



(Note to the presenter: Comments in parentheses are instructions to follow while giving the presentation. Do not read the comments to participants. This convention will be followed throughout the notes in this slide show.)

(Give each participant a copy of this presentation, obtained by printing the PDF version of these slides in the Training 2 folder on this Web Resource.)

This session focuses on the five food groups and the best choices in each group. It also introduces the Nutrition Facts food label in more depth.

The Five Basic Food Groups

- **Vegetables**
- **Fruits**
- **Grains**
- **Protein**
- **Dairy**

Eating a variety of foods keeps our meals interesting and flavorful. It's also the key to a healthy and balanced diet because each food has a unique mix of nutrients—both macronutrients (carbohydrate, protein, and fat) and micronutrients (vitamins and minerals).

Vegetables, fruits, grains, protein, and dairy make up the five basic food groups, but not all options within these groups are equally beneficial or healthy, and some foods—especially those from plants—are needed in greater proportion than others.



(Distribute the Kid's Healthy Eating Plate handout from the Additional Resources folder on this Web Resource.)

The **Kid's Healthy Eating Plate** provides a blueprint to help build a balanced meal with the best choices from each group:

Along with filling half of our plate with colorful **vegetables** and **fruits**, split the other half between **whole grains** and **healthy protein**. Healthy protein includes mostly plant-based options such as nuts, seeds, and beans, but poultry and fish are also excellent choices. Foods from the **dairy** group are needed in lower proportions than foods from the other groups, but milk and other dairy foods are common sources of calcium and vitamin D, so choose unflavored milk, plain yogurt, or other unsweetened dairy foods.

The Kid's Healthy Eating Plate also includes elements that are not part of the five food groups but are additional important reminders for maintaining a healthy diet and lifestyle.

- Healthy oils (plant-based oils such as olive and canola oil) are a great source of healthy fat, and should be used when cooking or as

dressing on a salad.

- Water should be the drink of choice at every meal and snack, as well as when staying active.
- Note that the Kid's Healthy Eating Plate does not contain sugary drinks, sweets, and other junk foods. These are not everyday foods and should only be eaten rarely, if ever.

Finally, just like choosing the right foods, incorporating physical activity into our day by staying active is part of the recipe for keeping healthy.

Okay—let's move on to discussing each of the food groups in a little more detail.

Choose Colorful Fruits and Vegetables Instead of Junk Food

- **Fruits and vegetables provide vitamins, minerals, and carbohydrate.**
- **Choose fruits and vegetables in a rainbow of colors (choose especially dark-green and orange vegetables).**
- **Getting 5 or more servings each day can reduce the risk of diabetes, heart disease, obesity, and possibly some cancers.**

(Distribute the Best-Choice Foods handout from the Additional Resources folder on this Web Resource. Distribute food labels from lesson 10 for Sweet Potatoes, Plums, Chicken, and Milk. Distribute any other food labels you have collected. Review the following information with participants:)

Vegetables and fruits provide vitamins, minerals, and carbohydrate. In general they promote overall good health and can reduce the risk of diabetes, heart disease, obesity, and possibly some cancers. Eat at least 5 servings of colorful vegetables and fruits every day; eating more is better.

Fruits

- **Good source of vitamins A and C and potassium**
- **Whole and sliced fruits have more fiber than juice and are better choices.**
- **One serving = 1 medium apple, banana, or orange; 1/2 cup chopped or cooked fruit; 1/4 cup of dried fruit, like raisins**
- **Limit fruit juice to no more than 4-6 ounces per day.**

Fruits (e.g., oranges, cantaloupe, and strawberries) supply vitamins A and C as well as potassium. They are also high in fiber.

Choose whole fruits or sliced fruits rather than fruit juices, since they contain the most fiber; if eating canned fruit, choose fruit canned in 100% juice (rather than fruit canned in syrup or with other added sugars and ingredients).

(Review the Plums Nutrition Facts label in lesson 10 of the book, and discuss differences in serving sizes and nutrients.)

One serving of fruit is 1 medium apple, banana, or orange; 1/2 cup chopped or cooked fruit; 1/4 cup of dried fruit, like raisins.

Make sure to limit your consumption of 100% fruit juice to no more than 4 to 6 ounces per day; juice has vitamins and minerals, but it is naturally high in fruit sugar (fructose) and it lacks the fiber found in whole fruit.

Vegetables

- **Good source of vitamins A and C, folate, iron, and magnesium**
- **High in fiber**
- **Choose a rainbow of colors, especially dark green and deep orange.**
- **One serving = 1/2 cup cooked vegetables, 1 cup of leafy salad greens**

Vegetables (e.g., broccoli, spinach, and carrots) provide vitamins A and C and folate as well as iron and magnesium. They are also high in fiber.

Choose vegetables in a rainbow of colors, especially dark green (e.g., broccoli, spinach, romaine lettuce, bok choy, kale) and orange (e.g., carrots, sweet potatoes, winter squash).

(Review the Sweet Potatoes Nutrition Facts label from lesson 10 in the book, and discuss serving sizes and nutrients.)

One serving of vegetables is 1/2 cup of cooked or raw vegetables (like baby carrots or green beans), or 1 cup of raw leafy vegetables.

Grains: *Get Whole Grains and Sack the Sugar!*

- **Grains contain carbohydrate, fiber, and some vitamins and minerals.**
- **Whole grains are the healthiest choices.**
- **Choose foods that list a whole grain as the first ingredient and watch out for added sugar in the ingredients list.**
- **Examples of whole-grain foods include 100% whole-wheat bread and pasta, steel-cut oatmeal, whole-grain crackers and breakfast cereals, barley, brown rice, and quinoa.**

- Basic nutrients from the grains category are carbohydrate, fiber, and some vitamins and minerals.
- In the grains group, the healthiest choices are whole grains, the less processed the better. Whole grains are a much better choice than refined grains (such as white bread, white rice, and white pasta) because the refining process breaks down the intact grain and strips away many beneficial nutrients. Even though refined grains are fortified with vitamins and minerals in the U.S. and many other countries, fortification is not standard everywhere, and fortification does not replace all of the lost nutrients.
- Another problem with refined grains is that they get digested and absorbed very quickly, which can cause blood sugar levels to spike. In response, the body quickly takes up sugar from the blood and puts it into storage (in muscle, fat, and the liver) to bring sugar levels down to normal. Working so quickly may cause the body to overshoot things however, making blood sugar levels a bit lower than they should be. This can cause feelings of false hunger (even after a big meal) and tiredness.
- Choose foods that list a whole grain as the first ingredient and that keep the grain as intact as possible (e.g., choose coarsely ground steel-cut oatmeal rather than instant oatmeal for breakfast).
- Also watch out for added sugar in the ingredient list, which can be labeled as fructose, glucose, sucrose, corn syrup, and honey, among others. Many grain-based foods, especially cereals, are marketed as being “made with

whole grains,” and often list a whole grain as the first ingredient—yet added sugar is also included at the top of the ingredients list, or it appears multiple times throughout the list.

- Other examples of whole grains include 100% whole-wheat bread and pasta, whole-grain crackers and breakfast cereals, barley, brown rice, and quinoa.

Protein

- **Contain protein, B vitamins, and minerals responsible for functions like building and repairing muscles and tissue.**
- **Choose healthy sources of protein, including nuts, seeds, beans, and peas, as well as fish, poultry, and vegetarian alternatives.**

Foods in the protein group supply protein, B vitamins, iron, and zinc. They are primarily responsible for building and repairing muscles and tissues, digesting nutrients, and improving immunity and blood quality.

Choose healthy sources of protein, including nuts, seeds, beans, and peas, as well as fish, poultry, and vegetarian alternatives.

(Review the Chicken Nutrition Facts label in lesson 10, and discuss nutrients.)

Dairy

- **Dairy foods are needed in lower proportions than foods from the other groups**
- **Good source of calcium; also contains protein, riboflavin, and vitamins A and D**
- **Promotes strong bones and healthy teeth**
- **Choose unflavored milk, plain yogurt, or unsweetened dairy foods**
- **Those who cannot consume dairy can choose lactose-free milk or calcium-fortified nondairy alternatives such as unflavored and unsweetened rice milk or soy milk**

Foods from the dairy group are needed in lower proportions than foods from the other groups, but milk and other dairy foods are common sources of calcium and vitamin D. They also supply protein, riboflavin, and vitamins A and D (if fortified), and help promote strong bones and healthy teeth.

Best-choices include unflavored milk, plain yogurt, and other unsweetened dairy foods. People who cannot consume dairy can choose lactose-free milk or calcium-fortified nondairy alternatives such as unflavored and unsweetened rice milk or soy milk.

Note that the optimal intake of dairy products has yet to be determined and the research is still developing.

(To review the most up-to-date evidence on dairy consumption, you can visit or point participants to the Kid's Healthy Eating Plate web page on The Nutrition Source: www.hsph.harvard.edu/nutritionsource/kids-healthy-eating-plate.)

(Review the Milk Nutrition Facts label in lesson 10, and discuss nutrients.)

Combination and Processed Foods

- **Combination foods contain foods from more than one food group.**
- **Processed foods are prepared and packaged by manufacturers.**

Combination foods contain foods from more than one food group (e.g., a brown rice and bean burrito with cheese: the tortilla and brown rice are in the grains group; the beans are in the protein group; and the cheese is in the dairy group).

Processed foods are those prepared and packaged by manufacturers. Salt and other sodium-containing ingredients are often used in food processing.

A Balanced Diet

- **No single food supplies all needed nutrients.**
- **Choose a variety of foods from each group.**
- **Follow these guidelines to make the best choices:**
 - Choose colorful fruits and vegetables instead of junk food.
 - Choose whole-grain foods and limit foods with added sugar.
 - Make the switch from sugary drinks to water.
 - Choose foods with healthy fat, limit foods high in saturated fat, and avoid foods with trans fat.

No single food can supply all the nutrients needed to maintain good health. Similarly, not all foods in the same group contain the same nutrients. Oranges, for instance, do not contain much vitamin A, but cantaloupe is a good source of this vitamin.

Choosing foods from all the food groups each day and choosing a variety of best-choice foods within each food group will help you meet your nutritional requirements. It will also make your diet more interesting!

To make the best choices within each food group, remember the Kid's Healthy Eating Plate and these guidelines from the Principles of Healthy Living:

- Choose colorful fruits and vegetables instead of junk food (especially dark-green and orange vegetables).
- Choose whole-grain foods and limit foods with added sugar.
- Make the switch from sugary drinks to water.
- Choose foods with healthy fat, limit foods high in saturated fat, and avoid foods with trans fat.

Energy Requirements

- **Adults**
 - Women need 1,800 to 2,000 calories per day.
 - Men need 2,200 to 2,400 calories per day.
 - Adults need more if they are very active.
- **Children**
 - Girls aged 9 to 13 need 1,600 calories per day.
 - Boys aged 9 to 13 need 1,800 calories per day.
 - Children may need 400 calories more each day if they are moderately active.
 - Very active boys and girls may need even more.

When planning a balanced diet, we must also keep in mind the energy requirements for adults and children.

Most women need 1,800 to 2,000 calories per day, and most men need 2,200 to 2,400 calories per day; people need more if they are very active.

Girls aged 9 to 13 need about 1,600 calories per day, while boys aged 9 to 13 need 1,800 calories per day; girls and boys who are moderately physically active may need up to 2,000 calories per day (girls) and 2,200 calories per day (boys), and very active girls and boys (those who do the equivalent of walking more than 3 miles, or 5 kilometers, per day in addition to participating in regular daily activities) may need to consume even more.

It's crucial to note that while calories are important, it's not just how many calories you eat, but where they come from that matters as well. Energy balance is important, but it's also key to make sure that your energy from food (calories) come from nutritious, healthy sources.

Reading Food Labels

Nutrition Facts	
Serving Size: 1/8 cup (31g) about 8 pieces	Serving size
Servings Per Container: 6	Servings per container
Amount Per Serving	
Calories 160	Calories from Fat 80
% Daily Value*	
Total Fat 9g	14%
Saturated Fat 3g	15%
Trans Fat 0g	
Cholesterol 0mg	0%
Potassium 90mg	3%
Sodium 160mg	7%
Total Carbohydrate 18g	6%
Dietary Fiber 0g	0%
Sugars 4g	
Protein 2g	
Vitamin A 0%	Vitamin C 0%
Calcium 0%	Iron 0%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
Calories	2,000 2,500
Total Fat	Less than 65g 80g
Sat. Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

The Nutrition Facts food label is printed on nearly all packaged foods. Reading these labels is an effective way to compare the saturated fat, trans fat, fiber, and other nutrient contents of various foods.

The food label uses a daily diet of 2,000 calories as a reference point for the number of calories a person needs each day. But you may require more or less than 2,000 calories, depending on your age, gender, level of physical activity, and intention to maintain, lose, or gain weight.

To calculate the energy needs for an adult, visit <https://www.bcm.edu/cnrc-apps/caloriesneed.cfm>.

Understanding % Daily Value

- **The % Daily Value (% DV) tells you whether a food is low or high in a nutrient.**
- **Consider saturated fat:**
 - Food with % DV ≤ 5 is *low* in saturated fat.
 - Food with % DV ≥ 20 is *high* in saturated fat.
- **Follow the daily goal for saturated fat:**
 - Choose foods that together have $<100\%$ of the DV for saturated fat.
 - It is easier to eat a healthy diet by choosing foods that have $\leq 5\%$ of the DV for saturated fat.

The % Daily Value (% DV) that appears on food labels lets you find out whether a food is high or low in a nutrient.

Regarding saturated fat, if the % DV is 5 or less for an individual food, then the food is considered low in saturated fat. The more foods chosen that have a % DV of 5 or less for saturated fat, the easier it is to eat a healthier diet.

The overall daily goal is to select foods that together have less than 100% of the DV for saturated fat.

The same rule applies to the % DV for sodium.

% Daily Value for Other Nutrients

- **% DV for vitamins, iron, calcium**
 - Food with % DV ≤ 5 is *low* in a nutrient.
 - Food with % DV ≥ 20 is *high* in a nutrient.
- **Daily goal for vitamins, iron, calcium**
 - Choose foods that together reach 100% of the DV for these beneficial nutrients.
 - It is easier to reach 100% DV by choosing foods that are high in these nutrients.

The % DV also indicates whether a food is high or low in other nutrients like vitamins A and C, calcium, and iron.

If the % DV for any of these nutrients is 5 or less, the food is considered low in that nutrient.

The overall daily goal is to select foods that together reach 100% of the DV for these nutrients.

Trans Fat on the Food Label

- **No % DV is listed for trans fat, because it is unclear if there is any safe level.**
- **It is best to avoid trans fat.**
 - Look for “0 grams trans fat” on food label.
 - And
 - Check ingredients list for partially hydrogenated oil.
 - Switch to products that do not contain trans fat or partially hydrogenated oil.

There is no % DV for trans fat, because it is unclear if there is any safe level of intake. The consumption of trans fat is strongly associated with increased risk of coronary heart disease, so it is best to avoid trans fat from partially hydrogenated oils.

Food labels list the number of grams of trans fat per serving. Products made with partially hydrogenated oils can still claim “0 grams trans fat” if they contain less than 0.5 grams of trans fat per serving. These small amounts of trans fat can add up over the course of the day. So watch out for the words *partially hydrogenated vegetable oil** in the ingredients list.

Switch to an alternative product that does not contain partially hydrogenated oil, especially if it is a product you consume regularly.

*(*Note that at the time of publication, the FDA banned the use of partially hydrogenated oils in food products, giving manufacturers three years to comply with the decision. This messaging on avoiding trans fat from partially hydrogenated oils remains important guidance during the transitional period.)*

Calculating % Daily Value for Saturated Fat

- **Divide the number of grams of saturated fat per serving by 22 and multiply by 100.**
- **Here is an example:**
 - 1 cup of whole milk has 5 grams of saturated fat.
 - $(5 \div 22) \times 100 = 23\%$ DV for saturated fat.

How is % DV for saturated fat calculated?

Although all food labels provide the % DV for nutrients, it is good to know how these values are calculated. The following instructions describe how the % DV for saturated fat is calculated:

For a particular food, divide the number of grams of saturated fat per serving by 22 and multiply by 100. (The number 22 is used because health experts recommend that a person eating a 2,000-calorie daily diet consume no more than 22 grams of saturated fat each day.)

For example, 1 cup of whole milk has 5 grams of saturated fat, and so $(5 \div 22) \times 100 = 23\%$.

Notice that 5 grams does not sound like much, but for a person who requires 2,000 calories per day, just 1 cup of whole milk contains 23% of the DV for saturated fat.

Adding Up the Saturated Fat

Snack foods	% DV saturated fat
Nonfat milk	0%
Apple slices	0%
Water	0%
Chocolate chip cookie (1)	16%
Small fast-food cheeseburger	32%
Vanilla milkshake (12 oz.)	45%
Spinach	0%
Roasted cashews (1/4 cup)	11%
Total	104%

We are going to do an exercise focusing on the % DV for saturated fat.

(Pass out photocopied food labels or the Percent Daily Values of Saturated Fat and Grams of Trans Fat for Fast Food chart from worksheet 5.1 in the Reproducibles folder of the Web Resource.)

Locate the calories per serving, the amount of saturated fat grams per serving, and the % DV for saturated fat as listed on the food label. Let's determine which foods when combined add up to 100% of the recommended daily maximum of saturated fat. This is done by adding the % DVs for saturated fat of the foods until the combined % DVs equal 100%. It may take only 2 to 4 foods, depending on their saturated fat content.

(Take suggestions from the participants or allow participants to work together in groups.)

(The example on the slide shows that you can get a day's worth of saturated fat from one small fast-food cheeseburger and a vanilla milkshake, a chocolate chip cookie, and 1/4 cup of roasted cashews.)

You can use this approach with each of the nutrients whose % DV appears on food labels. For vitamins and minerals, eat foods totaling to at least 100% of the DV. For saturated fat, eat less than 100% of the DV.

Tour de Health

(Distribute the Tour de Health Scorecard, several small slips of paper, and markers to each group. Shuffle the deck of Tour de Health Game Cards, and place it facedown on the top of a table.)

We will now play a healthy living game that is part of the *Eat Well & Keep Moving* classroom lessons. Let's review the directions and play a round:

Each group gets a scorecard and a marker. I (*the trainer*) will draw one card at a time, in order from the top of the deck, and read the category of the question (e.g., Whole Grains, Keep Moving). I will then read the question to all of the groups. Questions are either multiple choice or true or false. Each group should decide on a response to the question and write down the answer on a slip of paper. I will ask each group for its response. When a group answers correctly, it will receive 1, 2, or 3 points, depending on the value of the question. Each group enters its points on its scorecard in the related category column. For example, if a group earns 2 points for answering a Keep Moving question, it enters 2 points in the Keep Moving column.

(Winning the game)

(Option one: Play can be timed for 15 or 20 minutes, and the group with the most points at the end wins.)

(Option two: First group to get 20 total points wins.)

(If you like you may offer incentives or prizes [pens, T-shirts, gift certificates, trinkets, or hats] to the winners.)



Questions?

(After the conclusion of Tour de Health, ask participants if they have any final questions.)

The next *Eat Well & Keep Moving* session will discuss the safe workout.