

Be Healthy Today; Be Healthy For Life

Information for Youth and their Families Living with Type 2 Diabetes



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The American Diabetes Association has worked with additional leading experts to offer these materials to support the education and care of all youth with type 2 diabetes and their families.

These materials provide an easy-to-use version of the TODAY study standard education manual. It can be used by the youth and family themselves or in partnership with a certified diabetes educator or other member of the youth's health care team. All aspects of health care need to take into account the special circumstances of the individual patient. A number of different approaches for managing diabetes are introduced in these materials. The youth should work with health care professionals to determine which strategies are best for him or her.

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WHAT IS DIABETES?

Diabetes is a serious disease. With diabetes, your body can't turn the food you eat into energy.

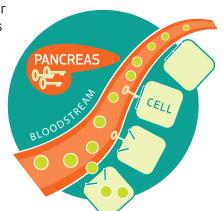
A few things are supposed to happen when you eat:

- Food changes to a sugar called glucose. This sugar (glucose) is your body's main fuel source. (You may hear people say blood sugar instead of blood glucose. They mean the same thing!)
- Glucose goes into the blood. It moves through the bloodstream to your body's cells. Your blood glucose level starts to go up.
- Your body sends a message to the pancreas. The pancreas sits behind your stomach and makes insulin. When your body needs it, your pancreas sends insulin into the blood.
- Insulin travels to the cells. Insulin is the key that opens the door to let glucose into a cell.
- Your cells use the glucose for energy. As glucose leaves the bloodstream and goes into the cells, your blood glucose level comes back down.

For all this to work, your body has to have insulin.

In this picture, the pancreas is making insulin. Insulin goes into the bloodstream to open the cell doors. Insulin lets the glucose in the blood move into the cells. Once the glucose is inside, the cells can make energy for your body.

The two main types of diabetes are type 1 and type 2. Diabetes develops when the body can't make enough insulin, can't use the insulin well, or both.



GET DIABETES?

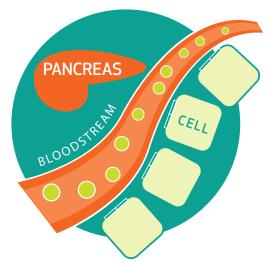
We don't know exactly what causes diabetes. Type 2 diabetes usually happens in adults, but more and more youth are developing it. These young people often:

- Are not very active
- Weigh too much
- Have other family members with type 2 diabetes
- Have high blood pressure
- Are African American
- Are Hispanic American
- Are American Indian
- Are Asian American

IS IT MY FAULT?

Don't blame yourself. Think about ways to become and stay healthy. Some of these risks you CAN change. You can change how active you are and what type of food you eat.

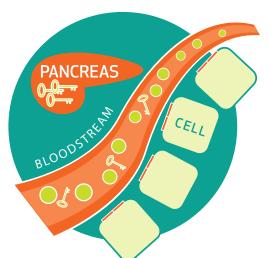




TYPE 1 DIABETES

Sometimes the body stops making insulin. This is called type 1 diabetes. You must take insulin shots to stay alive and healthy.

In this picture, the pancreas is not making insulin. The cells have enough doors, but no insulin is in the blood to open them. Glucose cannot move from the blood into the cells. Glucose stays in the bloodstream instead of moving into the cells to make energy for your body. Blood glucose levels become high and unhealthy.



TYPE 2 DIABETES

Sometimes cells don't have enough doors or the pancreas doesn't make enough insulin. This is called type 2 diabetes.

In this picture, the pancreas is making insulin but the cell doors are not working. The glucose stays in the bloodstream because the doors don't open. The glucose can't get into the cells to make energy for your body. Blood glucose levels become high and unhealthy.

What helps insulin open the doors to let glucose in?

- Exercise and physical activity
- Eating healthy meals and snacks
- Losing weight

These things can help your body use insulin better. When you weigh more, your body needs more insulin. The pancreas has to work hard to make enough insulin. If it works too hard, it can get too tired and will need help.

Diabetes pills don't have insulin in them. They help open cell doors so your body can use the insulin it has.

Some types of diabetes pills may help the body to make more insulin.

If your body can't make enough insulin, you will need insulin shots.

What are signs that insulin is not working or the cell doors are not opening?

Dark skin patches might appear on your neck, stomach, knees, elbows, armpits, hands, breast, or groin. These dark skin patches are called Acanthosis Nigricans, or AN for short. People whose body isn't using insulin well (insulin resistant) often get AN.

WHY SHOULD I WORRY ABOUT MY DIABETES?

Blood glucose (sugar) levels that stay high all the time can cause problems. High blood glucose can:

- Make you feel sick, tired, sleepy, and thirsty
- Leave you without energy to play, work, or have fun
- Give you blurry vision
- Cause you to urinate (go to the bathroom) more often
- Cause you to get up at night to go to the bathroom
- Make you sick more often
- Make it hard for infections and wounds to heal
- Damage the blood vessels in your eyes, your kidneys, or your heart

Keeping your blood glucose in a healthy range can prevent these problems as you get older.

WILL TYPE 2 DIABETES GO AWAY?

There is no cure for diabetes so it will never go away. Diabetes may change over time so how you take care of it may need to change too.

HOW CAN I TAKE CARE OF MY DIABETES?

There are lots of ways to manage your blood glucose and your diabetes! Keep the level of glucose in your blood in a healthy range:

- Make healthy food choices
- Exercise and be active every day
- Take your diabetes medicines
- Check your blood glucose



Manage Diabetes with STAR

Managing diabetes means making choices—some easy, some hard. When faced with a decision, think STAR:

STOP before you make a decision.

THINK about your choices. Consider how they will affect you.

ACT on the better choice for your health. Small steps add up to big results!

REFLECT on your progress. Give yourself credit for healthy choices.

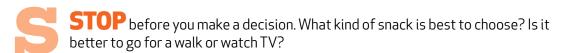
MANAGE YOUR DIABETES

with SILAIR

Learn all you can about how to take care of yourself and your diabetes. It's important to follow your treatment plan.

- Eat healthy and exercise
- Remember to take your medicine
- Check your blood sugar (also called glucose)

Managing diabetes means making choices—some easy, some hard. When faced with a decision, think STAR:



THINK about your choices before you act. How will they affect you and your diabetes care plan? For example, a piece a fruit will affect your blood sugar level differently than a bag of chips.

ACT on the better choice for your health. Remember, change is slow. No one expects you to always choose the healthier option. Small steps add up to big results!

REFLECT on your progress. Give yourself credit when you make a healthy choice. If you choose the bag of chips, think about what you can do to make up for your extra calories. How can you make a different decision next time?

Over time, it gets easier to make healthy choices. Try to make healthy changes as a family. Review your progress together.

CHECKING BLOOD SUGAR

Why do I have to stick my finger?

You, your family, and your diabetes care team will make a plan to take care of your diabetes. You check your blood sugar (glucose) to see if your plan is working. Check your blood sugar as often as you and your diabetes care team decide is best.

How do I check my blood sugar?

You will need a few things to get your blood sugar level:

- Lancet device (holds the sharp lancets)
- Lancet (finger poker)
- Blood sugar meter
- Strips for the meter
- Soap and water
- Logbook

Talk with your diabetes educator. He or she will show you how to use your meter and lancet device. Get the drop of blood from your fingertips. Use the sides of your fingers for the best drops and it's less painful.

Some people are able to use blood drops from their arms or hands. Talk with your diabetes care team about how to use these places.

Where do I put the lancets?

Keep the lancets to yourself! You don't want anyone to get stuck by accident. Here's some good advice when it comes to the sharp lancets:

- Never let anyone use your lancet device or your lancets.
- Talk with your diabetes educator about how to throw away the used lancets safely.
- Keep all your diabetes care supplies away from little kids!

What can I do to make the checks more comfortable?

Good question! Here are some tips:

- Be sure your fingertip is warm and pink. Wash your hands in warm water or shake your hands to get the blood into the fingertips.
- Use an adjustable lancet device to get a drop without poking too deeply.
- Poke on the sides of your fingers, not the tips.
- Gently squeeze a blood drop from your fingertip.
- Use skin cream to keep your fingers soft.

Tracking Blood Sugars

Keep track of blood sugars in a logbook. It's a good way to show your diabetes care team how your diabetes is doing. It's also the best way for you to keep track of your progress. Some meters can keep an electronic record of your blood sugars. Work with your care team. See if it is better for you to keep a written logbook or to use your meter as a log. Remember to look at your meter. Bring it to your diabetes check-ups.

A Balancing Act

Staying healthy means keeping your blood sugar in balance, Do this with diet, physical activity, and medicines. Keep your blood sugar levels in the target range. You and your parents can work with your diabetes care team to decide what a healthy target range is for you. Remember, you're the most important person in your diabetes management.

Each day you will make decisions and choices about your health. You will decide:

- What to eat
- How much to eat
- When to eat
- What kind of exercises to do
- When to take your medicine
- And lots of other things about being YOU!

STAYING HEALTHY

Diabetes is a lifelong disease. Start taking good care of yourself now so you can live a long and healthy life. See your diabetes care team regularly. The team will talk about your blood sugar (glucose), hemoglobin A1C, cholesterol, weight, and blood pressure levels. These things show you and your diabetes care team how your diabetes and overall health are doing.

- Blood sugar shows how your diabetes care is going
- A1C test measures your average blood sugar for the past 3 months
- Cholesterol shows how well your body is controlling fat in the bloodstream
- Weight can show positive changes in your diet and exercise. These changes can help your diabetes control and overall health
- Blood pressure tells you if your heart, kidneys, and blood vessels are staying healthy

UNDERSTANDING HEMOGLOBIN A1C

The A1C is a blood test. It measures your average blood sugar level over time. Think of it as a blood sugar test "with a memory."

You should have an A1C test done about every 3 to 4 months. The A1C test should be done in your doctor's office or a lab.

WHAT A1C NUMBERS SHOULD I AIM FOR?

Most people with type 2 diabetes should aim for an A1C level of 7% or less. Talk to your diabetes care team about the best target for you.

What does the A1C number mean?

Hemoglobin A1C values are percents. These percents stand for average blood sugar. You can use this chart to see your average blood sugar levels:

Hemoglobin A1c	Average blood sugar
6.0%	126 mg/dl
7.0%	154 mg/dl
8.0%	183 mg/dl
10.0%	240 mg/dl
12.0%	298 mg/dl



Remember that you can be a STAR with your diabetes care:

STOP to check your blood sugar level. See your care team at regular times.

THINK about making healthy choices for your meals and snacks. Find time to exercise every day.

ACT on your plan. Make a healthy choice at meal time each day. Exercise at least 10 minutes a day.

REFLECT on your progress. Try to eat more healthy meals. Exercise a little longer each day.

You will feel good. Your diabetes control will improve!

CING CARE OF DIABET

Can I take pills instead of injections?

Some people with type 2 diabetes control blood sugar (glucose) with diet and activity. Most will need to add pills. Some must use insulin shots. Remember, there is no "best" diabetes medicine for everyone. The best diabetes care plan is the one that works best for you. You and your care team will decide the best way to manage your blood sugar.

What do diabetes medicines do?

The two general types of diabetes medicines are pills and injections.

PILLS: There are many different types of diabetes pills. New ones come out almost every year! Different pills work in different ways in the body. Some pills for diabetes help your body make more insulin. Others help the insulin in your body work better. Pills can be used alone, with other pills, or with insulin. Talk with your diabetes care team. Be sure the medicines you take can be taken together safely.

SHOTS: Many people with diabetes must take insulin shots (injections). Pills may not control their blood sugars well enough. Insulin shots replace what the pancreas can no longer make. There are other medicines also given as a shot to help insulin work better. These medicines must be given as a shot to work properly. They should not be taken by mouth.

I'm taking all my pills. Why is my blood sugar not going down?

It can take a few days or even weeks for the medicines to work well. Checking your blood sugar is important. You will talk with your diabetes team often. If high blood sugar continues, your doctor or diabetes care team may look at changing your care plan to bring your blood sugar levels down.



In the meantime:

- Do not stop taking your pills!
- Try not to get frustrated. Contact your care team if you need help.
- Side effects are more likely to occur or return if you miss too many pills.

I'm feeling different on these medicines. Why?

Some people feel "funny" as their blood sugar gets closer to target. Let your diabetes care team know if you have:

- Dizziness or headaches
- Upset stomach or diarrhea
- Blurry vision

You may have short-term changes in your vision if your blood sugars are going from normal to high or from high to low. Tell your diabetes care team about any changes in your vision.

Remember, do not stop taking your pills!

TAKING CARE OF DIABETES WITH MEDICINES



How can I remember to take my pills or shots?

Try some of these tips to remember your medicines:

- Place sticky notes on the bathroom mirror
- Place reminders next to your blood sugar meter
- Place reminders in your calendar
- Don't get upset if your mom or dad reminds you
- Set the alarm on your watch or cell phone

What if I forget to take my pills?

Call your diabetes care team as soon as you realize you forgot your medicines. You can likely still take your medicine.

What about holidays when we fast for a day? What do I do?

Talk with your care team. You may need to stop your medicine that day. Or you may need to take a smaller amount.

Don't make any changes to your medicine without talking with your team first. Check your blood sugars an extra time or two on days when you're fasting or have a different schedule. Keep drinking water during your fast.

I am on pills now. Will I ever have to take shots?

Maybe. This is a tough question. At first, you may be able to manage your blood sugar with diet, activity, and pills. After a while, pills might not be enough. Your body may stop making enough insulin. That's when you may need to start taking shots. You might take pills with insulin, or insulin alone.

Insulin is also needed:

- When you're sick. Blood sugar can get so high when you're sick that you may need insulin to lower it.
- Right after diagnosis. Sometimes people start insulin right after diagnosis. This gives the body a chance to heal. Insulin helps lower blood sugar levels quickly. Then pills can work better.

Manage Diabetes with STAR

Managing diabetes means making choices—some easy, some hard. When faced with a decision, think STAR: **STOP** before you make a decision.

THINK about your choices. Consider how they will affect you.

ACT on the better choice for your health. Small steps add up to big results!

REFLECT on your progress. Give yourself credit for healthy choices.

LOW BLOOD SUGAR (HYPOGLYCEMIA) HIGH BLOOD SUGAR (HYPERGLYCEMIA)

The goal of managing diabetes is to keep your blood sugar within your target range. Everyone's target range is different. You and your care team will decide on a healthy target range for you.

WHAT IS YOUR TARGET RANGE?

My target range is between and
Remember the 3 things that keep blood sugar on target?
1:
2:
3:

STOP, THINK, ACT, and REFLECT on how you can do your best. Choose to eat healthy, daily exercise, and take your medicine every day.

(Answer: diet, activity, medicines)

LOW BLOOD SUGAR (HYPOGLYCEMIA)

Your blood sugar may be out of range even when you do your best. When your blood sugar drops below target, it can make you feel funny. Low blood sugar is called hypoglycemia.

What causes low blood sugar?

Low blood sugar happens when there is too much insulin for the sugar in the blood. Low blood sugar is not very common in people with type 2 diabetes who are not taking insulin.

Here are some causes of low blood sugar:

- You took too much insulin or too many diabetes pills.
- You skipped a meal after taking your medicine
- You are sick and cannot eat your usual meals and snacks
- You exercised a lot more than usual

Sometimes you will not know why your blood sugar is low.

LOW BLOOD SUGAR (HYPOGLYCEMIA) AND HIGH BLOOD SUGAR (HYPERGLYCEMIA)

How does it feel to have low blood sugar?

Low blood sugar has many common symptoms and signs. You may have many or just a few of these feelings:

- Irritable or cranky
- Unusual behavior
- Confused
- Sweaty
- Shaky or Weak
- Drowsy or Sleepy
- Blurry vision or trouble focusing
- Headache
- Hungry
- Lack of coordination
- Moody
- Crying for no reason
- Bad dreams or nightmares
- Restless sleep

When in doubt, check it out! Even when you feel or act "low," check your blood sugar to confirm.

How do I treat low blood sugar?

If you have symptoms and feel like your blood sugar is low and dropping quickly, eat or drink something with 15 grams of carbohydrates in it, like 4 ounces (1/2 cup) of juice.

Follow these steps:

Step 1. Check. Stop what you're doing. Check your blood sugar on your meter. What if you don't have your meter? Treat as if you know your blood sugar is low.

Step 2. Treat. Eat or drink something with 15 grams of carbohydrate in it:

- 4 ounces (1/2 cup) of juice or regular soda (not a diet soda)
- 5-6 pieces of hard candy (depends on size)
- 3-4 glucose tablets (depends on size)
- 1 small tube of cake frosting gel
- 1 tablespoon of honey or jelly or syrup (regular, not diet or "lite")

Step 3. Wait. Wait 15 minutes. It can take this long for the sugar to get into your blood. This is called the 15-15 Rule: Eat 15 grams of carbohydrate and wait 15 minutes. Sit still or lie down while you wait.

Step 4. Repeat. Recheck your blood sugar 15 minutes after treating. If your blood sugar is still low, treat again with 15 grams of carbohydrate.

Step 5. Eat. If your next meal or snack is more than 1 hour away, eat a snack. The snack should include carbohydrates that will last longer:

- Half a turkey sandwich
- 6 soda crackers
- 15 fat-free snack chips
- 1 cup skim or low fat milk
- 3/4 cup of cereal

Step 6. Call. If your blood sugar does not rise after treating twice, call the urgent care or emergency number to speak with your diabetes care team.

Don't over-treat! When you have low blood sugar, you may feel like eating more than 15 grams of carbs. Don't do it! Eating too much will make your blood sugar go too high.

Prevent Low Blood Sugar

There are things you can do to avoid low blood sugar:

- Take the correct dose of diabetes medicines.

 Never double your dose unless your diabetes care team tells you to.
- Don't skip meals after taking your medicine.
- Track your blood sugar levels. If your blood sugar levels go low often, talk with your care team.

Tell important people in your life about your diabetes. Teach them how to treat low blood sugar. These people could be:

- School nurses
- Older brothers and sisters
- Grandparents
- Coaches
- School bus drivers
- Teachers
- Babysitters
- Friends who you spend a lot of time with
- Co-workers

Wear some type of medical identification, like a necklace or bracelet.

HIGH BLOOD SUGAR (HYPERGLYCEMIA)

Even when you do your best, your blood sugar may be too high. When your blood sugar goes above target, it can make you feel funny. High blood sugar is called hyperglycemia.

What is high blood sugar?

High blood sugar is when there is too much sugar and not enough insulin in the blood. Without enough insulin, sugar does not get into the body's cells for energy.

Remember, insulin opens the cell door to let sugar into the cell and out of the blood. Without enough insulin, sugar is trapped in the blood. That leads to high blood sugar.

Here are some causes of high blood sugar:

- You ate too much food
- You are sick
- You are feeling stressed
- You are less active
- You forgot to take your insulin or diabetes pills

Sometimes you will not know why high blood sugar happened. The important thing is to treat it the best you can.

How does it feel to have high blood sugar?

High blood sugar has many common symptoms and signs. You may have many or few of these feelings:

- Thirsty
- Tired
- Blurry vision or trouble focusing
- Need to urinate more often
- Need to get up at night to urinate
- Very dry skin or mouth
- Yeast or fungal infections (like jock itch)

When in doubt, check it out! The best way to recognize high blood sugar is to check your blood sugar level. Sometimes you may not feel any different when your blood sugar is high.

Why should I worry about high blood sugar?

Good question! Here are some facts about high blood sugar:

FACT. Over time, high blood sugar can lead to health problems. Our bodies were not made to live with high blood sugar. High blood sugar can hurt your eyes, feet, kidneys, blood vessels, and heart.

FACT. High blood sugar can make you feel bad. People have low energy with high blood sugar.

FACT. High blood sugar can make your body and mouth feel very dry or dehydrated.

FACT. High blood sugar can cause more cavities in your teeth.

FACT. High blood sugar can cause yeast or fungal infections (like jock itch).

How do I treat high blood sugar?

Drink plenty of water or sugar-free drinks. High blood sugar can make your body get too dry or dehydrated. If you are not feeling well, call your diabetes care team.

You should drink about 1 to 2 cups of sugar-free liquids every hour. Here are some good choices:

- Water
- Sugar-free soft drinks (diet soda)
- Sugar-free flavored powdered drink mixes
- Sugar-free gelatin desserts
- Sugar-free frozen ices or pops
- Sugar-free tea or coffee
- Broth or onion soup

Call Your Care Team

It is important to call your doctor or diabetes educator if any of the following happens:

- Vomiting
- Can't eat or drink
- Very dry mouth
- Fever

HEALTHY FOOD CHOICES

STAYING HEALTHY WITH DIABETES: SIMPLE STEPS FOR HEALTHY EATING

Eating healthy can keep your blood sugar in good control. Eating healthy also helps avoid weight gain. These simple steps will get you started.

Step 1. Avoid drinks with sugar, like sodas, sports drinks and juices. Instead, choose to drink:

- Water—drink 6 to 8 glasses a
- Diet soda (like diet cola, diet root beer)
- Diet drinks (like sugar-free flavored water)
- Skim or 1% milk—up to 3 cups per day



Step 2. Eat the right-sized portions! Know how much you're eating for meals and snacks.

- Use a measuring cup.
- Meat servings at a meal should be the size of a deck of cards.
- Use small baggies to portion out your snacks.
- Fat one sandwich instead of
- Put food on your plate before sitting down at the table. Avoid placing foods at the dinner table and taking portions from large serving bowls.
- Always leave something over on your plate.

Step 3. Don't skip meals. Try to eat three meals each day.

- Eat breakfast!
- Avoid eating late at night.
- If you're hungry between meals, choose healthy snacks.



Now that I have diabetes, do I have to give up my favorite foods?

No! You will still be able to enjoy most of the foods you love. You will learn how different foods affect your blood sugar. You will also learn that how much you eat is important.

The unit of energy in food is called a calorie. Your body uses calories for activity and growth, and to stay healthy. You need calories to do everyday things. Your body burns more calories when you walk, play, and move. Your diabetes care team will help you decide how much energy (calories in foods and drinks) you need daily to stay healthy.

WHERE DO CALORIES COME FROM?

Calories comes from three types of food: carbohydrates (carbs), protein, and fat. Carbs have the biggest effect on your blood sugar levels.

CARBS

Carbs are in many foods, including:

- **Breads**
- Pastas
- Tortillas
- **Biscuits**
- Beans
- Starchy vegetables (corn, peas, potatoes, sweet potatoes, winter squash-like acorn and butternut)
- Cassava



- Taro
- Water chestnuts
- Rice
- Cereals
- Crackers
- Fruits
- Milk
- Yogurt
- Ice cream
- Sugar
- Jelly
- Honey
- Syrups
- Desserts
- Most snacks foods
- Non-starchy vegetables (broccoli, lettuce, tomatoes, cabbage, cauliflower, carrots,

Choose healthy carbs most of the time! Try these:

- Whole grain breads and cereals, like oats
- Fresh fruit or canned fruit in juice or water
- Low-fat milk and light yogurt
- Whole wheat pasta/ noodles, boiled or steamed brown rice, barley, bulgur
- Baked potato with skin
- Vegetables (any kind)
- Beans (navy, lima, kidney, chili, lentils, split peas)
- Snacks like pretzels, baked chips, low-fat popcorn, animal or graham crackers, goldfish crackers, and sugar-free popsicles



Starchy Versus Non-starchy Vegetables

There are two kinds of vegetables. Starchy vegetables, like corn, potatoes, and peas, are higher in carbs. They can raise your blood sugar. Non-starchy vegetables have fewer carbs. You can enjoy them with almost no effect on your blood sugar.

Non-starchy vegetables are packed with fiber and nutrition. They help you feel full. They help you eat healthy portions at each meal.

Adding lots of oils, fats, cheese, and cream sauces adds calories. Instead, try steaming or baking these vegetables. Add them to every meal!

- Artichokes
- Asparagus
- Avocado
- Bean sprouts
- Beets
- **Bok Choy**
- Broccoli
- Brussels sprouts
- Carrots

- Cabbage
- Cauliflower
- Celery
- Cucumbers
- Collard greens
- Dark green leafy lettuce
- Eggplant
- Green beans

- Green peppers
- Iceberg (head) lettuce
- Kale
- Mesclun
- Mushrooms
- Mustard greens
- Okra
- Onions

- Red peppers
- Romaine lettuce
- Spinach
- **Tomatoes**
- Turnip greens
- **Turnips**
- Watercress
- Wax beans
- Zucchini



Fiber Is a Healthy Carb

We know carbs are an important part of healthy eating. They give us energy for physical activity and proper growth. But not all carbs act the same way in our bodies.

Some carbs are digested in the body very quickly. This can cause high spikes in your blood sugars. Other carbs are digested more slowly. They contain a fiberrich outer coating and move slower. Fiber is also called bulk or roughage. It fills you up so you feel full longer. This might help you eat less. It can also help you lose weight!

Fiber can act like a scrub brush inside your body. It helps remove extra blood fats. This can protect your heart. It makes sense to "bulk up" and "rough it up." Choose healthy carbs with fiber!



Quick Ways to Add Fiber to Your Meal Plan

Include a high-fiber cereal or bread at breakfast or as an evening snack.

Choose oatmeal or bran cereals with 4 or more grams of fiber per serving.

Switch to whole grains such as brown rice, barley, or bran.

- Try whole wheat pasta instead of regular pasta. Don't overcook the pasta.
- Add crushed bran or oats to meatloaf, breads, and muffins.

Include a serving of beans two to three times each week.

- Add kidney, pinto, black beans, or chickpeas to soups and salads.
- Substitute beans for meat in chili.

Aim for 5 servings of fruits and vegetables every day.

- Eat fruit rather than drink juice.
- Add fruit to cereal.
- Snack on an apple or an orange between meals.
- Put cut-up carrots or celery in small baggies to take with you for snacks.
- Mix chopped broccoli or spinach into spaghetti sauce or grated carrots into muffin batter.

PROTEIN

Protein builds and repairs muscle. Protein is also good energy for your body. Choose lean and low-fat proteins.

Protein is found in the meat and dairy food groups:

- Chicken
- Pork
- Beans

- Beef
- Tofu
- Milk

- Turkey
- Fish
- Peanut butter

Avocados and

guacamole Cheeses

- Deer
- Eggs
- Duck
- Cheese

Fat helps carry vitamins to the cells. Fat is found in these foods:

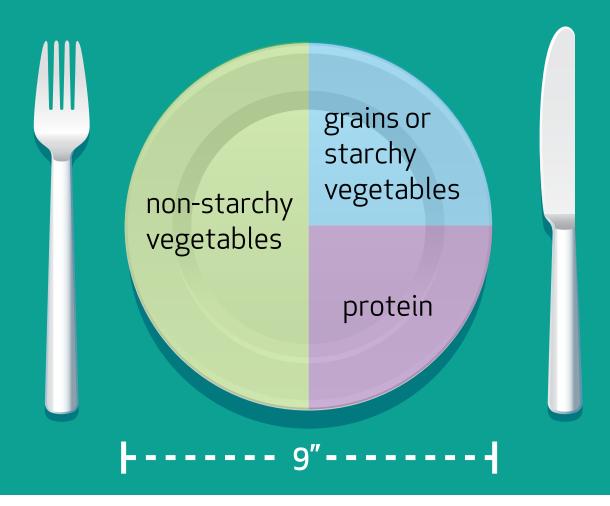
- Margarine
- Butter
- Creams (heavy, light, sour, cream cheese)
- Oils

- Salad dressings
- Grease and lard, bacon, and sausages
- Nuts and seeds
- Coconut

Should I watch the fat in my foods?

Yes! Fat helps food taste better and your body needs some fat every day. But too much fat adds a lot of extra calories. It can make you gain weight. Too much fat is also not healthy for vour heart. Choose lower-fat foods most of the time. Work with your health care team or about low-fat proteins and healthy fats.

See Appendix 1, Choosing Lower-Fat Foods, and Appendix 2, How to Read Food Labels.



CREATE YOUR HEALTHY PLATE

Knowing how much to eat can be tricky. One way to figure out your portion size is to use the "plate method":

- Make sure your plate is no more than 9 inches across
- Fill half your plate with non-starchy vegetables
- Fill ¼ of your plate with protein
- Fill ¼ of your plate with grains or starchy vegetables
- Choose a calcium-rich food at most of your meals (low-fat milk; soy, rice, or almond milk; or yogurt)
- Make sure your plate is no more than 1 inch deep with food

What if I am still hungry after a meal?

First, eat slowly. Give your stomach enough time to tell your brain it's full. It takes about 20 minutes. If you're still hungry, eat more non-starchy vegetables to help you feel satisfied. Drink water. Brush your teeth. It makes your mouth feel good. It also might take away the hunger.

SWEETS AND TREATS

You can enjoy your favorite dessert or sweet treat once in awhile. You have to watch how much you eat and how often. Add extra physical activity on days when you have dessert. That will help you balance your blood sugar.

Tips to remember:

- Eat a smaller portion
- Share your dessert with others
- Add extra exercise on days you eat dessert

HEALTHY SNACK IDEAS

Snacking can be part of a healthy diet. A healthy snack can be filling. It can help you not be overly hungry at your next meal. Add a healthy snack if you have more than 4 hours between meals. Here are some healthy snack ideas:

- 3 cups of unbuttered popcorn
- 8 oz nonfat yogurt
- 1 piece fresh fruit
- Canned fruit in "own juice"
- 1 banana
- 8-16 animal crackers
- 5 vanilla wafers
- 4-8 whole grain pretzel twists
- 2 slices of whole grain bread with about a tablespoon of jelly
- 1 low-fat granola bar

- 2 squares of graham crackers
- Half a grapefruit
- 15 grapes
- 15 baked tortilla chips with salsa
- 1 small pita stuffed with veggies
- 20 oyster crackers
- Homemade shake made with 8 oz nonfat yogurt, 1/2 cup 1% milk, ½ cup of fruit, 1 packet sugar substitute
- 2 slices light whole wheat bread spread with 1 tablespoon low-fat cream cheese
- 1/2 cup dry cereal in 1 cup lowfat milk or nonfat yogurt
- 1 cup berries with 1 cup nonfat yogurt
- Half a can of low-fat soup

There are lots of ways to start eating healthier. But don't try to do too much at once. Start by making small changes. Find more ways to get started with healthy changes. Visit diabetes.org/smallsteps

What are two things you can do to start eating healthier and help manage your diabetes?

1.	•			
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Manage Diabetes with STAR

Managing diabetes means making choices—some easy, some hard. When faced with a decision, think STAR:

STOP before you make a decision.

THINK about your choices. Consider how they will affect you.

ACT on the better choice for your health. Small steps add up to big results!

REFLECT on your progress. Give yourself credit for healthy choices.

CHOOSING LOWER-FAT FOODS

BREAKFAST FOODS

Try	every day	Only once a week	Avoid most of the time
	Egg whites Liquid egg substitutes Soy breakfast meats Boiled egg Breakfast burrito with 1 egg, reduced-fat cheese, salsa	Canadian bacon (1 slice)Turkey sausage (1 slice)Sausage breakfast burrito	 Sausage, pork roll Bacon Egg biscuit Egg and sausage biscuit or muffin Croissant with egg or sausage Bacon, egg, cheese biscuit
	Non-fat or low-fat cheese Non-fat cottage cheese I slice of 2% cheese Light cream cheese, 1 table- spoon		 Any cheese with 5 grams of fat or more per serving Regular cottage cheese
	Nonfat cooking sprays Low-fat margarine in a tub or squeeze bottle Low-fat cream cheese	Cream cheese (limit 2 tea- spoons per meal)	ButterShorteningLardBacon fatRegular cream cheese

LUNCH AND DINNER FOODS

Try every day	Only once a week	Avoid most of the time
 Chicken breast, thigh, or drumstick (no skin); grilled or baked Turkey breast (no skin) Turkey ham Ground turkey breast Soy chicken nuggets 	Chicken nuggets	Chicken wingsSausageSalamiLiverwurst
 Tuna packed in water Trout, cod, or whitefish; grilled or baked Fresh ham or pork loin 	Pork chopHam luncheon meat	Fried fishFried chickenPork rollRibs
 Side dish of pasta with tomato sauce Grilled/baked chicken breast Grilled chicken sandwich or salad Bean burrito Chicken taco, no sour cream Chicken/turkey breast wrap Turkey or roast beef sandwich Chicken or fish (no breading, not fried) with vegetables and steamed rice, steamed dumplings 	 Pizza (no meat, try vegetable toppings) Chicken steak sandwich made with chicken breast Frozen sandwiches or turnovers Small-size french fries 	 Meatball sandwiches Stuffed crust pizza Taco salad, BLT taco Supreme burrito/tortilla Big beef burrito Nachos supreme Potato skins Jalapeno poppers Hot dogs, chili dogs Cheese fries, large french fries Large subs or hoagies Fried rice, fried dumplings Breaded chicken or fish
 Low-fat hot dogs Non-fat or low-fat cheese Non-fat cottage cheese Only 1 slice of 2% cheese 	▶ Sliced cheese	Extra cheeseRegular cottage cheese
Veggie burgers	Single cheeseburgerHamburger (1 small patty)	Double cheeseburgerBacon cheeseburger
Low-fat soupFresh fruit		Creamed/cheese soupRamen noodle soup
Low-fat salad dressingLow-fat mayonnaiseMustardSalsa	Regular dressing (limit 2 teaspoons)	Regular dressing or mayon- naiseSour cream

HOW TO READ FOOD LABELS

Measuring and estimating are great ways to learn portion sizes. Reading food labels can help you learn portion sizes. It can also open up your world to healthy eating! Food labels will let you fit any food into your healthy meal plan.

Let's look at this food label for a whole grain cereal:

Step 1. Look at the "Serving Size."

That will tell you the size of the serving that the nutrition facts are for. This does not always have to be your portion size. The amount of calories will increase as the portion size increases.

This label says if you eat 3/4 cup of this cereal, you will get 100 calories, 0.5 grams of fat, 23 grams of total carbohydrates, and 3 grams of dietary fiber.

Step 2. Look at the grams of "Total Carbohydrate."

That will tell you how much total carb you are eating in each serving. You don't even have to look at "Sugars" on the label.

- Try choosing foods that are less than or equal to 25 grams of total carbohydrate per serving.
- Choose foods that have 3 or more grams of fiber per serving.

Step 3. Look at the "Calories" and the "Total Fat."

Try choosing foods that are 0-3 grams of total fat for every 100 calorie serving. Another way to choose is by looking at the "% Daily Value" for fat. Choose foods that are 5% to 8% or less of the daily value for total fat.

Remember, if you eat more than the serving size, you are getting more calories, fat, and carbs. For example, if you eat 1.5 cups of this cereal, you are getting 2 times the amount of everything. You will be eating 200 calories, 1 gram of fat, 46 grams of carbs, and 6 grams of dietary fiber.

Nutrition Facts Serving Size 3/4 cup (30g) Amount Per Serving Calories 100 Calories from Fat 4 % Daily Value* Total Fat 0.5 g 1% Saturated Fat 0.1 g 1% Trans Fat 0 g <u>0</u>% Cholesterol 0 mg Sodium 190 mg **8**% Potassium 90 mg 3% Total Carbohydrate 23 g 8% 11% Dietary Fiber 3 g Sugars 5 g Sugar Alcohols Protein 2 g Vitamin A 500 iu 10% 100% Vitamin C 60 mg Calcium 1000 mg 100% Iron 18 g 100%

PHYSICAL ACTIVITY

Make a Plan

- Choose exercises that you will enjoy.
- Start your exercise plan slowly. Then you can build up your time, effort, and energy levels to be active every day.
- Notice how exercise affects your weight and blood sugar levels.
- See that you feel good and have more energy!

Keep track of what you're doing. You can look back and see how much you have done. Use a chart to keep track of your activity.

ACTIVITY/ EXERCISE	DAY/DATE	LENGTH OF TIME	NOTES	BLOOD SUGAR?
Sample: basketball	Monday, 11/19/12	1 hour	Played ball with friends. Good work out and fun!	A little high today but came down after basketball

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ACT on the better choice for your health. Small steps add up to big results!

REFLECT on your progress. Give yourself credit for healthy choices.

PHYSICAL ACTIVITY

Why is physical activity important?

- To get fit
- D To stay strong
- To have fun by yourself and with other people
- To lose weight
- To improve blood sugar levels

There are 3 types of physical activity:

- Aerobic exercises
- Strength training
- Recreational activities

AEROBIC EXERCISES: GET FIT

Why is it important to do aerobic exercises?

Aerobic exercises use your large muscles. They make your heart and lungs stronger. They also help control your weight and give you energy.

Here are some examples of aerobic exercises:

- Brisk walking
- Bike riding
- Karate
- Jumping rope
- Jogging or running
- Fast dancing
- Rowing

- Swimming
- Rollerblading and skating
- Yoga and Pilates
- Team sports such as basketball, soccer, baseball, and volleyball

How often should I do them?

Try to do some aerobic exercise for 1 hour each day, most days of the week. If you're just starting to get active, build up the amount of time that you exercise. Start with 10 to 15 minutes daily. Then work your way up to an hour each day.

STRENGTH TRAINING: STAY STRONG

Why is it important to do strength training exercises?

Muscles need to be strong for good balance and posture. Strong muscles can also help prevent injuries.

There are three main types of strength-training exercises:

- **Exercises that use your own** body weight. Try push-ups, pull-ups, squats, and crunches.
- **Exercises with hand weights:** Use small dumbbells, wrist weights, or objects around the house such as soup cans or milk jugs half-filled with water.
- Weight machines and free weights: Work on your strength and muscle toning. Try to use the gym at your school or a local community center.

Try to do strength-training exercises 3 to 4 times a week.





RECREATIONAL ACTIVITIES: HAVE FUN

Why is it important to do recreational activities?

Doing an activity alone gives you time to yourself. Being active with friends, family, or classmates lets you have fun with others. Recreational activities can also relieve stress!

Here are some examples of recreational activities you can do by yourself or with others:

- Sports
- Dancing
- Walking or hiking outside
- Shopping with friends

List some of your favorite recreational activities:
By myself:
With others:

Try to do recreational activities at least 1 to 2 times a week.

Tips for healthy recreation:

- Don't forget to stretch before and after you exercise. Good flexibility helps protect you from getting injured.
- Keep your feet healthy. High blood sugar can affect your feet. Make sure your shoes fit well so that you don't get blisters or sores on your feet.
- Make sure your blood sugar levels are in your target range.
- Know the signs of low blood sugar and high blood sugar.
- Take your blood sugar meter, diabetes medicine and a snack with 15 grams of carbohydrates just in case your blood sugar goes low.
- Ask your diabetes care team if there are times when you should not exercise. An example might be if your blood sugar is too high.
- If you have any concerns, talk with your doctor or care team.



SETTING GOALS, PROBLEM SOLVING, AND MANAGING STRESS

SETTING GOALS

You might set goals for yourself at home: "I'm going to clean my room so I can go out later." Or you might set them for school: "I'm going to study math for an hour tonight." Goals can help you take care of your diabetes too.

Goals help us stay on track. They can make us feel successful. Set goals that you can achieve and that will help you to feel good about yourself. Here are some tips:

- **Choose a goal that is important to you.** You'll be more motivated to work on it if it is important to you.
- Make your goal challenging but realistic. That way, you will feel successful when you achieve it. You can break a big goal into several smaller steps. Each step can be a separate goal.
- Be specific in describing your goal. Instead of "exercise more," you could try, "Walk 10 blocks every day after school."

- Make sure you can measure your goal. This will help you keep track of how you're doing and help you stay on track. You can count how many times you're doing something, how long you're doing it, or how much you do.
- Tell someone else (a parent, a friend, a teacher) about your goal so they can support you.
- Reward yourself! We all feel good when we get rewarded for doing something. When you reach your goal, reward yourself! Need some ideas on how to reward yourself? Ask your parent to help figure out a good reward for all the hard work you've been doing. Here are some ideas: Go to see a movie, buy a new book, go shopping with friends.

This chart can help you make a specific goal to work toward.

General goal:
Why this goal is important to me?
Why is it challenging but still a realistic goal?
How am I going to measure my progress?
Who I will tell so they can support me?
What will be the reward?

PROBLEM SOLVING

Sometimes you're going to have trouble reaching your goal. And other problems will come up that you have to solve. You already know about the STAR method. Let's see how it applies to goals.

The STAR method:

STOP: What is the problem or question?

THINK: What would be a possible answer?

ACT: Choose the best solution and try it!

REFLECT: How did it work? What happened?

Here's an example of how you can use STAR to solve a problem.

Let's say you are having four snacks a day. Your goal is to have only one snack a day. You are having trouble meeting this goal.

If you **STOP**, you will notice the problem. You have been eating 4 snacks each day. Going down to 1 snack per day is really hard for you.

THINK about it. You wonder if maybe you should start with a more realistic goal. Going from 4 snacks to 1 snack per day is a big jump. You're hungry, and this is hard!

ACT by deciding that you will make a more realistic goal. Two snacks a day is more realistic. When you feel more confident, then you can achieve this new goal.

After 1 week, you **REFLECT**. Notice that 5 out of 7 days, you had only 2 snacks. One day you had 3, but the other you had just one!

You have successfully problem solved and made a more realistic goal. Make sure you reward yourself!

MANAGING STRESS

Taking care of your diabetes can affect different parts of your life. It can be stressful. Remember there are people who love you and want to help. Sometimes you just need to ask.

Ask for Help

Get support from others. Ask your mom, dad, sibling, or other family member to help you by making sure you have all the supplies you need.



At school, you could help the rest of your class learn about diabetes. They will know more about what you're going through and what you're doing about it. You could also ask a friend to help you with your diabetes. A friend could make sure you're doing OK with your diabetes at parties or other events.

Federal laws protect people with diabetes. You have the right to take care of your diabetes at school. If you feel like you are being treated unfairly at school because of your diabetes, call 1-800-DIABETES or visit diabetes.org/safeatschool to learn more.

Be Proud of Who You Are

We often see ourselves as we think others see us. Maybe you think you are too short or too tall. Maybe you think your hair is too straight or too curly. Maybe you are concerned about your weight. All of these things relate to self-esteem or how good you feel about YOU. By now, you probably have some feelings about having diabetes. Ask for the support you need. Take care of your stress so diabetes does not make you feel less like yourself. You can have diabetes and feel good about yourself!

BEING A TENDIABETES

Taking care of your diabetes can be pretty tiring at any age. There is a lot to do. It can be especially hard when you have so many other things going on in your life.

Your teenage years are a time for physical changes. Your body starts to make new hormones as it matures. These hormones may make you feel stressed or moody. When your blood sugar goes up or down, you may have a change in your moods. Girls will find that their blood sugar levels will change just before or during their menstrual period. This is because of hormone changes.

The next time your mood changes or you feel really stressed, stop and check your blood sugar. You may find it's out of range. Keep track of your blood sugar and your mood. Know when your mood changes because of your diabetes.

A NEW ADVENTURE

You will have many new experiences during your teenage years. These experiences mean choices. Many are very serious choices. Before making any decisions, understand all the consequences. Think about how your choices could affect your health and diabetes control. Remember, you don't have to make these decisions on your own. Ask a trusted adult for advice.

Think about these situations:

- How do I check my blood sugar on a date?
- When and how do I tell my date that I have diabetes?
- How do I pick sugar-free drinks when everyone is drinking the "real" stuff?
- How do I say no when I need to, like to extra snacks or desserts?

When facing a big decision, put STAR to work for you!

How Could STAR Help These Teens?

Tony has not been following his meal plan lately. He also quit checking his blood sugar levels regularly because they seemed high. He has a clinic visit next week. He does not want his care team to see his high blood sugar readings. What should Tony do?

STOP: What is the problem?

The problem is that Tony is discouraged because his blood sugars have been high lately. His blood sugars

have been high because he hasn't been following his meal plan. It's hard to follow a healthy meal plan and check blood sugars every day.

THINK: What are the choices? What are the good points? What are the bad points?

Tony has a lot of options. He could skip his clinic visit. That would mean his blood sugars would continue to be high and make him feel bad. He could go to the visit and make up blood sugars. Once the A1C test results come back, his care team will know how he's really been doing. He can be honest. He can tell his care team that his meal plan has been hard to follow and that he needs help.

ACT: What would you do?

Tony decides to go to the clinic appointment. He chooses to discuss his high blood sugars and challenges with his diabetes management. He also wants to ask his family for help. Tony and his diabetes care team try a different meal plan that might work better for him.

REFLECT: What do you think will happen? Would you do it that way again?

Tony realizes that it was good to talk about the problems he was having. He learned that he was not alone. He learned how to work with his care team to manage his diabetes.

BEING A TEEN WITH DIABETES

Mikah is 14. She is at her friend Dara's house with some other friends. Dara's parents are not home. Dara finds some vodka and starts passing it around. The others join in. The bottle comes to Mikah. What should Mikah do?

STOP: What is the problem?

THINK: What are the choices? What are the good points? What are the bad points?

ACT: What would you do?

REFLECT: What do you think will happen? Would you do it that way again?

To help with this exercise, see page 26 about Alcohol and Diabetes.

Here are some tips for using STAR for these tough choices:

- Know your goals.
- Now your values and your family's values.
- Trust your goals and values.
- Gather as many facts as you can.
- Take your time to decide.
- Ask friends and family you trust for help.
- Make the choice for YOU, not for others.

Try this exercise with your care team or your family.
STOP:
THINK:
ACT:
REFLECT:

TOBACCO, DRUGS, AND DIABETES

Tobacco and drugs are not good for anyone. If you have diabetes, cigarettes and drugs can affect your body in more negative ways.

Here are the facts:

FACT. Using tobacco if you are underage is illegal.

FACT. Using drugs is illegal at any age.

FACT. Tobacco, whether in cigarettes or chewing tobacco, is linked to cancer and other diseases.

FACT. Tobacco and diabetes make a deadly pair. Tobacco narrows blood vessels. Diabetes also narrows blood vessels. Together, they slow blood to the brain, the heart, and other body parts.

FACT. It's really hard to quit smoking. It's much easier never to start.

FACT. Drugs take you away from your goals.

FACT. Drugs mess up your blood sugar and your health.

FACT. Drugs can lead to problems with the law.

Now that you know the facts, the best thing you can do for your diabetes and your health is to avoid smoking and using drugs.

It can be hard to say no when asked to smoke or use drugs. Think about the reasons why you should say no to cigarettes and drugs.

Are you already smoking or using drugs and would like to quit? Talk to your diabetes care team. They can help.

ALCOHOL AND DIABETES

If you are younger than 21 years old, it's illegal for you to drink alcohol.

Here are some more facts:

FACT. Alcohol affects your diabetes care. It can interfere with your diabetes medicines. It can keep your blood sugars out of your target range. Alcohol can lead to very high or very low blood sugars.

FACT. Alcohol is full of calories. If you're trying to lose weight, steer clear of alcohol.

FACT. Driving after drinking alcohol can be deadly. NEVER get behind a wheel if you have been drinking alcohol. You can put your life and the lives of others at risk.

Think about the reasons why you should say no when offered an alcoholic drink. Then think about ways you can say no when you are offered an alcoholic drink. For example, try, "No thanks, I'm the designated driver."

Are you already drinking alcohol and would you like to quit? Talk with your diabetes care team. They can help with this challenge too.

If you are old enough and choose to drink alcohol, please do it safely:

- Wear a medical ID.
- Tell your friends about your diabetes. If you act drunk, you might really have low blood sugar.
- Do not skip meals or drink on an empty stomach.
- Do not skip your medicines.
- Limit your drinks to one or two.
- Mix your alcohol with diet sodas or water.
- Know your blood sugar, especially before you go to sleep for the night.
- Do not EVER drink and drive.

DATING

Whether it's your relationship with your best friend, your mom, or your brother, the most important part of any relationship is communication. This is especially true in dating.

Does the person you want to date already know about your diabetes? When do you tell? Who you tell and when you tell them are your decisions.

When you're ready, here are some examples of how to do it:

Eric decided to tell Juana about his diabetes before he asked her out. After all, he was not embarrassed about it. He stayed positive about it. He told her, "Hey, I have diabetes. It's not a big deal. I just have to take some meds, watch what I eat, and exercise. Want to go to the movies Friday night?" Sometimes teens worry that their friends will become the "food patrol" if they know about the diabetes:

Ricardo was getting frustrated with his friends. They were always telling him what he could or couldn't eat. He knew his friends were trying to help. He didn't want to hurt their feelings. He decided that not telling them he was frustrated would hurt their friendship more. One afternoon he said, "Guys, I really appreciate your help, but my mom is already reminding me of what I can and can't eat. I know you care, but I am in charge of my diabetes and I'll take care of it. Can you guys just be my friends?"

SEX: ARE YOU READY?

Choosing when to have sex is a very personal decision. It is one of the most important decisions you will make. If you have questions, talk to all the important people in your life. Your parents, religious leaders, doctors and nurses, coaches, teachers, and your friends' parents can help you with this choice.

Be in control of your choice! Use all of the STAR tips you have practiced to help you with your decision.

PREGNANCY AND DIABETES

Pregnancy for a woman with diabetes is serious. High blood sugars can harm an unborn child. Having a healthy baby takes good planning. For more information, talk to your educator or doctor.

Some diabetes medicines you take could harm an unborn child. Let your health care team know immediately if you think you are pregnant.

SAFE SEX

If you're sure you're ready, then be sure you are protected:

- Unprotected sex can lead to sexually transmitted diseases like HIV/AIDS.
- Unprotected sex can lead to pregnancy.
- lt is best to protect yourself.

Talk with your doctor and parents about birth control options and disease prevention.



DIABETES GLOSSARY

A1C: A blood test that can tell you what your average blood sugar (glucose) has been over the past 3-4 months. It's the blood sugar test "with a memory."

Acanthosis Nigricans (AN): Dark skin around the neck or armpits. AN can be a sign of insulin resistance.

Blood glucose (blood sugar):

The amount of glucose or sugar that is in the blood.

Blood glucose meter: A small machine that can measure the amount of glucose (sugar) in your blood. You have to prick your finger or forearm (follow the instructions for your meter) to get a small drop of blood that you put on a test strip.

Blood sugar (blood glucose): See blood glucose.

Carbohydrates (carbs): Another word for sugar. Carbs are the main source of energy for the body. Carbs get digested quickly and turn into blood sugar (glucose). Carbs are the foods that affect blood sugar the most. Examples of carbs are fruits, starchy vegetables like potatoes and corn, breads, pastas, rice, sugar, syrup, and honey.

Cells: The tiniest living unit that makes up the body. Cells are alive and need glucose for energy to survive. Beta cells in your pancreas make insulin.

Cell membrane (or an outside layer): Cells protect themselves with a membrane (outside layer). They can control what comes in and out. Insulin is needed for glucose to get through the cell membrane and into the cell.

Certified Diabetes Educator (CDE): A person who is an expert in diabetes and can help teach you how to manage your diabetes.

Control solution: Your meter comes with a control solution of sugar (glucose). Sometimes you might not be sure if your meter or test strips are working correctly. Use the control solution to test your meter and test strips.

Diabetes mellitus: A disease in which the body does not make or use insulin properly. Without insulin, the body cannot use the food you eat as energy. Instead, food, in the form of sugar (glucose) stays in the blood. This leads to high blood sugar (glucose). See also type 2 diabetes.

Diabetes care team: Anyone working with you to help manage your diabetes. This could be your doctor, nurse, diabetes educator, dietitian, mom, or dad. Remember, you are part of the team too!

Dietitian: A person who has knowledge about food and how it affects your blood sugar (glucose).

Endocrine system: The system of your body that deals with hormones and metabolism.

Endocrinologist: A doctor who specializes in diabetes care.

Fiber: The part of food that takes longer to digest. High-fiber foods raise your blood sugar (glucose) more slowly because they are harder to digest. These foods include whole wheat bread, prunes and other fruits and vegetables.

Glucose: The food you eat gets digested and broken down into sugar (glucose) your body's cells can use. See blood glucose, blood sugar.

Heart disease: Diabetes can increase your blood pressure and cholesterol levels. This can lead to heart attack and stroke.

Hormone: A chemical made by your body. Insulin is a hormone.

Hypoglycemia: Blood sugar (glucose) gets too low. You have more insulin in your system than your body needs.

Hyperglycemia: Blood sugar (glucose) gets too high. You don't have enough insulin in your system.

Insulin: A hormone made by the beta cells in your pancreas. Insulin acts like a key so sugar (glucose) can get into your cells. Without insulin to unlock the door to your cells, sugar from the food you eat can't get into your cells. The cells starve.

DIABETES GLOSSARY

Insulin resistance: Your body is not able to use the insulin your body makes. This occurs most often in people with type 2 diabetes. People with type 1 diabetes can have insulin resistance too.

Kidneys: Kidneys clean your blood. You have two kidneys. They filter out waste from your blood. You later remove that waste from your body as urine.

Nephropathy: Kidney damage. Over time, diabetes can cause problems with your kidneys.

Neuropathy: Problems with your nerves, especially in your feet. Over time, diabetes can cause nerve problems.

Pancreas: A small organ located right behind your stomach. Insulin is made in the pancreas.

Physical activity: Any activity that gets your body moving. Dancing, jogging, swimming, walking, biking, cleaning your room, and mowing the lawn are all examples of physical activity.

Protein: A source of energy for your body. It takes twice as long for protein to become sugar (glucose) compared to carbs. Proteins are good for building muscle. Good sources of protein are lean meats, fish, milk, nuts, and some beans.

Retinopathy: Eye problems. Over time, diabetes can cause damage to the eyes. This can lead to vision loss or blindness.

Target range: The range in which you and your diabetes care team have decided it would be best to keep your blood sugar (glucose) levels. This range can be different for each person.

Type 1 diabetes: The body no longer makes any insulin. People with type 1 diabetes must inject insulin every day.

Type 2 diabetes: The body doesn't make enough insulin, can't use the insulin that it makes, or both. Often type 2 diabetes can be treated with diet, exercise, or pills. Some people with type 2 diabetes use insulin to help manage blood glucose levels.