What's On Your Plate?
## Welcome and Introduction
- Page 3

## Objectives
- Page 6

## Obesity
- Page 5

## Institute of Medicine
- Page 7

## 2010 Dietary Guidelines
- Page 10

## Creditable Meal Requirements
- Page 11

## Milk
- Page 12

## Whole Grains
- Page 15

## Reading Labels
- Page 33

## Making Whole Grains Available
- Page 36

## Nutrition Education with Whole Grains
- Page 44

## Conclusion
- Page 45

## Contact Information
- Page 46
What’s On Your Plate?

Breads, Grains, and
Milk
Activity 1: Whole Grain Unscramble

**Supplies:**
1. “Whole Grain Unscramble” handout in the Participant Booklet

**Procedure:**
1. Complete the “Whole Grain Unscramble” Activity
Objectives

By the end of this lesson, you will:

- Learn how small changes can improve the nutritional quality of what you provide for the children
- Gain knowledge about why, where, and how to select whole grain products
- Understand the long term health effects of those small changes
Obesity

From 1972 to 2008 (36 years) the percentage of children aged two to nineteen years who are obese has tripled, from 6% to 18%.

Source: CDC, National Center for Health Statistics, National Health and Nutrition Examination Surveys.
The concern is that if obesity continues to increase, then the life expectancy of our children and grandchildren will be less than it is for us today!

**Consequences of Obesity**

- Heart disease
- High blood pressure
- Cancer
- Diabetes
- Asthma
- Low self-esteem
- Depression
Other guidance will be issued in 2011 & 2012 and final regulations are expected in 2013.

*Note to trainer: The Healthy, Hunger-Free Kids Act requires USDA to publish the CACFP Meal Patterns proposed rule by no later than 2012 with a final rule by Fall of 2013.*

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**The Institute of Medicine (IOM)**

- A 12 member panel tasked with reviewing and assessing the nutritional needs of CACFP's target populations and recommending revisions to the meal patterns.
- The final report from the IOM will be released in November 2011.
Fill in the blanks in the Participant Booklet.

The 2010 Dietary Guidelines for Americans were released at a Joint Press Conference on Monday, January, 31, 2011. This is another important part of CACFP's Meal Requirements.

### 2010 Dietary Guidelines

The Dietary Guidelines for Americans are the cornerstone of Federal nutrition policy and nutrition education activities.

Some of the recommendations include:
+ Avoiding oversized portions
+ Make half your plate fruits and vegetables
+ Drink water instead of sugary drinks
+ Choose a variety of proteins including seafood, lean meat, poultry, beans and peas, and unsalted nuts and seeds
+ Switch to fat-free or low-fat (1%) milk
+ Make at least half of total grains whole grains
Providing nutritious components in a meal helps children learn how to eat healthy. Why do you think this is important? Prevention of obesity, general health, proper growth

The Child and Adult Care Food Program supports the nutrition and health of the nation’s most vulnerable individuals – more than 3 million infants and children and more than 114,000 impaired or older adults, primarily from low-income households. The meals and snacks provided by you on our program can account for the majority of food consumed by many of these individuals, so the quality of the foods provided has the potential to affect their diets substantially.

These are the current creditable meal requirements.

The two components on your plate that we are going discuss today are Milk and Bread/Grains. In other classes the other meal components (fruits, vegetables, and meats/meat alternatives) will be covered.
Skim milk is more nutrient dense than whole milk. That means it has the same amount of protein, calcium, and vitamins with less calories and fat.

**Milk**

- Milk - fat-free (skim) or low-fat (1%) milk to all children 2 years or older
- Whole Milk should be provided for children 12 to 24 months old. The extra fat is necessary for proper brain development.
Fill in the blanks in the Participant Booklet

**Low-Fat Milk**

- Contains vital nutrients including calcium, potassium, vitamin D, and protein
- Helps maintain bone mass by keeping our bones and teeth strong and healthy
- Provides less saturated fat than whole milk or 2% milk, helping to lower the risk of heart disease and stroke
- Provides a lower amount of calories than whole milk
In many milk taste tests, results found that most people could not tell the difference between the lower fat milks.

Milk is a required component for breakfast and lunch and/or supper.
The second component that will be covered in today’s class is breads/grains.

All grains start out as whole grains. If, after milling, they keep all three parts of the original grain, the starchy endosperm, the fiber-rich bran, and the germ, in their original proportions, they still qualify as whole grains.
Why Serve Whole Grains?

Whole Grains contain all major nutrient groups:

+ Carbohydrates – energy for the body
+ Protein – whole grains are 10 - 15% protein
+ Fats – contained in the germ
+ Vitamins – including B vitamins (thiamin, niacin, riboflavin and folic acid)
+ Minerals – including iron, zinc, copper, and antioxidants

*Fill in the blanks in the Participant Booklet*
This has been recommended in the 2010 Dietary Guidelines, on the Food Guide Pyramid and MyPlate, etc., for a number of years. Expect it to be part of the new meal guidelines in the future.

Benefits of Whole Grains

- Provide fiber in varying amounts
- May help to maintain a healthy weight
- May reduce the risk of several chronic diseases (heart disease, diabetes, certain cancers)
Tips for Increasing Whole Grains

+ Gradually increase the number of whole grain bread/grains served each week.
+ \( \frac{1}{2} \) your bread/grains be whole grains.
+ Offer at least 1 whole grain per day.
Here are several examples of whole grains. The first column are those that are probably more common and the second column are those that are less common.

As you can see, there are many types of whole grains. They can be eaten as kernels in the way they are grown, they can be popped, cracked, split, and they can be ground or milled into flour to be used as an ingredient in products such as breads, cereals and other processed foods. As long as all three parts of the kernel are retained, these are all whole grain foods.

Anything made with oats or oat flour and all types of oatmeal whether it is instant, slow cooking or flavored, is a whole grain.

Let's take a minute to compare some of these whole grains to their refined counterparts. For example, whole wheat flour is an example of a whole grain ingredient. What is an example of a refined wheat? *White flour, regular pasta*

Brown rice is a whole grain food. What is an example of a refined rice? *White rice, Minute Rice*

Whole grain corn or whole cornmeal is an example of a whole grain ingredient. An example of a product made from this is corn tortillas. Can you think of an example of refined corn? *Regular Corn Meal*

Some cornbread is made from regular cornmeal which is a refined grain – that is, one which does not contain all three parts of the grain. Cornbread can be made from Whole Grain Cornmeal and then it is a whole grain. When checking make sure that you look at the first ingredient on the ingredient label. *(Note to trainers, corn tortillas often list “corn treated with lime” as the first ingredient. The lime acts as a stabilizer. Although the word “whole” is not used, corn tortillas are almost always a whole grain product.)*
Brown rice is a whole grain rice that isn’t milled as much as white rice, so it retains the bran and germ. That makes brown rice more fiber-rich, nutritious, and chewy. Unfortunately, it doesn’t perform as well as white rice in some recipes because it is not as fluffy or tender. It takes about twice as long to cook and has a much shorter shelf life because of the oil in the germ. Keep it in a cool, dark place for not more than three months. You can also refrigerate it for longer shelf life.

Wild rice is sometimes called Indian rice and comes from a grass seed. Wild rice can be expensive, especially when harvested in the “Wild”. Around the great lakes, rice gatherers use sticks to brush the grain off the stalks right into their canoe. The plant is a perennial and harvesters can return to the same area year after year to harvest the rice. Wild rice is about 5 times more expensive than the average long grain rice.
Bulgur consists of whole wheat kernels that have been steamed then dried and then cracked into grits. Fine or medium grind is most commonly used for tabbouleh, which is a Southwest Asian salad made with bulgur wheat and finely chopped tomatoes with mint and parsley, and coarse or medium for pilaf. Bulgur is a good source of iron and magnesium.
Anything made with oats or oat flour and all types of oatmeal, whether it is instant, slow cooking, or flavored, is a whole grain. Oats are a heart-healthy whole grain that can help decrease cholesterol. They are also an excellent source of iron, magnesium, phosphorus, zinc, copper, thiamin and folate. Look for steel cut oats, also known as oat groats or Irish oatmeal, which are less processed and have a delightful, chewy taste.
Differs from white flour in that all parts of the grain (bran, germ, and endosperm) are ground to make the flour. Whole wheat flour has a shorter shelf life than refined white flour. Though, if kept in the refrigerator it has a long shelf life. It is commonly added to white flour to use in recipes.

White Whole Wheat flour is another option that can be used. It is still whole wheat flour but has a lighter color and a milder flavor that may be more acceptable to children.
Amaranth has been grown for 8,000 years and survived as a weed. Some is now cultivated and is mostly sold in health food stores.
Buckwheat has an inedible black shell, which is removed before processing. The kernel (groat) is usually ground into a dark, gritty flour and is sometimes used to make pancakes.
Millet is one of the oldest known foods and was grown in China 2700BC. It is highly nutritious and non-glutinous. There are four major types of millet: pearl, foxtail, proso, and finger.
Muesli is a cereal based on uncooked rolled oats, fruit, and nuts. It was originally developed for patients in hospitals. A diet rich in fresh fruits and grains was an essential part of therapy.
Quinoa (keen-wah) is a grain that is high in protein, has a fluffy consistency, and a delicate, slightly nutty flavor. National Public Radio recently had a story that quinoa is being grown in Bolivia, where it is increasing in popularity and price and bettering the life of farmers.
Sorghum is the third most important cereal crop grown in the United States and the fifth in the World. It is used for syrup and animal feed.
Whole grain barley can be used in a number of delicious and nutritious ways. Hulled barley, or barley groats, is the least processed form of barley and is used mainly for cereal. Pearled barley is polished so that it cooks faster, but it means that it's not a whole grain. All the same, it is an excellent source of fiber and a good source of iron.
Whole rye is a cereal grain. It is closely related to barley and wheat. Rye is most commonly used in breads such as pumpernickel.
Marketers know that whole grains are better for you than refined products so they try hard to trick you into thinking that their refined products are made with whole grains. You really have to know what to look for and even then, they might succeed in tricking you. Here are some commonly used terms you’ll see on breads, crackers, and a few other processed products.

**Activity 2: Don’t Be Fooled**

**Supplies:**
1. “Don’t Be Fooled!” handout in the Participant Booklet

**Procedure:**
1. Complete the “Don’t Be Fooled!” Activity
Crushed Wheat Bread with grains sprinkled on top are not necessarily a whole grain. Brown breads are not necessarily whole grains, they often have added food coloring or molasses (dark sugar).

In order to be sure that you are getting a true whole grain and not a refined grain, what should you look for? The word 'whole' or a known whole grain, such as oats, rye, etc., listed as the first ingredient.
Fill in the blanks in the Participant Booklet

The Whole Grains Council has two stamps available for products that meet their requirements.

This is a voluntary effort by food companies and can be found on more than 400 grain products of council members. A note to the savvy consumer: One company has made its serving two slices of bread in order to meet the whole grain stamp requirement.

This stamp may be a useful tool to help easily identify whole grains; however, keep in mind this is company sponsored and not an official standard. Although these are becoming more and more popular among manufacturers, they are optional. That means that a product may be a good or excellent source even though it doesn’t have one of these stamps. Therefore you still need to read the labels. Remember that the most predominant ingredient (that is, the ingredient that the product has the largest amount of), is listed first.

Foods are considered a “good” source of whole grains if they have 8 to 15 grams of whole grains per serving. If they meet this requirement, the package may display the first stamp shown here.

Foods with 16 grams or more of whole grains per servings are considered “excellent” sources and might have the second stamp shown here. As you can see they are very similar. The numbers under the words WHOLE GRAIN are different and the excellent source stamp has a 100% banner across the wheat.

Can a product have this stamp even if the 1st ingredient is not whole grain? (yes)
Activity 3: Are These Whole Grains?

Supplies:
1. “Are These Whole Grains?” handout in the Participant Booklet.

Procedure:
1. Complete the “Are These Whole Grains?” Activity and use the Participant Booklet to complete the activity. List the name of the product, the 1st ingredient from the ingredient list, and whether or not it is a whole grain (yes/no)
How many of your sites prepare bread/grain products from scratch?

You can purchase whole grain foods and you can make your own. More and more whole grain foods are becoming available. The quality has improved over time and the quality of some products, for example whole wheat pasta, varies quite a bit from one brand to another. So if you tried something, for example a whole wheat pasta, five years ago and didn’t like it, it is probably time to try it again. If you tried to get whole wheat pizza dough three years ago and couldn’t, don’t assume that you can’t get it now. Even if you can’t get it, keep asking. The more we ask, the more we will be heard and the more likely our suppliers are to make these products available for us.

If you make your own whole grain products, there are several ways you can add whole grains to existing recipes and we’ll look at a few ideas in a minute. You can also substitute whole wheat flour for white flour in current recipes or you might choose to introduce new recipes.
Here are some whole grain products that you can purchase. Some are easier to get than others but the products are out there.

- Cereal, ready to eat and cooked
- Tortillas, taco shells
- Bread, rolls, buns, pita pockets
- Bagels, muffins
- Crackers, cookies
- Pasta
- Pancakes, waffles
- Cornbread
- Brown rice
- Granola bars
- Trail mix with whole grain cereal, fruit, nuts
Here are some tips for purchasing whole grain foods.

First, do not assume that they're all the same. We discussed the whole wheat pasta example already. Bakers need to realize that each time flour is milled, it comes out a little bit different. Sometimes it is more noticeable than others but the moisture content will not always be exactly the same. Great bakers know how to adjust for this.

Second, as you already know, you need to read the labels carefully. Why is this? In order to be sure that you are getting a true whole grain and not a refined grain. What should you look for? The word 'whole' or a known whole grain, such as oats, rye, etc., listed as the first ingredient. Beware of salespeople who tell you that a product contains whole grains. Ask for more specific information and/or ask them to back up their statements by sending you a copy of the label before you place the order.

Third, you should try to order only what you need before the next delivery. Why do you think this is? Because whole grains do not store as well (last as long) as refined grains. Whole grain flour should be stored in the freezer (not the refrigerator) and should be brought to room temperature before using in baked goods.
For those of you who bake from scratch, here are some tips for substituting whole wheat flour for white flour in your existing recipes.

When you are trying to alter an existing recipe, it’s always a good idea to start with small changes (usually a ¼ to a 1/3 measurement) and then build up if that works.

Some products handle whole grain flours better than others but there are things you can do to adjust for differences in flours. To improve the quality of quick breads, try using buttermilk for some or all of the liquid. You can also increase the baking powder by 1 teaspoon for every 3 cups of whole wheat flour.

When you substitute whole wheat flour in a yeast bread recipe, you can add some water, increase the yeast, and increase the rising time. It will take some experimentation but it’s worth a few trials to get a terrific recipe that your children and staff will enjoy and benefit from.
Another way to add whole grains to your menus is to add or substitute whole grains in existing recipes. For example, use oatmeal in your meatloaf recipe instead of bread crumbs. Add whole grains to soups, stews, casseroles and stir-fry. Use whole grain cracker crumbs as the breading on fish and chicken and make salads with whole grains such as whole wheat pasta salads or bulgur salads. Use brown rice or wild rice or a blend instead of some or all of your white rice. Try using a whole grain cereal as croutons on salad or use whole grain bread.

Look at your menus and look for ways you can increase the amount of whole grains that you offer but in ways that your children and staff will accept it.
Activity 4: Revise Your Menus

Supplies:
1. “Revise Your Menus” handout in the Participant Booklet

Procedure:
1. Choose a week of menus from the 4 weeks of menus provided in the Participant Booklet
2. Count how many breads/grains are served in that week and record the number at the bottom of the menu
3. Cross through existing breads/grains and replace them with a whole grain alternative
We have included whole grain recipes in the Participant Booklet. We encourage you to try some of these recipes in your CACFP Program meals!

Whole Grain Recipes

- Kansas Granola Cereal
- Whole Grain Cereal Parfait
- Peachy Pancakes
- Mexican Skillet Rice
- French Toast
- Pumpkin Chip Muffins
- Banana Wrap
Whole Grain Recipes

- Easy Chicken Nuggets
- Tortilla Pizza
- Brown Pancakes
- Rice Casserole
- Cranberry Orange Snack Mix
- Graham Crackers
Here are two excellent resources to teach about whole grains to the children in your program.

**Encourage Whole Grain Nutrition Activities in the classrooms**

- **Wheatland Traveling Resource Trunk**
  - Available from the Kansas Historical Society

- **Little Red Hen Bread**
  - Cooking Connection from the Care Connection
  - [www.nfsmi.org](http://www.nfsmi.org)
Through this class you have learned that emphasizing low fat milk and increasing whole grains will provide nutritious benefits to the children you serve. Use what you’ve learned to increase the amount of whole grains and milk that children and participants in your facility eat.
Contact Information

If you have any questions about this class or the Child and Adult Care Food Program contact:

Child Nutrition and Wellness
Kansas State Department of Education
785-296-2276
www.kn-eat.org