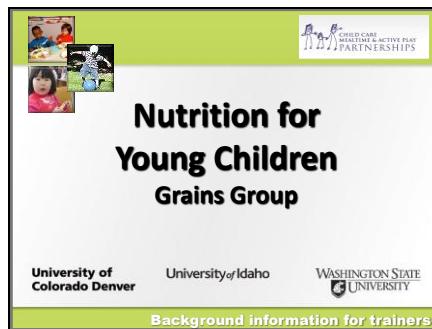


BACKGROUND INFORMATION FOR TRAINERS

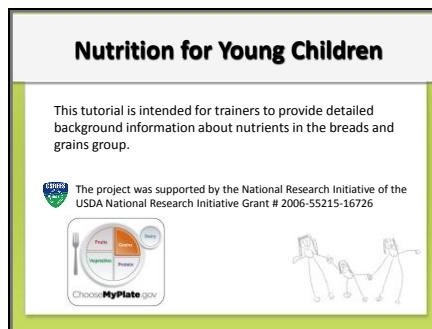
Slide 1



The cover slide features a green header with the Child Care Mealtime & Active Play Partnerships logo. Below the header is a small image of children eating. The main title is "Nutrition for Young Children" followed by "Grains Group". Logos for the University of Colorado Denver, University of Idaho, and Washington State University are at the bottom, along with the text "Background information for trainers".

You are viewing a presentation on the nutrition needs for young children. This presentation will provide the information you need to offer children food that will best support their growth and development. **The notes section is intended to provide background information for trainers (not necessarily for communication to child care staff.)**

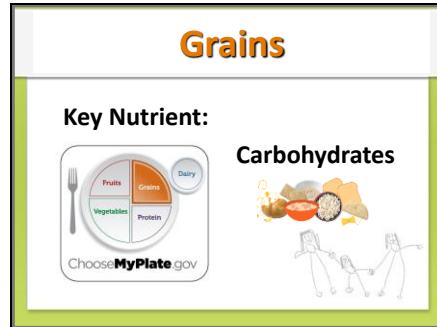
Slide 2



This slide continues the theme from the first slide, featuring the same header and logos. It includes a statement about the tutorial being for trainers, a mention of USDA support, and a graphic of the MyPlate food guide.

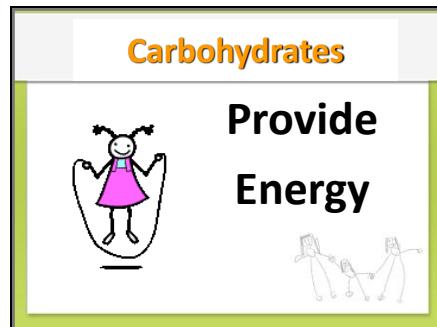
The first food group you are reviewing is the grains group. The types of foods that fall in the grains group are items such as pasta, rice, and crackers to name a few. A key nutrient found in the grains group is carbohydrates.

Slide 3



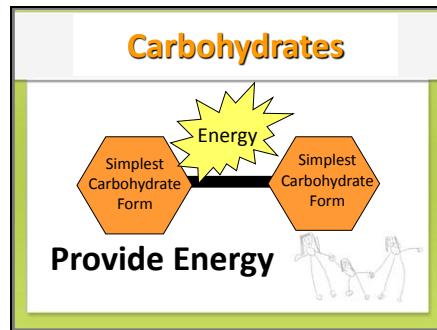
The first food group you are reviewing is the grains group. The types of foods that fall in the grains group are items such as pasta, rice, and crackers to name a few. A key nutrient found in the grains group is carbohydrates.

Slide 4



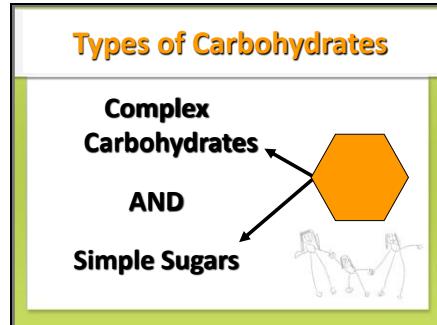
The primary role of the carbohydrate nutrient is to provide children (and adults) with energy. The energy you get from carbohydrates is used by the body for all activities (such as breathing, thinking, or walking.) How exactly do you get energy from carbohydrates?

Slide 5



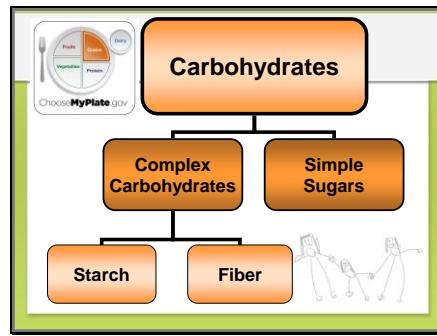
You get energy from carbohydrates by breaking down the carbohydrates into their simplest carbohydrate form (in other words, very tiny pieces we term molecules.) Once the body has broken the carbohydrates down to their simplest form, the bonds that hold the forms together, are broken and energy is released.

Slide 6



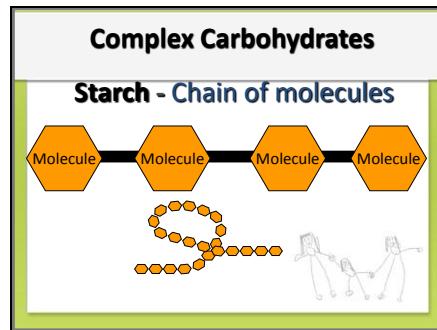
Ultimately, all carbohydrate foods are made up of carbohydrate molecules. There are two main categories of carbohydrate molecules: complex carbohydrates and simple sugars. In these slides, an orange hexagon shape is used to depict a carbohydrate molecule.

Slide 7



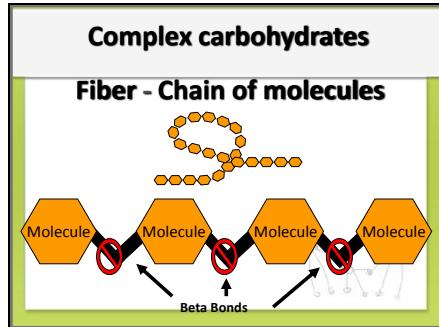
Taking it one step further there are two types of complex carbohydrates, which are starch and fiber.

Slide 8



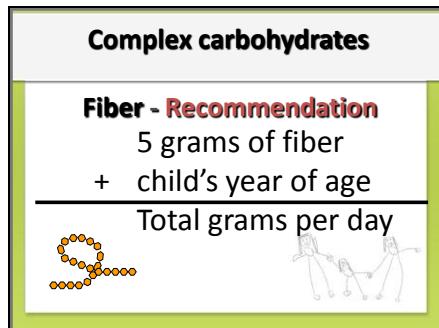
Starch consists of very long chains of carbohydrates molecules. Because starch consists of long chains, there is a greater number of bonds that can be broken to provide energy. Examples of starch foods are pasta, rice, potatoes, and breads.

Slide 9



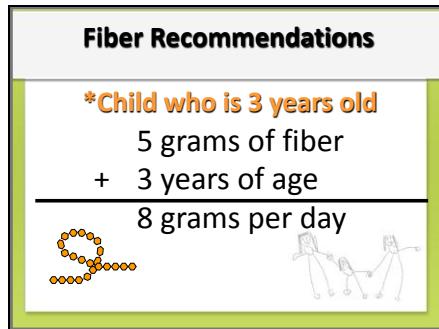
The second type of complex carbohydrates is fiber. Fiber, like starch, also consists of chains of carbohydrate molecules. Fiber does however have a unique characteristic. The bonds (called Beta bonds) between each molecule can not be broken. Since the bonds can not be broken, the body is not able to digest and absorb the molecules. This unique characteristic offers many health benefits for children such as maintains a healthy digestive tract, helps prevent constipation and helps manage blood glucose levels.

Slide 10



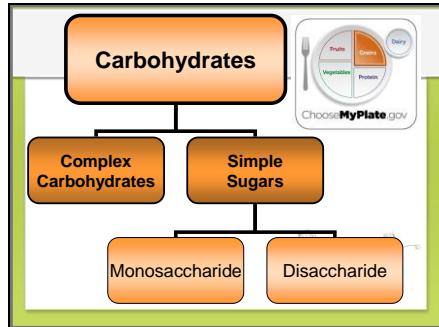
Since fiber offers so many health benefits for children, the recommended amount of fiber children should consume each day is 5 grams of fiber plus their year of age.

Slide 11



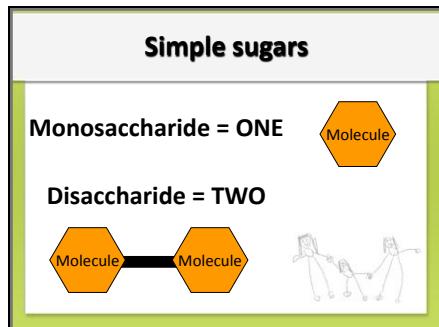
For example: A child who is 3 years old would need roughly 8 grams of fiber because you add 5 grams of fiber to their year of age for a total of 8 grams of fiber per day.

Slide 12



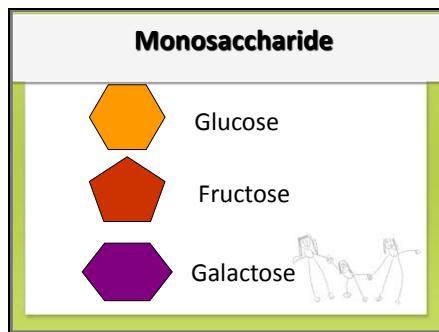
Now that you have the knowledge of the two types of complex carbohydrates, starch and fiber, you will learn about the two types of simple sugars: monosaccharides and disaccharides.

Slide 13



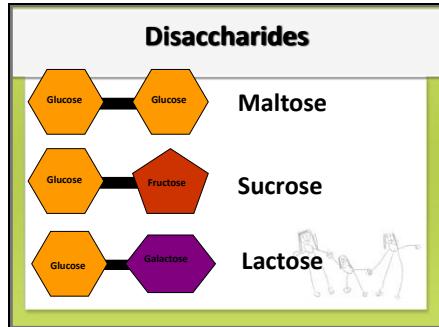
Monosaccharides is the term for a single molecule of sugar and disaccharide is the term for two molecules of sugar. Examples of simple sugars are granulated sugar, corn syrup, and honey.

Slide 14



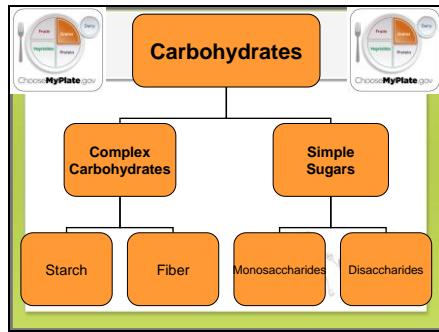
There are three types of monosaccharides; glucose, fructose, and galactose. Glucose is the single sugar commonly found in most carbohydrate dense foods. Fructose is referred to as the “fruit sugar” and is found abundantly in fruits and honey. Galactose is paired with glucose to form the sugar in milk.

Slide 15



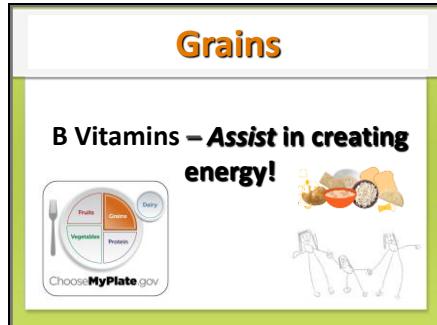
There are also three types of disaccharides; maltose, sucrose, and lactose. Maltose is made up of two glucose molecules and is commonly referred to as malt sugar. Sucrose consists of glucose and fructose. Sucrose is best known as table sugar, and occurs in many fruits, some vegetables, and grains. Lactose is made up of glucose and galactose. Lactose is referred to as “milk sugar” because it is the primary sugar found in milk products.

Slide 16



Before you continue the review of other nutrients found in the grains group, let's recap what you learned about carbohydrates. First, carbohydrates provide energy, and the energy comes from either complex carbohydrates or simple sugars. You learned about two types of complex carbohydrates, starch and fiber. You also learned about two types of simple sugars, monosaccharides and disaccharides. With this understanding of carbohydrates, you will now learn about a few other nutrients in the grains group.

Slide 17



Grains

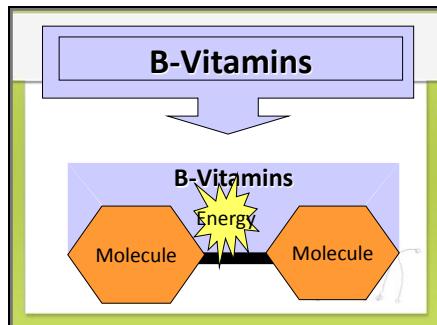
B Vitamins – Assist in creating energy!

Choose MyPlate.gov

The slide features a MyPlate graphic where the grains group is highlighted in orange. Below it, a text box states "B Vitamins – Assist in creating energy!" with a small illustration of a family. A small MyPlate graphic is also present.

Another group of nutrients important for children's growth and development present in the grains group is the B-vitamin complex. Contrary to popular belief, the B-vitamins themselves do not provide energy. Rather, they must be present in order for the body to break down carbohydrates for energy. B-vitamins include vitamin B6, niacin, folate, pantothenic acid, riboflavin, and thiamin.

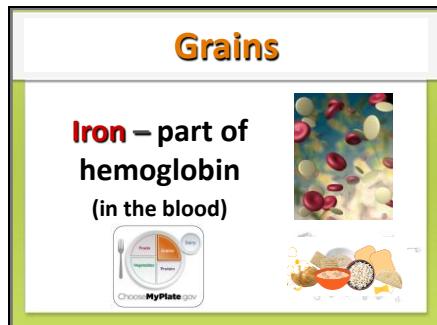
Slide 18



Lets take a closer look at how the B-vitamins assist in creating energy. To do this you must first recall the previous slides and how you get energy from two molecules. When the bond between the two molecules is broken, energy is released.

The role of the B-vitamins are to assist in the chemical reactions that breaks the bonds between the two molecules. Without the B-vitamins, the chemical reactions cannot occur, and energy cannot be released.

Slide 19



Grains

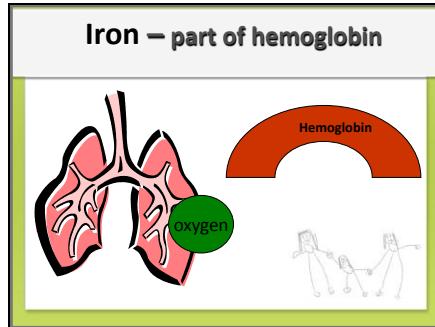
Iron – part of hemoglobin (in the blood)

Choose MyPlate.gov

The slide features a MyPlate graphic where the grains group is highlighted in orange. Below it, a text box states "Iron – part of hemoglobin (in the blood)" with a small illustration of various grains and a MyPlate graphic.

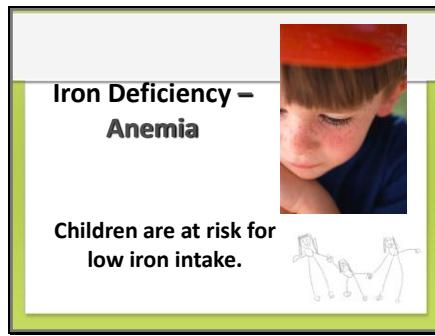
Another nutrient found in the grains group through fortification is iron. Iron is a part of hemoglobin, which is the oxygen carrying protein of red blood cells.

Slide 20



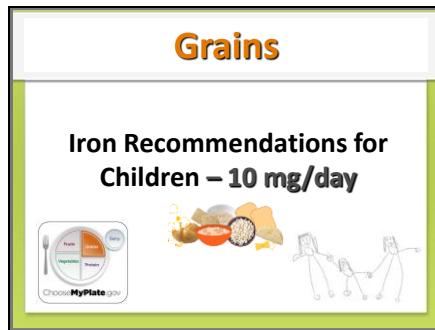
In other words, if iron is not available, hemoglobin cannot be made, and oxygen can not be carried to the body's tissues. If the tissues do not get enough oxygen, fatigue occurs.

Slide 21



Anemia is the condition when iron stores are low, resulting in low hemoglobin in the blood. Children are at an increased risk for a low iron intake. The first sign of a child may have if their intake of iron is low is a decreased ability to concentrate. If iron intake continues to be low, growth and development will be hindered.

Slide 22



The recommended amount of iron for young children is roughly 10 mg/day, depending on age.

The grains group is one source of iron. The amount of iron in many foods in the grains group has increased through fortification. This is the process of adding nutrients to food products during processing. An example of a food with iron fortification is breakfast cereals.

Slide 23

How to communicate information about nutrition?

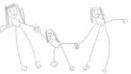



Slide 24

Appropriate Communication with Children

Concrete vs. Abstract

- Give children information appropriate to their cognitive developmental stage!



Piaget describes stages in children's cognitive development: sensorimotor stage; preoperational stage; concrete operational, and formal operational or abstract stage. Early childhood involves the first three stages, meaning children are not developmentally ready for abstract information. Unfortunately, a lot of nutrition information is abstract such as vitamins and minerals.

Slide 25

Child Appropriate Phrases

- Concrete information: What nutrients do for the body!
 - Help you run.
 - Keep your hair shiny.
 - Give you energy to play.



Appropriate nutrition information for young children is concrete. Therefore, information about nutrition for trainers will provide phrases that are concrete. Appropriate phrases will be provided in the training materials for each food group topic.