	9	212 mg/dL
Caution	8	183 mg/dL
	7	154 mg/dL
Excellent	6	126 mg/dL
	5	97 mg/dL
	4	68 mg/dL

Medications

Why do I need to take medications for my diabetes?

Like healthy eating and exercise, taking medication can control your blood glucose (sugar). There are various kinds (classes) of diabetes medications. Some must be taken by mouth (pills), others must be injected (shots).

- Each diabetes medication works in a different way and has different side effects
- Some medications are only for people with Type 2 diabetes because of how they work in your body; these medications require your pancreas to produce insulin
- Other medications focus on enhancing the effect of insulin and may be used in both Type 1 and Type 2 diabetes



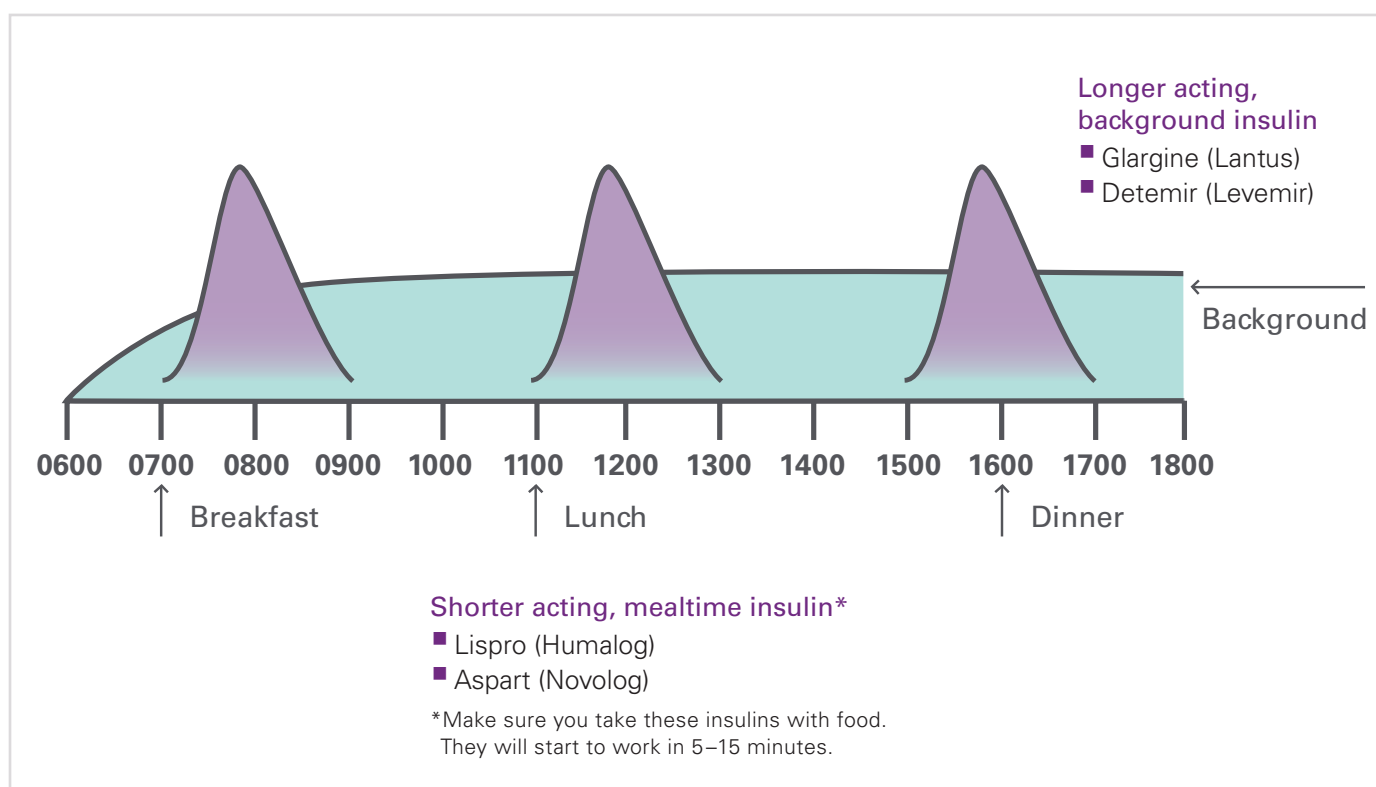


What about insulin?

When used correctly, insulin is often the best way to control your blood glucose. Insulin is required for people with Type 1 diabetes because their bodies cannot produce it. For people with Type 2 diabetes, if diet and exercise and/or other medications cannot control blood glucose, then insulin is the best option.

Why do people take different insulins at different times?

There are different types of insulins you may inject. These insulins act differently, in terms of how soon they kick in, when they peak and how long they last. For example, a patient may need to take a shorter acting insulin with meals and a longer acting insulin in the morning or before bed. The short, mealtime insulin controls blood glucose when you eat. The longer, morning or bedtime insulin works in the background to control blood glucose between meals.



Personal Medication List

This personalized medication list includes medications I am taking on a regular or as needed basis. Use the blank rows below to include prescription and over-the-counter (herbals, vitamins) medications. Keep a list of your medications in your wallet and bring it with you to every appointment.

Medication	Why I Take It	Dosage	How Often I Take It	Start Date

INSULIN PEN INJECTION (SHOT)

Though insulin pens differ slightly, the basic steps for using them are the same. The pictures below show the basic steps for preparing and giving insulin via an insulin pen injection.



STEP 1:
Wash hands.



STEP 2:
Gather supplies.



STEP 3:
Remove the pen cap.



STEP 7:
Attach the needle to the pen.
Turn it until it is snug.



STEP 8:
Remove the outer cap
of the needle.



STEP 9:
Remove the
inner needle cap.



STEPS 13 and 14:
Firmly grasp the pen. If the pen needle is 6 mm or less, do not pinch the skin. Place the needle through the skin. (If it is more than 6 mm, pinch a 1-inch fold before inserting).



STEP 15:
Press the plunger
all the way down.



STEP 4:

For 70/30, 75/25, or NPH insulin only — rock the insulin pen back and forth to mix the insulin.



STEP 5:

Wipe the tip of the pen with an alcohol swab.



STEP 6:

Remove the pull tab from the needle.



STEPS 10 and 11:

Turn the dial to “2 units.” Hold the pen with the needle pointing up. Push the plunger all the way down. You should see a drop of insulin coming from the needle. If you do not, repeat steps 10 and 11 until a drop of insulin appears.



STEP 12:

Turn the dial to the dose of insulin you need to take. Choose the injection site. Clean the site with an alcohol swab.



STEP 16:

Wait 10 seconds before removing the needle from your skin.



STEP 17:

Replace the outer cap and use it to remove the needle by unscrewing counterclockwise. Discard the needle in a sharps container.



STEP 18:

Recap the insulin pen. Store the pen outside the refrigerator when it is in use.

Talk to your health care team if you have questions about any of these steps.

INSULIN BOTTLE AND SYRINGE INJECTION ONE TYPE OF INSULIN

The pictures below show the basic steps for preparing and giving insulin with one bottle (vial) and a syringe.



STEP 1:
Wash hands.



STEP 2:
Gather supplies.



STEP 3:
For 70/30, 75/25, or NPH (cloudy) insulin only — roll the insulin bottle back and forth to mix the insulin.



STEP 7:
With the insulin bottle placed on a hard surface, inject the air you just pulled into the syringe into the insulin bottle. Keep the syringe in the bottle.



STEP 8:
With the syringe still in the bottle, turn the bottle upside down. Hold the bottle straight up and down.



STEP 9:
Make sure the needle tip is covered by insulin. This will prevent air bubbles.



STEP 13:
When you have the right dose of insulin with no air bubbles, take the syringe out of the bottle.



STEP 14:
Check the needle to make sure it is not bent. If it is bent, throw away the syringe and start the process again.



STEP 15:
Set the syringe down, but do not let the needle touch anything.



STEP 4:

Wipe the top of the bottle with an alcohol swab.



STEP 5:

Remove the syringe needle cap and plunger if present.



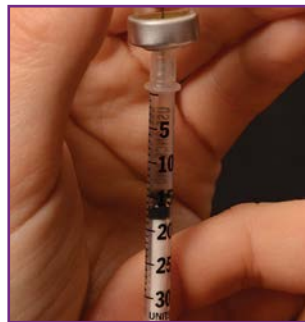
STEP 6:

Pull air into the syringe by drawing back on the plunger. Stop at the number of your insulin dose.



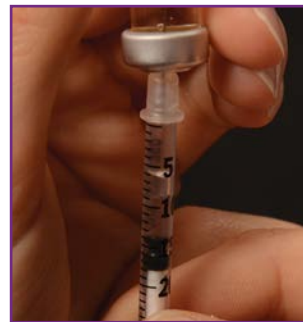
STEP 10:

Pull back on the plunger slowly, stopping at the number of your insulin dose.



STEP 11:

Ensure the insulin in the syringe does not have air bubbles. Small air bubbles will not hurt you, but they take up space, which means you won't receive the correct insulin dose.



STEP 12:

If you do see an air bubble, push all of the insulin back into the bottle by pushing the syringe plunger and repeat step 10.



STEP 16:

Choose your injection site and clean the injection site with an alcohol swab.



STEP 17:

Hold the syringe firmly with your hand and inject it at a 90-degree angle (if your needle is more than 6 mm, pinch 1-inch of the skin before inserting the needle).



STEP 18:

Push down on the plunger with your thumb to inject the insulin.

STEP 19:

After the syringe plunger is pushed all the way down, remove the needle by pulling straight out. Discard the syringe in a sharps container.

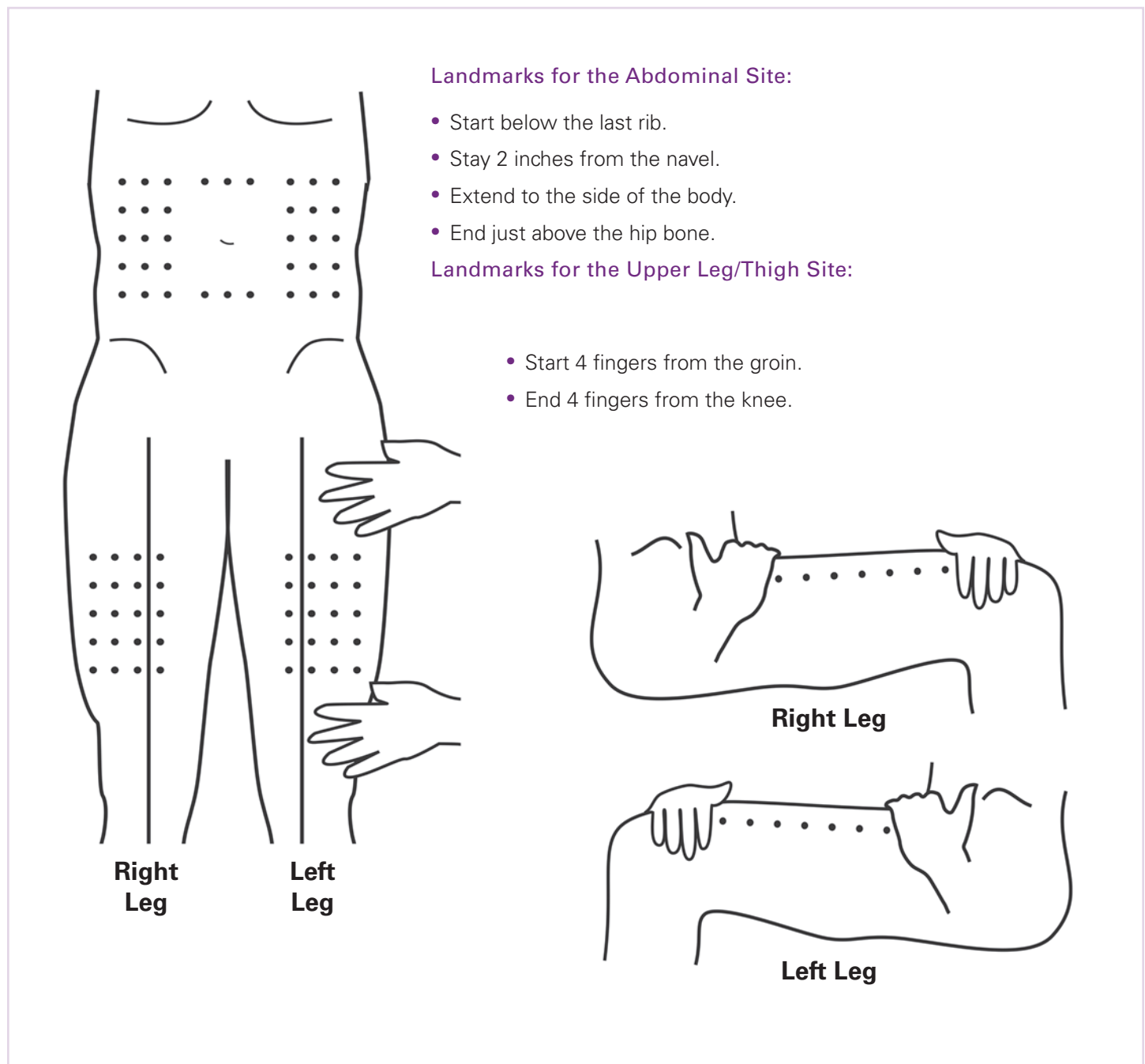
Talk to your health care team if you have questions about any of these steps.

Insulin Rotation Record

NOTE: The abdomen is the preferred site for insulin injections.

Insulin is absorbed the fastest and most consistently from day-to-day when injected in the abdomen.

- Keep at least 1 inch between injections.
- Try to use each spot only once a month.
- If moving between major sites, use all of one site before moving to another.



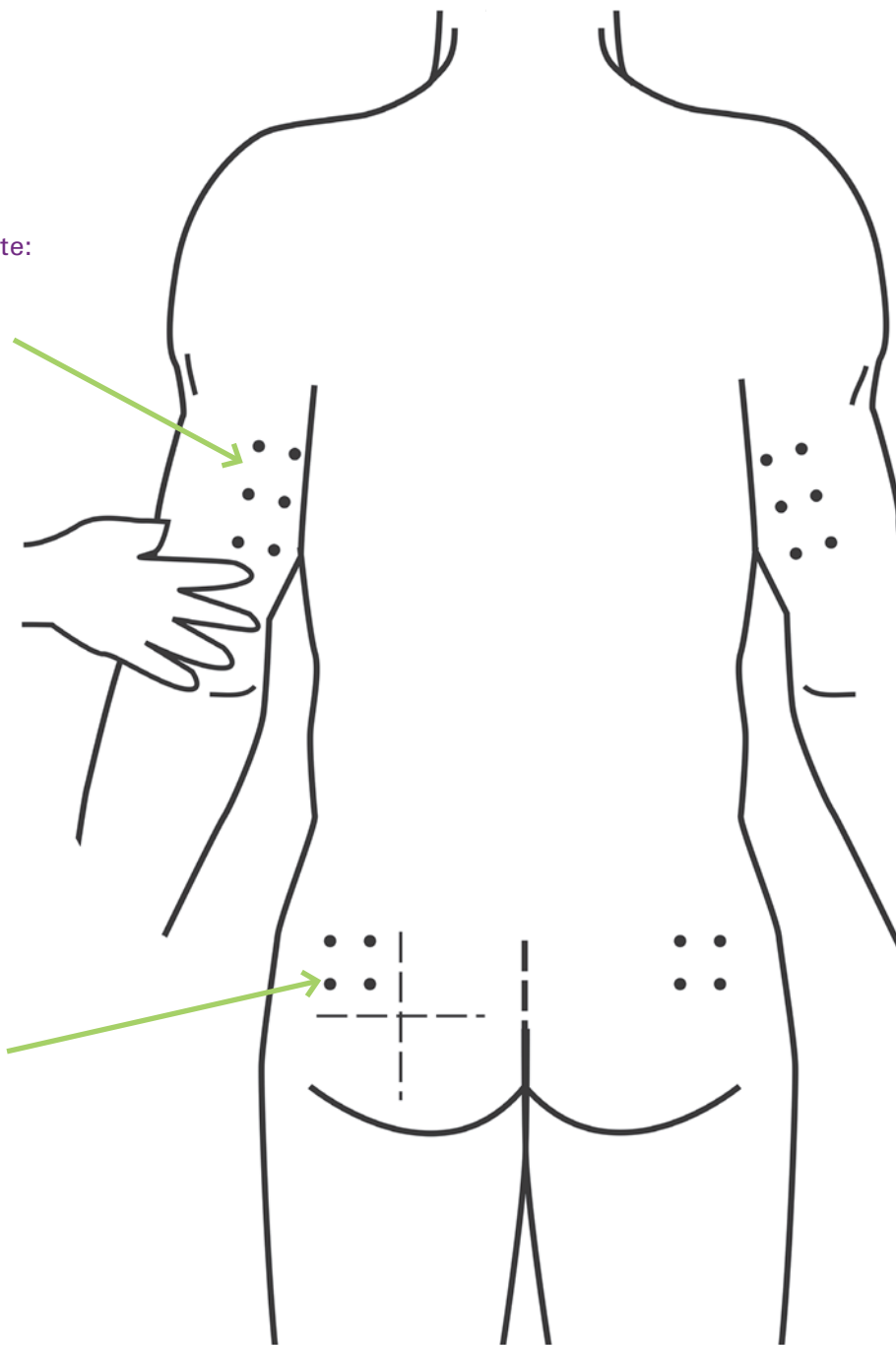
NOTE: If moving between major sites, use all of one site before moving to another.

Landmarks for the Upper Arm Site:

- Start below the deltoid muscle.
- End four fingers above the elbow.

Landmarks for the Buttock Site:

Injections may be given in the upper outer quadrant of the buttock.



Hyperglycemia

(High Blood Glucose)

High blood glucose (sugar) is also called hyperglycemia.

Hyperglycemia is usually defined as blood glucose greater than 180 to 200 mg/dL. In general, if your blood glucose is above your target range for more than half the week, you should notify your doctor.

How will I feel if my blood glucose levels are high?



Upset stomach or
throwing up



Thirsty



Dry, itchy skin



Hungry



Tired



Unexplained
weight loss



Blurry vision



Urinating
more often



Dizzy

- ▶ High blood glucose can also cause poor wound healing, infection, numbness and tingling in the toes and fingers.
- ▶ High blood glucose over many months and years leads to diabetes-related complications like eye disease, kidney disease and heart disease.

You can also have high blood glucose levels and not have any symptoms at all.

Some people realize they are having a high blood glucose, others do not. It is important to test your blood glucose if your doctor has instructed you to do so.



What causes hyperglycemia?

- Eating too much
- Poor timing between meals and medicine
- Not enough medicine
- Being sick, surgery or infections
- Being less active than usual
- Increased stress, anxiety or nervousness
- Certain medications such as steroids
- Weight gain
- Hormonal changes

How do I control high blood glucose levels?

- Take the prescribed amount of insulin or other medication
- Eat healthy food choices, including the right amount of carbohydrates
- Regular physical activity
- Drink the right amount of fluids each day
- Test your blood glucose levels every day
- Find ways to deal with stress that will not raise your blood glucose

Hypoglycemia

(Low Blood Glucose)

Low blood glucose (sugar) is also called hypoglycemia.

Hypoglycemia is usually defined as blood glucose less than or equal to 70 mg/dL (60 mg/dL in pregnancy). In general, if your blood glucose is below your target range more than once or twice a week, you should notify your doctor.

How will I feel if my blood glucose levels are low?



Shaky, nervous
or tingling
around mouth



Confused or hard
time concentrating



Very hungry



Mood changes
or irritability



Cold, clammy sweats



Pounding or
racing heart



Restless sleep or
nightmares



Headache

You can also have low blood glucose levels and not have any symptoms at all. This is called hypoglycemia unawareness.

Some people realize when they are having a low blood glucose, others do not. It is important to test your blood glucose if your doctor has instructed you to do so.

What causes hypoglycemia?

- Taking too much insulin or other diabetes medication by mistake
- More activity/exercise than usual
- Eating a meal later than usual
- Skipping a meal or only eating part of a meal
- Drinking alcohol on empty stomach
- Needing less medication because your health is improving (Type 2 diabetes)

How should I treat hypoglycemia?

Use the rule of 15



1. Test your blood glucose, if possible. If your blood glucose is less than or equal to 70 mg/dL, proceed to step 2.
2. Treat with 15 grams of simple carbohydrate.
You should carry one of these sources of glucose with you at all times.

Simple Carbs	15 gram Amounts	Special Considerations
Glucose Tablets or Glucose Gel	3–4 tablets (check label) 1 tube (check label)	<ul style="list-style-type: none">• Chew the tablets—do not swallow whole• Tubes of icing can be used as a glucose gel
Hard Candy	5-6 pieces	No candy bars—they have too much fat and will make it hard to raise your blood glucose
Juice	4 oz. or ½ cup	May use 8 oz. or 1 cup for blood glucose less than 50 mg/dL
Regular Soft Drink/ Soda/Pop	4 oz. or ½ cup	<ul style="list-style-type: none">• No diet pop/soda—there is no sugar in it to raise your low blood glucose• May use 8 oz. or 1 cup for blood glucose less than 50 mg/dL
Milk	8 oz. or 1 cup	Use skim milk if possible—whole milk has too much fat and will make it hard to raise your blood glucose
Jelly, Honey, Maple Syrup	1 tablespoon	No comments

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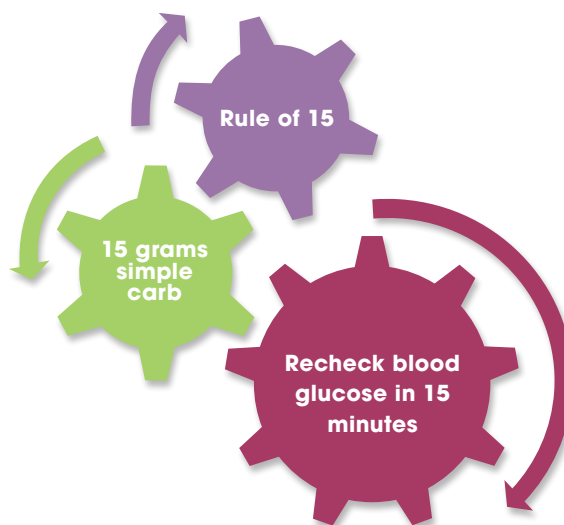
3. Rest 15 minutes. Test your blood glucose again.

Blood Glucose	Action
Less than 70 mg/dL	Re-treat with another 15 grams of simple carbohydrate as above. Rest another 15 minutes. Test your blood glucose again, if possible. If you are still not better or your blood glucose is still low, seek medical care immediately (call 911).
Greater than 70 mg/dL	Eat a snack containing a longer acting carbohydrate and protein within one hour to help maintain blood glucose. For example, tuna or peanut butter sandwich with a cup of milk.

4. Determine the reason for the low blood glucose and write it in your log book.
5. If you have low blood glucose and cannot determine the reason, **call** your doctor. Your medications may need to be adjusted.

If low blood glucose is frequent or severe, you may want your significant other or support person to learn to give you a glucagon injection.

Glucagon can quickly bring someone out of an unconscious low blood glucose reaction. A prescription from your doctor is required to obtain a glucagon injection kit.



Sick Days

How does being sick affect my blood glucose (sugar)?

When your body is under stress, such as having a cold or infection, you produce certain hormones to fight against stress. These hormones tell your body it is fighting the stress, but it also tells your blood glucose to rise.

What do I do if I become sick?

To prevent complications, you need to develop an action or “sick day” plan to manage days in which you are not feeling well.

An action or “sick day” plan may include:

- Testing your blood glucose levels more often (every 2 to 4 hours) when you are sick
- Checking for ketones in your urine—especially if you have Type 1 diabetes or a history of diabetic ketoacidosis (DKA)
- Drinking eight ounces of calorie-free fluid every hour to prevent dehydration
- Keeping a written record of symptoms, blood glucose levels, ketones and medications taken during illness

If You Can Eat	If You Can't Eat
Focus on drinking calorie-free (no sugar) drinks such as water	Focus on drinking drinks with calories such as sports drinks or regular pop/soda



How do I take my insulin or other medications?

Even if you can't eat, your body still needs your diabetes medications, especially since being sick usually makes your blood glucose high. Ask your doctor which medications you should take when sick. Some oral medications (pills) are not recommended when you are sick and have trouble eating and/or are nauseated or vomiting.

Do not stop taking insulin when you are sick, even if you are not eating. Often, you will need more insulin when you are sick. If you adjust your insulin dose based on your blood sugar, be sure to check your blood sugar often.

Always remember to call your doctor if you aren't sure how to manage your diabetes when you are sick.

When should I call my health care team?

- If you are sick for 1 to 2 days and are not getting better
- If you are vomiting or you have diarrhea for more than 6 to 8 hours
- If you have moderate to large amounts of ketones in your urine
- If you are dehydrated or have trouble thinking or breathing
- If you have not eaten normally for more than 24 hours
- If you have a fever of 100.4°F (38°C) or higher
- If your chest hurts
- If you aren't sure what to do to take care of yourself
- If your blood glucose is consistently above or below your target range (i.e., above 300 to 400 mg/dL)

If you have any of the following symptoms:



Upset stomach or
throwing up



Extreme thirst



Confusion or hard
time concentrating
or speaking



Very tired



Dry mouth



Urinating much
more often



Blurry vision



Fruity breath

These signs and symptoms could mean you are developing diabetic ketoacidosis (DKA) or hyperosmolar hyperglycemic state (HHS). These are emergencies and require immediate medical attention. You should call for help if you think you may be experiencing DKA or HHS.

Healthy Eating

Having diabetes does not mean there is a single diet you will have to follow. Some tips to get started eating healthy include:

- Eating regular meals and snacks—try not to go more than 4 to 5 hours without eating a meal. If you do go longer than 4 to 5 hours, eat a small snack.
- Limit sweet drinks and sweet treats
- Limit alcoholic beverages
- Eat some carbohydrate containing food at each meal—avoid eating all of your daily carbohydrates at any one meal
- Pay attention to what foods keep your blood glucose (sugar) steady and what foods seem to raise your blood glucose
- Focus on brightly colored fruits and vegetables
- Buy lean meats such as chicken, turkey and fish
- Avoid the high-fat snack food aisle
- Look for whole grain foods and low-fat dairy products



How do carbohydrates affect blood glucose (sugar)?

Food is broken down into protein, carbohydrate and fat in the stomach and intestines. These nutrients are absorbed into the blood. Carbohydrates are the main nutrient broken down into glucose. Glucose then travels into the cells where it will be used for energy.

Eating the right amount of carbohydrates each meal of the day is very important since they affect your blood glucose levels the most. To keep your blood glucose in your target range, it is important to know which foods contain carbohydrates. The three main types of carbohydrates are starch, sugar and fiber.

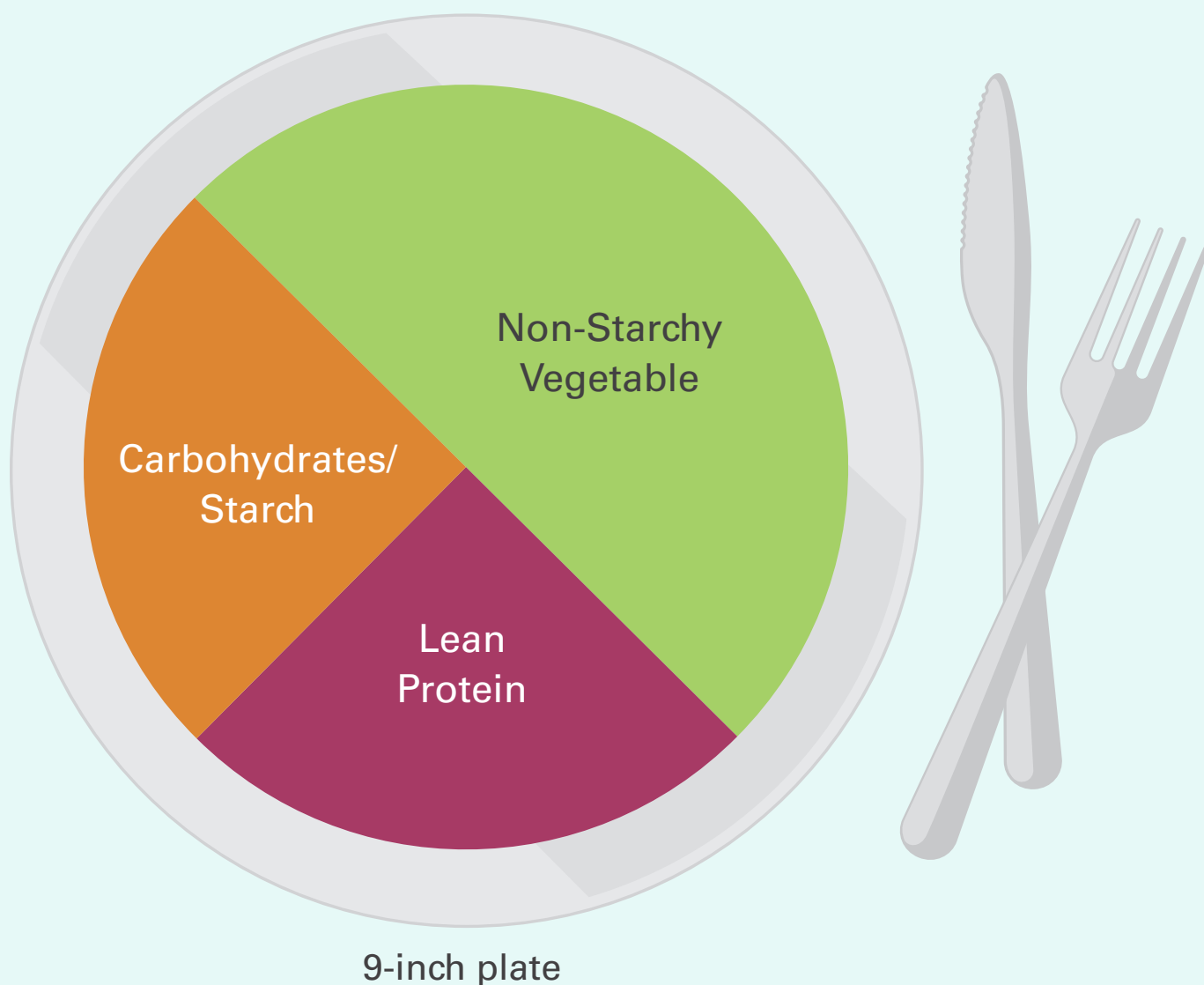
Examples

Starch	Sugar	Fiber
Grains, rice, beans	Natural sugars and added sugars	Plant based food
Pasta, cereal, tortilla, potatoes, peas, corn and beans	Natural: Fruits and dairy products Added: Most desserts, processed foods, candy, soda	Nuts, beans, peas, whole grains and fruits

How should I plan my meals?

When people are diagnosed with diabetes, they often don't know where to begin with meal planning. Start with adjusting the portions of foods you already eat. The plate method is an easy way to get started with managing blood glucose (sugar) levels.

Start by using a 9-inch plate. Draw an imaginary line down the center of the plate and fill half of the plate with non-starchy vegetables. Draw the second half of the plate in half again and fill one quarter with a lean protein and the other quarter with a carbohydrate. Add water to drink and for a snack, try eating some fruit.



What about carbohydrate counting?

When you count carbohydrates, use the nutrition facts label on the food package.

If the food doesn't have a label, reference common serving sizes and carbohydrate content of foods from a trusted resource. **A dietitian is a great resource to help you learn how to count carbohydrates.**

	Amount	Carbohydrates		Amount	Carbohydrates
Grains	Large Bagel (1)	60 grams	Fruits	Apple (small, 4 ounces)	15 grams
	Bread (1 slice)	15 grams		Banana (medium, 7-inch)	30 grams
	Pasta (cooked, 1/3 cup)	15 grams		Blueberries (2/3 cup)	16 grams
	Rice (cooked, 1/3 cup)	15 grams		Cantaloupe (1 cup)	13 grams
	Tortilla (6-inch)	15 grams (flour) 12 grams (corn)		Grapes (17, 3 ounces)	15 grams
Starchy Vegetables	Beans (½ cup)	20 grams		Orange (small, 6 ounces)	15 grams
	Corn (½ cup)	16 grams		Peach (medium)	15 grams
	Peas (½ cup)	11 grams		Pear (large, 4 ounces)	18 grams
	Potato (3 ounces)	18 grams		Raspberries (1 cup)	15 grams
	Squash (1 cup)	17 grams		Strawberries	15 grams
Dairy Products	Ice Cream (½ cup)	15 grams	<p>A dietitian can help you figure out how many carbohydrates to eat at each meal and snack.</p> <p>A typical place to start is 30 grams for a snack.</p>		
	Milk (2%, 1 cup)	11 grams			
	Pudding (½ cup)	26 grams			
	Soy Milk (1 cup)	6 grams			
	Yogurt (6 ounces)	12 grams			

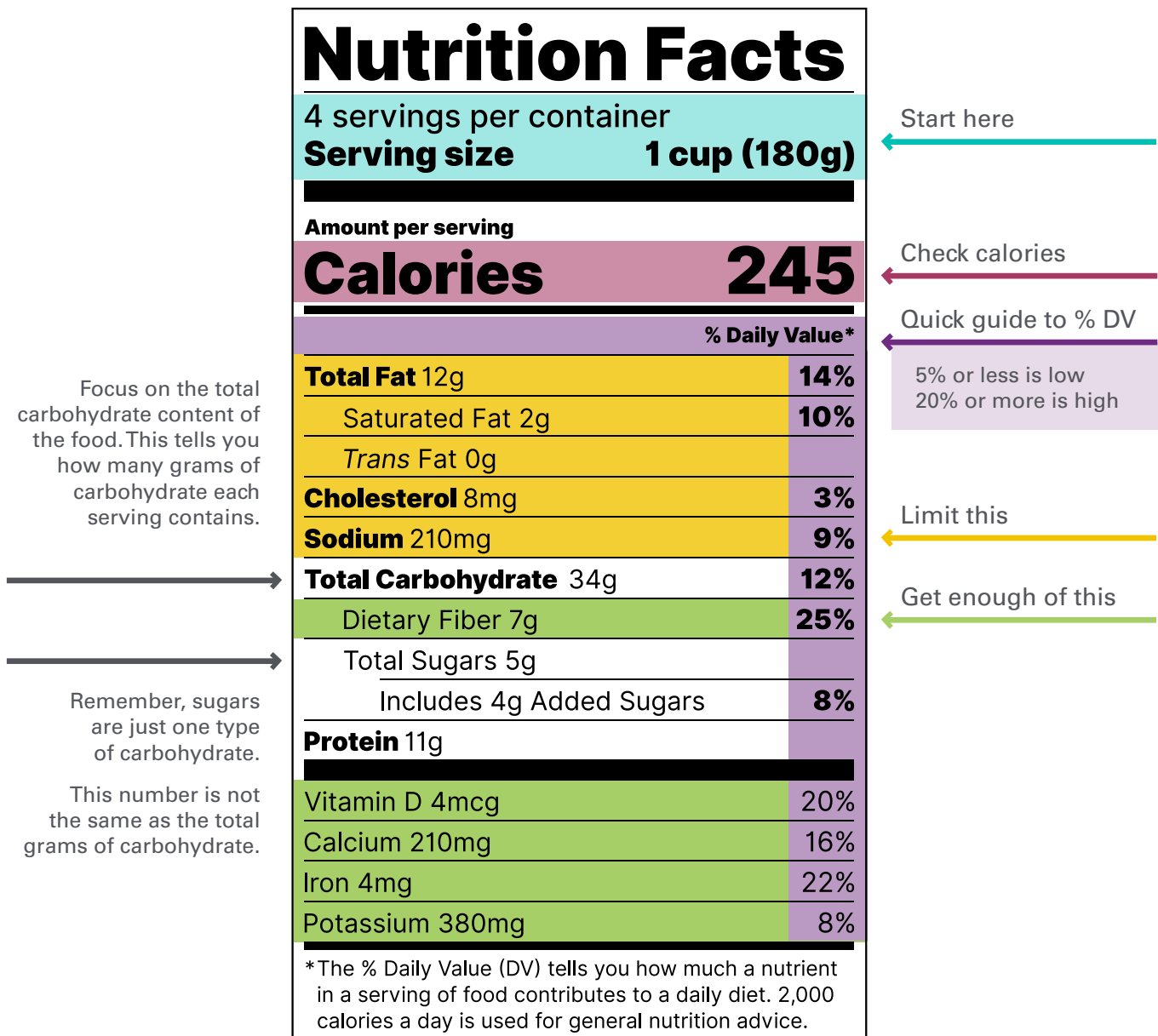
How can nutrition labels help me?

Before you go to the store, have a plan in place. Decide what you want to cook ahead of time and make a list. This helps you keep on track. Reading the food labels at the store will help you make the healthiest choices.

The nutrition label tells you how much carbohydrate, fat and protein (nutrients) are in each serving. This will help you figure out if the food fits into your meal plan.

Start with the serving size—this tells you how much of the food makes up one serving. If you eat more than one serving, you must adjust the other values. For example, if you eat two servings, you must double all of the values listed.

Watch out for hidden sources of sugar, such as high-fructose corn syrup, sucrose, barley malt, dextrose, maltose and rice syrup. Many of these are added sugars. Focus on eating foods with natural and not added sugar.





Physical Activity

Why should I exercise?

Exercise is very important for staying healthy. It will also help you better control your blood glucose (sugar) levels. An active lifestyle can help improve your body's ability to use insulin and also helps to lower your blood glucose without insulin (short-term). This will help prevent problems from poor blood glucose control (long-term).

Exercise can help with other health problems too, such as high blood pressure and cholesterol. Exercise is also a great way to relieve stress.

How much should I exercise?

The American Diabetes Association recommends at least 150 minutes per week of moderate aerobic exercise. This should be spread out over three or more days in a week.

There should not be more than two days of rest between the days you choose to work out. This is because the short-term benefits of exercise on your blood glucose levels wear off after about 48 hours.

Examples of moderate aerobic exercise include:

- Going on a walk
- Climbing staircases
- Jogging or running on the treadmill or outside
- Playing a sport

If you are new to exercise, start slow, walk five minutes a day and then slowly increase the time and distance.

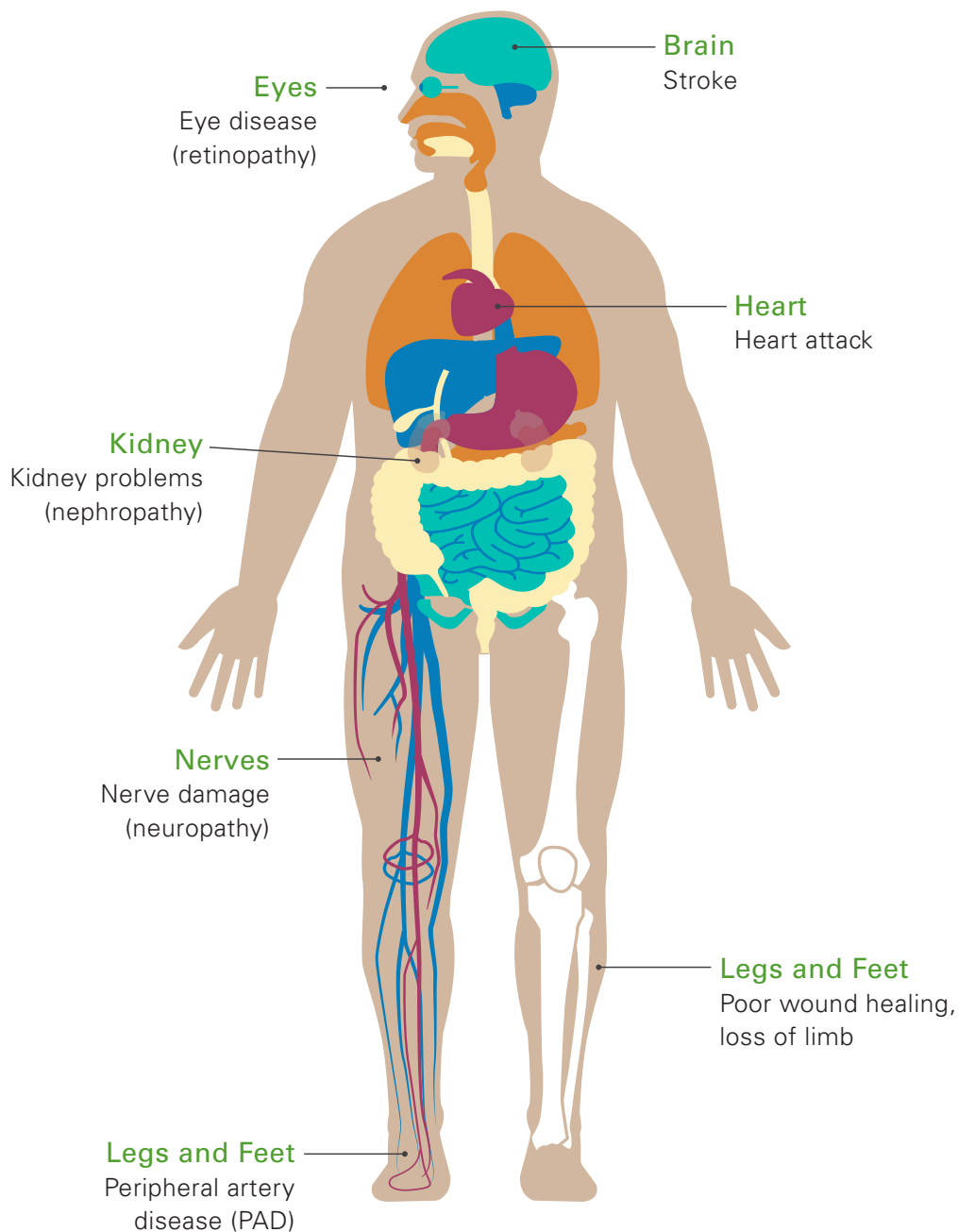
Always ask your doctor before starting an exercise program.

How does exercise affect my blood glucose?

Exercise can lower your blood glucose faster than resting. Be sure to check your blood glucose often, especially if you have been active for longer than usual. Also, be sure to check your blood glucose several hours (up to 24 hours) after you are done exercising. Use your log book to keep track of how exercise affects your blood glucose.

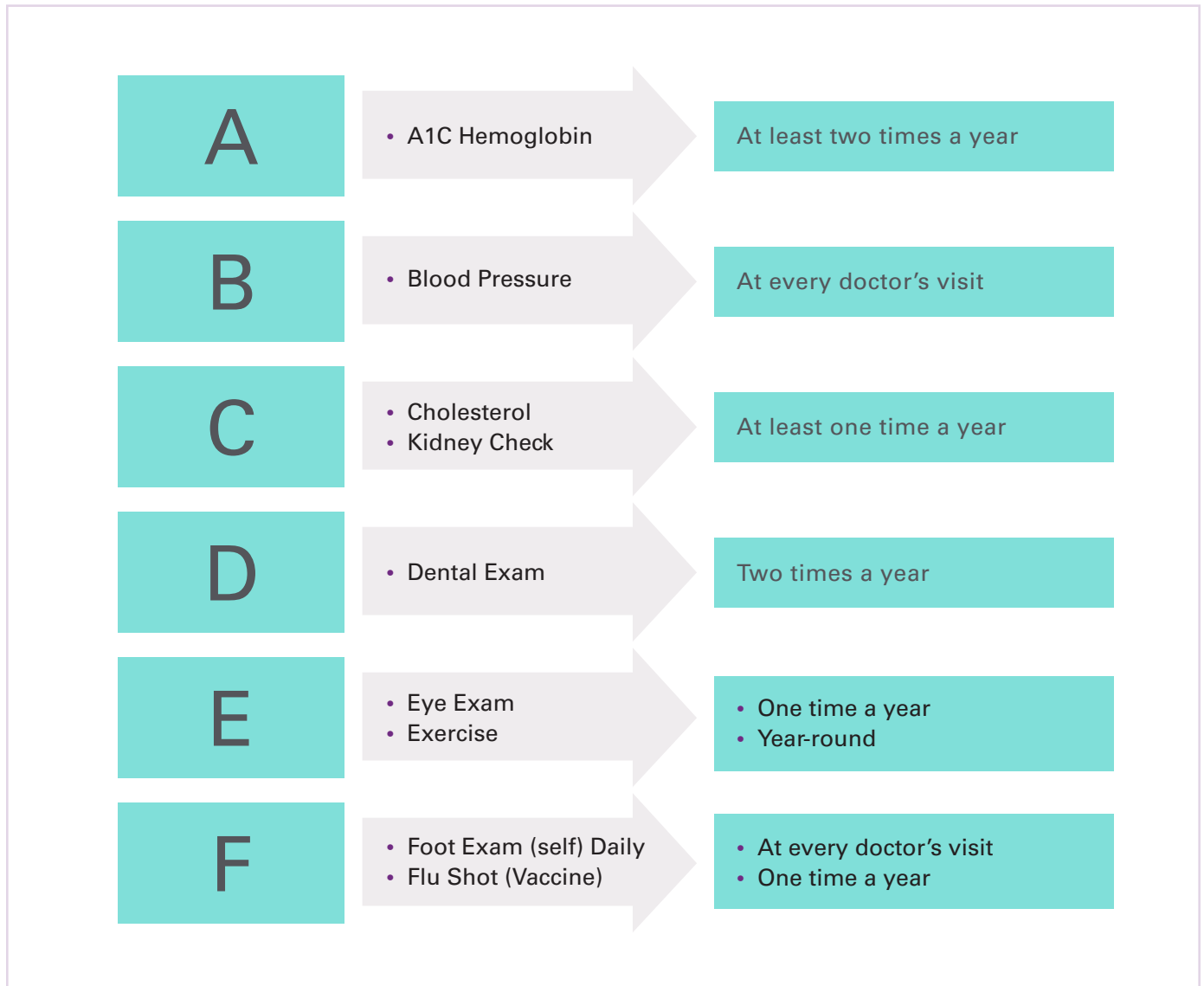
Long-Term Complications

There are some things you will want to monitor over the years when you have diabetes. Over time, high blood glucose (sugar) can lead to damage in your big and small blood vessels. This can lead to complications in your whole body including heart attack, stroke, kidney disease, vision problems, blindness, nervous system damage (numbness and tingling in toes and feet) and risk of lower-limb loss (amputation).



Managing Your Diabetes

While many complications can arise from diabetes, do not lose hope. Diabetes is a disease that can be readily controlled with self-management. You are in control of managing your diabetes. Control your diabetes by following the steps below—the ABCDEs of diabetes care.



Foot Care Tips

- Inspect your feet every day for cuts, cracks, redness, sores and swelling. If you notice cuts and scrapes, watch how they heal. If they are slow to heal, if they itch, feel warm, become red or ooze any fluid, let your health care provider know right away.
- Keep your feet clean and dry. Do not soak your feet. Wash your feet in warm (not hot) water and dry thoroughly, especially between your toes.
- Do not go barefoot. Protect your feet from injury by wearing clean socks and comfortable shoes.

My Diabetes Care Record

		Date and Results		
A	A1C			
B	Blood Pressure			
C	Cholesterol and Kidney Check			
D	Dental Exam			
E	Eye Exam and Exercise			
F	Foot Exam and Flu Shot			
	Pneumonia Shot (once before age 65 and once after)			

Tobacco and Alcohol Consumption

How Does Tobacco Affect the Body?

The diameter of your blood vessels are decreased by half their size for about 20 minutes after smoking a cigarette. This causes damage to your blood vessels. Combine this with the damage caused by high blood glucose (sugar) when you have diabetes and you are putting your body at great risk.

To quit smoking, consider following the steps below:

- Talk with your health care provider about creating a quit plan
- Ask your health care provider about quit aids such as nicotine gum or patches
- Plan exactly when you'll quit and what method you will use
- Decide ahead of time how you will deal with the urge to smoke
- Let your family and friends know you are quitting so they can support you
- Set a date!

Free quit hotline:
800-QUIT-NOW
 (800-784-8669)

Is Alcohol Safe?

Most people with diabetes can have a moderate amount of alcohol. Women should have no more than one drink per day. Men should have no more than two drinks per day.

One drink is equal to a 12 oz. beer, 5 oz. glass of wine or 1.5 oz. distilled spirits (vodka, whiskey, gin, etc.).

Be sure to not drink on an empty stomach or when your blood glucose is low. Check your blood glucose before you drink, while drinking and up to 24 hours after drinking. Check your blood glucose before you go to bed to make sure it is at a safe level—between 100 and 140 mg/dL. If your blood glucose is low, eat something to raise it.

Emotions

You may experience different feelings after being diagnosed with diabetes. It is important to recognize your feelings, and work through them. Some people may feel:

- Denial
- Anger
- Guilt
- Bargaining
- Depression
- Fear
- Anxiety
- Frustration
- Helplessness
- Hopelessness
- Isolation
- Acceptance

It is important to make sure you take time to:

- Deal with stress
- Avoid burnout
- Take time to relax
- Set priorities

Depression

People with diabetes are at a greater risk of having depression. This is because many people are sad or down when they first get diagnosed with the disease. Feelings like these are very common and very normal.

If you have had little interest or pleasure in doing things or are feeling down, depressed or hopeless on more than half the days or nearly every day in the past two weeks, talk to your health care team right away. Don't wait or assume everything will get better on its own. Speak up!

While having diabetes means making some changes, you can still do things you enjoy. Don't forget to make time to have fun. Write down a few activities you like below and make time to do them at least once a week.

1. _____
2. _____
3. _____



Helpful Information

Trinity Health offers a variety of diabetes education programs. For more information, please talk to your health care team, visit trinityhealthmichigan.org or call the phone number listed on the back.

If you need help locating a Diabetes Education Program in your area, please let us know before you leave.

Notes

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Notes

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Trinity Health Livingston

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44405 Woodward Avenue, Pontiac, MI 48341

Trinity Health Livonia

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TrinityHealthMichigan.org

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