

The background is a solid pink color with a pattern of white circles of various sizes scattered across it. A large white rounded rectangle is centered on the page, containing the title text.

*Handbook for Youth
with Type 2 Diabetes*

Acknowledgments

This handbook was developed to deliver standard diabetes education practices and procedures to youth and their families participating in the TODAY (Treatment Options for type 2 Diabetes in Adolescents and Youth) study, funded by the National Institute of Diabetes and Digestive and Kidney Disease of the National Institutes of Health. TODAY participants had been recently diagnosed with type 2 diabetes (T2D). They and their families needed to get not only basic knowledge about T2D, but help with skills and behaviors that are important for successful management of this disease. When the TODAY study began, the only materials available had been designed for youth with type 1 diabetes or for adults with T2D. Therefore, the TODAY study identified a group of experts to develop an educational program and materials that would specifically reach youth with T2D. This handbook is based upon the TODAY study materials. 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; while a number of different approaches for managing diabetes are introduced in the handbook, the youth should work with the health care professionals to determine which strategies are best for him or her.

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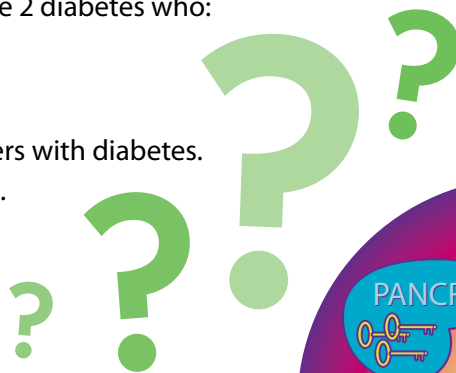


What is Diabetes?

How did I get diabetes?

Diabetes is a lifelong disease. We don't know exactly what causes diabetes. Type 2 diabetes usually happens in adults, but more and more children are getting type 2 diabetes who:

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



Is it my fault?

Look at the list of risks to the left. Some of these you **CANNOT** change. You cannot change your parents or your heritage. Some of these risks you **CAN** change. You can change how active you are or what type of food you eat.

What is diabetes?

Diabetes is a serious disease! When you have diabetes, your body cannot turn the food you eat into energy. Here is what should happen when you eat:

1. Food changes to sugar in your body. Sugar is your body's main fuel source.
2. Sugar goes into the blood. Sugar moves through the bloodstream to your body's cells.
3. Your blood sugar starts to go up.
4. Your body sends a message to the pancreas. The pancreas is the part of your body that makes

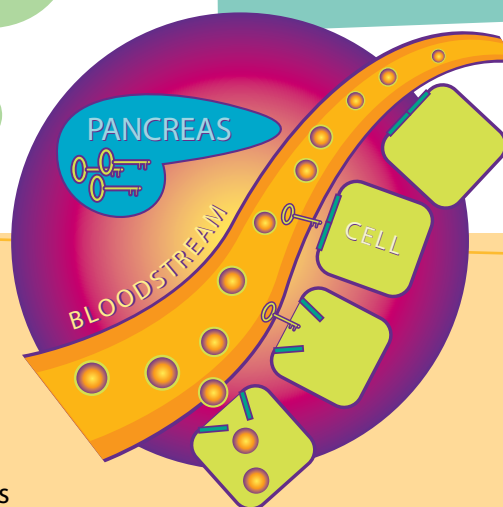
insulin.

It sits behind your stomach.

5. Your pancreas makes insulin and sends it into the blood.
6. Insulin travels to the cells. Insulin is the key that lets sugar into a cell.
7. Insulin opens the cell door. This lets sugar into the cell.
8. Sugar goes into the cell through the door.
9. Your body uses the sugar for energy inside the cell.
10. Your blood sugar goes back to normal.

For all this to work, you have to have insulin and cell doors.

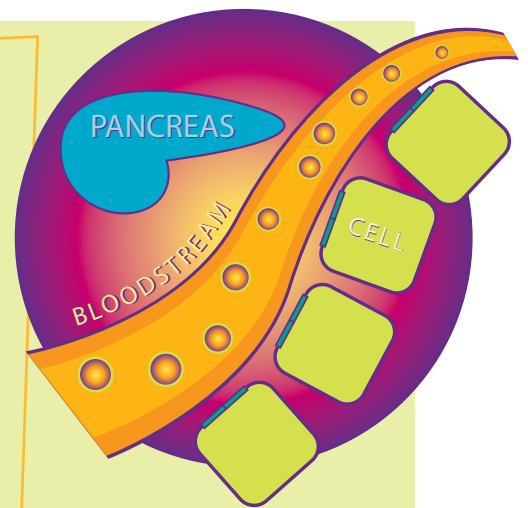
In this picture, the pancreas is making insulin and releasing it into the bloodstream. The insulin opens the cell doors. Insulin lets the sugar in the blood move into the cell. Once the sugar is inside, the cell can make energy for your body.



TYPE 1 DIABETES

Sometimes your body stops making enough insulin. This is called type 1 diabetes. If your body has enough doors into the cells, but is not making enough insulin to open the doors, then you have type 1 diabetes. You must take insulin shots to stay healthy and alive.

In this picture, the pancreas is not making insulin. The cells have enough doors, but there is no insulin in the blood to open them and move sugar from the blood to the cell. Sugar stays in the bloodstream instead of moving into the cells to make energy for your body.

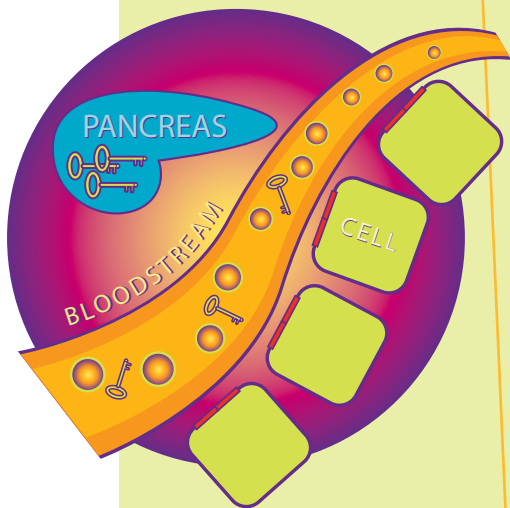


When you have diabetes, your body cannot turn the food you eat into energy.

TYPE 2 DIABETES

Sometimes cells do not have enough doors. This is called type 2 diabetes. If the pancreas is making enough insulin, but there is something wrong with the cells doors, then you have type 2 diabetes. Sometimes there are not enough cell doors. Sometimes the cell doors will not open.

In this picture, the pancreas is making insulin, but there are not enough cell doors for the insulin to open. The sugar stays in the bloodstream because the doors do not open. The sugar cannot get into the cells to make energy for your body.



What helps insulin open the doors to let sugar in?



Exercise and physical activity!
Eating healthy meals and snacks! Losing weight can help your body to use insulin better. The more you weigh, the more insulin your body needs. If the pancreas has to work overtime

making insulin, then it might get tired. When the pancreas gets too tired, it cannot make enough insulin. If you have type 2 diabetes and your body is not able to make enough insulin on its own because the pancreas is too tired, then you will need to take insulin shots.

Diabetes pills do not have insulin in them, but help to open the cell doors.



Will type 2 diabetes go away?

Diabetes never really goes away, but it can act differently at different times. When you are active and eat healthy foods, your blood sugar can be more normal and cell doors more easily open. Some people can take care of their diabetes with diet and exercise alone.

Sometimes your body just cannot open enough cell doors—even with lots of exercise and healthy foods. That is when you might need pills.

If your body just cannot produce enough insulin on its own, then you need to take insulin shots. Insulin shots are used when the pancreas gets tired and cannot make enough insulin anymore.

People with type 2 diabetes usually have insulin resistance.

What is insulin resistance?

Insulin resistance is “closed cell doors”. The cell doors are shut tight. This causes insulin to build up in the bloodstream. The cells are resisting insulin. People who have type 2 diabetes usually have insulin resistance.

Insulin resistance may happen in the early stages of diabetes. That means that some of the cell doors are closed. A few of the cell doors are open. The pancreas makes more and more insulin to try to push through the closed doors. This puts a lot of insulin in the blood. Even with a lot of insulin, the sugar cannot get into the cells. Blood sugar goes high.

How do I know if I have insulin resistance?

Your doctor will perform some tests on your blood. The results from some of these tests will show that there is a lot of insulin and sugar in your blood. This will be true especially if the tests are taken after you have eaten a meal.

If dark skin patches appear on your breasts, stomach, knees, elbows, armpits, hands, groin, or the back of your neck, then you might have insulin resistance. Some people try to bleach or scrub the patches away. They will NOT go away with bleach or scrubbing. These dark skin patches are called Acanthosis Nigricans (AN for short). AN means that you have a lot of insulin in your blood and you have insulin resistance. They may begin to go away when your body stops making so much insulin and your insulin resistance is treated. AN can also mean that you have diabetes, high blood pressure, or high cholesterol. AN can happen in children and adults, and many people with AN are overweight.

How do I take care of insulin resistance?

It is important to learn how to make the best plan and stay on course. All the ways you take care of diabetes are also the ways to take care of insulin resistance. These ways are healthy diet, exercise, and, when necessary, medication. So keep reading and keep working hard!

Why should I worry about my diabetes?

High blood sugar can make you feel sick. High blood sugar can make you feel tired, sleepy, and thirsty. You might not have the energy you need to play, to work, or to have fun. High blood sugar can cause you to urinate more often (go to the bathroom). High blood sugar can cause you to get up at night to go to the bathroom.

What have I heard about diabetes:

Is this fact or fiction?

You get diabetes from eating too much sugar.

Fiction. You do not get diabetes by eating too much sugar. You can get diabetes by eating too many calories and becoming overweight. You can also get diabetes if you are overweight or if other members of your family have diabetes.

Diabetes can be cured with herbs.

Fiction. There is no cure for diabetes right now. Some people think that certain herbs, cacti, or vitamins can cure diabetes. These things do not make more insulin and they do not open the cell doors.

My aunt takes insulin pills.

Fiction. The pills for diabetes are not insulin. Pills help you make your own insulin or they open cell doors. So far there are not any pills that replace insulin shots.

Type 2 diabetes is the mild form of diabetes—you only have to take a pill!

Fiction. All types of diabetes are very serious, and can lead to very bad health problems. High blood sugar is bad for everyone!

High blood sugar may cause you to get sick more often. You might have infections that will not heal well. High blood sugar can also damage important parts of your body. High blood sugar can hurt the blood vessels in your eyes, your kidneys, or your heart.

It takes years for blood vessel problems to happen. So you can start today to prevent your diabetes from causing these problems. So, instead of worrying, learn how to take care of your diabetes!

How can I take care of my diabetes?

We are glad you asked! Now you know that there is no cure for diabetes, but there is control for diabetes! Controlling diabetes means keeping the level of sugar in your blood near normal.

There are four main ways to do this:



This book, your doctor, and your diabetes educator will show you how to do all four of these things. It is also important that your family help you take care of your diabetes.

LEARNING CHECKUP

1. Match the word to the definition.

Word	Answer	Definition
Insulin		A. Your body's cells use this for energy.
Sugar		B. Known as type 1 or type 2—your body cannot turn food into energy.
Acanthosis Nigricans (AN)		C. One way to help your body better use insulin.
Insulin Resistance		D. Dark patches of skin when the pancreas makes too much insulin.
Exercise		E. Moves sugar into cells.
Diabetes		F. Cell doors are shut tight and insulin is kept out.

2. Mark each statement T (true) if it is a fact or F (false) if it is fiction.

Fact (T) or Fiction (F)?	
T F	Diabetes will go away if you take pills.
T F	High blood sugar can make you feel sleepy and thirsty.
T F	You get diabetes from eating too much sugar.
T F	Years of high blood sugar can damage your eyes and kidneys.
T F	Diabetes is only serious if you take insulin.
T F	Losing weight helps your body better use insulin.

Questions I have about my diabetes:

Checking Blood Sugar

Why do I have to stick my finger?

You and your diabetes specialists are a team. As a team you will be making a plan to take care of your diabetes. This plan will include good food choices, physical activity, and medicines.

The plan will help to keep your blood sugar normal. The best way to learn if the plan is working is to check your blood sugar. The way to do this is to get a drop of blood from your finger and check that drop on a meter or machine. Check your blood sugar each day using a blood sugar meter.

What can I do to make the checks more comfortable?

Good question! Here are some tips to make the checks more comfortable:

1. 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.
2. Use an adjustable lancet device to obtain a drop without poking too deeply.
3. Gently squeeze a blood drop from your fingertip. Do not squeeze too hard.
4. The meter does not need a lot of blood. It uses a very small drop (YEAH!).
5. Use skin cream to keep your fingers soft.

Where do I put the lancets?

Keep it to yourself!

Here's some good advice when it comes to the sharp lancets:

- Do not ever let anyone use your lancet device or your lancets.
- Always throw away your lancets carefully by using either a needle box, a bleach jug, or a coffee can.
- When these are full, tape them up and throw them out in a safe way.
- Your diabetes educator can tell you how to throw away things safely.

Keep all your diabetes care things away from little kids!

How do I check my blood sugar?

You will need a few things to get your score:

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

Your diabetes educator will show you how to use your blood sugar meter and lancet device. The best place to get the drop is from your fingertips. Use the sides of your fingers for the best drops.

Some people are able to get blood drops from their arms or hand. Your diabetes team will have information about how to use these places.



Keeping a Logbook

Why do I have to write the result down?

Winning in diabetes is like winning in a football or basketball game. The only way to know who wins a football or basketball game is to keep score. So in order to know if you are staying healthy, you have to keep track of your score!

Keeping track in a logbook is the best way to show your diabetes team how your diabetes is doing. It is also the best way for you to keep track of your progress.






Some kids worry about writing a really high number in their logbook. They think that their parents, their doctor, or their diabetes educator will be mad at them. **NO WAY!** Write down whatever number comes up on the meter. That way you and your team can safely make changes to your plan.

You really do not need to worry about writing down high scores for blood sugar. Both high and low blood sugar scores tell your team that change is needed. Sometimes high blood sugar means that you have a cold or infection. Be sure to let your team know when your blood sugar is high.

Even though you are checking your blood sugar twice a day, it is important to have visits with your team. **Bring your blood sugar meter and your logbook to your visits.** Your team will want to look over the numbers with you. These things can help your diabetes team learn more about your diabetes. Your diabetes team needs to look at your meter and your logbook to make the best choices about your treatment.

What does a logbook look like?

Your logbook is a book full of individual logs. Here is what a log looks like:

Date:	AM	PM	Praise
Notes:	PILLS		 <input type="checkbox"/>
			 <input type="checkbox"/>
	BLOOD SUGAR		 <input type="checkbox"/>



Bring your blood sugar meter and your logbook to your visits.

Blood Sugar Targets

How will I know that my diabetes is in good control?

By now you may have figured out that diabetes is a balancing act. Staying healthy means keeping food in balance with activity and medications. You and your parents will be the most important people in this job! Each day you will make decisions and choices about your health. You will be deciding:

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

You will know if your choices are correct by checking your blood sugars and by visiting with your diabetes team. You will need to know about your blood sugar, hemoglobin A1c (A1c), cholesterol, and insulin levels in order to know if your diabetes is in good control:

- ▶ Blood sugar will give you immediate information about your diabetes.
- ▶ A1c measures the average of your blood sugar for the past 3 months (we will talk more about this later).
- ▶ Cholesterol tells you and your doctor how well your body is controlling fat in the bloodstream.
- ▶ Insulin levels tell the doctor how much insulin your pancreas is making.

What blood sugar numbers should I aim for?

Good control of diabetes means that blood sugar is between 70 and 120. Your team may need to make changes in your diabetes care if your blood sugar is too high or too low.



Target blood sugar levels

Goal: 60-70% of blood sugar measurements are within your target

TOO HIGH!!!

Try to increase your activity and eat less food to lower the blood sugar.

If your blood sugar is too high, you may have to test for ketones. For more information on ketone testing, see p. 81.

If HIGH with Moderate or Large ketones, then CALL your diabetes team.

IN TARGET!!!

No changes needed.

TOO LOW

Treat immediately with 15 grams of carbohydrate (½ cup juice, 4 ounces cola, 1 glucose gel, or 1 Tbs sugar).

If lows are frequent, then a dose change is needed.

Spot check

Circle the blood sugars that are in target:

222 144
87 96 62 302
93
118 104 146
148 127 264 81 112
213 58
131 77 93

Understanding your A1c

A1c is a blood test that measures the amount of sugar on each red blood cell. The test measures sugar that has coated the protein part. This protein part is called hemoglobin.

How often should the A1c test be done?

Your red blood cells live about 3 to 4 months. Your body makes new red cells (and new hemoglobin) about every 3 to 4 months. Your A1c values change as new cells are made. The A1c test should be done in a laboratory every 3 to 4 months.

How important is the A1c?

It's really important! Hemoglobin is one of the few body proteins that we can test for sugarcoating. Many scientists believe that other body proteins may also be sugarcoated. These proteins are found in the eye, kidney, blood vessels, and nerves, but we cannot test them easily.

A research study called DCCT showed us that people with lower A1c tests had much fewer complications from diabetes. If the A1c is near normal then other body proteins are sugar-free and healthy.

What does the A1c number mean?

Hemoglobin A1c values are percents. These percents stand for average blood sugar. Here is a chart for you to use:

Hemoglobin A1c	Average blood sugar
6.0 %	135 mg/dl
7.0 %	170 mg/dl
8.0 %	205 mg/dl
10.0 %	240 mg/dl
12.0 %	345 mg/dl

What A1c numbers should I aim for?

Most people with type 2 diabetes should aim for an A1c of 7% or less.

LEARNING CHECKUP

1. The target for blood sugar is:

- A. Between 70 and 120
- B. Between 120 and 200
- C. Between 40 and 100

2. You should check your blood sugar at least how many times a day?

- A. Four
- B. Two
- C. Three

3. What number should your Hemoglobin A1c test be?

- A. 5.0% or less
- B. 7.0% or less
- C. Over 7.0%

4. How often should you have the Hemoglobin A1c test done?

- A. Twice per day
- B. Once per month
- C. Every 3 months

5. People who have Hemoglobin A1c near the target are healthier and have fewer:

- A. Illnesses and colds.
- B. Complications from diabetes.
- C. Injuries and accidents.

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.
Here are simple steps to get you started:

STEP 1: Avoid all sugar drinks. Try drinking more water.

Good Picks

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

Avoid these

- ▶ Sports drinks—energy drinks
- ▶ Regular soda—cola
- ▶ Fruit drinks—sweetened fruit flavored drinks
- ▶ Other soda—ginger ale, root beer, or orange- or strawberry-flavored soda

STEP 2: When you eat--eat less! Eat less food at meals and smaller snacks.

- ▶ Eat half of what you usually eat at meals.
- ▶ 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.
- ▶ Eat one sandwich instead of two.
- ▶ Always leave something on your plate.

STEP 3: Don't skip meals. Try eating three meals each day.

- ▶ Start a new habit—eat breakfast!
- ▶ Avoid eating late at night.

STEP 4: Shop smart. Use this list for healthy food ideas at the market.

A Shopping List to Get You Started

Milk and Cheese

- ▶ Lite or low-fat cheese
- ▶ Low-fat cottage cheese
- ▶ Low-fat milk (skim or 1%)
- ▶ Lite or low-fat yogurt

Poultry and Eggs

- ▶ Canned chicken packed in water
- ▶ Turkey
- ▶ Ground turkey breast (no skin)
- ▶ Eggs (egg whites or egg beaters)
- ▶ Skinless chicken thighs
- ▶ Skinless chicken breast
- ▶ Skinless chicken on the bone
- ▶ Chicken breast steak

Meat and Fish

- ▶ Roast beef lunch meat
- ▶ Ham lunch meat
- ▶ 95% lean ground beef
- ▶ Rib, chuck, or rump beef
- ▶ 98% lean meats
- ▶ Any fish - especially salmon, canned tuna packed in water
- ▶ Pork loin or pork chops

Beans (dried, frozen, or canned)

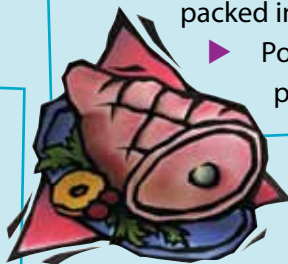
- ▶ Navy beans
- ▶ Lima beans
- ▶ Wax beans
- ▶ Great Northern beans
- ▶ Kidney beans
- ▶ Black-eyed peas
- ▶ Chili beans
- ▶ Lentils
- ▶ Pinto beans
- ▶ Chickpeas (Garbanzo beans)

Vegetables

- ▶ Collard greens
- ▶ Frozen vegetables
- ▶ Tomatoes
- ▶ Cucumbers
- ▶ Onions
- ▶ String beans
- ▶ Mushrooms
- ▶ Broccoli
- ▶ Carrots
- ▶ Spinach
- ▶ Peppers
- ▶ Celery

Fruit

- ▶ Canned in own juice
- ▶ Fresh fruit (any kind)
- ▶ Juice
- ▶ Lite juice
- ▶ Sugar-free flavored water



Cereal

- ▶ Anything bran
- ▶ Bran flakes (no raisins)
- ▶ Toasted O's
- ▶ Shredded wheat
- ▶ Corn puffs
- ▶ Rice crisps
- ▶ Wheat flakes
- ▶ Oats
- ▶ Oatmeal



Snacks

- ▶ Baked snack chips
- ▶ Thin pretzels
- ▶ Melba toast
- ▶ Low-fat or sugar-free hot cocoa
- ▶ Low-fat pudding
- ▶ Low-fat fudge popsicles
- ▶ Sugar-free popsicles
- ▶ Low-fat granola bars
- ▶ Flavored rice cakes
- ▶ Lite or low-fat popcorn
- ▶ Vanilla wafers
- ▶ Graham crackers
- ▶ Animal crackers
- ▶ Gold fish crackers
- ▶ Sugar-free sodas and tea
- ▶ Dill pickles



Starches

- ▶ Potato
- ▶ Whole wheat bread
- ▶ Corn (canned, frozen, or fresh)
- ▶ Brown rice
- ▶ Lite macaroni and cheese
- ▶ Whole wheat pasta
- ▶ Grits
- ▶ Frozen waffles
- ▶ Frozen whole wheat bagels
- ▶ Reduced fat biscuit mix
- ▶ Small rolls
- ▶ Sweet potato or yam
- ▶ Corn tortilla, flat bread, or whole wheat pita bread



Other Foods

- ▶ Sugar-free pancake syrup
- ▶ Mustard
- ▶ Lite mayonnaise
- ▶ Nonfat cooking spray
- ▶ Barbeque sauce
- ▶ Lite margarine (tub)
- ▶ Low-fat salad dressing
- ▶ Shake and bake seasoning
- ▶ Lemon
- ▶ Chicken broth
- ▶ Bouillon cubes
- ▶ Low sugar jelly or jam
- ▶ Low-fat cream cheese
- ▶ Salsa
- ▶ Sugar substitute



How to cook it up...

- ▶ Bake
- ▶ Broil
- ▶ Boil
- ▶ Roast
- ▶ Grill
- ▶ Steam

LEARNING CHECKUP

Check the best drink choices
(Hint: Go for no sugar or low sugar ones!)



Mastery Assessment for Lesson 1

1. What opens the cell doors to let in sugar?
 - A. Ketones
 - B. Insulin
 - C. Carbohydrates
2. Blood sugar level increases in type 2 diabetes because:
 - A. There is not enough insulin.
 - B. The cell doors are closed.
 - C. You are eating too much fat.

3. Mark each statement T (true) if it is a fact or F (false) if it is fiction.

Fact (T) or Fiction (F)?	
T F	Pills are the only way to treat type 2 diabetes.
T F	Eating less and exercising more can help blood sugars reach targets.
T F	Type 2 diabetes only happens to adults.

4. Which drink will not raise blood sugar?
 - A. ½ can of regular cola
 - B. 8 ounces of unsweetened orange juice
 - C. 16 ounces of diet root beer

LESSON 2

- ▶ Food and Diabetes
- ▶ Your Meal Plan
- ▶ Taking Care of Diabetes with Medicine
- ▶ Diabetes and Feelings
- ▶ Mastery Assessment

Food and Diabetes

In this chapter you will learn about good nutrition and meal planning, as well as how to pick the best food according to your body's energy needs.

Why worry about food?

Food is one of the three important things about diabetes.

Diabetes is like a 3-legged stool. Each leg is important to the whole stool.

The three legs are food, medication, and physical activity. When all three legs support the stool, the stool is strong and balanced.

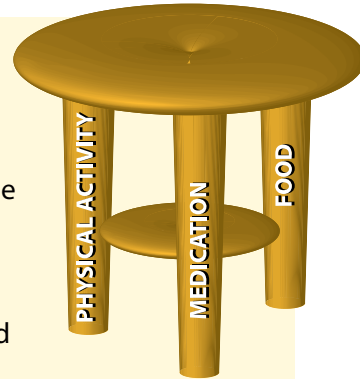
When one leg is missing or broken, the stool will fall.

Food is important for two other reasons:

First, food gives you energy for all the things you want to do. For example, if you want to play basketball, you have to eat food to have energy to play.

Second, food is one way to meet and talk with friends. Think about the last meal you had. Did you eat with your friends or with your family? Think of parties—you think of food. Think of sports events—you think of food. Think of the movies—there is food there too!

Ok, so food is important in balancing your diabetes, giving you everyday energy, and it is everywhere!



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

NO! You will still be able to enjoy almost all the foods you love. You will learn how certain foods affect your blood sugar. You will learn that the amount you eat is important.

What is the difference between bad food and good food?

First, let us explain—there is no such thing as bad food. It is just food. Some decisions about what kind of food to eat are better than others. Some decisions about how much food to eat are better than others. Food is our source of energy, but some foods provide MORE energy than your body needs. This is where your choice comes into play.

What are vitamins and minerals?

Vitamins and minerals are part of nutrition. They do not have calories. They are important for healthy skin and eyes. Vitamin C keeps you healthy. Vitamin A helps your vision. Your body needs minerals like iron and calcium to build blood and bone. Vitamins and minerals are found in fruits, vegetables, whole grains, and low-fat dairy products.



How much food do I need?

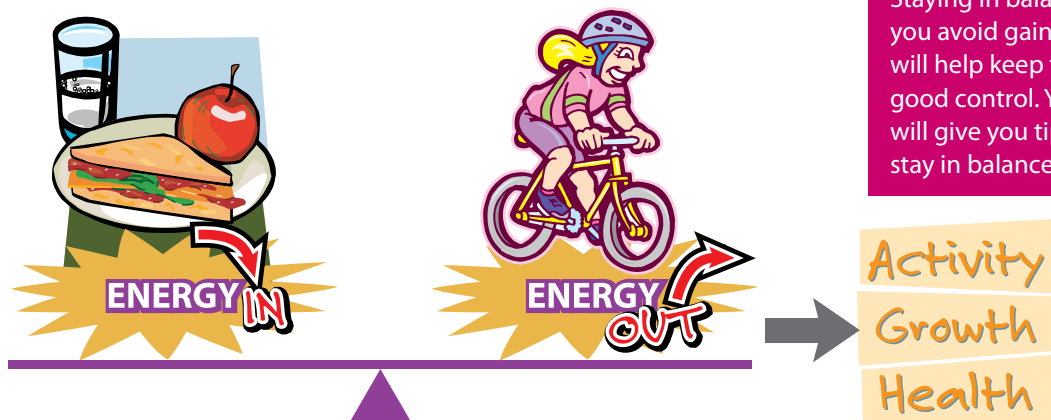
Good question. This depends on a few things:

- ▶ How old are you?
- ▶ How active are you?
- ▶ How fast is your body growing?
- ▶ Do you weigh more than what is healthy?

Energy in food is called calories. Your body uses calories to do everyday things. Your body burns more calories when you walk, play, and move. Your diabetes team will help you pick the amount of energy or calories you need.



Food and drink provide energy or calories to your body. Your body uses that energy for activity, growth, and to stay healthy. To be in balance you must have the same amount of energy coming in as the amount of energy being used. Look at the following picture:



If I eat the right amount of energy (calories) each day, can I eat it all as cake and soda?

Whoa!! Did we mention the choice of food and drink is important to your body? Calories are just one part.

First, let us learn more about food types and energy (calories) to help complete this picture.

CAUTION: Taking in too much energy and not burning enough energy can cause weight gain.

Staying in balance will help you avoid gaining weight. This will help keep the diabetes in good control. Your meal plan will give you tips on how to stay in balance.

Roughing it Up with Healthy Carbohydrates

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

Some carbs are digested in the body very quickly, which can cause high spikes in your blood sugars. Other carbs are less processed, contain a fiber-rich outer coating, and move slower. You may see a lower and gentler change in blood sugar after you eat them.

Fiber, also known as bulk or roughage, fills you up to help you feel full longer. This might help you slim down! And fiber can also act like a scrub brush inside your body, helping to remove extra blood fats, protecting your heart.

So it makes sense to “bulk up and rough it up” by choosing healthy carbs!

Where do you find these high fiber, less refined carbs that will help you feel your best?

In whole, plant foods, so boost your intake of:

- ▶ whole grain breads and cereals
- ▶ bran, barley, bulgur and beans
- ▶ oats, nuts and seeds
- ▶ fresh fruits and vegetables, especially those with skins and seeds like apples and pears, carrots and broccoli, and berries

Quick Ways to 25 grams Fiber

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

- ▶ Choose oatmeal or bran cereals with 4 or more grams per serving.

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

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

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

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

4. Aim for “Five-a-Day” fruit and vegetable servings every day.

- ▶ “Eat” your fruit rather than drinking juice.
- ▶ Add berries to cereal.
- ▶ Try fresh fruit between meals as a snack.
- ▶ Have cut up veggies in small baggies to take with you for snacks.
- ▶ Mix chopped broccoli into spaghetti sauce, grated carrots into muffin batter.

So where does energy (calories) come from?

Food comes in three different types of energy:

- ▶ Carbohydrate
- ▶ Protein
- ▶ Fat

Carbohydrates (Carbs)

Carbohydrate (carbs) are found in:

- ▶ Bread
- ▶ Pasta
- ▶ Tortillas
- ▶ Flat bread
- ▶ Biscuits
- ▶ Beans
- ▶ Corn
- ▶ Rice
- ▶ Potatoes
- ▶ All fruits
- ▶ All fruit juice
- ▶ Green, yellow, purple, red vegetables
- ▶ Milk, ice cream, yogurt
- ▶ Sugar, jelly, honey, syrup
- ▶ Cereals
- ▶ Crackers
- ▶ Desserts like candy, cakes, cookies, pies
- ▶ Most snacks like pretzels and chips

Carbs really raise blood sugar. Sometimes they do not even taste sweet, like the carbs in milk. Often you cannot know if a food will raise your blood sugar just by its taste alone.

Many carbs are high in fiber that can fill you up and protect your heart. Foods that are less processed and contain 3 or more grams of fiber per serving may make you feel your best, so fill your day with healthy carbs!

What are healthy carbs?

Try these:

- ▶ Whole grain breads and cereals, especially brans and oats
- ▶ Fresh fruit (any kind), especially those with skins and seeds!
- ▶ Low-fat milk and lite yogurt
- ▶ Whole wheat pasta/noodles, boiled or steamed brown rice, barley, bulgur
- ▶ Baked potato with skin
- ▶ Vegetables (any kind) – don't peel!
- ▶ Beans like navy, lima, kidney, chili, lentils, split peas
- ▶ Snacks like thin pretzels, baked chips, low-fat popcorn, animal or graham crackers, gold fish crackers, fudge popsicles, and sugar-free popsicles

Which food is healthier for you?

Remember!

Any carb will give your body energy. Only healthy carbs give your body other important benefits. Healthy carbs are full of vitamins and minerals.

Fill your day with healthy carbs!



The glass of milk of course! Milk gives your body other needed things, like vitamins and minerals for good bones, healthy eyes and clear skin.

How can I make healthy food choices?

You are stepping in the right direction when you eat healthy carbs!!

Carbs are not “free” foods, so you have to watch how many carbs you eat. Free foods have 5 grams or less of carbohydrates and less than 20 calories per serving. Your diabetes educator will help you figure out how many carbs to eat each day.

The first list of Free Foods shows foods or drinks you can have in unlimited amounts. The Food Guide Pyramid can also help.

The second list shows foods that are “Free Foods” if you eat 3 or less of them per day. If you have 4 or more per day, you will need to count the calories and carbs of each food after the 3rd food.

Free Foods— Unlimited list

Artificial sweeteners (Equal, Sweet & Low, Splenda)
Bouillon, broth, consommé
Bouillon, broth, low sodium
Club soda, seltzer
Coffee
Cooking spray when used for cooking
Diet soft drinks, sugar-free
Gum, sugar-free
Herbs and spices (pepper, garlic powder)
Horseradish
Hot sauce
Margarine spray
Mineral water
Soda pop, diet
Sugar-free flavored drinks
Tea, hot or iced, unsweetened
Vinegar
Water
Worcestershire sauce

Free up to 3 servings (less than 5 grams carb/serving) per day

Food	Serving	Calories
Barbecue sauce	1 Tbsp	14
Celery stalk (7 inches long)	2 stalks	12
Cream cheese, fat-free	1 Tbsp	15
Creamers, non-dairy, liquid, fat-free	1 Tbsp	10
Cucumber, raw, sliced	1 cup	14
Diet Jell-O, sugar-free gelatin	½ cup	25
Ketchup/catsup	1 Tbsp	15
Lemon juice	¼ cup	15
Lime juice	¼ cup	17
Mayonnaise, fat-free	1 Tbsp	10
Mustard	2 Tbsp	18
Pickles, dill	2 whole	8
Pickles, sweet (bread and butter)	2 slices	16
Popsicle, sugar-free	1 whole	15
Ranch dressing, fat-free	1 Tbsp	25
Relish	1 Tbsp	20
Salad dressing, fat-free	1 Tbsp	5
Salsa	¼ cup	16
Sour cream, fat-free	1 Tbsp	15
Soy sauce	1 Tbsp	9
Spinach, raw	1 cup	7
Steak sauce	1 Tbsp	12
Syrup, sugar-free	2 Tbsp	18
Taco sauce	1 Tbsp	7
Whipped topping, fat-free	2 Tbsp	15
Whipped topping, lite	1 Tbsp	10

Sugar is a carbohydrate. Can I eat sugar?

Let us look at the facts about sugar...

Sugar is also a carbohydrate. It is found in many types of foods that are sweetened. Some examples of sugar are table sugar, brown sugar, honey, maple syrup, corn syrup, and fructose.

It is a good idea to eat less of all carbohydrates including sugar. Your blood sugars may go too high if you eat large amounts of carbohydrate, especially a lot at one time.

Some foods have a lot of sugar added. It is a good idea to avoid these foods most of the time or eat smaller amounts of them.

That is why we suggested that you avoid sugar drinks.

How about if I just start eating sugar-free foods?

Sugar-free foods are fine in your diet, but they tend to cost more money.

Here is another thing: sugar-free does not mean carbohydrate free!

How can that be?

The food may have natural carbohydrates like milk, or starch, or sugar alcohols.

Sugar alcohols are found in sugar-free candies, gum, and cookies. They are:

- ▶ Mannitol
- ▶ Xylitol
- ▶ Sorbitol

Sugar alcohols may give you an upset stomach if you eat large amounts.

So sugar-free food is not always "free" food.



Did you know there are about 16 teaspoons of sugar in a 20 oz bottle of soda? That is enough sugar to raise your blood sugar about 200 points! YIKES!!



What about sugar substitutes?

You can use sweeteners. They are safe. They are in sodas and sugar-free gelatin and gum. There are several kinds:

- ▶ Aspartame (NutraSweet®)
- ▶ Acesulfame-K (Sunett®)
- ▶ Sucralose (Splenda®)
- ▶ Saccharin (Sweet'N Low®)

So, we have talked about carbohydrates (carbs) as one energy source. Remember there are two more sources of energy and calories: Protein and Fat.

Protein

Protein repairs and builds muscle. Protein is also a source of energy for your body.

Protein is found in the meat and milk groups:

- ▶ Chicken
- ▶ Beef
- ▶ Turkey
- ▶ Deer
- ▶ Duck
- ▶ Pork
- ▶ Tofu
- ▶ Fish
- ▶ Eggs
- ▶ Cheese
- ▶ Beans
- ▶ Milk
- ▶ Peanut butter

Fat

Fat helps carry vitamins to the cells. Fat helps food taste better. Too much fat can make you fat! Too much fat can make your heart work too hard.

Fat is found in:

- ▶ Margarine
- ▶ Butter
- ▶ Creams (heavy, light, sour, cream cheese)
- ▶ Oils
- ▶ Salad dressings
- ▶ Grease and lard, bacon and sausages
- ▶ Nuts and seeds
- ▶ Coconut
- ▶ Avocados and guacamole

What are combination foods?

They are foods with more than one energy source.

Can you see that some foods are really combinations of carbs, protein, and fat?

Meat has protein and fat.

Milk has carbs and protein. Whole milk also has fat.

Vegetables can have fat if they are fried or cooked in oil.

Fat is found in lots of combination foods:

- ▶ Candy
- ▶ Ice cream
- ▶ Potato chips
- ▶ Corn chips
- ▶ Fried chicken
- ▶ French fries
- ▶ Hot dogs

So, carbs, proteins, and fats all give the body energy. They all have calories. However, they each provide calories in different ways. In your next lesson, we'll talk about energy and portions of food.

LEARNING CHECKUP

What source of energy is in each of these foods?

Put a check in the column for each energy source found in these foods:

	Carbohydrate	Protein	Fat
Pizza			
Fried Chicken			
French Fries			
Regular Cola Drink			
Raw Crunchy Carrots			
Sports Drink			

Your Meal Plan

How can I make healthy choices?

By now you know that calories are calories. Some come in healthy packages, full of vitamins and minerals. Some come in packages full of sugar and fat.

Here are some tools to help you learn about healthy food choices and portion sizes.

My favorite foods to eat are:

The foods I don't like to eat are:

My goal:

Diabetes MyPyramid

The Food Guide Pyramid is a great tool. (For more, see page 40.)

It helps you know how many servings to eat from each food group.

Use the Pyramid to know the different groups of foods and how the groups fit in to your diet. You can find exchange lists for meal planning to help you determine portion size on the websites of the American Diabetes Association (<http://store.diabetes.org>) and American Dietetic Association (www.eatright.org).

The Pyramid helps you select healthy foods. The smaller sections of the Pyramid show the foods we should eat less of, like oils. Foods in the larger sections of the Pyramid are full of vitamins, minerals, and fiber. They have very little fat.

Eat more of the foods from the larger sections, and fewer of the foods from the smaller sections.

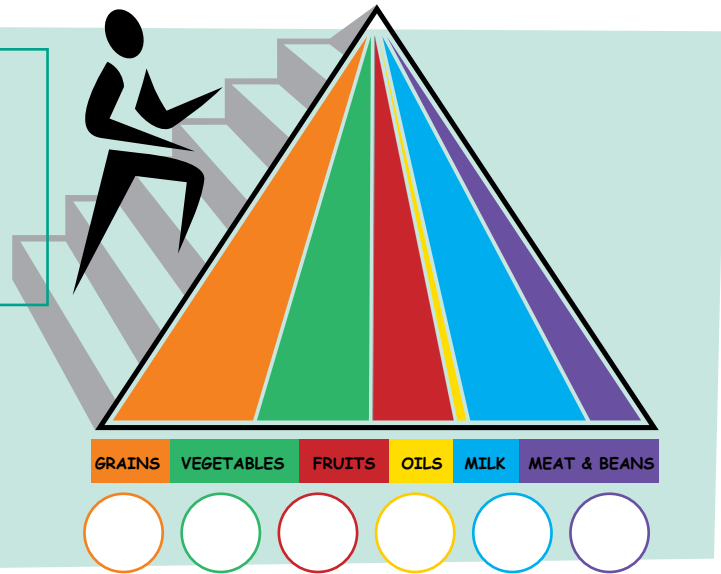


MyPyramid.gov
STEPS TO A HEALTHIER YOU



MyPyramid

Fill in the amount to eat each day with your diabetes educator



How do I use government commodity foods in my meal plan?

Good question! You may be eating some of these foods often.

Here is a list of some of the foods. Decide which group each food belongs to:

Food	Milk	Meat	Fruit	Vegetable	Fat	Starch
Green beans						
Applesauce						
Canned beef						
Apple juice						
Pinto beans						
Nonfat dry milk						
Pumpkin						
Fruit cocktail						
Orange juice						
Canned tuna						
Spaghetti						
Sweet potatoes						
Tomatoes						
Pears						
Oat cereal						
Peanut butter						
Rice						
Tomato juice						
Eggs						
Corn						
Kidney beans						
Grits						

Were you surprised that most of the foods were from the larger sections of the Pyramid? You can easily use commodity foods in your meal plan!

LEARNING CHECKUP

1. The 3 parts of taking care of diabetes are:

F _____
 M _____
 A _____

2. PICK THE FOOD. Is the food a carbohydrate, a protein, or a fat?

Put C or P or F in front of each food

C= Carbohydrate

P= Protein (meat)

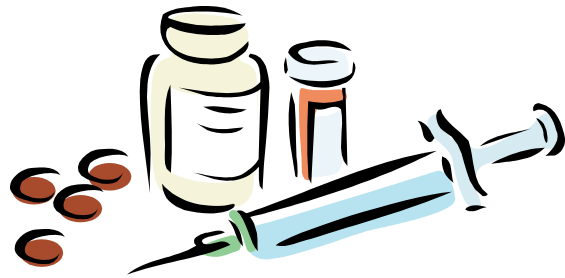
F= Fats and oils

	Banana
	Eggs
	Tomato
	Butter
	Sugar
	Yogurt
	Popcorn
	Corn
	Hot dog
	Salad dressing
	Bacon
	Steak

Taking Care of Diabetes with Medicines

Can I take pills instead of shots?

Some children and young people with type 2 diabetes can control their blood sugar with diet and activity. Most eventually need to add pills, and some must use injections to control their blood sugar. Remember that there is no “best” diabetes medicine for everyone – the best diabetes regimen is whatever works best for you to control your blood sugars.



What do diabetes medicines do?

There are two general types of diabetes medicines, pills and injections. Let's consider each of them.

PILLS:

There are many different types of diabetes pills, with new ones becoming available almost every year! Their names are less important than the fact that they are not all the same in the way that they work in the body. In general terms, pills for diabetes work either by causing your body to make or release more insulin or by making the insulin in your body work more effectively. Some pills work on the pancreas gland (mostly those that make the beta cells of the pancreas secrete more insulin), while others work on liver, muscle, or fat tissues (those that help the insulin work better). Many can be used either alone or in combination with other pills or insulin, while others should not be used with insulin. Don't forget to speak with your doctor to be sure that the medicines you are on can be combined safely.

INJECTIONS:

Many people with diabetes must take injections because pills are not controlling their blood sugars well enough. There are two kinds of injections that your doctor might prescribe: insulin, to replace what the pancreas can no longer make, and injections that make insulin work better, much like the pills described above that help insulin work better – except that these medicines cannot be given in a pill form and must be injected.

Here are some common questions about diabetes medicines:

I'm taking all my pills - why is my blood sugar not going down?

- ▶ It can take a few days (even weeks) for the medicines to work well. That is why checking your blood sugar is important. That also is why you will be talking to your diabetes team often. If high blood sugars continue, it may eventually be necessary for your doctor to change the strength of your medicine or to change the medicines you are on.
- ▶ Do not stop taking your pills!
- ▶ Do not get frustrated – your team is there to help you.
- ▶ And don't forget, side effects are more likely to occur or return if you miss too many pills.

I'm feeling different on these medicines - why?

- ▶ Some kids feel “funny” as their blood sugar gets closer to target. Let your team know if you have:
 - ▶ Dizziness or headaches
 - ▶ Upset stomach or diarrhea
- ▶ Oh yeah – did we mention – do not stop taking your pills!!!

What if I forget to take my pills?

- ▶ If it is less than 2 hours after you should have taken your pills – go ahead and take them when you remember.
- ▶ If it is longer than 2 hours – don't take the dose. (Make a note in your log about missing the dose.)
- ▶ If you sleep late one day, take your pills as soon as you wake up and with the first meal.
- ▶ Never take morning and evening doses at the same time!
- ▶ 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 on your calendar.
 - ▶ Don't get upset if Mom or Dad reminds you.
 - ▶ Set the alarm on your watch.

It's our holiday and we fast for a day. What do I do?

- ▶ Talk with your diabetes team. You may need to stop your medicine for that day. Or you may need to take a smaller amount.
- ▶ Do not make any changes to your medicine unless you have discussed it with your team!
- ▶ This is a good time to check your sugar an extra time or two.
- ▶ Keep drinking water during your fast.

Even though I am on pills now, will I ever have to take shots?

This is a tough question – maybe. When you first get type 2 diabetes it may be possible to control the blood sugar with diet, activity, and pills. After a time, the pills may not be enough. The body has stopped making enough insulin. That is when you may need to go on insulin. The care might be pills with insulin or insulin alone..

Here are some other times when insulin is needed:

- ▶ Sometimes blood sugar is so high during illness that insulin is needed.
- ▶ Sometimes the doctor will start a person on insulin right from the beginning. This gives the body a chance to lower the blood sugar. Then the pills can work better. Sometimes a person can stop taking insulin and begin using pills.

LEARNING CHECKUP

1. I am taking pills for my diabetes, but this morning I forgot my pill and did not remember until 4 hours later. I should:
- A. Skip the dose and forget about it
 - B. Skip the dose and write it in my logbook as missed
 - C. Take double the amount the next time

2. Mark each statement T (true) if it is a fact or F (false) if it is fiction.

Fact (T) or Fiction (F)?	
T F	It can take several days for diabetes medicines to work well.
T F	You should stop your medicines if you have an upset stomach.
T F	If you forget the morning pill, just take it with the evening pill.
T F	People with type 2 diabetes sometimes need insulin shots.

Feelings



Why did it happen to me?

- ▶ When you were first diagnosed, you may have had some of these feelings:

ANGER SADNESS FEAR
GUILT CONFUSION DENIAL

- ▶ Do these sound familiar?
- ▶ Can you remember having any of these feelings?
- ▶ How are you feeling about having diabetes today?
- ▶ On some days, do your emotions include all of the above?
- ▶ What happens when you are feeling pretty good? Then you check your blood sugar and it is too high!
 - ▶ Do you go from happy to sad?
 - ▶ Do you go from carefree to worried?
- ▶ How can you deal with those feelings?
- ▶ Do you have someone to talk with?
- ▶ What can you do about this?
- ▶ What kind of diabetes control do you want?
- ▶ Why?
- ▶ What kind of diabetes control do you think that your doctor wants?

How Might You Handle These Feelings?

- ▶ First of all, understand your own feelings! Talk about your feelings!
- ▶ Know that when you talk to your diabetes doctor, the words used in evaluating your blood sugar (good, bad) are not evaluating YOU AS A PERSON!
- ▶ The only way your diabetes team can know how you are feeling about yourself or your diabetes is IF YOU SAY IT!

THEN...

Your parents, doctor, or diabetes educator can then help you with specific changes that YOU WOULD LIKE TO MAKE!

CONGRATULATIONS!

Mastery Assessment for **Lesson 2**

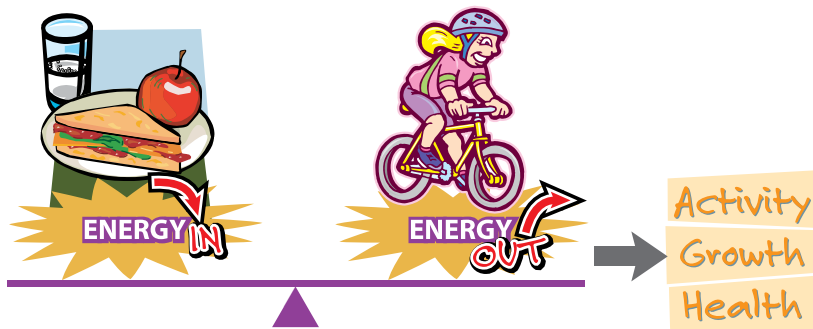
1. Jose forgot to take his 2 pills before supper at 5 :00 pm. It is now 6:30 pm. What should Jose do?
 - A) Skip the pills and write a note in his logbook.
 - B) Take one pill now and one pill at 10:00 pm.
 - C) Take both pills now.
2. Mary had stomach cramps this morning. She should:
 - A) Stop her medicine and call her doctor.
 - B) Call her diabetes team.
 - C) Skip her morning pills but take her supper pills.
3. Pick all the foods that have carbohydrates (carbs).
 - A) Bread
 - B) Apples
 - C) Hamburger meat
 - D) Butter
 - E) Milk
4. Which food has the most calories from fat?
 - A) 6 chicken nuggets
 - B) 6 carrot sticks
 - C) 6 ounces apple juice
5. Which food has the most vitamins and minerals?
 - A) Milk
 - B) Milky Way
 - C) Milk Duds

LESSON 3

- ▶ Food Portions
- ▶ Reading Food Labels
- ▶ Beverages
- ▶ Physical Activity
- ▶ Mastery Assessment

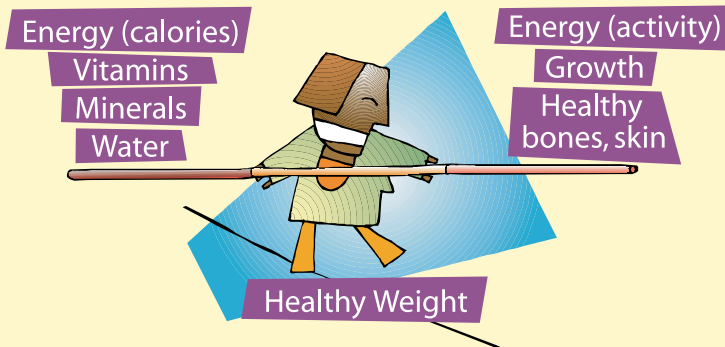
Taking care of Your Diabetes with Nutrition

A quick review....
Remember this picture?



Your body depends on calories from healthy foods for energy. The calories you eat or drink are used by your body for activity, growth and health.

Healthy weight is a balance between energy in and energy out.



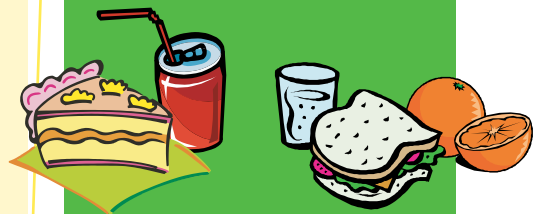
So, if I eat the right amount of energy (calories) each day – I could eat it all as cake and soda, right?

Whoa!! Did we mention your choice of foods is important to your body?

Calories are just one part – let us complete the picture.

Remember that thing about vitamins and minerals?

You find vitamins and minerals in colorful foods like vegetables and fruits. Compare the 2 meals below. Both have about the same amount of calories (energy). Which meal is healthier for you?



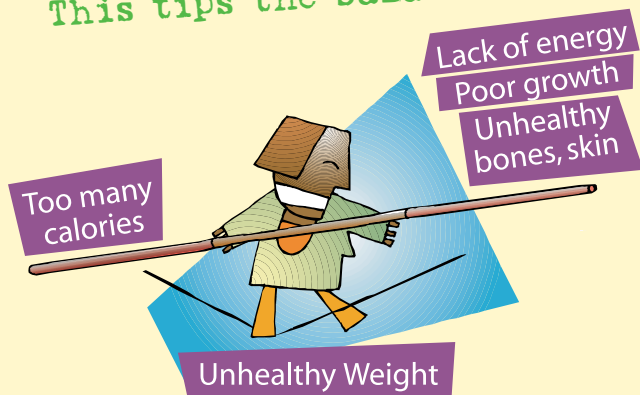
Did you pick the sandwich, milk and orange?

Do you want clear skin? Do you want shiny hair? Do you want high energy? To have a healthier body choose foods that are packed with vitamins and minerals.

What if I eat more energy than my body needs?

If you eat more than you need, your body will store the extra calories as fat.

This tips the balance!!!



The trick is to keep calories at the correct amount and still get good nutrition.

Look at these 2 breakfast meals –

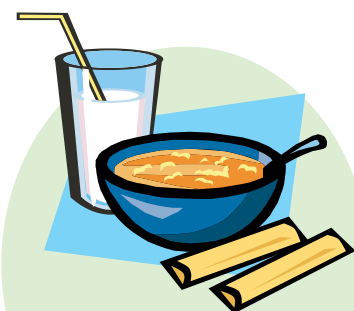
Which one has more sugar (think sweet)?

Which one has more fat (think greasy)?

Which one has more calories?



Breakfast 1:
Glazed donut
Bacon
Large cola drink



Breakfast 2:
Oatmeal
Low-fat cheese sticks
Cup of low-fat milk

But I do not want to give up my favorite foods!

You can still eat your favorite foods and keep your blood sugars in good control. The trick is to eat the right portions of food throughout the day.

SIZE MATTERS!

Here is an example

One of Raul's favorite foods is a hamburger. Which hamburger should Raul choose?



Regular



Super
Sized

- ▶ Which burger will raise Raul's blood sugar more?
- ▶ Which burger has more energy (calories) than Raul needs?
- ▶ Which burger would cause his body to store more fat?

You see, Raul can still have his hamburger – just pick a better size.

Let the Pyramid be your Guide

“Eat a balanced meal,” is a phrase we hear often. Do you ever wonder what “a balanced meal” means? How do we know if our foods are “balanced?” Let the Pyramid be your guide!



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STEPS TO A HEALTHIER YOU

GRAINS

VEGETABLES

FRUITS

OILS

MILK

MEAT & BEANS

Every color in the Pyramid represents a food group. Eat more foods from the larger groups, like grains, vegetables, and milk, and fewer foods from the smaller groups, like meats and oils.

Food guide pyramid graphic courtesy of: www.mypyramid.gov

Here's how the foods we eat fit into the groups.

GRAINS

Grains are **carbohydrates**, which means they can raise blood sugars. Choosing the right grain foods is important. **Whole grains** give our bodies **fiber**. Fiber foods help us feel full when we eat and won't raise blood sugars as much as grains without fiber. Good grain choices are whole wheat bread, whole grain cereals, brown rice, and whole wheat pasta. **Beans** are also a great source of dietary fiber. Look for foods that say "**100% whole grain**" or "**100% whole wheat**" on the package.

FRUITS

Fruits are **carbohydrates**. Just like vegetables, bright colored fruits give us lots of vitamins and minerals. It's always better to eat **fresh fruit** instead of drinking juice, and if you eat the skin or peel, such as on an apple, you get more fiber. Examples of good fruit choices are apples, oranges, pears, and strawberries.

MILK

Milk and yogurt are **carbohydrates**. They also contain protein, which does not raise blood sugars and helps us feel full when we eat. Milk and yogurt are our main sources of **calcium**, which is important for strong bones and teeth. Be sure to eat 3 servings of milk or yogurt a day. Choose milk that is **low-fat (1%)** or **fat-free (skim)**, and light yogurt.

VEGETABLES

Vegetables are **carbohydrates**. However, they contain only a small amount of carbohydrate. Unlike other carbohydrates, vegetables do not raise blood sugars very much, so they are a great choice. The more vegetables we eat, the more **vitamins and minerals** we give our bodies. Be sure to eat a lot of different colors of vegetables to get the most nutrition, such as broccoli, carrots, tomatoes, and spinach. The deeper and darker the colors, the more nutrition you get!

OILS

Oils are **fats**. Too much fat causes us to gain weight. It is really important to avoid foods high in fat and oil, such as fried foods (fried meat, French fries, potato chips), mayonnaise, and salad dressings. Try to cook foods without using oil, and limit how much fat you add to foods. Choose foods containing healthy oils, such as avocados, nuts, olives, and fish.

MEAT & BEANS

Meat & beans are our main source of **protein**. Beans are also **carbohydrates**. Choose **lean meats** since they have less fat and cholesterol. Examples of lean meats would be fish, skinless chicken or turkey, 90-97% lean ground beef, sirloin steak, and pork loin chops. Baking, broiling, and grilling are great ways to cook meats.

For additional information on the Food Guide Pyramid, visit www.mypyramid.gov

Here are some other ideas to keep your favorite foods in your meal plan:

- ▶ Have only one sandwich at a meal instead of two.
- ▶ Try a sandwich on two slices of bread instead of a large roll.
- ▶ Have a small taco instead of a large burrito.
- ▶ Have two handfuls of a snack instead of a large bag.
- ▶ Have fruit the size of a tennis ball or small handful instead of a large bowl.
- ▶ Have one serving spoon of pasta OR rice OR macaroni at a meal.
- ▶ Have more non-starchy vegetables on your plate to fill you up (salads, peppers, carrots, string beans, tomatoes, spinach).

Be sure to eat from all groups every day for a healthy you!

How Many Carbs Should I Eat Each Day?

Remember, too much carbohydrates can raise blood sugar too high. Choose a variety of foods!

Counting carbohydrates to limit the amount you eat will help you control your blood sugar. The MyPyramid will also help you get the right amount of vitamins, minerals, and fiber your body needs to be healthy.

Use the MyPyramid to pick foods from the different groups. Pick different foods to get a balance of vitamins and minerals.

You and your diabetes educator will decide on a meal plan that is right for you. Plan to eat your number of servings each day from each group. Each serving in a group has a certain number of calories and grams of carbohydrate. (Remember: carbohydrates are important for energy. But too much carbohydrate can raise blood sugar too high!) Your MyPyramid will help you control your blood sugar. It also helps you get the right amount of vitamins and minerals to be healthy.

Look at the milk, fruit and grain groups. These foods are a great source of energy!

Servings of milk, fruit or grains have about 15 grams of carbohydrate. Servings of vegetables have about 5 grams of carbohydrate. Servings of meat or fat have no carbohydrate. You can count carbohydrates by grams or by choices.

By the way: Low carb does not mean low calorie!
Use the MyPyramid or learn carbohydrate counting to plan your meals. Carbohydrate counting helps you eat similar amounts of carbs during meals and snacks. This helps keep your blood sugar in target. Eating your meals and snacks at the same time everyday can also help.



How to read Food Labels

Measuring and estimating are great ways to learn portion sizes. So are using food lists. But reading food labels will open up your world!

Food labels will let you fit any food into your meal plan.

Let's look at this food label for an ice cream bar:

Nutrition Facts	
Serving Size 1 Bar (49g)	
Servings Per Container 6	
Amount Per Serving	
Calories 120	
Calories from Fat 70	
% Daily Value*	
Total Fat 8g	13%
Saturated Fat 6g	32%
Cholesterol 10mg	4%
Sodium 40mg	2%
Total Carbohydrate 13g	4%
Dietary Fiber 0g	2%
Sugars 4g**	
Sugar Alcohols 2g	
Protein 3g	

1) Look at the "serving size."

This will tell you the serving/amount the nutrient analysis is based on. This does not always have to be your portion.

2) Look at the grams of "total carbohydrate."

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

Try choosing foods that are less than or equal to 25 grams of total carbohydrate.

3) Look at the calories and the "total fat."

This will tell you if the food is healthy or low in fat.

Try choosing foods that are 0-3 gm of total fat for every 100 calorie serving. Or try choosing foods this way: Look at the % of Daily Value for total fat. Pick foods that are 5 to 8% of the Daily Value.

For This Food Label...

How much is one serving?

How many servings are in the box? _____

How much carbohydrate is in one serving? _____ grams

How many calories for one serving? _____ calories

How much fat is in one serving? _____ grams, or _____% of Daily Value

What if you ate 2 bars?

How much carbohydrate would you be eating? _____ grams

How much fat would you be eating? _____ grams

TEST YOUR SKILL:

Let's practice with some food labels

Let's say you want cookies for a snack.

Your snack has this label.

How many cookies in one serving? _____

How many grams of "total carb" per serving? _____

How many calories per serving? _____

Nutrition Facts

Serving Size 8 cookies
Servings Per Container 12

Amount Per Serving

Calories 80

Calories from Fat 15

% Daily Value*

Total Fat 2g 3%

Saturated Fat 1g 5%

Polyunsaturated Fat 0g

Monounsaturated Fat 0g

Cholesterol 0mg 0%

Sodium 50mg 2%

Total Carbohydrate 15g 5%

Dietary Fiber less than 1g 4%

Sugar 18g

Protein 1g

Nutrition Facts

Serving Size 2 fun size bars
Servings Per Container about 9

Amount Per Serving

Calories 180

Calories from Fat 60

% Daily Value*

Total Fat 7g 11%

Saturated Fat 3.5g 17%

Cholesterol 5mg 2%

Sodium 65mg 3%

Total Carbohydrate 28g 9%

Dietary Fiber 0g 0%

Sugar 24g

Protein 2g

Try another one:

You want to have a fun size candy bar for dessert.

How many candy bars in one serving? _____

How many grams of "total carb" per serving? _____

How many calories per serving? _____

How could you decrease the calories in this snack? _____

What if I am still hungry after a meal?

Did you know that it takes 20 minutes for your stomach to tell your brain that it is full?

The first tip: Wait long enough for the message to get to your head.

Being full does not mean having a stomachache!

Meals should not hurt.

The second tip: Eat more non-starchy vegetables to help fill you up.

Another couple of tips:

- ▶ Drink water.
- ▶ Brush your teeth (makes your mouth feel good and might take away the hunger).

Find the right place to eat that helps you enjoy your food and eat slower.

Eating in front of the TV may not be the best choice.

Here is a secret game you could play: Be the last one to finish a meal. Watch how fast your friends or family eat. Slow your eating down so you are always the last to finish.

Try these steps first and if you still have trouble let your diabetes educator know.

Answers:

1st Nutrition label: 1st question=8, 2nd question=15, 3rd question=80; 2nd Nutrition label: 1st question=2, 2nd question=28; 3rd question=180; 4th question=Eat only 1 bar



How to Measure and Weigh Foods

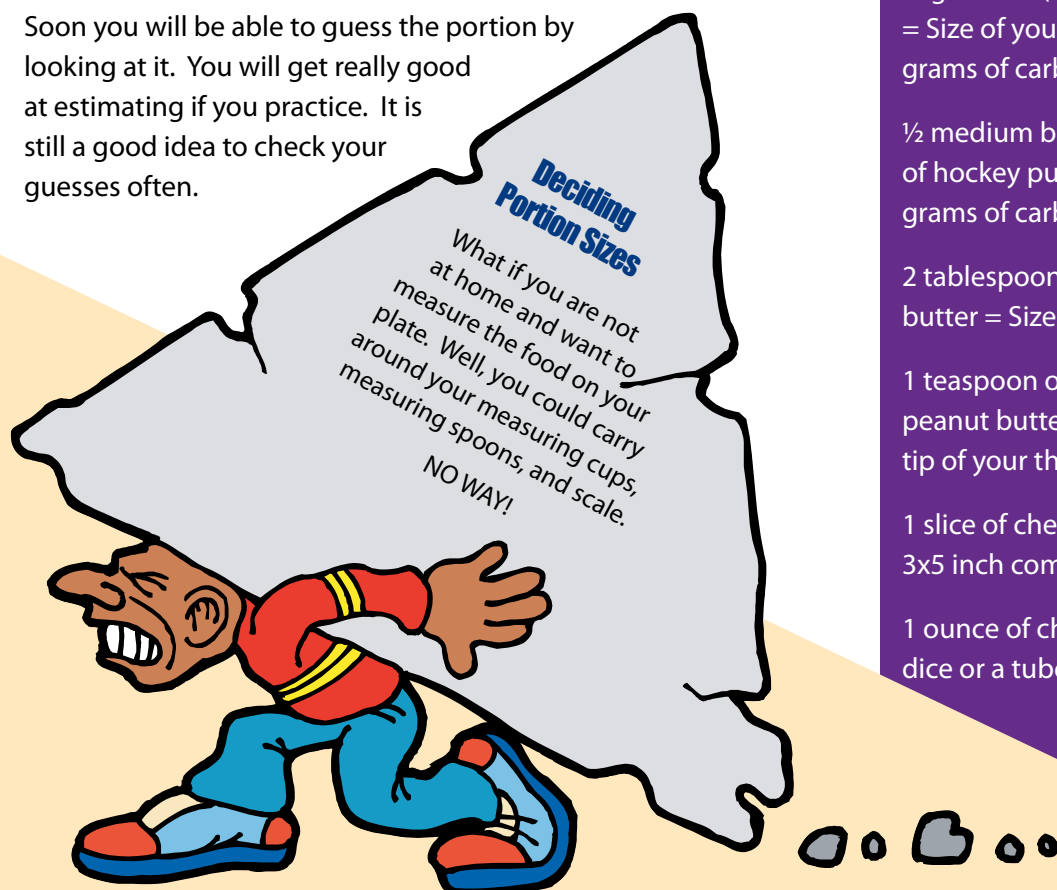
How much is a serving? When is my plate too full?

Measure your foods.

Find a measuring cup or spoon in the house that is easy to use.

You could also use a scale to weigh foods, like meat.

Soon you will be able to guess the portion by looking at it. You will get really good at estimating if you practice. It is still a good idea to check your guesses often.



Here are some handy ways to guess how much food you are eating.

3 ounces of meat, poultry or fish = Size and thickness of a deck of cards



Small apple or peach = Size of tennis ball (about 15 grams of carbs)



½ cup ice cream = Size of tennis ball or racquetball (about 15 grams of carbs)

1 cup of fruit or light yogurt = Size of baseball (about 15 grams of carbs)



1 medium potato = Size of computer mouse (about 30 grams of carbs)



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1 cup raw non-starchy vegetables (like broccoli) = Size of your fist (about 5 grams of carbs)



½ medium bagel = Size of hockey puck (about 30 grams of carbs)



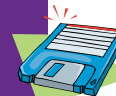
2 tablespoons of peanut butter = Size of golf ball



1 teaspoon of butter or peanut butter = Size of the tip of your thumb



1 slice of cheese = Size of 3x5 inch computer disk



1 ounce of cheese = Size of 4 dice or a tube of lipstick



FYI: Use Your Plate! (For Your Information)

A simple way to help make good food choices is to eat from a plate!
Eat from a smaller plate. Don't eat from a serving dish. This helps
change how you eat in small but great ways!

Here is what eating from a plate does for you:

- ▶ Helps control how much food you eat.
- ▶ Helps you remember to eat from all the food groups.
- ▶ Helps you learn what a serving size looks like.
- ▶ Helps you remember to eat at a table away from the television.
- ▶ Serving my food on a plate will help me _____

Get the message?

Serving your food on a plate at mealtime and snacks is a good idea!

Use Your Plate as a Guide!

Think of your plate divided into 3 areas, just like the diagram below.
Your plate will hold meat, vegetables, and grains, beans, and
starchy vegetables. Vegetables make up the largest area.

How a placemat can help you:

- ▶ A placemat is another way to help you make good choices!
- ▶ A placemat on a table helps mark your space for food on the table.
- ▶ Placemats help you control the amount of food you eat.

*Let each serving area match a
food group*

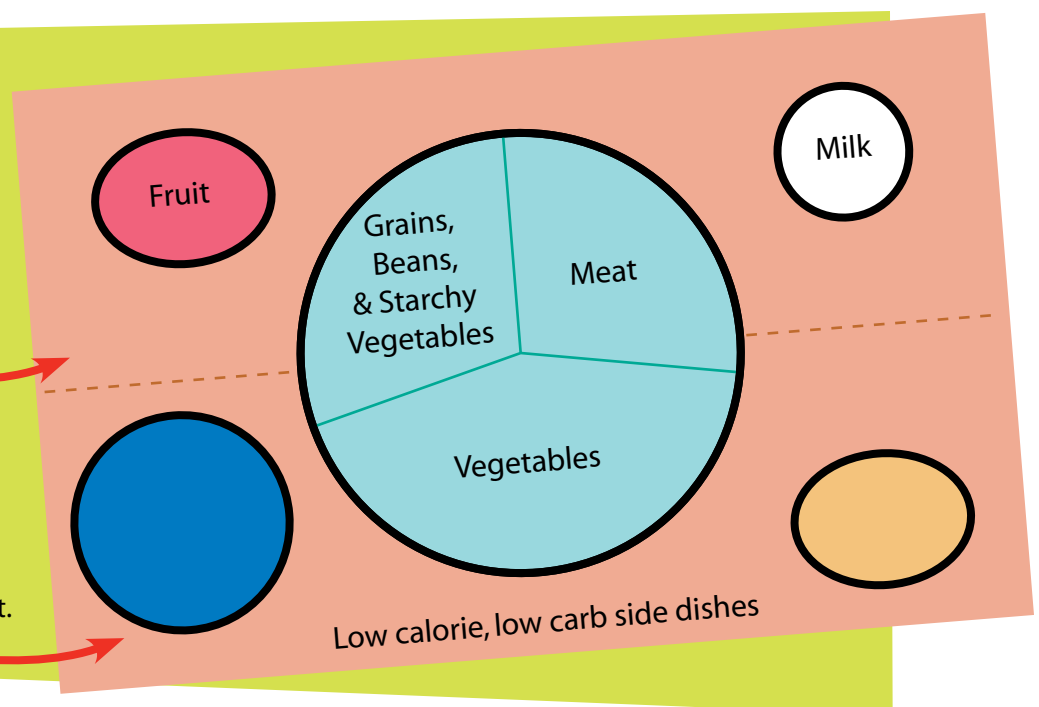
Now you have a Balanced
Meal!

All you did was think about
your plate and placemat
being divided into food
areas.

Divide your placemat
into food serving areas.
The center will be for the
plate.

Side dishes of carb foods
stay on the top half of the
placemat.

Low calorie, low carb side
dishes like sugar-free Jello
and water stay on the
bottom half of the placemat.



LEARNING CHECKUP

1. MATCH the food to the portion size



Deck of cards



Tennis ball



Computer mouse



4 dice

Medium apple

1 ounce cheese

3 ounces of meat or chicken

Medium potato

Nutrition Facts

Serving Size 19 chips
Servings Per Container about 2

Amount Per Serving

Calories 134

Calories from Fat 48

% Daily Value*

Total Fat 5.9g **9%**

Saturated Fat 1.2g **6%**

Polyunsaturated Fat 3.1g

Monounsaturated Fat 1.4g

Cholesterol 0mg **0%**

Sodium 140mg **1%**

Total Carbohydrate 19g **6%**

Dietary Fiber 1.7g **7%**

Sugar 1g

Protein 2g

2. READ A FOOD LABEL

What is the serving size? _____

How many grams of "total carb" in a serving? _____

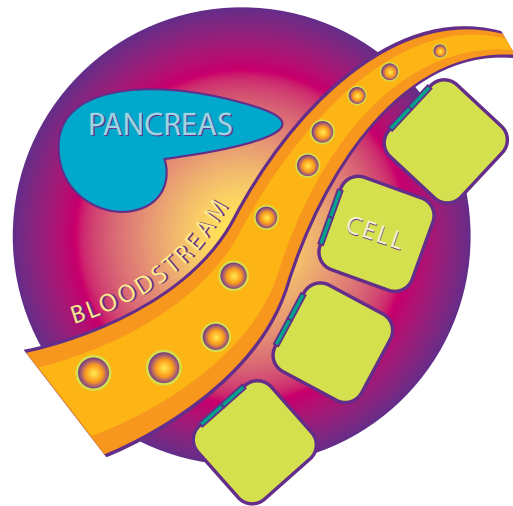
How many calories per serving? _____

Taking care of Diabetes by staying ACTIVE

Why do I need to be active?

Remember that one problem with type 2 diabetes is that something is wrong with the doors to the body's cells. There are not enough of them, or they do not open well. Insulin cannot get the door to work and sugar cannot get into the cell.

- ▶ Well, exercise and physical activity **OPENS** up the cell doors!!!
- ▶ Sugar can go into the cell and be used for energy.
- ▶ When sugar moves into the cell, then less sugar is in the blood.
- ▶ Blood sugar goes down with exercise.
- ▶ And that is **GREAT!!!**



What can I do?

Anything - just move!!! It is a good idea to be active 60 minutes a day. If you have concerns about this recommendation, please check with your physician. You can walk. You can skate. You can swim. You can dance. You can run, play basketball or football. Do what you like to do. Just do it.

Here are some things that do **NOT** count for exercise. These things do not make the blood sugar lower!

- ▶ Sitting, playing computer games
- ▶ Playing card games
- ▶ Watching TV
- ▶ Reading a book
- ▶ Watching other people being active
- ▶ Watching sports events
- ▶ Thinking about starting an exercise plan (but not doing it!)

How do I start?

Glad you asked!!! Start slowly. That means you might try walking to the end of the street and back. Do it every other day this week. Next week, you might walk every day. Then you might walk around the block.

Add small bits of activity. That can help too. Take the stairs instead of the elevator. Walk the long way home from school a few days each week. Take a mall walk. Take the dog for a walk.

Check out this walking plan...

WALKING PLAN: walking is one of the most healthy ways to stay fit. And it is easy! And it is cheap!

It takes just 3 things:

1. Pick a time and place
2. Pick a partner
3. Start slowly

So put on your walking shoes and let's go!

Walking
is one of
the most
healthy
ways to
stay fit.

		MY CHOICE
PICK A TIME AND PLACE	Before breakfast? After school? At lunch? Before supper? After supper? Walk around the neighborhood? Walk at the school track? Walk at the mall? Walk or march in place at home?	
PICK A PARTNER	A friend? Your mom or dad? A coach? Your dog?	
START SLOWLY	Your Goal: gradually increase your speed, distance and time Start with distance, then add some speed	

If You Are Walking Outside

Once you have a place and time, find the distance. Have your parents drive the walking route. You watch the car's odometer. For example, start at home and drive a 1/2-mile. Note the spot. That will be your turn-around point for a 1-mile walk.

Aim to walk 1 mile in 20 minutes.

In a few weeks, find a spot 1 mile from home. This will be your turn-around point for a 2-mile walk.

Aim to walk the 2 miles in 35 minutes.

If You Are Walking or Marching at Home

If you are marching in place, you will need to measure 1 and 2 miles by how many steps you take.

Count how many steps you take in one minute and use this chart to plan your 1 or 2-mile walks at home.

STEPS In one minute	Type of walk	Minutes to walk one mile	Minutes to walk 2 miles
70	Slow (2 miles per hour)	30	60
90	Slow (2.5 miles per hour)	24	48
105	Fast (3.0 miles per hour)	20	40
140	Fast (4.0 miles per hour)	15	30

YOUR GOAL: Work up to a speed of 3 miles per hour.



How do I keep doing it?

Boy, this can be tough. Staying active can be hard. It is work. But it is worth it!

Here are some ways to keep up the good work:

- ▶ Play or exercise with a friend.
- ▶ Get your family active with you.
- ▶ Find an activity you really like to do.
- ▶ Make active choices—walk to your friend's house.
- ▶ Take the stairs.
- ▶ Pick active chores around the house (like cutting the grass or washing the car).

Being Fit..... Being Healthy..... Having FUN!

So why is exercise such a BIG DEAL?

Exercise helps:

- ▶ Lower blood glucose levels
- ▶ Lower blood fats
- ▶ Reduce body fat – the greater your weight, the greater your insulin resistance!
- ▶ Improve physical fitness
- ▶ YOU FEEL GOOD

There are five parts to physical fitness. Each is important. Each should be a part of your PHYSICAL ACTIVITY PLAN.

- ▶ Cardiovascular (aerobic) fitness – your heart is more healthy!
- ▶ Muscle strength – your muscles get stronger!
- ▶ Muscle endurance – you feel stronger longer!
- ▶ Flexibility – your body is not so tight and you move easier!
- ▶ Body composition – with exercise, you lose fat and gain muscle! Wow, what a Good Deal!








Here are the suggestions for activity for children with diabetes:

- ▶ Be physically active every day. This includes play, games, sports, work, recreation, physical education (P.E.) or exercise at home.
- ▶ Break a sweat! The amount of exercise is recommended, but not continuous.

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“7 and 60”

(at least 7 times a week for at least 60 minutes)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						

OK, OK!! How do I get started?

Have a Plan and a Desire!

For some people, being more active means CHANGE! We do not often like to change what we are doing. So, we need to plan our activity in order to be successful!

Starting “MY” Exercise Program

What activities do you enjoy? Different strokes for different folks. Do you hate to jog or swim? If we told you to do it, you probably would not exercise regularly. Ask yourself:

- ▶ What activities am I good at?
- ▶ What new activities would I like to try?
- ▶ Who could be active with me?
- ▶ Where do I prefer to be active?
- ▶ Do I enjoy competing?

It's all about ME!!

This is why I want to be more PHYSICALLY ACTIVE:

A cool calorie burning chart – How much can YOU burn ?

Approximate calories burned every 30 minutes					
Heavier people will burn more calories					
	150 pound person	200 pound person	250 pound person	300 pound person	>300 pound person
Playing with friends	114	142	170	199	227
Aerobic exercises	80	99	119	139	159
Cleaning your room	68	85	102	119	136
Swimming (slow)	182	227	273	318	364
Biking (light effort)	136	170	205	239	273
Throwing frisbee	93	85	102	119	136
Dancing	148	185	222	259	295
Reading	27	34	41	48	55
Watching TV	27	34	41	48	55
Walking (3 mph)	75	94	113	131	150
Jumping rope (slow)	182	227	273	318	364
Rollerblading	284	355	426	497	568
Skateboarding	114	142	170	199	227
Sleeping	16	20	24	28	32

Now that you have started your plan, some things to remember are:

- ▶ Be active every day. You choose. Just pick something and do it.
- ▶ Some activities are "AEROBIC." These are things that are done constantly, without stopping. These include walking, jogging, bicycling, or skating.
- ▶ Some exercises give you strength and flexibility. These include push-ups, pull-ups, jumping jacks, stretching, and dancing.
- ▶ Limit activities with a lot of sitting. Your body will not burn much energy watching television, playing video games or playing on the computer.

Get Prepared...

- ▶ Always check your blood glucose before exercise. Then check it again several hours after exercise.
- ▶ Keep a glucose log. Notice how much exercise changes YOUR sugar.
- ▶ How hard are you working? It takes time to train your body. Check how hard your body is working. Talk with someone during exercise.
 - ▶ Are you having trouble talking? SLOW down.
 - ▶ Are you talking, singing and laughing – and still have your breath? Hey, you are not working hard enough – speed it up!!
- ▶ Try to exercise at the same time each day. Make your exercise program **IMPORTANT TO YOU!** **IT IS YOUR FUTURE HEALTH** that you are taking care of!

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Did you know??

Exercise every 1 or 2 days and your body will have lower blood sugar long after you finish exercising. The lower blood sugar might even last for a full day!

Exercise keeps the muscle cells open for many hours after the activity. YEAH!!!

Give it a try. See if this happens for you!

Be Safe...

DO NOT EXERCISE A LOT

WHEN:

- ▶ You are sick.
 - ▶ You have ketones.
 - ▶ You have a fever.
 - ▶ You have an infection.
 - ▶ When your doctor tells you not to!
- ▶ If you take insulin, have a snack with you when you exercise. Your blood glucose may drop. You may feel weak or dizzy. If this happens:
 - ▶ STOP exercising.
 - ▶ Check your blood glucose.
 - ▶ If the glucose is below 70, eat some carbohydrate such as 3 glucose tablets or 4 to 6 ounces of regular soda.
- ▶ Friends, teachers and coaches should know that you have type 2 diabetes. They should know how to help you if you need it.
 - ▶ Carry a diabetes ID or wear a necklace or bracelet. It should say whom to call in case of emergency.
 - ▶ DRINK PLENTY OF WATER---before and after exercising!
 - ▶ Wear socks and shoes that fit. Take care of blisters or sores on your feet.
 - ▶ Interested in weight lifting or high intensity activities? Ask a coach for help.

REMEMBER—THE GOOD THING IS “exercise lowers blood sugars as your body uses calories!”



My Action Plan:

Active things I can do every day:

Active things I can do several times each week:

Activity

Time of day

How long will I do this for?

How will I find the time to do this?

Days of week

Where

Friend or family partner

LEARNING CHECKUP

1. What does physical activity do to blood sugar?

- A) Blood sugar goes up
- B) Blood sugar goes down
- C) Blood sugar does not change

2. Which activity counts for exercise?

- A) Playing computer games
- B) Walking
- C) Playing card games
- D) Watching a sports event

3. Being active means:

- A) At least 10 minutes every day
- B) At least 30 minutes every day
- C) At least 60 minutes every day

4. Exercise should be delayed if blood sugar is

- A) Above 150
- B) Above 300 with ketones
- C) Below 200

Mastery Assessment for **Lesson 3**

1. Paul wants to eat a lunch with
 - 1 serving fruit (15 grams)
 - 2 servings of starch (30 grams)
 - 1 serving of vegetable (non-starchy)
 - 1 serving of milk (12 grams)
 - 1 serving meat (3 oz.)
 - 1 serving fat

Use your exchange lists and create a meal for Paul.

Fruit	
Starch (2)	
Vegetable (non-starchy)	
Milk	
Meat (3 oz.)	
Fat	

2. Tamika wants an afternoon snack with 1 carbohydrate choice (15 grams) and 1 non-starchy vegetable serving.

Use your exchange lists and create a snack for Tamika.

Carbohydrate	
Vegetable (non-starchy)	

3. Use this food label to answer the questions.

How many calories in 10 chips? _____

How many carbs in 10 chips? _____



Nutrition Facts	
Serving Size 5 chips	
Servings Per Container 12	
Amount Per Serving	
Calories 40	
Calories from Fat 18	
	% Daily Value*
Total Fat 2g	3%
Saturated Fat 1g	5%
Polyunsaturated Fat 0g	
Monounsaturated Fat 0g	
Cholesterol 0mg	0%
Sodium 50mg	2%
Total Carbohydrate 10g	3%
Dietary Fiber 1g	1%
Sugar 0g	
Protein 1g	

4. Eating a super sized portion gives your body too much:

- A) Calories
- B) Carbohydrate
- C) Fat
- D) All of these

5. Physical activity makes blood sugar:

- A) Go up
- B) Go down
- C) Stay the same

6. Pick the activity that will open the body's cell doors:

- A) 30 minutes of dancing
- B) 45 minutes of watching a football game
- C) 60 minutes playing video games

Answers: 1. An example is Fruit=small apple, Starch=small roll and small potato, Vegetable=1/2 cup broccoli, Milk=1 cup skim milk, Meat=3 oz. grilled chicken, Fat=1 tsp. margarine; 2. An example is Carbohydrate=1 cup yogurt, Vegetable=1 cup raw carrots; 3.80 calories; 20 grams; 4.D; 5.B; 6.A

LESSON 4

- ▶ Low-fat Meal Planning
- ▶ Eating Out
- ▶ Social Support
- ▶ Stress
- ▶ Mastery Assessment

Should I watch the fat in my foods?

YES!

A low-fat meal plan is good for anyone over 2 years old. It is especially good for people who are trying to lose weight.

Fat is found in oils, butter and salad dressings. Fat is also in fatty meats, bacon, nuts, olives, desserts and dairy products. Some fat is needed every day by your body.

Fat helps carry vitamins to the cells. Fat helps food taste better. But too much fat can make you gain a lot of weight. Also, too much of certain kinds of fat can increase your cholesterol level and make your heart work too hard. These are saturated and trans fats found mostly in animal and highly processed foods. We need to choose less of these. Other kinds of fats called mono- and poly-unsaturated fats found in oils, nuts, and seeds can protect your heart. It is better to use these kinds instead of saturated fat..

All types of fats are made of energy (calories). So try adding less fat to each meal.

Fat is found in other foods:
whole milk, cheese, potato chips,
French fries, and candy bars. It is
a good idea to eat healthier snacks.



Fats

Have only one of these below at a meal

- ▶ 1 teaspoon oil
- ▶ 6-10 nuts
- ▶ 1 teaspoon margarine or butter
- ▶ 1 tablespoon low-fat margarine or butter
- ▶ 1 tablespoon cream cheese
- ▶ 2 tablespoons reduced-fat cream cheese
- ▶ 2 tablespoons sour cream
- ▶ 3 tablespoons reduced-fat sour cream
- ▶ 1 tablespoon salad dressing
- ▶ 2 tablespoons reduced-fat salad dressing
- ▶ 1 teaspoon mayonnaise
- ▶ 1 tablespoon reduced-fat mayonnaise
- ▶ 1 slice Canadian or turkey bacon
- ▶ 6-10 olives

Other foods that you can have in larger amounts are: mustard, low-fat mayonnaise or low-fat salad dressing, balsamic vinegar, low-fat marinade sauces, lemon, low-fat sour cream.

Sources of saturated fat (raises cholesterol level)

Bacon
Butter
Chocolate
Coconut
High-fat dairy foods (cheese, whole milk, cream, sour cream, ice cream)
Fatback and salt pork
Gravy from meat drippings
Lard and shortening
High-fat meats like regular ground beef, bologna, hot dogs, sausage, spareribs
Palm oils
Poultry skin

Sources of trans fat (raises cholesterol level)

Processed foods like snacks and baked good with hydrogenated oil or partially hydrogenated oil
Stick margarine
Shortening
Some fast foods such as French fries

Sources of mono-unsaturated fat (can protect the heart)

Avocado
Canola oil
Nuts like almonds, cashews, peanuts
Olive oil and olives
Peanut butter and peanut oil
Sesame seeds

Sources of poly-unsaturated fat (can protect the heart)

Corn oil
Safflower, soybean, sunflower oils
Walnuts
Pumpkin or sunflower seeds
Soft (tub) light margarine

Cookbook Ideas

Quick Meals for Healthy Kids and Busy Parents – Wholesome Family Recipes in 30 minutes or less,
Sandra K. Nissenberg, MS, RD, Margaret L. Bogle, PhD, RD, and
Audrey C. Wright, MD, RD, John Wiley & Sons, New York, 1995

Quick and Healthy Recipes and Ideas Volume I and II,
Brenda J. Ponichtera, RD

ScaleDown, The Dalles, Oregon, 1995

The Diabetes Snack, Munch, Nibble, and Nosh Book, Ruth Glick, American Diabetes Association, 1998



Reference Guides

Dining Lean

Joanne V. Lichten, RD, PhD
Nutrfit, Houston, Texas, 1998

The ADA Guide to Healthy Restaurant Eating

Hope S. Warshaw, MMSc,
RD, CDE, American Diabetes
Association, 1998, Lea Ann
Holzmeister, RD, CDE

How do I know how much fat is in my food?

You can select low-fat foods by reading food labels. You can also look at the shopping list of low-fat foods and list of cooking tips.

Shopping List of 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, lite 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
Nonfat or lite cheese Nonfat cottage cheese 1 slice of 2% cheese Lite cream cheese (1 Tbsp)		Any cheese with 5 grams of fat or more per serving Regular cottage cheese
Nonfat cooking sprays Lite margarine tub or squeeze Lite cream cheese	Cream cheese (limit 2 teaspoons per meal)	Butter Shortening Lard Bacon fat Regular cream cheese

Lunch/Dinner foods

Try every day	Only once a week	Avoid most of the time
Chicken breast (no skin) - grilled or baked Turkey breast (no skin) Turkey ham, ground turkey breast Soy chicken nuggets	Chicken thigh Chicken drumstick Chicken nuggets	Chicken wings Sausage Salami Liverwurst
Tuna packed in water Trout, cod, or whitefish – grilled or baked Fresh ham or pork loin	Pork chop Ham luncheon meat	Fried fish Fried chicken Pork roll Ribs
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 Hot pockets 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, chilli dogs Cheese fries, large French fries Large subs or hoagies Fried rice, fried dumplings Breaded chicken/fish
Lite hot dogs Nonfat or lite cheese Nonfat cottage cheese Only 1 slice of 2% cheese	Sliced cheese (5 grams of fat/svg)	Extra cheese Regular cottage cheese
Veggie burgers	Single cheeseburger Hamburger (1 small patty)	Double cheeseburger Bacon cheeseburger
Low-fat soup Fresh fruit		Creamed/cheese soup Ramen noodle soup
Low-fat salad dressing or mayonnaise Mustard Salsa	Regular dressing (limit 2 teaspoons)	Regular dressing or mayonnaise Sour cream

HealthySnack Ideas (Choose one)

8 oz. nonfat yogurt
1 piece fresh fruit
canned fruit in "own juice"
sugar-free hot cocoa
15 baked potato chips
2-4 flavored rice cakes
1 frozen fruit bar
1 banana
8-16 animal crackers
5 vanilla wafers
4-8 pretzel twists
2 slices lite bread with jelly
1 cup of lite ice cream
1 low-fat granola bar
20 gold fish pretzels or crackers
2 squares of graham crackers
½ grapefruit
15 grapes
15 baked tortilla chips and salsa
1 small pita stuffed with veggies
20 oyster crackers
1 cup of (plain) hot cereal with sugar substitute

homemade shake made with 8 oz. nonfat yogurt, 1% milk, ½ cup of fruit, 1 packet sugar substitute

2 slices lite whole wheat bread spread with 1 tablespoon lite cream cheese

½ cup dry cereal in 1 cup low-fat milk or nonfat yogurt

1 cup berries with 1 cup nonfat yogurt

½ can low-fat soup

Free Snacks

non-starchy vegetables (any kind)

sugar-free gelatin

sugar-free flavored powdered drink mixes

French fries, hot dogs or burgers are not healthy snacks.

Cooking Tips For a Healthy Heart



- ▶ Cook with heart healthy oils like canola or olive oil. Don't use vegetable shortening, lard or bacon fat.
- ▶ Trim extra fat from meat before cooking. Take the skin off chicken and turkey.
- ▶ Cook with low-fat 1% or skim milk. Do not use whole milk, 2% milk or heavy cream.
- ▶ Use non-stick pots to help you cook with less fat.
- ▶ Try nonfat butter or garlic flavored cooking spray for pan frying or baking.
- ▶ Keep meats moist and tasty with marinades or sauces like chicken broth, lemon juice, low-fat salad dressing, or vinegar.
- ▶ Try eating no more than 3 ounces of meat (the size of a deck of cards) at a meal and only twice a day. If you eat breakfast meats or eggs, then have a meatless meal at lunch or dinner like vegetables, noodles and beans (navy, black, nonfat refried).
- ▶ Try tub or light margarine on your toast or bread instead of butter or stick margarine.
- ▶ Try to have at least one non-starchy vegetable at lunch and dinner every day (salads or grilled, stir fried, or steamed vegetables).

How to lower the fat and calories in recipes

	Substitute this:	With this:
Butter/ Shortening/ Regular Margarine	1 stick (½ cup)	½ cup applesauce or ½ cup diet margarine
Cream	1 cup heavy whipping cream	1 cup evaporated skim milk
Milk	1 cup whole milk 1 cup regular evaporated milk	1 cup nonfat/skim milk 1 cup evaporated skim milk
Sour Cream	1 cup sour cream	1 cup nonfat plain yogurt 1 cup low-fat cottage cheese blended with 1 Tbsp lemon juice 1 cup nonfat/reduced-fat sour cream
Cream Cheese	8 ounces cream cheese	8 ounces light cream cheese 4 ounces skim ricotta + 4 ounces tofu
Cheddar Cheese	1 cup grated cheddar cheese	1 cup low-fat cheddar cheese
Oil	½ cup oil	½ cup applesauce or pureed prunes or figs or mashed bananas ¼ cup applesauce + ¼ cup skim milk ¼ cup applesauce + ¼ cup oil
	2 Tbsp oil	2 Tbsp wine or broth
Egg	1 medium whole egg	2 egg whites ¼ cup egg substitute
Chocolate	1 ounce (1 square) baking chocolate	3 Tbsp cocoa powder + 1 Tbsp polyunsaturated oil
Other	¼ cup gravy	¼ cup broth
	1 cup cream soup	1 cup evaporated skim milk + bouillon cube + 1 Tbsp flour 1 cup reduced-fat cream soup
	Mayonnaise	Reduced-fat or fat-free mayo or nonfat yogurt
	Chocolate chips	Use less than recipe calls for
	Nuts	Use less than recipe calls for
	Coconut	Use less than recipe calls for
	Canned fruits, vegetables, meats	Choose water packed cans

Reading Food Labels for Low-fat

Food packages that say 'light' or 'lite' or 'reduced-fat' may not contain foods that are 'low-fat'. Also they may not be low in calories. Look on food labels for total fat and calories. If you eat a very large portion of these foods you may be eating too many calories.

HOW COME?

Sometimes food producers take out the fat and replace it with sugar! So take a look at food labels for total carbs. You may find the sugar amount is too high.

THE LESSON....

You have to read the food label and not just go by what the box says!

Total Fat Goal: 0 to 3 grams per 100 calorie serving
OR 5 to 8% of the Daily Value

TEST YOUR SKILL #1

Let's figure out if animal crackers are a low-fat food. Here is the food label

ANIMAL CRACKERS

What is the serving size?

What are the calories?

What is the total fat?

_____ grams

_____ % of Daily Value

Is this a low-fat food?

Nutrition Facts

Serving Size 15 crackers
Servings Per Container about 10

Amount Per Serving

Calories 110

Calories from Fat 15

% Daily Value*

Total Fat 2g 3%

Saturated Fat 0g 0%

Polyunsaturated Fat 0g

Monounsaturated Fat 1g

Cholesterol 0mg 0%

Sodium 95mg 4%

Total Carbohydrate 23g 8%

Dietary Fiber less than 1g 2%

Sugar 6g

Protein 2g

TEST YOUR SKILL #2

Here is another – this time, baked potato chips

BAKED POTATO CHIPS

Nutrition Facts

Serving Size 10 chips
Servings Per Container about 4

Amount Per Serving

Calories 150

Calories from Fat 28

% Daily Value*

Total Fat 4g 6%

Saturated Fat 1g 5%

Polyunsaturated Fat 2g

Monounsaturated Fat 1g

Cholesterol 0mg 0%

Sodium 200mg 8%

Total Carbohydrate 21g 7%

Dietary Fiber less than 2g 8%

Sugar 2g

Protein 2g

What is the serving size?

What are the calories?

What is the total fat?

_____ grams

_____ % of Daily Value

Is this a low-fat food?

Start Counting Carbs Today!

Calories from food and drinks come in three forms: Carbohydrate, Protein and Fat. Carbohydrates break down into glucose and raise your blood sugar faster and higher than proteins and fats. To help control your blood sugar, you need to balance how much carbohydrate you eat and how much exercise you do with how much insulin is in your body.

When you eat a small amount of carbs, your blood sugar rises. Eating a large amount of carbs makes it rise much higher. All carbohydrates make your blood sugar rise, but only healthy carbs like fruits, vegetables and whole grains give you the vitamins, minerals and fiber that your body needs.

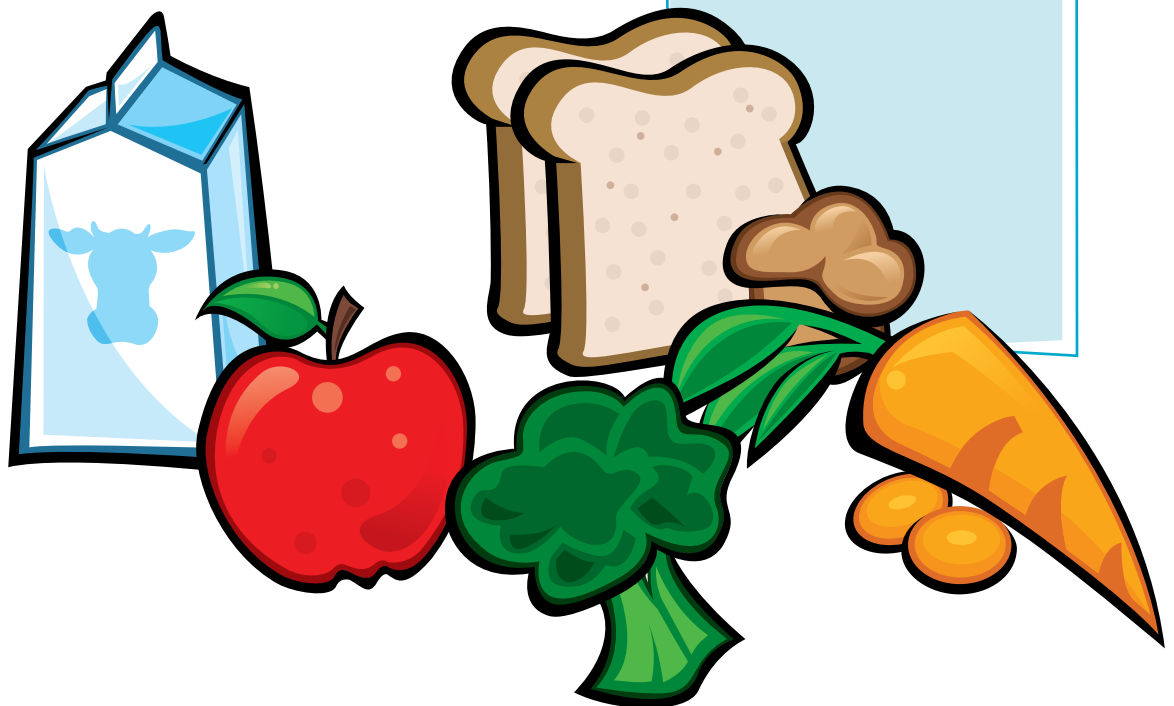
Carbohydrates that contain fat will keep your blood sugar high for a long time. Try to eat meals low in fat to help your body open up the cell doors and push the glucose through. Your body's cells will use it for energy.



What are Carbohydrates?

Carbohydrates are starches, fruits, vegetables, milk and sugars. Whole grains, fruits and vegetables also have fiber. Milk has protein and fat as well. Sugar is pure carbohydrate.

Carbohydrate is measured in grams. A carb choice is a serving of starch, fruit or milk equal to 15 grams of carbohydrate. A serving of vegetables has only 5 grams of carbs. Free foods have less than 5 grams of carbs and less than 20 calories. A serving of meat has no carbs. A serving of fat has no carbs either, but contains lots of calories. Remember that energy is measured in calories and that too many calories cause weight gain.



How do You Count Carbohydrates?

All foods that come packaged have a *Nutrition Facts* panel. Before you have a meal or snack, use a cup or spoon to measure the amount of food that you will be eating and compare it to the serving size listed on the food label.

Now look up on the label the total carbohydrate grams per serving and compare it to your serving —don't count the sugar grams because they are already included in the total grams of carbohydrate.

Example: The label says that 1 cup of cereal has 24 grams of carbs. But you have measured 2 cups in your bowl. How many grams of carbohydrate will you be eating?

Answer: $24 (1 \text{ cup}) + 24 (1 \text{ cup}) = 48 \text{ grams in 2 cups}$

Starch, fruit, and milk contain 15 grams of carbs (equal to 1 carb choice). Sweets vary. You can look up the carbohydrate content of some foods on the lists on the following pages. Foods are listed by groups and each serving is equal to 15 grams (1 carb), 30 grams (2 carbs), or 45 grams (3 carbs).

- ▶ For most people, a healthy food plan includes 3 - 5 carb choices (45 - 75 grams) at each meal and 1 - 1 ½ carb choices (15 - 25 grams) for a snack. Add free foods to your meals if desired, but if you eat more than 3 servings of free foods, you will have to add the carbohydrates in them as well. Eating the same amount of carbs day after day will help your blood sugar stay in target!

Nutrition Facts	
Serving Size 1 cup	
Servings Per Container about 8	
Amount Per Serving	
Calories 150	
Calories from Fat 28	
% Daily Value*	
Total Fat 4g	6%
Saturated Fat 1g	5%
Polyunsaturated Fat 2g	
Monounsaturated Fat 1g	
Cholesterol 0mg	0%
Sodium 200mg	8%
Total Carbohydrate 24g	7%
Dietary Fiber less than 2g	8%
Sugar 2g	
Protein 2g	

First let's look at a day's sample meal plan in terms of carbs.

Sample Meal Plan

	CARB GRAMS	CARB CHOICES
BREAKFAST: 57 grams		
1 cup cooked oatmeal	30	2
1 cup low-fat milk	12	1
1 small banana	15	1
1 hard boiled egg	0	0
artificial sweetener	0	0
LUNCH: 60 grams		
2 slices whole wheat bread	30	2
2 ounces turkey breast	0	0
1 ounce low-fat cheese	0	0
1 tablespoon light mayo	0	0
½ cup carrot sticks	3	0
1 cup low-fat milk	12	1
1 apple	15	1
DINNER: 65 grams		
3 ounces chicken breast	0	0
1 cup brown rice	45	3
½ cup cooked broccoli	5	0
salad with light dressing	0	0
15 grapes	15	1
1 glass water	0	0
SNACK: 25 grams		
1 cup sugar-free hot cocoa	10	½
8 animal crackers	15	1

Carbohydrate Counting Food List

Breads: 15 grams

- ◆ 1 slice bread (any kind)
- ◆ 6 small breadsticks (4" long)
- ◆ ½ small bagel or ¼ deli bagel
- ◆ ½ English muffin
- ◆ ½ hot dog or hamburger bun
- ◆ 1 matzo ball
- ◆ 1 5-inch pancake/waffle
- ◆ ½ pita bread (6 inches)
- ◆ 1 small plain roll
- ◆ 1 tortilla (6 inches)
- ◆ ⅓ cup bread stuffing*
- ◆ 1 small muffin*

Cereals: 15 grams

- ◆ ½ cup bran cereal
- ◆ ¼ cup granola*
- ◆ ½ cup cooked cereal
- ◆ ¾ cup dry cereal-no sugar
- ◆ ½ cup sugar-frosted cereal
- ◆ 1 ½ cups puffed cereal

Crackers/Snacks: 15 grams

- ◆ 8 animal crackers
- ◆ 3 graham cracker squares
- ◆ 3 cups popcorn
- ◆ 4 - 6 round crackers
- ◆ ¾ oz pretzels
- ◆ 1 oz baked snack chips
- ◆ 6 saltine type crackers

Pasta/Grains: 15 grams

- ◆ ⅓ cup cooked pasta
- ◆ ⅓ cup cooked rice
- ◆ ½ cup cooked grains

Vegetables/Beans: 15 grams

- ◆ ½ cup cooked beans
- ◆ ⅓ cup baked beans
- ◆ ½ cup corn or peas
- ◆ 1 small baked potato
- ◆ ½ c cooked or mashed potatoes
- ◆ 10-15 oven baked fries*
- ◆ ½ cup spaghetti sauce

Fruits: 15 grams

- ◆ 1 small apple, orange, pear, peach or nectarine
- ◆ ½ cup applesauce
- ◆ 4 fresh apricots
- ◆ 7 dried apricot halves
- ◆ 1 small banana or ½ large
- ◆ 1 cup blueberries
- ◆ ⅓ of a cantaloupe
- ◆ 1 cup melon cubes
- ◆ 15 cherries or 15 grapes
- ◆ 2 figs or 2 small plums
- ◆ ½ cup canned fruit, "light"
- ◆ 1 large kiwi
- ◆ ¾ cup fresh pineapple
- ◆ ½ mango or papaya
- ◆ 3 medium prunes
- ◆ 2 tbsp raisins
- ◆ 1 ¼ cup strawberries
- ◆ 1 ¼ cup watermelon

* contains fat

Milk/Yogurt: 12-15 grams

- ◆ 1 cup skim, 1%, 2%*, whole*
- ◆ ½ cup evaporated skim milk
- ◆ ⅓ cup nonfat dry milk powder
- ◆ ¾ cup plain yogurt

Soups: 15 grams

- ◆ 1 cup chicken or beef with noodles
- ◆ ½ cup bean, split pea
- ◆ 1 cup cream soup*

Vegetables: 5 grams

(count only if serving size is >1 ½ cups)

- ◆ ½ cup cooked vegetables (asparagus, broccoli, carrots, collard greens, cabbage, cauliflower, green beans, eggplant, tomato, peppers, spinach, zucchini, etc)
- ◆ 1 cup raw vegetables
- ◆ ½ cup tomato or V-8 juice

Combination foods: 30 grams

- ◆ 1 cup beef stew*
- ◆ 1 meat burrito*
- ◆ 2 stuffed cannelloni*
- ◆ 12 chicken nuggets*
- ◆ 1 cup chili with beans*
- ◆ 3 x 4 inch piece of lasagna*
- ◆ ⅔ cup macaroni & cheese*
- ◆ 1 regular slice of pizza*
- ◆ 1 cup ravioli*
- ◆ 2 soft tacos
- ◆ 1 pot pie (7 oz)*
- ◆ 1 small enchilada*

Sweets: 15 grams

- ◆ 2-inch square piece of cake (no icing)*
- ◆ 2 small cookies*
- ◆ 5 Vanilla wafers
- ◆ 2-inch brownie (unfrosted)*
- ◆ ½ cup sugar-free pudding
- ◆ 1 plain donut*
- ◆ 1 small low-fat granola bar
- ◆ ½ cup ice cream* or ice milk
- ◆ ⅓ cup frozen yogurt
- ◆ ⅛ of a pumpkin pie*
- ◆ ½ twin popsicle bar
- ◆ 2 tablespoons light syrup
- ◆ 1 tablespoon table sugar

Sweets: 30 grams

- ◆ 2 inch square cake with icing*
- ◆ 1 frosted cupcake*
- ◆ ½ cup regular pudding*
- ◆ 1 cup low-fat chocolate milk
- ◆ 1 small soft-serve cone
- ◆ ¼ cup cranberry sauce

Sweets: 45 grams

- ◆ ⅓ piece of double crust pie*
- ◆ 1 sweet roll or Danish*
- ◆ 6 oz flavored low-fat yogurt
- ◆ 3 tbsp regular maple syrup
- ◆ ½ cup fruit crumble*

* contains fat

Healthy food choices when eating out

Chinese Food	
Not Healthy	Healthy
Egg drop soup	Wonton or hot and sour soup
Egg rolls or fried wontons	Steamed dumplings
Dishes with fried meats	Boiled, steamed, broiled, or lightly stir-fried
Dishes with cashews or peanuts	Dishes with lots of vegetables or water chestnuts
Fried rice	Steamed rice
Lobster sauce	Soy sauce

Fast Foods	
Not Healthy	Healthy
Danish or sweet roll	Whole wheat small bagel
Jumbo double cheeseburger	Regular small burger (no mayo or cheese)
Fried chicken	Grilled chicken
Fried chicken nuggets	Grilled chicken
Beef and cheese taco	Chicken fajita pita or chicken soft taco
French fries	Baked potato with vegetable or yogurt topping or green salad
Potato chips	Pretzels or fat-free chips
Milkshake	Low-fat milk or diet drink
Regular soda	Diet soda or water

Family Restaurants	
Not Healthy	Healthy
Cream soups	Broth type soups
Quiche and salad	Soup and salad
Buffalo wings	Peel and eat shrimp
Fried chicken sandwich	Grilled chicken sandwich
Chicken fried steak	Veggie burger
French fries	Baked potato
Potatoes with gravy	No gravy
Creamy coleslaw	Crunchy or cooked vegetables
Hot fudge sundae	Nonfat yogurt or sherbet

Italian Foods	
Not Healthy	Healthy
Fried calamari	Roasted red peppers or minestrone soup
Cheese or meat filled pastas	Whole wheat pasta with vegetables
Pasta with butter, cream sauces, or pesto	Whole wheat pasta with red clam sauce
Scallopine or parmigiana (floured, fried, baked with cheese)	Whole wheat pasta with marsala or marinara sauce, piccata dishes
Italian pastries	Plain cookies
Bread stick, buttered	Without butter

Mexican Foods	
Not Healthy	Healthy
Flour tortilla (made with lard)	Corn tortilla
Nachos	Fat-free or baked chips
Carnitas (fried beef or pork)	Grilled shrimp, chicken or fish
Refried beans	Frijoles a la charra or borracho beans
Sour cream and cheese	Salsa, pico de gallo, cilantro, jalapeño peppers
Quesadillas filled with meat and cheese	Chicken fajitas (no sour cream or cheese)
Chalupas and tacos	Chicken soft tacos (no sour cream or cheese)
Chimichangas, burritos, or other fried tortillas	Chicken or beef enchiladas with red sauce or salsa

LEARNING CHECKUP

1. Put a check by the foods that have fat:

- Butter
- Orange juice
- Bacon
- Cheese
- Olives
- Lettuce
- Tomatoes
- Beans
- Buttered corn
- Fried chicken

2. Too much fat in meals and snacks leads to:

- A) Weight gain
- B) Weight loss
- C) Healthy hair and bones

3. 3 ounces of meat is a normal serving size. 3 ounces of meat is the size of:

- A) A large platter
- B) A baseball
- C) A deck of cards

4. Which one would lower the fat in a meal?

- A) Putting cheese on a hamburger
- B) Drinking skim milk
- C) Using butter on corn on the cob

5. Marita likes breakfast burritos. Here is what is in a breakfast burrito.

1 large flour tortilla regular cheese
2 eggs salsa
fried potatoes

What are 2 things Marita could do to lower the fat in her favorite food?

1 _____

2 _____

Stress and diabetes

Have you heard about stress? You might feel stress when these things are happening:

- ▶ you have a fight with your parents
- ▶ you are not ready for a test at school
- ▶ you forgot your homework
- ▶ you missed the goal
- ▶ you were invited to a big party
- ▶ you won an award

Stress comes from change. Stress comes from unexpected events. You can feel stress from upsetting things. You can feel stress from good things.

We feel stress from our world, our bodies and our thoughts. Here are some examples:

- ▶ Our world: weather, noise, time pressures
- ▶ Our bodies: growing up, having diabetes, poor food choices, not enough exercise, sleep problems, illness
- ▶ Our thoughts: how we feel about things

Feeling stress can lead to headaches, illness, stomach problems. It can make you feel tired or raise your blood pressure.

Here are some ideas for dealing with stress:

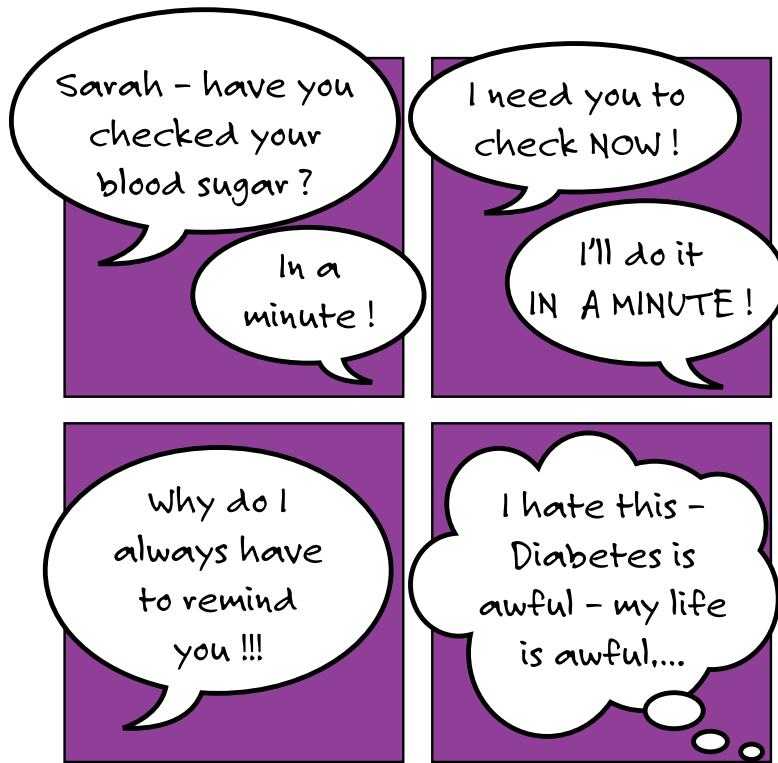
- ▶ Learn to plan and be organized. You might try writing things down.
- ▶ Find fun things you like to do.
- ▶ Set goals that you can reach.
- ▶ Learn to forgive. Each person sees things in different ways.
- ▶ Have a positive attitude. Smile at what bugs you.
- ▶ Know that you will not win every time.
- ▶ What can you learn from the stress?
- ▶ Use exercise to fight stress.
- ▶ Find someone to talk to about your problems.
- ▶ Work on small problems before they get too big.

How Stress Happens

You react with emotions and behaviors

**You choose how to feel
You choose what you think**

Something happens, like a bad grade or an argument or something exciting



We can't avoid stress. But we can choose how to react to it. Check this out:

Sarah's mom wants her to check her blood sugar.

What is creating stress for Sarah?

What is Sarah feeling or thinking?

How is she reacting to the stress?

What could help Sarah feel less stress?

Stress can raise blood sugar.

Jack is having semester tests all week. He has studied hard all year. But tests always make him nervous. His blood sugar is about 50 points higher than usual. He feels upset every time he checks and sees a high blood sugar. He and his father call his diabetes team. They learn that stress and feeling upset can raise blood sugar levels. Jack's diabetes doctor adjusts his medicines for the next week.

What did Jack learn about stress and blood sugar?

What did Jack and his father do to handle this problem?

OK, ready for a quick check?

Who Ya GONNA CALL?

Had a bad day? Frustrated with life? Tired of diabetes?
Who are you going to call?
Who is on your top 10 list?
Who is your hero?

Everyone needs helpers in his or her life. These are people who you can count on. People you can trust. What else makes a good helper?

- | | |
|---|--|
| <input type="checkbox"/> Courage | <input type="checkbox"/> Positive attitude |
| <input type="checkbox"/> Sense of humor | <input type="checkbox"/> Friendly |
| <input type="checkbox"/> Honesty | <input type="checkbox"/> Patient |
| <input type="checkbox"/> Kindness | <input type="checkbox"/> Understanding |
| <input type="checkbox"/> Smart | <input type="checkbox"/> Committed |
| <input type="checkbox"/> Generous | <input type="checkbox"/> Listens |



Create your own team of helpers

Imagine you were on an island in the middle of nowhere.
You can pick 10 people to be on the island with you.

Who would you pick?

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Why would you pick these people?

Mastery Assessment for **Lesson 4**

1. Check out this lunch menu at a local restaurant.

APPETIZERS and STARTERS

Chicken wings
Quesadillas
Boiled shrimp
Cheese sticks

Dinner salad
Cream of mushroom soup
Vegetable soup
Nachos with cheese

MAIN DISHES

Chicken fried steak
Beef fajitas
Cheese pizza, personal size
Pizza with sausage and extra cheese

Grilled chicken sandwich
Fried shrimp basket
Spaghetti with tomato sauce

SIDE ORDERS

Mashed potatoes with gravy
French fries
Peas and carrots
Baked potato

Creamy coleslaw
Refried beans
Borracho beans

DRINKS

Small orange juice
Large orange juice
Milk
Chocolate milk

Root beer
Diet root beer
Milkshake

What are 3 high-fat choices?

- 1 _____
- 2 _____
- 3 _____

What are 3 low-fat choices?

- 1 _____
- 2 _____
- 3 _____

Answers:
1. High-fat choices: Chicken wings, Quesadillas, Cheese sticks, Cream of mushroom soup, Nachos with cheese, Chicken fried steak, Beef fajitas, Cheese pizza personal size, Pizza with sausage and extra cheese, Fried shrimp basket, Mashed potatoes with gravy, French fried, Baked potato, Borracho beans, Small orange juice, Large orange juice, Root beer, Diet root beer
2. Low-fat choices: Boiled shrimp, Dinner salad, Vegetable soup, Grilled chicken sandwich, Spaghetti with tomato sauce, Peas and carrots, Creamy coleslaw, refried beans, milk, Chocolate milk, Milkshake

LESSON 5

- ▶ Physical Activity
- ▶ Hypoglycemia
- ▶ Hyperglycemia
- ▶ Ketone Testing
- ▶ Mastery Assessment

Types of Activities: getting fit, having fun and staying strong

Getting more fit (aerobic activities)

1 hour most days

Aerobic exercise means...
"with air"

- ▶ Aerobic exercise uses large muscles
- ▶ Aerobic exercise makes the HEART and LUNGS stronger
- ▶ Aerobic exercise helps control your weight
- ▶ Aerobic exercise gives you ENERGY!

Some examples of exercise:

- ▶ Brisk walking
- ▶ Stair climbing
- ▶ Bike riding
- ▶ Karate
- ▶ Jumping rope
- ▶ Jogging
- ▶ Aerobic dancing
- ▶ Running
- ▶ Rowing
- ▶ Swimming
- ▶ Rollerblading and skating
- ▶ Yoga and Pilates

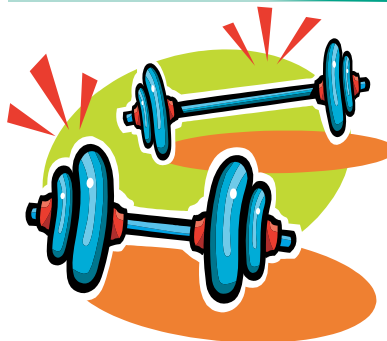
Your goal is 1 hour of activity most days. For optimum physical health, combine aerobic or recreational activities with strength activities. It's up to you to choose the activities you like — here are some ideas.



Having fun (recreational activities)

1 to 2 times each week

- ▶ Pick-up basketball
- ▶ Soccer
- ▶ Relay races
- ▶ Kickball
- ▶ Baseball
- ▶ Volleyball



Staying strong (strength training)

3 or 4 times each week

Muscles need to be strong to give us good balance and posture. Strong muscles can help prevent injuries. Do something every week to keep muscles strong!

There are three basic types of strength training:

1. Calisthenics use upper body weight. Try push-ups, pull-ups, stomach crunches, and jumping jacks.
2. Hand weights target upper body. Use small dumbbells, wrist weights, or objects around the house such as soup cans or sacks of flour.
3. Weight machines and free weights work on strength and muscle toning.

Stretch for Success



Why Stretch?

Muscles are like rubber bands.

Rubber bands can only stretch so far before they break.

Muscles can only stretch so far before they tear. Ouch!!

Stretching allows a muscle to lengthen safely. This makes your body more flexible. Being flexible allows your body to move better. That means you will do better at sports and other physical activities.

Good flexibility helps protect you from getting injured. (Remember the rubber band!) Stretch all the muscles you will use in an activity.

How Should I Stretch?

Have you ever seen a cat stretch? Slow and steady. Not moving too much. No bouncing. A good stretch lets the muscle lengthen safely.

A stretch should be held for a slow count of 20. A good stretch may be a little uncomfortable. It should NEVER hurt! If you feel pain, ease off.

When Should I Stretch?

BEFORE: Stretch your muscles before the activity – it will warm up the muscles.

AFTER: Stretch your muscles after the activity – it will keep you flexible and feeling great!

MY ACTION PLAN:

1. Active things I can do every day:

2. Active things I can do several times each week:

Activity:

Time of day:

Days of the week:

Location:

Length of time:

How I will find the time to do this?

Foot Care

Now that you are making an exercise plan, let's talk about keeping your feet in great shape.

You may have heard that people with diabetes can have problems with their feet.

Your feet depend on healthy nerves and blood supply. The nerves in your feet can be hurt by high blood sugar. The blood supply to your feet can also be hurt by high blood sugar.

So, keeping blood sugars in target is great for your feet.

You should do some other things to keep your feet healthy.

Stay on
your
toes! You
can keep
your feet
healthy
for a
lifetime.

<i>What to do</i>	<i>WHY ??</i>
Wear shoes.	If you walk barefoot, you might step on something and hurt your feet.
Wear shoes that fit well and have lots of room for your toes.	This prevents blisters and sores.
Closed toe shoes are best.	They cover and protect your feet.
Wear socks.	Socks protect your feet. Socks help to prevent blisters and sores.
Check that your socks and the insides of your shoes are smooth.	This prevents blisters and sores.
Be active every day.	Great way to keep the blood flowing.
Wash your feet every day. Use a thin coat of lotion or cream on the tops and bottoms of your feet.	Cream keeps your skin soft and helps prevent cracking.
Carefully trim your toenails.	Stops ingrown toenails.
Check your feet every day. Look for cuts, sores, red spots, or infected toenails.	Lets you catch problems early.
Check with your doctor or educator if any cuts, sores or infections do not begin to heal after one day.	Lets your doctor treat problems early.

Seeing is Believing

Check how activity works for you

Now is your chance to be a personal scientist.
 You have read all the cool stuff about being active.
 You see athletes do amazing things.
 Will it work for you?? Here is your experiment.

Date:	AM	PM	Praise
Notes:	PILLS		<input type="checkbox"/>
			<input type="checkbox"/>
	BLOOD SUGAR		<input type="checkbox"/>
Date:	AM	PM	Praise
Notes:	PILLS		<input type="checkbox"/>
			<input type="checkbox"/>
	BLOOD SUGAR		<input type="checkbox"/>
Date:	AM	PM	Praise
Notes:	PILLS		<input type="checkbox"/>
			<input type="checkbox"/>
	BLOOD SUGAR		<input type="checkbox"/>
Youth Signature:			
Parent's Signature:			
Date (only 1 day this week):			
ACTIVE MINUTES		SITTING MINUTES	

Try an experiment

Pick a day when you were especially active. Answer these questions:

Did you have lower blood sugars on your active day?

Did you feel more energy on your active day?

Did you feel stronger on your active day?

Did you feel better about yourself on your active day?

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You may not see changes right away.

It can take several weeks to see lower blood sugar.

It can take several weeks to feel more energy.

But IT WILL HAPPEN!!!!

Your body was made to be active!

It's YOUR plan

It's YOUR desire

Go for it.....

LEARNING CHECKUP

1. Which activity is aerobic (“uses air”):

- A) Jumping rope
- B) Watching someone jump rope
- C) Jumping checkers

2. Which activity builds strength?

- A) Tennis
- B) Lifting weights
- C) Walking

3. Which activity makes muscles more flexible?

- A) Push ups
- B) Soccer
- C) Stretching

HYPOGLYCEMIA (low blood sugar)

In This Section

- ▶ We will learn how to recognize low blood sugar
- ▶ And what to do about low blood sugar

We have been talking about how to keep your blood sugar in the target of 70-120.

Remember the 3 things that keep blood sugar in the target?

1: _____

2: _____

3: _____

(Answer: food, activity, medications)

It is possible for blood sugar to go too low – below 70.

A blood sugar below 70 can make you feel funny. That is when you have hypoglycemia.

What causes hypoglycemia (low blood sugar)?

Hypoglycemia means that the amount of insulin and the amount of sugar in the body are out of balance. There is too much insulin for the amount of sugar in the blood.

Remember!

Insulin lowers the blood sugar level.

Here are some causes of low blood sugar:

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

Sometimes, you will not know why hypoglycemia happened.

What is hypoglycemia?

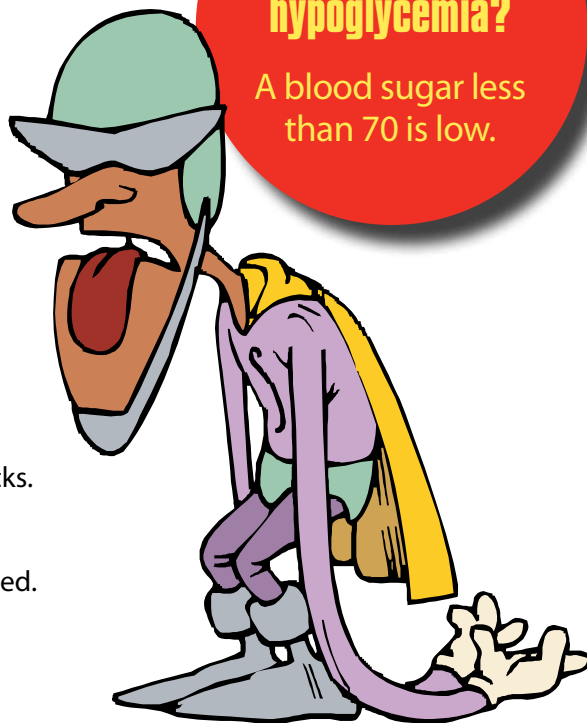
Hypoglycemia means low blood sugar. "Hypo" means too little, and "glycemia" refers to blood glucose or sugar.

Most kids with type 2 diabetes never have hypoglycemia. It is rare or uncommon.

Some medications you might be taking might cause hypoglycemia. We think it is good for you to know what low blood sugar feels like. It is good to know how to treat it.

What blood sugar level is hypoglycemia?

A blood sugar less than 70 is low.



How do I treat a Low Blood Sugar?

It is really quite simple:

TEST - TREAT - REPEAT - EAT

A low blood sugar means that the blood sugar is below 70. When you have a low blood sugar AND you can eat or drink, do these steps.

Step 1. TEST. Stop exercising or playing, and check your blood sugar on your meter. What if you don't have your meter? Treat as if you knew the blood sugar number.

Step 2. TREAT. Eat or drink something with 15 grams of carbohydrate in it. Here are some examples:

- ▶ 4 ounces of juice or regular soft drink (not a diet soft drink)
- ▶ 6 roll candies
- ▶ 3 glucose tablets
- ▶ one small tube of cake frosting gel
- ▶ 1 tablespoon of honey or jelly or syrup (be sure it is regular and not diet or lite)

Step 3. 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).

Step 4. REPEAT. Retest your blood sugar 15 to 30 minutes after treating. This makes sure that your sugar has returned to target. 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 one hour away, then eat a snack. The snack should include carbohydrate that will last longer. Some examples are:

- ▶ ½ sandwich
- ▶ 6 soda crackers
- ▶ 15 fat-free snack chips
- ▶ 1 cup skim milk
- ▶ ¾ cup of cereal

Step 6. If the blood sugar does not go up to 70 or more after treating two times, call the emergency number and speak with your diabetes team.

How does it feel to have hypoglycemia?

The most common signs of mild hypoglycemia are:

- ▶ irritable or cranky
- ▶ unusual behavior
- ▶ confusion
- ▶ sweaty
- ▶ shaky
- ▶ weak
- ▶ drowsy
- ▶ blurry vision or trouble focusing
- ▶ headache
- ▶ hunger
- ▶ lack of coordination
- ▶ sleepy
- ▶ moody
- ▶ crying for no reason
- ▶ bad dreams or nightmares
- ▶ restless sleep

There are two ways to recognize a low blood sugar:

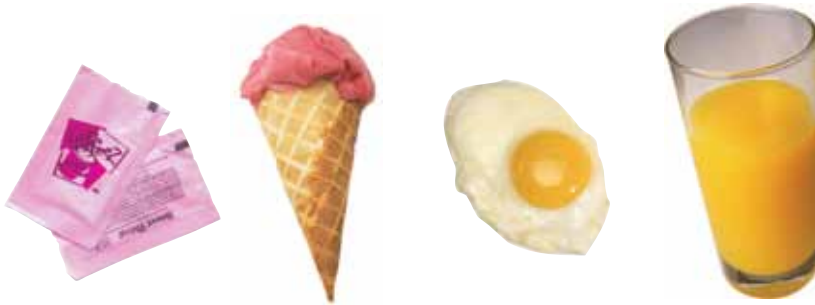
- ▶ Your blood sugar check is low.
- ▶ You feel or act "low".

Even when you feel or act "low," it is important to check your blood sugar.

When in doubt, check it out!

Test Your Skill

1) Circle the best choices to treat a blood sugar of 52



Let's say you just treated a low blood sugar. You feel better. Your next meal is 2 hours away. You will need to have a snack to keep your sugar in target before your next meal. Circle the best choices for a snack.



Answers: 1. Orange juice; 2. Sandwich or milk

- Test -
- Treat -
- Repeat -
- Eat -

Low blood sugar treatments

- ▶ 15 grapes
- ▶ ½ cup juice
- ▶ 1 fruit roll
- ▶ 2 tablespoons raisins
- ▶ 1 tablespoon honey or jelly or sugar
- ▶ 2 hard candies
- ▶ 6 roll candies
- ▶ 1 small tube glucose gel
- ▶ 1 small tube cake gel
- ▶ 2 to 4 glucose tablets
- ▶ 1/3 can regular cola
- ▶ 1 cup sports drink

How will I know if the treatment worked?

Good question! The treatment worked if two things happen:

- ▶ Your blood sugar is back to target.
- ▶ You feel better (your symptoms go away).

Be careful though. It is easy to over treat a low blood sugar. You might feel like overeating. Don't do it!!

If you eat too much to treat hypoglycemia, your blood sugar will go very high.

Feeling Safe with Diabetes

By now, you may be thinking - WHOA! This low blood sugar thing is scary. I want to avoid hypoglycemia.

First, most youth with type 2 diabetes do not have hypoglycemia. Low sugars may happen. They usually are easy to treat.

There are things you can do to avoid hypoglycemia.

Know what your blood sugar is. If the numbers start to get too low, talk with your diabetes team.

Do not skip meals after taking your medicine.

Tell important people about your diabetes. Teach them how to treat hypoglycemia. These people are:

- ▶ Babysitters
- ▶ School nurses
- ▶ Older brothers and sisters
- ▶ Grandparents
- ▶ Coaches
- ▶ School bus drivers
- ▶ Teachers

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

Take the correct dose of diabetes medicines. Never double up on a dose.



LEARNING CHECKUP

1. How much of each food should you use to treat a low blood sugar?

(TIP: Use your exchange lists)

- Raisins _____
- Glucose tabs _____
- Orange juice _____
- Regular cola _____
- Grapes _____
- Saltines _____
- Fruit roll _____
- Juice box _____
- Cake gel _____
- Sugar _____
- Honey or jelly _____

2. Name 2 things to do to prevent a low blood sugar:

1. _____

2. _____

HYPERGLYCEMIA (high blood sugar)

In This Section

- ▶ We will learn how to recognize high blood sugar
- ▶ And what to do about high blood sugar

We have been talking about how to keep your blood sugar in the target of 70-120. And what can make your blood sugar too low.

Now let's talk about high blood sugar.

What causes hyperglycemia (high blood sugar)?

Hyperglycemia means that the amount of insulin and the amount of sugar in the body are out of balance. There is too much sugar. And the sugar is not getting into the body's cells.

Remember! Sugar leaves the blood and goes into the cells. To do this, insulin must open the cell door.

Here are some causes of high blood sugar

- 1) You forgot to take your insulin or diabetes pills.
- 2) You ate too much food.
- 3) You are sick.
- 4) You are feeling stress.
- 5) You are less active.

Sometimes, you will not know why high blood sugar happened.

What is hyperglycemia?

Hyperglycemia means high blood sugar. "Hyper" means too much, and "glycemia" refers to blood glucose or sugar.

We know you have diabetes because you had high blood sugar.

Why should I worry about high blood sugar?

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

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

How do I treat a High Blood Sugar?

- ▶ First, you may need to check your urine for ketones (more about this later).
- ▶ Next drink plenty of water or sugar-free drinks.
- ▶ And finally, if you are not feeling well, call your diabetes team.

We'll talk about each of these steps.

Checking Ketones

Ketones are found in the urine when blood sugar is high. Ketones are a sign that your body is not using sugar well. It is a sign that you are burning too much fat for energy.

Ketones can make you ill.

You will need to check your urine for ketones whenever your blood sugar is over 300.

Call your diabetes team if the ketones are moderate or large.

How does it feel to have hyperglycemia?

The most common signs of hyperglycemia are:

- ▶ thirsty
- ▶ tired
- ▶ blurry vision or trouble focusing
- ▶ urinating more often
- ▶ night time urination
- ▶ very dry skin or mouth

The best way to recognize high blood sugar is with a blood sugar check.

When in doubt, check it out!

How to do a ketone check:

1. Collect some urine in a paper cup. Or you can urinate on the test strip.
2. Completely wet the test strip.
3. Use a watch or clock to time 15 seconds.
4. Compare the color of the strip to the chart.



**DANGER:
CALL IF
YOUR
KETONES
ARE THIS
COLOR!**

Drink plenty of sugar-free drinks

If you have high blood sugar, then your body will be too dry. You should drink about 1 to 2 cups of liquids every hour. Here are some good choices:

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

Remember – you should not exercise if you have ketones that are over 300.

Call your Diabetes Team

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

- ▶ High blood sugar with moderate or large ketones
- ▶ Vomiting and cannot eat or drink
- ▶ Very dry mouth and not urinating
- ▶ Fever



LEARNING CHECKUP

1. When should you check urine ketones?
 - A. Blood sugar over 200 at breakfast
 - B. Blood sugar over 300
 - C. Blood sugar less than 50
 - D. In place of a blood sugar check

2. HIGH OR LOW. What will happen to blood sugar for each of these things:

	HIGH OR LOW?
Eating an extra serving of ice cream	
Taking too much insulin or medication	
Having the flu or a cold	
Being upset or angry	

3. It is important to drink extra fluids with a high blood sugar because:
 - A. The medicines will work better.
 - B. You will be hungry.
 - C. Your body will be dry or dehydrated.

Mastery Assessment for Lesson 5

1. Moderate or large ketones are signs that:

- A) You are gaining weight.
- B) Your blood sugars have been very high.
- C) Your blood sugars are in target.

2. HIGH OR LOW?? Put a check in the correct box.

Which symptoms go with HIGH blood sugar? Which symptoms go with LOW blood sugar?

SYMPTOMS	HIGH BLOOD SUGAR	LOW BLOOD SUGAR
Shaky		
Thirsty		
Urinating often		
Confusion		
Dry mouth		
Meter says 245		
Meter says 56		

3. Match the HIGH and LOW blood sugar with its needed treatment. Put a check in the correct box.

ACTION	Would do for HIGH BLOOD SUGAR	Would do for LOW BLOOD SUGAR
Check blood sugar		
Eat sugar		
Check ketones		
Drink more fluids		

4. How long should you time a ketone test for?

- A) 1 minutes
- B) 30 seconds
- C) 15 seconds
- D) 10 seconds

Setting Goals and Sticking to Them!

Do you have goals? Maybe they are ideas or wishes or dreams. Maybe you have goals about school or about sports or about your future. Goals are great for diabetes care too.



Do you have goals that you have worked on for a long time? Do you have trouble making progress on some goals? Do you have someone to help you with your goals? Sort of a "goal mate!"

What is a goal?? Could be a wish or a dream. Here are some ways to turn wishes and dreams into goals.



Tips for setting goals:

1. Be specific. Consider questions such as what? When? How long?
2. Make sure you can measure progress toward your goals. Measure your success.
3. Make your goals challenging. But be realistic.
4. Choose goals that are important to YOU.
5. Share your goals with a friend.

Jordan wants to make an "A" in math class this semester. That is his dream. Here is how he turned the dream into a goal.

1. Be specific: *I will make an "A" in math in the next 6 weeks.*
2. Measure your progress: *I'll keep a record of all my homework and test grades. I'll keep my ongoing grade average in my notes.*
3. Make your goal challenging, but realistic:
 - Unrealistic:** *I'll bring all my other grades up by studying every night until 11 pm.*
 - Challenging and Realistic:** *I'll work hard at math – I'll add an extra hour each day to my studies.*
4. Choose goals important to YOU. *Making an "A" will help me get into college.*
5. Share your goal with a friend. *I'll let Mark know – he might want to do this with me!*

OK – your turn. Try setting a goal related to your health or diabetes.

My Goal!

Today's Date: _____

What I want to do (my goal):

Why I want to do it (my goal is important to me):

How I am going to reach my goal:

Who I will tell:

When I want to reach my goal:





Family Communication Skills

1. Treat your family with love and respect.
2. Do not blame others.
3. Share your feelings but try not to lecture.
4. Do not judge the ideas and feelings of others.
5. Let past arguments go.
6. Try to be as honest as possible.
7. Always separate a person from their behavior.
8. Don't give up.

Family Meetings

This is a good way to encourage communication within the family. Meetings give you the chance to tell your thoughts and feelings, work on learning to listen to others, and help family members feel important and loved. The family, together, will select a time to meet once a week and take turns leading the discussion.

1. It is important for the person speaking to share only his/her own thoughts and feelings.
2. This is not a time to lecture, preach, or gripe.
3. No one is allowed to interrupt—listen until it is your turn to speak.
4. Everyone has a turn to talk about their concerns/feelings.
5. Have a discussion to make sure everyone understands each other.
6. Resolve all arguments before leaving the room.

Open communication can help prevent problems with diabetes management. There are many changes that have taken place within all of your lives over the past few weeks or months—it is hard to change and we don't always want to stick with the new plans. Let each other know what you need to stay happy—discover rewards for doing a great job. Enjoy healthy living together!

School and Diabetes

Monday through Friday 8:30 am till 3:30 pm
Homework

Sounds like a job!

Well, it is. You work hard to get to the next grade.

Just like a job, you have people with you at school. Some of the people are students. Some people are teachers. Some people are school workers. Some you do not know. But all are there to help you get to the next grade.

Some of the people at school can help you with your diabetes. These people are very important. You need to know who they are and talk to them.

Here is a list of people at school who can help you control your diabetes at school.

- ▶ Teacher
- ▶ School nurse
- ▶ School principal
- ▶ School cafeteria workers
- ▶ School bus driver
- ▶ Friends

What do I do if they do not want to help?

There are laws that give you the right to take care of your diabetes at school. These laws say that you have the right to be treated the same as any other student.

These three federal laws are:

- ▶ Section 504 of the Rehabilitation Act of 1973
- ▶ The Americans with Disabilities Act
- ▶ Individuals with Disabilities Education Act (IDEA)
 - ▶ These laws say that you have the right to go to school.
 - ▶ You have the right to play sports.
 - ▶ You have the right to join clubs.
 - ▶ You have a right to do everything that other kids do.

They also say your school must help you make a plan for controlling your diabetes at school.

But these people do not know about diabetes! What do I do?

YOU AND YOUR FAMILY BECOME TEACHERS!

You do not need to teach much. Just teach the things they need to know to help you control your diabetes at school.

Teach:

- ▶ How to use your monitor to check blood sugars
- ▶ What hypoglycemia and hyperglycemia are
- ▶ How to treat hypoglycemia and hyperglycemia
- ▶ About the foods that are best for you to eat



So what should you do and what should your school do?

School

Listen to your family and you.

Help make a plan to control your diabetes while at school.

Learn about diabetes.

Provide a safe space for student to check blood sugars.

Offer good food choices.

Encourage you to be involved in school activities.

**Listen and offer help!
Be a partner!**

Me

Ask your family to help.

Decide which people to talk with at your school.

Make a plan of how to control your diabetes at school.

Teach about diabetes.

Check your blood sugars.

Make good food choices.

Play sports and join clubs.

Work hard to get to the next grade.

**Ask for help!
Have a partner!**

OK. So I have a plan. Now what???

Right ... You talked to the people at school. You made a school plan. You made good food choices and played hard.

You are doing everything right. Then something happens you did not plan for.

Without warning...

- ▶ Someone has a birthday party at school.
- ▶ Your teacher surprises you with a picnic party.
- ▶ Here comes Halloween, Thanksgiving, Hanukah, and Christmas.
- ▶ The homeroom mothers bring Valentine cookies.
- ▶ You left your lunch or lunch money at home.
- ▶ Your mother surprises you with a birthday party at school.
- ▶ The school bus breaks down on the way to school.

NOW WHAT?

STAY COOL. RELAX.

All the things that happen have happened before. They might happen again.

How did you handle them before you had diabetes? You probably did not think about what you were doing. Now you need to think about what you are doing. You will need to plan and prepare.

WOW!! That's the answer!!

Think about what can happen before it happens.

Make a plan for the future.

Here are some “WHAT IFs “

WHAT IF?	WHAT'S A PLAN?
Parties at school	Have good snack choices already at school. Drink water or have sugar-free drinks already at school as part of your school plan. Enjoy the party but have only one treat. Be more active today than yesterday.
The bus breaks down	Have more than one good snack choice in your backpack. Give the bus driver extra snacks to carry on the bus for you too.
You left your lunch or lunch money at home	Ask to call your parent to bring a lunch. Ask your principal to help you decide what to do. Have meal tickets on hold in cafeteria. If you must, eat your extra snacks at school but remember to replace them tomorrow.

What other things can happen to you? What is your plan?

What's happened?	What's the plan?

Remember we said that you have the right to play sports? Playing in school sports is great for controlling blood sugars. Get involved. It does not have to be at school. Just get more activity every day.

FOR PARENTS:**School and Parents of a Child with Diabetes**

As a parent, your job is to be sure your child gets a good education and is safe at school. As a parent of a child with diabetes you have other jobs:

- ▶ Meet every year before school starts to learn who will be your child's partner in controlling his/her diabetes at school.
- ▶ Teach your child's school partners about diabetes.
- ▶ Make a Health Care Plan for your child at the school.
- ▶ Include the Diabetes Care Plan in the health care plan.
- ▶ Talk to the lunchroom workers about your child's meal plan.
- ▶ Learn about Section 504 of the Rehabilitation Act of 1973, The Americans with Disabilities Act (ADA), and Individuals with Disabilities Education Act (IDEA).
- ▶ Encourage your child to be active, to be involved, and to have fun.
- ▶ Also encourage your child to talk about diabetes with his or her school partners.
- ▶ Encourage your child to be responsible, to be safe, and to work hard to get to the next grade.
- ▶ Find ways to praise and encourage your child even for partial successes.
- ▶ You might also want to check with diabetes team about regulations in the state you live in.

Putting it all together

You have come a long way in learning about diabetes. You now should know these things:

- | | | |
|---|---|--|
| ▶ How to check blood sugar | ▶ What foods are carbohydrates, proteins and fats | ▶ Why physical activity is so good for you |
| ▶ How to check urine ketones | ▶ How to choose healthy snacks | ▶ What physical activities to do |
| ▶ Why blood sugar goes high or low in type 2 diabetes | ▶ How to choose low-fat foods | ▶ Symptoms and treatment for high or low blood sugar |
| ▶ What causes type 2 diabetes | ▶ What acceptable serving sizes are | ▶ Blood sugar and A1c goals |
| ▶ What pills and insulin do | | ▶ How to live with stress, family and school |
| ▶ How to take your medicines | | |

WOW! That's like.... Well, a LOT!

We know that living with diabetes is tough. It takes a lot of information and skill. And you have to do all these things every day.

Let's try some real life stories. How would you handle these?

You get home from school and you are HUNGRY. REALLY HUNGRY!!! What do you do?

Your friends are going to the movies. You know they will be eating popcorn (with butter) and regular sodas and candy. What do you do?

You have 2 birthday parties to go to this weekend. There will be lots of cake and ice cream and sodas. What do you do?

You started a walking program with your friend. You have been walking about a mile every day. Now your friend is moving away. What do you do?

You are getting really tired of checking your blood sugar. In fact, you have not tested in about a week. But now you have a clinic visit tomorrow. You have heard that some kids just write numbers in their logbooks. What do you do?

You have finished your diabetes classes, but you want to learn a few more things. What do you do?

LESSON 7

- ▶ Being a Teen with Diabetes
- ▶ Stress
- ▶ Self Esteem
- ▶ Making Decisions
- ▶ Tobacco, Drugs, and Alcohol
- ▶ Relationships
- ▶ Communicating

Teen Issues

Being a Teen with Diabetes

Living with diabetes is a challenge. Diabetes affects everything that you do.

You are being asked to:

- ▶ Prick your finger to check your blood sugar.
- ▶ Write it down... because you will need it!
- ▶ Show it to your parents, your educator, and your doctor!
- ▶ Take medicine that is for your diabetes care.
- ▶ EAT! Sometimes not what you like, sometimes less than you want.

This "routine" can be pretty exhausting and you **MIGHT FEEL FED UP!**

All stressed out and nowhere to go....

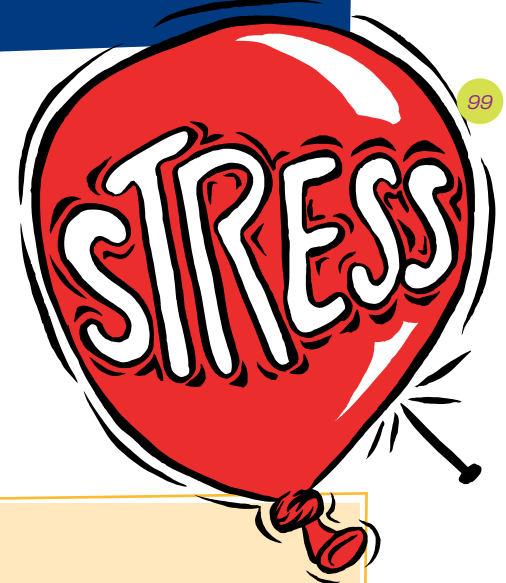
Have you heard that stress is a part of life? It is all around you –

- ▶ Worrying about a test.
- ▶ Thinking someone does not like you.
- ▶ Hassling with your parents or teachers.
- ▶ Not meeting your personal goals.
- ▶ Winning an award or prize can even be stressful!

How does it feel to be stressed?

It is true that things in your life can:

- ▶ Annoy you
- ▶ Concern you
- ▶ Worry you
- ▶ Excite you
- ▶ Make you anxious
- ▶ Make you happy



Things that are stressful for me:

When I have stress, I feel:

When I have stress, I do these things to feel better:

Can stress affect my diabetes?

Sure can! For many people, having stress and feeling upset can raise the blood sugar. For some people, feeling 'stressed out' is distracting. They stop taking care of themselves. When they are mad or angry or sad or upset, they stop checking their blood sugar. They might stop watching their meal plan. They might stop being active.

We cannot avoid stress. But we can choose how to react to it.

*It is how
you react
to stress
that
is your
choice.*

Shondra was hoping to make the cheerleading team. She worked really hard at practices. She could see herself in the school uniform. She could picture herself at the games. But Shondra was not picked for the team. She felt defeated and sad. The more she thought about it, the angrier she felt. On her way home from school that day, she ate 2 candy bars to feel better.

What was Shondra's stress?

How did she feel when she had stress?

What did she do to feel better?

Isaac was having a tough time with his parents. They kept reminding him about checking his blood sugar and always wanted to know what his blood sugar was. He felt hassled and frustrated. Isaac decided to put the logbook where his parents could see it. He also asked them to review his book with him on Sundays. He reminded them not to "freak" when his blood sugar was high during exam week.

What was Isaac's stress?

How did he feel when he had stress?

What did he do to feel better?

Shondra and Isaac both had stress. They both made choices to feel better. What do you think were the results of these choices?

Shondra: possible results: _____

Isaac: possible results: _____

A Bit About Self-Esteem

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 size.

All of these things add up to self-esteem or how good you feel about YOU.

By now you probably have some feelings about having diabetes. You may have many different feelings. You may feel overwhelmed about managing your diabetes. You may feel pressure about meeting your goals.

Let's take some time to get real...

- ▶ How are you feeling about you?
- ▶ Who is on your support team?
- ▶ Are you making progress towards your goals?
- ▶ Do you blame diabetes for your problems?

It's a good time to think of the great and fabulous things you do every day. No one is just like you. No one is a son or daughter just like you. No one is a friend just like you.

No one. Only YOU!

I'm not crazy - It's my hormones!

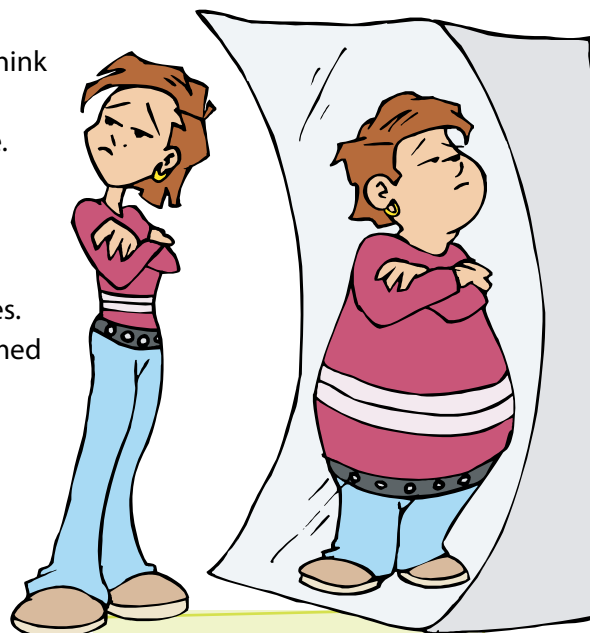
Adolescence is a time for physical changes. New hormones are being produced. These hormones may make you feel stressed or moody. When your blood sugar goes up or down, you may also have a change in your moods.

How can you know if your moods are because of your diabetes?

What can you do if these moods do not go away?

Girls will find that their blood sugars will change just before or during their menstrual period. This is because of hormone changes also.

How might girls deal with changing blood sugars during this time?



How Might You Know If You Are "Feeling" Good?

- ▶ I feel happy and content MOST OF THE TIME.
- ▶ I enjoy activities (sports, dancing, etc.) with my friends and family.
- ▶ I feel people respect me – not pity me.
- ▶ I feel I am good at what I do (friends, family, school, church, sports).
- ▶ I can talk comfortably about diabetes with others.
- ▶ I do not dwell on my diabetes.
- ▶ I do not use my diabetes as an excuse for my actions.
- ▶ Taking care of my diabetes feels routine.

Adolescence is a New Adventure!

You will have many new experiences during your exciting adolescent years. These experiences bring CHOICES with them. Many are very serious choices. These choices will need your knowledge, wisdom, insight and experience! Whew! What does all that mean???

Have you thought about this?

- ▶ How do I test 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?

Phew, dating choices, relationship choices ...

How do I practice making THESE IMPORTANT decisions and choices?

Put **STAR** to work for you!

STOP – What is the problem or question?

THINK – What would be a possible answer?

Be sure and think about the consequences of your actions.

ACT – Choose the best solution, and ...try it!

REFLECT – Now, how did it work? What happened?

(STAR is from publications by the American Diabetes Association.)

OK, let's have a rehearsal.

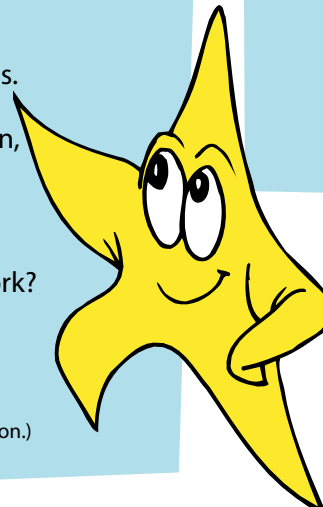
Think of a problem or challenge you have recently had, and put **STAR** to work:

STOP: What was the problem?

THINK: What were your choices; what were the good points; what were the bad points?

ACT: What did you do?

REFLECT: What happened? Would you do it that way again?



How could STAR help these teens?



Monica is having trouble with the math problems in class today. She really just wants a break. She heard of some kids with diabetes faking a low blood sugar to get out of class. What should she 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?

Tony has not been following his meal plan lately. He also quit doing the blood sugar checks. He has a clinic visit next week and knows his diabetes team will not be happy with him. What should Tony 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?

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 and 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?

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Things that could spin your STAR around!

Some choices you will have time to think about (like Monica and Tony). Some choices will need a quick decision (like Mikah).

Sometimes you will make choices under pressure from others.

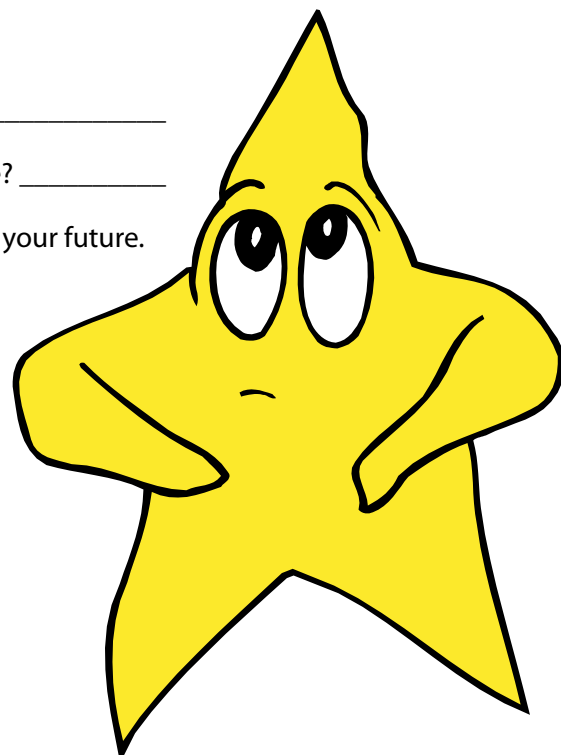
Which example showed pressure from friends? _____

Which example showed pressure from parents or medical people? _____

Some choices will affect you right away. Some choices will affect your future.

Here are some tips to use your STAR even in these tough choices:

- ▶ Know your goals.
- ▶ Know 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.



Puff, Puff, Puff that cigarette: Tobacco, drugs and diabetes

It would be easy for us to just say “Don’t do it!” And we would be right. But we thought you might like some extra facts.

Another chance to make a choice! Your STAR can help:

STOP: Do not smoke, use chewing tobacco, or take drugs until you know the facts.

THINK:

- ▶ Using tobacco if you are under age is illegal.
- ▶ Using drugs is illegal at any age.
- ▶ Tobacco, in any form, is linked to cancer and other diseases.
- ▶ Tobacco and diabetes make a deadly pair. Tobacco narrows blood vessels. Diabetes can do this also. Together they slow blood to the brain, the heart, and other body parts.
- ▶ Drugs take you away from your goals. Drugs mess up blood sugar. Drugs mess up your choices and your health. Enough said!

ACT: Make your choice – because it is right for YOU!

Action	Consequence (results)
Do not use tobacco or drugs	
Use tobacco or drugs	

REFLECT: How do you feel after making the choice?

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

99 Bottles of beer on the wall: Alcohol and diabetes

Do you know any teens who drink alcohol? Do you?

It's one of those choices we talked about. Let's get our STAR to help.

STOP: Do not choose to drink until you have all the facts.

THINK:

- ▶ Drinking alcohol if you are under age is illegal – against the law – big trouble.
- ▶ Alcohol and driving do not mix.
- ▶ Alcohol and health do not mix. Alcohol is full of calories. Sodas mixed with alcohol are full of calories. Not a good deal if you are watching your weight.
- ▶ Alcohol and diabetes do not mix either. Here is why: Alcohol prevents your body from keeping blood sugar in target. Alcohol interferes with your medicines.

ACT: Make your choice – because it is right for YOU!

Action	Consequence (results)
Do not drink alcohol	
Drink alcohol	

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REFLECT: How do you feel after making the choice?

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

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 may really be having a 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 per day.
- ▶ 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

What teen does not wonder about dating? Relating to people is both curious and exciting. Will diabetes get in the way? Should you go “all the way?”

More choices! This is one of those times that STAR can really help. But only if you:

- ▶ Know your goals.
- ▶ Know 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.

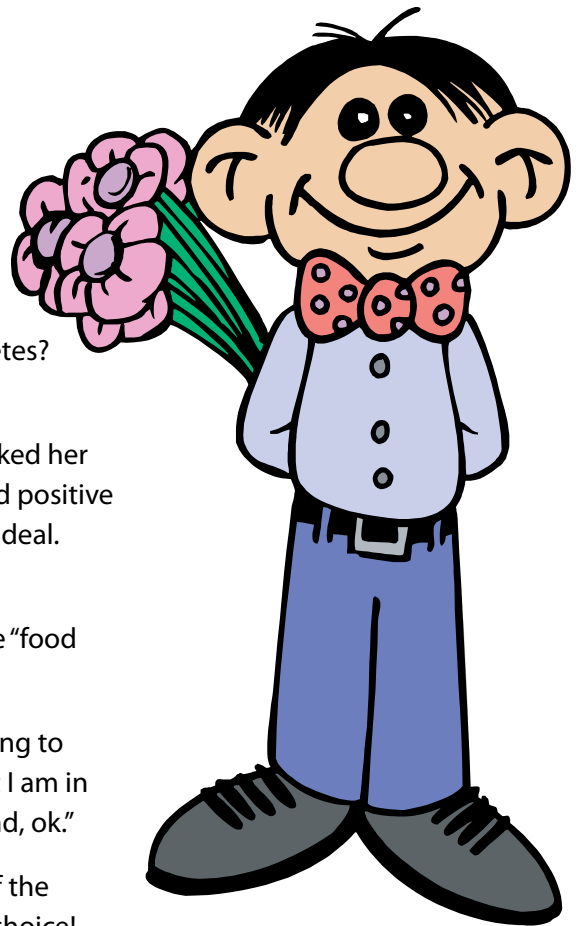
Let’s talk about dating. Who do you tell about your diabetes? When do you tell them?

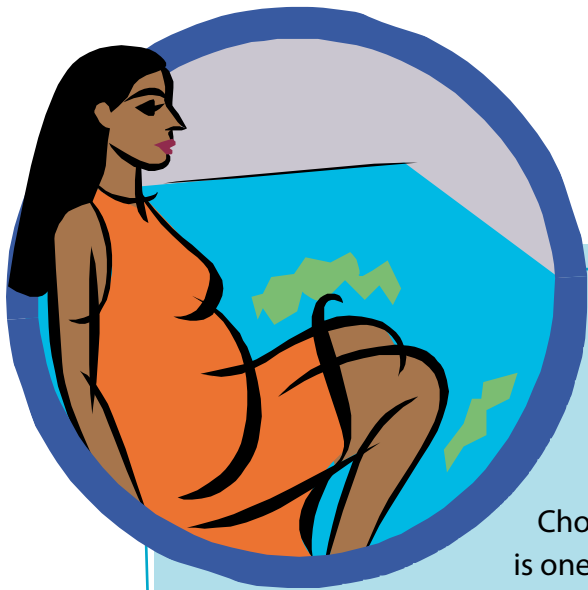
Eric decided to tell Juana about his diabetes before he asked her out. After all, he was not embarrassed about it. He stayed positive about it and told her, “Hey, I have diabetes and it’s no big deal. Wanna go to the movies?”

Sometimes teens worry that their friends will become the “food patrol” if they know about the diabetes.

Ricardo worried about that. He knew his friends were trying to help. He started telling them, “I appreciate your help, but I am in charge of my diabetes. I’ll take care of it. Just be my friend, ok.”

What about the decision about having sex? This is one of the biggest choices you will make. Be in control about your choice! Use all the STAR tips you have practiced. Be sure when you are ready, then be sure you are protected.





Really Important Stuff about Diabetes and Pregnancy:

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

As you make your choice, think of two things:

- ▶ How do I really feel about having sex?
- ▶ What are the risks and what effect will it have on my diabetes?

Unprotected sex can lead to sexually transmitted diseases like HIV/AIDS. Unprotected sex can lead to pregnancy. It is best to protect yourself. Talk with your doctor and parents about birth control options and disease prevention.

Pregnancy for a woman with type 2 diabetes is serious. High blood sugars can harm an unborn child. It takes good planning to have a normal healthy baby. A planned pregnancy is very important! For further information, talk to your educator or doctor.

Some diabetes medications you are taking could harm an unborn child. Your health care team must know immediately if you think you are pregnant!

Communicating with parents and others

Did you ever wonder when you and the adults around you stopped talking the same language?

It seems to happen in the teen years. Teens and adults have different views of the world. They even have different views about diabetes.

Parents, doctors, nurses, and dieticians can really get worked up over high blood sugars. They worry about missed medicines or weight gain.

So how do you talk with them? Here are some tips:

Most of our comments are a mix of facts and feelings. Check this out:

Charlene is late getting home. She lost track of time. Her mother greets her with, "I can't ever depend on you to be home on time!"

What is **fact**: _____

What is Charlene's mother **feeling**? _____

FACT: Charlene is late getting home.

FEELING: Maybe her mother is frustrated, mad or upset.

Great communication includes both facts and feelings. Let's go back to Charlene.

Charlene's reply to her mother, "I lost track of time. I know I'm late. I know you're mad, I'll try to watch the time better."

Clean, simple. Charlene owned up to her mistake (she used an "I" statement). She also showed her mother that she understood her feelings.

Here is another example:

Mike's friend says, "That Mr. Pacheco is the worst teacher in the whole school. He gave me a D on the test!"

What is fact:

What is Mike feeling?

FACT: Mike made a D on his test.

FEELING: Maybe Mike is angry, ticked off, or upset. He might be worried about his grades.

How would you reply to let Mike know you understand?

Rubia did not check her blood sugar very much last week. Her doctor says, "Why didn't you check at supper last week?"

What are the facts?

What is the doctor feeling?

How could Rubia reply in order to show that she is responsible for her actions?

WOW - You made it to the end -
 or is it the beginning?
 You stand ready to take on the
 world!
 Do it in good health!
 You are the STAR!!

