

Grade 8: Healthy Eating

Lesson 3: Healthy Eating to Support the Endocrine System

Objectives:

- 1) Record food intake accurately.
- 2) Analyze food intake and compare to recommendations.
- 3) Analyze food intake for balance and moderation.
- 4) Identify the key concepts related to diet, weight, and diabetes.

Materials:

- Food journal (have each student use a small notebook or composition book)
- Food Analysis Chart (**See Figure 1**)
- Daily Servings Graph (**See Figure 2**)
- Student Article (**See Figure 3**)
- Choose My Plate (**See Figure 4**)

Activity Summary:

This activity provides students with information about a healthy diet. Students are asked to evaluate their own diet. In addition, they are asked to identify strategies for staying trim and avoiding weight gain and diabetes. An optional activity asks students to use • Choose My Plate visual from www.choosemyplate.gov (optional).

Background Information for the Teacher:

(Below is a reproduction of the student article, “Healthy Eating to Support the Endocrine System.”)

Healthy Eating to Support the Endocrine System*

What will healthy eating do for me?

Sometimes “healthy eating” sounds boring—but eating a balanced diet can help you look better, think faster, and stay fit. It’s all about balance and moderation. Many foods are good for us, but too much of almost any food can overload your system. Some foods really aren’t very good for us, but if we eat only a little, our system seems to be able to handle it. The keys are balance—eating a variety of healthy foods—and moderation—eating amounts that your body can handle easily.

Eating a healthy, balanced diet will help you maintain a healthy weight, especially when you also exercise every day. Healthy diet plus exercise also helps prevent diabetes, a serious disease that affects the pancreas, part of your endocrine system.

If you have access to the Internet, go to • Choose My Plate visual from www.choosemyplate.gov It is published by the United States Department of Agriculture and helps you plan a healthy diet.

There are suggestions for serving size, depending on age and whether you are a boy or a girl. All the food categories are important—you will want to be sure you include foods from each category in your diet.

Grains include bread, cereal, rice, and pasta. The best grains are whole grains. Whole wheat flour, for example, is a whole grain. It is less refined than white flour. Why does that make a difference? All grains eventually are converted to sugar in your digestive system. Refined grains, such as white flour and white rice, convert to sugar very quickly. Whole grains, such as whole wheat bread or brown rice, contain fiber that slows down the conversion of the grains to sugar. The fiber also helps keep your colon working well, and helps keep your arteries clear. In addition, eating whole grains rather than refined grains may help you avoid diabetes.

The Food Guide Choose My Plate 5 to 6 ounces of grains for teenage girls and 6 to 7 ounces of grains for teenage boys. An ounce is actually measured from the dry ingredients, so sometimes it's hard to know what that means in terms of cooked food. According to the USDA an ounce of grain is equivalent to one slice of bread, ½ cup of oatmeal, ½ cup cooked pasta, or ½ cup cooked rice or other cooked cereal. For dry cereals, read the label on the box. If you are eating dry cereal, be sure it contains some whole grains, and easy on the sugar! Packaged cereals often contain a lot of sugar. Read labels!

Vegetables are very important since they provide vitamins, minerals, and antioxidants. (See the Grade 7 article on Healthy Eating for the Immune System for more on antioxidants.) Vegetables are also another useful source of fiber. If you eat vegetables raw, be sure to wash them well. Vegetables are also good lightly steamed or stir-fried. If you are stir-frying, use only a little unsaturated oil, such as olive oil or canola oil. Don't overcook vegetables, as you can destroy some of the vitamins that way.

Recommended servings are 2 to 2 ½ cups for teenage girls and 2 ½ to 3 cups for teenage boys. Eating plenty of vegetables is an excellent way to include fiber in your diet. Also, if you eat plenty of vegetables you will fill up and avoid snacking on foods loaded with sugar and fats like cookies or chips. Again, this is a good defense against a disease like diabetes.

Fruits are a great source of vitamins and antioxidants. It's best to eat whole fruit rather than drinking fruit juice. Again, this is because whole fruit has fiber which slows down the absorption of sugar into your system. In general, we get way too much sugar in our diets. A good way to cut this down is eat whole fruit every day, decrease fruit juices, and cut out sodas! Drinking sugar-filled sodas can make

you fat. Juice drinks that aren't 100% juice aren't much better. Even smoothies and protein drinks can be loaded with sugar. Read labels! Too many sodas and juice drinks are a leading cause of obesity and can lead to diabetes. Eat whole fruit instead. *Recommended servings are 1 ½ cups of fruit each day for teenage girls and 1 ½ to 2 cups for teenage boys.*

Dairy includes milk, yogurt, cheese, and other foods made from milk. The dairy group provides you with protein, calcium, Vitamin D, and Vitamin A. *Recommended servings are 3 cups a day for teenage boys and girls.*

Meat, poultry, fish, beans and nuts provide protein and B vitamins. There can also be a lot of saturated fat in some meats, such as beef, pork, lamb, or poultry with the skin on. Try to eat lean meats and remove the skin from chicken or turkey before eating. Some fish and all nuts also contain fat, but this fat is unsaturated. Both fish oil and nuts contain healthy fats that, in moderation, can be good for you. Again, moderation is a key.

Recommended servings are 5 ounces per day for teenage girls and 5 to 6 ounces for teenage boys. Use the guide below to help you figure out what you should eat.

- 1 ounce meat = 1 ounce serving
- 1 ounce poultry = 1 ounce serving
- 1 ounce fish = 1 ounce serving
- 1 egg = 1 ounce serving
- 1 tablespoon of peanut butter = 1 ounce serving
- ½ ounce of nuts or seeds = 1 ounce serving (confusing, isn't it?)
- ½ cup cooked beans = 1 ounce serving

Remember that a ¼ pound hamburger patty = 4 ounces. A chicken drumstick = approximately 3 ounces. If you have both the hamburger patty and the chicken leg in one day, you've already gone over your limit! However, if you exercise a lot you may find that you need more protein than the recommended amount. Keeping track of what you eat and when you get hungry will help you decide what is right for you.

Fats, oils, and sweets should be eaten in *very small quantities*. Fats and oils are both important for your body—as long as they are the healthy fats such as olive oil, canola oil, safflower oil, or other unsaturated oils. Try to stay away from solid fats like butter, stick margarine, or shortening.

Limit foods with a lot of sugar such as candy, cookies, cakes, and sodas. Over-eating these kinds of foods is a primary cause of obesity and diabetes.

What does all this have to do with my endocrine system?

Your endocrine system is a finely tuned system. The part of your endocrine system that is most affected by diet is the pancreas. The pancreas produces insulin which helps you process sugar. The carbohydrates (sugars and starches) you eat are broken down into glucose in the digestive system. You need glucose to function—it is a major fuel for your body. However, if you eat more sugars and starches than your pancreas can handle, the excess glucose spills into your bloodstream. It's almost like putting too much gas in your car—once the tank is full, the extra gas spills all over the place. Eating too much sugar and starch can cause a chain reaction in your body that leads to obesity and diabetes. Almost 30% of Americans are overweight. And the number of children and teenagers who are considered obese has doubled over the past 20 years.

Diabetes is a serious disease of the endocrine system that involves the pancreas and the production of insulin. There are two types of diabetes—Type-1 and Type-2. Type-1 diabetes happens when your pancreas doesn't produce insulin, or only produces a little. Type-1 diabetes only accounts for about 10% of diabetes cases. It tends to be inherited and is not caused by diet, although people with Type-1 diabetes must be very careful what they eat. They must also take insulin injections every day.

Type-2 diabetes is more common in our society. Type-2 diabetes used to be considered an older person's disease—but it is happening now in children and teenagers! In Type-2 diabetes, the pancreas produces insulin, but the body has become resistant and doesn't respond. Being overweight and inactive can lead to Type-2 diabetes. Your body produces insulin, but your cells have become resistant to it. The glucose can't get into your cells, so it spills into your bloodstream, causing your blood sugar to go up.

Type-2 diabetes can often be controlled (or avoided) with proper diet and exercise. Some Type-2 diabetics must take insulin or medication every day. If you watch your weight, eat a balanced diet, and exercise regularly, you should be able to avoid diabetes. But it's smart to start paying attention now—don't wait until it's too late.

Tips for Staying Trim and Healthy

Eat Smart—eat a healthy, balanced diet

- Eat your **vegetables**
- Eat **whole fruit**
- Eat **whole grains**

Cut out sodas—they make you fat!

- Drink plenty of **water**
- If you drink juice, be sure it is 100% juice, and don't drink more than one cup each day
- Avoid juice drinks—they have lots of sugar and high fructose corn syrup

Snack smart

- **Avoid** chips, cookies, and other high sugar, high fat snacks
- Have some carrot sticks or celery sticks with a little peanut butter
- Eat a piece of fruit and a piece of cheese

Limit fast foods

- Cut out the French fries—they're loaded with trans fats
- **Don't Super-size!!!**
- Have a salad instead of a burger

Get moving!!!

- You need **60 minutes of exercise** every day
- Walk to school, instead of driving
- Join a sports team or other physical activity after school instead of watching TV
- Help around the house—take out the trash, help with the laundry, unload the groceries

Healthy Weight Loss—No Crash Diets!

If you are overweight—or if you think you're overweight and are tempted to try a crash diet, **don't!** Crash diets really don't help you lose weight. Here's why...

Most crash diets and diet pills cause your body to get rid of excess water. Diet pills are often diuretics or laxatives, which cause you to eliminate water. So the weight you are losing is literally water. The scale may say you are lighter, but it's really an illusion. And after a while your body gets used to the diuretic or laxative. When your body adjusts, you start gaining weight again.

Crash diets work much the same way. When your body thinks you are starving it, the first thing it does is get rid of water. Real weight loss only happens when your body burns fat—and that takes time. Starvation diets are also really bad for your

health. If you eat a diet that is less than 1200 calories a day for a long time it can lead to serious health problems. Your hair and skin will become less attractive. You could develop osteoporosis (brittle bones) or problems with your kidneys or heart. Your endocrine system can also react—this could affect your growth and the development of your reproductive system. For girls this could mean your menstrual period would stop. For guys, starvation diets can affect your muscle strength.

The best way to lose weight is to eat a healthy, balanced diet and include lots of fiber. This is because fiber satisfies your appetite and helps slow down the absorption of sugar into your system. Fiber rich foods like fresh fruits, vegetables, and whole grains fill you up faster than refined, processed foods. When you eat an apple it will fill you up and be better for you than a soda.

When you eat sugar-loaded foods like sodas, candy or cookies you can consume loads of calories at one time. For example, one large chocolate chip cookie is almost 300 calories. One large apple is only 100 calories—more food value and fewer calories. One large banana nut muffin is almost 500 calories. One large banana is only 105 calories. You could add a glass of milk and still be nowhere near the calories in a muffin!

If you really want to lose weight, one of the best things to do is keep a food journal. Keeping track of what you eat each day will make you more aware of how much you are actually eating. It's easy to fool yourself—so write it down! You'll be amazed how much it helps you control what you're eating.

NOTE: For more information on healthy eating, diets, and your Endocrine System go to www.kidshealth.org.

Vocabulary:

- Pancreas
- Insulin
- Diabetes
- Fiber

Engage:

1. Have each student record what they had for breakfast on a sheet of paper.
2. Post the chart below and have students assign points as follows to the various foods:

Food	Points
Grains	
Whole grain cereal (such as oatmeal, granola, Grape Nuts, without much sugar or other sweeteners—read labels)	10

Other cereal, not much sugar (like Cheerios, Shredded Wheat)	5
Cereals with lots of sugar (like Frosted anything, read labels)	-5
Whole grain bread, whole wheat flour tortilla, corn tortilla, or other whole grain bread products	10
White bread	5
Flour tortilla (white flour)	5
Bagel	5
Milk (dairy)	
Milk (low fat or non fat)	10
Yogurt (plain)	10
Yogurt (flavored)	5
Cottage cheese (½ cup)	10
Whole milk (4% fat—1 cup)	5
Low fat cheese (ricotta, reduced fat cheddar, etc.)	10
Regular whole milk cheese (American, Cheddar, Swiss, Jack)	5
Chocolate milk	2
Eggs	
1 or 2 eggs	10
Fruit	
Piece of fruit	10
Fruit juice	5
Fruit drink (not 100% juice)	-5
Nuts	
Peanut butter, almond butter, or other nut butter (2 tbsp.)	10
Other	
Soda	-10
Donut	-10
Other sweets	-10

3. Rules for scoring:

- Add up the points for everything you ate for breakfast.
- Be sure to subtract the negative points.
- If you have more than one food from the Grains category that is not a whole grain, subtract 5 points.
- If you have more than one food from the Other category, subtract 10 more points.
- Look at all the categories except Other. If you have foods in four out of five categories, add 10 extra points.
- Total your final points.

4. Your Breakfast Rating:

- **50-60: Excellent start to the day**
- **40-49: Good start to the day**
- **30-39: OK start to the day**
- **20-29: Not great--think about what else you could add to get enough protein and whole grains**
- **Less than 20: Oops! You need to reevaluate your diet!**

Explore:

1. This activity takes place across two weeks. It requires students to keep track of what they eat and when they get hungry. Have all students keep a **food journal** for two weeks. They will be using information from the food journal for the activity below.

The goal is to help students eat a good breakfast, high in protein, whole grains, and fresh fruit, which should set their eating patterns for the day.

To help students analyze their food intake, have them transfer the information from their food journal to the Food Analysis Chart (**See Figure 1**) and/or the Daily Servings Graph (**See Figure 2.**) This will help students actually see the distribution of the foods they eat.

Week One:

- Each day have students record what they had for breakfast, in detail. Have them include the serving size for each item they eat.
- Have them also record how soon after breakfast they feel hungry.
- Then have them record what they eat during the rest of the day.
- It's important that students keep track of everything they eat, since they will be doing a number of analysis exercises using their food journals.

Week Two:

1. Encourage students to eat one of the following breakfasts each day:
 - 1 or 2 eggs, a piece of whole wheat toast, a piece of fruit (not juice)
 - or**
 - Whole grain cereal (such as oatmeal or granola without a lot of sugar), milk or yogurt, walnuts and raisins
 - or**
 - A piece of whole wheat toast with peanut butter, a glass of milk, a piece of fruit (not juice)
 - or**
 - One or two corn tortillas, or whole wheat flour tortillas, with cheese, a piece of fruit, some sunflower seeds (or other nuts) (You may substitute whole grain pita bread or other whole grain flat bread for the tortillas, to accommodate different food preferences.)
 - or**
 - A variation that includes some protein, whole grains, fruit, and nuts.
2. Have students keep track of what they ate and when they got hungry, as they did the previous week.

3. Have them use their food journals to analyze what they ate the first and second weeks.
4. Are there any differences? What are they?
5. On which days did they eat the healthiest foods?
6. On which days did they eat the most junk?
7. What had they had for breakfast on those days?

Explain:

Have students read the article on Healthy Eating to Support the Endocrine System (**See Figure 3**). The text of the article is reproduced in the Background section and is also available as a separate handout for students. There is a study guide at the end of the article to help guide students' reading. You may also wish to divide students into groups and assign each group a section of the article. Then have each group report back to the class about what they learned.

Use the study guide below to help students read the article:

1. List the food categories and examples of healthy foods in each category.
2. List some of the reasons that fiber is good for you. What foods have fiber?
3. What is diabetes and what causes it?
4. List some tips for staying healthy and fit.
5. What are some of the results of eating too much sugar?
6. Why are crash diets not a good idea?

Extend:

See the student directions and worksheet provided as separate handouts. The worksheet is reproduced below for reference. (**See Figure 4**) If you have time, it is helpful to do this activity yourself before introducing it to the students.

Directions for Students:

1. Go to Choose My Plate visual from www.choosemyplate.gov (optional)
2. Click the following reports and note the specific information asked for below. Fill in the charts with your own information.
3. **Calculate DG Comparison:**

Food Category	Number of Servings	OK, Too Little, Too Much
Grain		

Vegetable		
Fruit		
Milk		
Meat and Beans		
Total Fat		
Saturated Fat		

4. Enter food information every day for a week. (You can enter the information from the previous day, using your food journal.) Check your food intake against the recommendations. See how you are doing in eating a balanced diet. Check to be sure you are eating plenty of whole grains, vegetables, and fruits, and limiting the amount of sugar, refined carbohydrates (like white bread), and saturated fats (like butter or stick margarine). Check that you are getting enough protein for your age and size. Be sure you are including moderate amounts of healthy fats like olive oil or canola oil. You may also wish to track your physical activity to see how your food intake and physical activity are working together. A balanced diet, together with consistent exercise, will support your endocrine system and help defend against diabetes.

Evaluate:

Have students use the information they have gathered to answer the questions below:

1. **In general, are you eating enough?**
(Remember, less than 1200 calories a day is dangerous.)
2. **Are you eating too much of some foods?**
(Check your intake of sugar and fat.)
3. **Which foods do you eat too much?**
(Again, check those sweets and fried foods.)
4. **Which foods should you eat more?**
(How are you doing with vegetables, fruits, and whole grains?)
5. **How would you rate your diet overall?**
(Be honest, now.)

*For more information about the preceding article, contact:

Eugenie V. Newton
 Dean of Faculty and Academic Affairs
 International Professional School of Bodywork, San Diego
 112 Second Ave.
 Chula Vista CA 91910
 9619) 276-4820

Missouri Standards:

Health and Physical Education Frameworks

II. Health Maintenance and Enhancement

What All Students Should Know:

2. The Choose My Plate visual from www.choosemyplate.gov is a visual representation of daily nutrient needs and food groupings they can provide them.

What All Students Should Be Able To Do

a. Organize foods into groups with similar nutrient composition

What All Students Should Know:

3. Balance, moderation and variety are important concepts to be considered when making food choices.

What All Students Should Be Able To Do

a. Make informed decisions regarding food choices based on an understanding of balance, moderation and variety.

Figure 1:

Food Analysis Chart

Figure 2:

Daily Servings Graph

Figure 3:

Healthy Eating to Support the Endocrine System

What will healthy eating do for me?

Sometimes “healthy eating” sounds boring—but eating a balanced diet can help you look better, think faster, and stay fit. It’s all about **balance** and **moderation**. Many foods are good for us, but too much of almost any food can overload your system. Some foods really aren’t very good for us, but if we eat only a little, our system seems to be able to handle it. The keys are **balance**—eating a variety of healthy foods—and **moderation**—eating amounts that your body can handle easily.

Eating a healthy, balanced diet will help you maintain a healthy weight, especially when you also exercise every day. Healthy diet plus exercise also helps prevent **diabetes**, a serious disease that affects the **pancreas**, part of your **endocrine system**.

If you have access to the Internet, go to Choose My Plate visual from www.choosemyplate.gov investigate diet. It is published by the United States Department of Agriculture and helps you plan a healthy diet. A visual of diet that represent different food groups.

There are suggestions for serving size, depending on age and whether you are a boy or a girl. All the food categories are important—you will want to be sure you include foods from each category in your diet.

Grains include bread, cereal, rice, and pasta. The best grains are **whole grains**. Whole wheat flour, for example, is a whole grain. It is less refined than white flour. Why does that make a difference? All grains eventually are converted to sugar in your digestive system. Refined grains, such as white flour and white rice, convert to sugar very quickly. Whole grains, such as whole wheat bread or brown rice, contain fiber that slows down the conversion of the grains to sugar. The fiber also helps keep your colon working well, and helps keep your arteries clear. In addition, eating whole grains rather than refined grains may help you avoid **diabetes**.

The Choose My Plate recommends five to six ounces of grains for teenage girls and six to seven ounces of grains for teenage boys.

An ounce is actually measured from the dry ingredients, so sometimes it's hard to know what that means in terms of cooked food. According to the USDA an ounce of grain is equivalent to:

- one slice of bread
- ½ cup of oatmeal
- ½ cup cooked pasta
- ½ cup cooked rice or other cooked cereal

For dry cereals, read the label on the box. If you are eating dry cereal, be sure it contains some whole grains, and easy on the sugar! Packaged cereals often contain a lot of sugar. Read labels!

Vegetables are very important since they provide vitamins, minerals, and antioxidants. (See the Grade 7 article on Healthy Eating for the Immune System for more on antioxidants.) Vegetables are also another useful source of fiber. If you eat vegetables raw, be sure to wash them well. Vegetables are also good lightly steamed or stir-fried. If you are stir-frying, use only a little unsaturated oil, such as olive oil or canola oil. Don't overcook vegetables, as you can destroy some of the vitamins that way.

Recommended servings are 2 to 2 ½ cups for teenage girls and 2 ½ to 3 cups for teenage boys. Eating plenty of vegetables is an excellent way to include **fiber** in your diet. Also, if you eat plenty of vegetables you will fill up and avoid snacking on foods loaded with sugar and fats like cookies or chips. Again, this is a good defense against a disease like **diabetes**.

Fruits are a great source of vitamins and antioxidants. It's best to eat whole fruit rather than drinking fruit juice. Again, this is because whole fruit has **fiber** which slows down the absorption of sugar into your system. In general, we get way too

much sugar in our diets. A good way to cut this down is **eat whole fruit every day**, decrease fruit juices, and **cut out sodas!** Drinking sugar-filled sodas can make you fat. Juice drinks that aren't 100% juice aren't much better. Even smoothies and protein drinks can be loaded with sugar. Read labels! Too many sodas and juice drinks are a leading cause of obesity and can lead to diabetes. Eat whole fruit instead. *Recommended servings are 1 ½ cups of fruit each day for teenage girls and 1 ½ to 2 cups for teenage boys.*

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Meat, poultry, fish, beans and nuts provide protein and B vitamins. There can also be a lot of saturated fat in some meats, such as beef, pork, lamb, or poultry with the skin on. Try to eat lean meats and remove the skin from chicken or turkey before eating. Some fish and all nuts also contain fat, but this fat is unsaturated. Both fish oil and nuts contain healthy fats that, in moderation, can be good for you. Again, moderation is a key.

Recommended servings are 5 ounces per day for teenage girls and 5 to 6 ounces for teenage boys. Use the guide below to help you figure out what you should eat.

- 1 ounce meat = 1 ounce serving
- 1 ounce poultry = 1 ounce serving
- 1 ounce fish = 1 ounce serving
- 1 egg = 1 ounce serving
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- ½ ounce of nuts or seeds = 1 ounce serving (confusing, isn't it?)
- ½ cup cooked beans = 1 ounce serving

Remember that a ¼ pound hamburger patty = 4 ounces. A chicken drumstick = approximately 3 ounces. If you have both the hamburger patty and the chicken leg in one day, you've already gone over your limit! However, if you exercise a lot you may find that you need more protein than the recommended amount. Keeping track of what you eat and when you get hungry will help you decide what is right for you.

Fats, oils, and sweets should be eaten in *very small quantities*. Fats and oils are both important for your body—as long as they are the healthy fats such as olive oil, canola oil, safflower oil, or other unsaturated oils. Try to stay away from solid fats like butter, stick margarine, or shortening.

Limit foods with a lot of **sugar** such as candy, cookies, cakes, and sodas. Over-eating these kinds of foods is a primary cause of **obesity** and **diabetes**.

What Does All This Have To Do With My Endocrine System?

Your Endocrine System is a finely tuned system. The part of your Endocrine System that is most affected by diet is the **pancreas**. The pancreas produces **insulin** which helps you process sugar. The **carbohydrates** (sugars and starches) you eat are broken down into **glucose** in the digestive system. You need glucose to function—it is a major fuel for your body. However, if you eat more sugars and starches than your pancreas can handle, the excess glucose spills into your bloodstream. It's almost like putting too much gas in your car—once the tank is full, the extra gas spills all over the place.

Eating too much sugar and starch can cause a chain reaction in your body that leads to **obesity** and **diabetes**. Almost 30% of Americans are overweight. And the number of children and teenagers who are considered obese has doubled over the past 20 years.

Diabetes is a serious disease of the endocrine system that involves the **pancreas** and the production of **insulin**. There are two types of diabetes—Type-1 and Type-2. Type-1 diabetes happens when your pancreas doesn't produce insulin, or only produces a little. Type-1 diabetes only accounts for about 10% of diabetes cases. It tends to be inherited and is not caused by diet, although people with Type-1 diabetes must be very careful what they eat. They must also take insulin injections every day.

Type-2 diabetes is more common in our society. Type-2 diabetes used to be considered an older person's disease—but it is happening now in children and teenagers! In Type-2 diabetes, the pancreas produces insulin, but the body has become resistant and doesn't respond. **Being overweight and inactive can lead to Type-2 diabetes**. Your body produces insulin, but your cells have become resistant to it. The glucose can't get into your cells, so it spills into your bloodstream, causing your blood sugar to go up.

Type-2 diabetes can often be controlled (or avoided) with proper diet and exercise. Some Type-2 diabetics must take insulin or medication every day. If you watch your weight, eat a balanced diet, and exercise regularly, you should be able to avoid diabetes. But it's smart to start paying attention now—don't wait until it's too late.

Tips for Staying Trim and Healthy

Eat Smart—eat a healthy, balanced diet

- Eat your **vegetables**
- Eat **whole fruit**
- Eat **whole grains**

Cut out sodas—they make you fat!

- Drink plenty of **water**
- If you drink juice, be sure it is 100% juice, and don't drink more than one cup each day
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Snack smart

- **Avoid** chips, cookies, and other high sugar, high fat snacks
- Have some carrot sticks or celery sticks with a little peanut butter
- Eat a piece of fruit and a piece of cheese

Limit fast foods

- Cut out the French fries—they're loaded with trans fats
- **Don't Super-size!!!**
- Have a salad instead of a burger

Get moving!!!

- You need **60 minutes of exercise** every day

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Healthy weight loss—No Crash Diets!

If you are overweight—or if you think you're overweight and are tempted to try a crash diet, **don't! Crash diets really don't help you lose weight.** Here's why...

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Use the study guide below to help you read the article:

7. List the food categories and examples **healthy** foods in each category.
8. List some of the reasons that **fiber** is good for you. What foods have fiber?
9. What is **diabetes** and what causes it?
10. List some tips for staying healthy and fit.
11. What are some of the results of eating too much sugar?
12. Why are crash diets not a good idea?

For more information on healthy eating, diets, and your endocrine system go to www.kidshealth.org.

Figure 4

Directions for Students:

1. Go to Choose My Plate visual from www.choosemyplate.gov
2. Monitor **Your Food Intake**.
- 3.

Food Category	Number of Servings	OK, Too Little, Too Much
Grain		
Vegetable		
Fruit		
Milk		
Meat and Beans		
Total Fat		
Saturated Fat		

4. Enter food information every day for a week. (You can enter the information from the previous day, using your food journal. Check your food intake against the recommendations. See how you are doing in eating a balanced diet. Check to be sure you are eating plenty of whole grains, vegetables, and fruits, and limiting the amount of sugar, refined carbohydrates (like white bread), and saturated fats (like butter or stick margarine). Check that you are getting enough protein for your age and size. Be sure you are including moderate amounts of healthy fats like olive oil or canola oil. You may also wish to track your physical activity to see how your food intake and physical activity are working together. A balanced diet, together with consistent exercise, will support your endocrine system and help defend against diabetes.
5. Use your information to answer the questions below:

1. In general, are you eating enough?

(Remember, less than 1200 calories a day is dangerous.)

2. Are you eating too much of some foods?

(Check your intake of sugar and fat.)

3. Which foods do you eat too much of?

(Again, check those sweets and fried foods.)

4. Which foods should you eat more of?

(How are you doing with vegetables, fruits, and whole grains?)

5. How would you rate your diet overall?

(Be honest, now!)