

# The Whole Truth About Grains

## **Target Audience:**

Adults

## **Topic Areas:**

Low Fat & Filling– Grain Foods

*The participants will:*

- Eat 2-4 ounces of high-fiber whole grain foods each day, like popcorn, brown rice, oatmeal, barley and whole-grain breads, cereals and pastas.
- Chose whole grain foods instead of refined grain foods.

# The Whole Truth About Grains

## Lesson Creators:

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## Purpose:

The purpose of this lesson is to encourage participants to choose high fiber whole grain foods for ½ of their grain choices.

## What The Nutrition Educator Needs To Know So That Participants' Questions Can Be Answered:

### Great Grains

Grain foods like bread, cereal, rice and pasta are often low in fat and high in carbohydrates. Carbohydrates are the main fuel for the body.<sup>1</sup> The body turns this fuel into energy which we call Calories. To find out how many ounces of grain foods you need to eat each day check out your personalized food plan by getting your Daily Food Plan at <http://www.choosemyplate.gov/supertracker-tools/daily-food-plans.html> . The amount you need depends on your age, your height, your weight, if you are male or female and how active you are. Each person can get their own personal food plan based on all these things. Your personal plan will tell you how many ounces you should eat each day. Most people will be told to eat between 4-6 ounces each day. Choose My Plate.gov tells us that we should get half of our grain servings (2-4 ounces) from whole grains each day.<sup>2</sup> See below for some grain foods that are the same as 1 ounce. For more complete information go to: <http://www.choosemyplate.gov/food-groups/grains.html> .

### Eating Whole Grains

Most people eat enough grain foods. Most people do not eat enough foods with **whole** grains. If someone eats a 2000 Calorie diet they will need to eat 6 ounces of grain foods each day. To make half of their grain foods whole grains, they will need to eat at least 3 ounces of whole grain foods each day.

One ounce of whole grains is: <sup>3,4</sup>

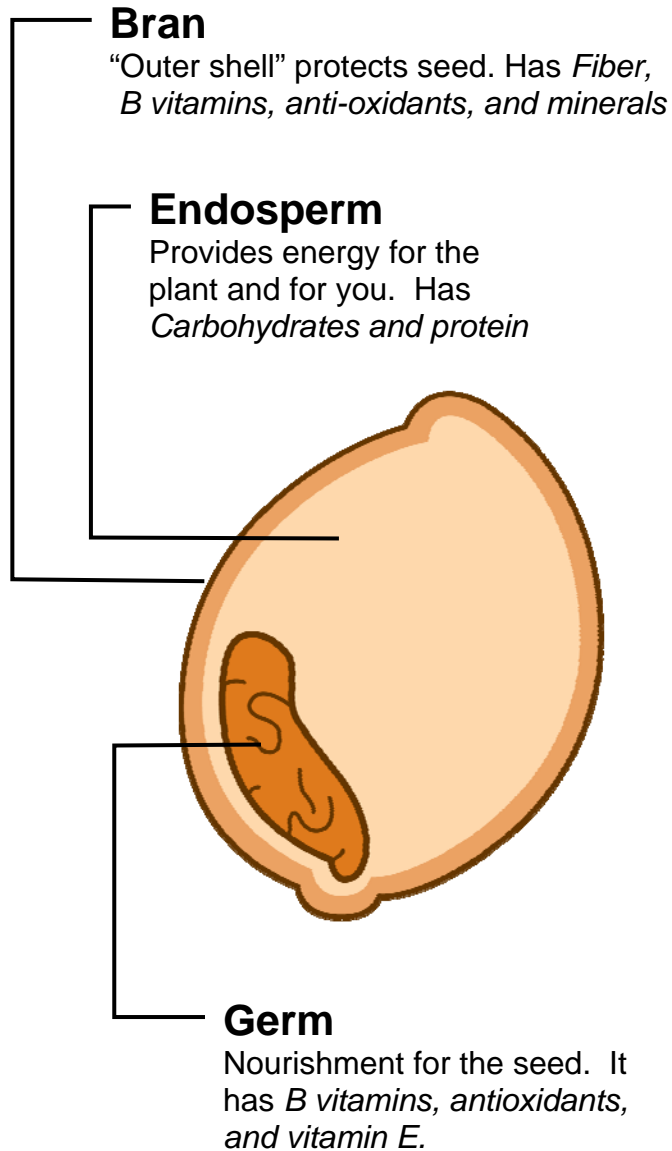
- 1 regular slice of whole wheat bread
- ½ cup of brown rice
- ½ cup of whole wheat pasta
- 6 inch whole wheat tortilla
- 4 ½ inch whole wheat pancake
- ½ whole wheat English muffin
- 3 cups popped popcorn
- 1 packet instant oatmeal
- 1 cup of ready-to-eat cereal

### **The 3 Parts of the Grain**

There are 3 parts to a whole grain. Each part of the grain has its own health benefit.

- The first part of the grain is the outer shell or bran. It protects the grain. It has some minerals, B vitamins, antioxidants and most of the fiber in the grain. Fiber keeps your digestive system healthy and moving smoothly. Minerals help your body work better. They help you digest food and help your bones and muscles grow and stay strong. They may also protect against diseases like cancer and osteoporosis. Antioxidants help your body work better and can reduce the risk of some diseases. <sup>5,6,7</sup>
- The inside middle of the grain or the endosperm is where the plant stores its energy to grow. This part is made up of carbohydrates and protein and has some vitamins and minerals. Protein builds muscle and keeps the organs in your body strong. Carbohydrates give you energy and vitamins and minerals help your body work better. <sup>5,6,7</sup>
- The last and smallest part of the grain is the germ. The germ is where the grain stores its nutrients to grow. The germ has a lot of B vitamins that help you use food to make energy for your body. It also has Vitamin E, some minerals, essential fats and antioxidants which can help reduce the risk of some diseases. <sup>5,7</sup> Below is a picture of a whole grain kernel:

# Whole Grain



## **Choose Whole Grains**

Whole grain foods are made with all 3 parts of the grain so they are high in fiber, vitamins, minerals and antioxidants in addition to carbohydrates and some protein. Whole grain foods with 3 to 5 grams of fiber per serving are good sources of fiber.<sup>5</sup> The USDA says that if at least half of the grain ounces you eat each day are whole grains it will help prevent some diseases.<sup>7</sup> The antioxidants, vitamins, minerals and fiber in whole grain foods may help reduce the risk of diseases like:

- heart disease<sup>5</sup>
- type 2 diabetes;<sup>5,8</sup>and
- some cancers, like colon cancer.<sup>5</sup>

Adding whole grains to what you eat will give you more fiber in your diet. Adding fiber will keep your food moving through your body to help you stay healthy and can provide a feeling of fullness with less Calories, which may help you lose weight. It can also help prevent constipation which can lead to an inflammation of the lining of the intestine called diverticulitis.<sup>5,7</sup>

We do not eat whole grains for fiber only and as we said before, there are many other nutrients in whole grains that are good for us. Also, all foods that are high in fiber do not necessarily have whole grains. Other foods may have fiber added to the product and not get their fiber from whole grains. Remember that the only way to tell whether a food is whole grain or not is to look at the ingredients on the label and make sure a whole grain is one of the first 3 ingredients.

Examples of whole grain foods are:

- whole grain or whole wheat bread
- whole grain or whole wheat tortilla
- whole wheat pita bread
- whole grain cereal like wheat flakes and oat circles like Cheerios®
- whole wheat pasta
- whole grain crackers
- brown rice
- whole barley
- popcorn
- oatmeal

## **Refined Grains**

The grain is called refined when it is processed in a way that takes out most of the bran and the germ which are the healthiest parts of the grain. This is done to give grains a finer texture and improve their shelf life.<sup>2</sup> Without the bran and the germ, refined grains do not have very much fiber, vitamin E, zinc and magnesium and antioxidants. Refined grain is what you usually find in foods like:

- white bread
- white rice
- white pasta
- pretzels

- flour tortillas

Refined grains are “milled,” which means the bran and germ are removed. Then, refined grains are “enriched,” which means that some of the vitamins and minerals are put back after milling. Grains are milled to make the flour softer; however it takes away the fiber, vitamins and minerals like iron and the B vitamins.<sup>3</sup> Even though vitamins and minerals are added back into the refined grains, it is still better to eat the whole grain because of the fiber and protein. Refined grain foods do not offer as many health benefits as whole grain foods.<sup>3</sup>

To keep the healthy parts of the whole grain in your diet remember, make half of the grain foods you eat whole grain foods. If your daily food plan tells you to eat 4 ounces of grains, 2 ounces should come from whole grains like:

- 1 slice of whole wheat bread
- ½ cup of oat cereal like Cheerios® or oatmeal.

If your daily food plan tells you to eat 6 ounces of grains, then 3 ounces should come from whole grains in foods like:

- ½ cup of whole wheat pasta,
- 1-6 inch whole wheat tortilla or
- ½ cup of brown rice

Each one of these foods is the same as 1 ounce so if you ate one of each you would have the 3 ounces of whole grains you need for the day.

### **3 Ways to Know if a Grain is a Whole Grain**

Picking out whole grain foods can be tricky. You cannot tell if a food is a whole grain food just by the color of it. Breads, for example, may be brown because of the ingredients, not because it is made with whole grains. Many labels look like they are whole grain foods when they are not. Common labels that look like they are whole grain foods but are not include labels that say<sup>3</sup>:

- multi-grain
- stone-ground
- 100% wheat
- cracked wheat
- seven-grain
- bran
- wheat

There are 3 ways to know if a grain food is a whole grain food:

1. All foods made with whole grains place “whole” before the name of the grain.<sup>3</sup>
2. The whole grain should be 1 of the first 3 ingredients on the ingredient list.<sup>3</sup>

3. The “whole grain claim” is another easy way to pick out whole grain foods. If more than ½ of the grain food is made with whole grains you will see a health claim on the package. It will say, “Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat and cholesterol, may help reduce the risk of heart disease and certain cancers.”<sup>3</sup>

You may also see a symbol that looks like this:



### **Adding Whole Grains to Your Diet**

Adding whole grain foods to your diet can be simple. Try to replace some refined grains, like the foods mentioned before, with whole grain versions. Some easy changes to make are:

- Choose whole grain cereals at breakfast like oatmeal, shredded wheat or Cheerios® or other whole oat cereal.
- Choose whole grain breakfast foods like whole wheat bagels or whole wheat pancakes.
- Use whole grain breads for sandwiches instead of white bread.
- Choose brown rice instead of white rice.
- Try whole wheat pasta and noodles.
- Use whole wheat tortillas
- Have whole grain crackers or popcorn as a snack instead of potato chips.
- Choose oatmeal or whole grain cookies.
- Make a snack mix of whole grain cereals. Add nuts and seeds and raisins if you want
- Use whole grain breadcrumbs.
- Add barley to soups.
- Substitute some or all of the white flour in recipes with whole wheat flour.
- For more tips go to: <http://www.choosemyplate.gov/food-groups/grains-tips.html> .

### References:

1. Duyff, RL, MS, RD FADA, CFCS. *ADA Complete Food and Nutrition Guide*, 3<sup>rd</sup> ed. Hoboken, NJ: John Wiley & Sons, Inc. Hoboken NJ; 2006. Pg 113

2. US Department of Agriculture. MyPlate.gov. “*How many grains are needed daily.*” MyPlate .gov. Accessed July 29, 2010 at: < <http://www.choosemyplate.gov/food-groups/grains-amount.html> >.
3. “Get on the Grain Train.” Center for Nutrition Policy and Promotion (CNPP), USDA, Home and Garden Bulletin No. 267-2. Revised March 2008. Available at: <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2000/GrainTrain-revisedMar08.pdf>. Accessed July 20, 2010.
4. US Department of Agriculture. MyPlate.gov. “*What counts as an ounce equivalent of grains?*” Accessed July 29, 2010 at : < [http://www.choosemyplate.gov/food-groups/grains\\_counts\\_table.html](http://www.choosemyplate.gov/food-groups/grains_counts_table.html) >.
5. Duyff, RL, MS, RD FADA,CFCS. *ADA Complete Food and Nutrition Guide*, 3<sup>rd</sup> ed. Hoboken, NJ: John Wiley & Sons, Inc. Hoboken NJ; 2006. Pg 133-137
6. Duyff, RL, MS, RD FADA,CFCS. *ADA Complete Food and Nutrition Guide*, 3<sup>rd</sup> ed. Hoboken, NJ: John Wiley & Sons, Inc. Hoboken NJ; 2006. Pg 91
7. US Department of Agriculture. MyPlate.gov. “*Why is it important to eat grains, especially whole grains?*”, Accessed July 29, 2010 at: < <http://www.choosemyplate.gov/food-groups/grains-why.html> >
8. “Type 2 Diabetes – The Bottom Line.” The Harvard School of Public Health-The Nutrition Source, 2010. Accessed July 20, 2010 at: <http://www.hsph.harvard.edu/nutritionsource/more/type-2-diabetes/>.

### **For Additional Reading:**

<sup>1</sup> Dietary Guidelines for Americans 2010. U.S. Department of Health and Human Services and U.S. Department of Agriculture [www.healthierus.gov/dietaryguidelines](http://www.healthierus.gov/dietaryguidelines).

“Get on the Grain Train” Center for Nutrition Policy and Promotion. United States Department of Agriculture. Home and Garden Bulletin.267-2. Revised March 2008 <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2000/GrainTrain-revisedMar08.pdf>

“Health Gains from Whole Grains.” The Nutrition Source - Harvard School of Public Health <http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/health-gains-from-whole-grains/index.html>

MyPlate.gov: <http://www.choosemyplate.gov/food-groups/grains.html>



# The Whole Truth About Grains

## Main Themes:

Nutrition & Diet

Cooking & Food Storage

Shopping

Budgeting

Safety & Sanitation

## Materials Needed:

### Activity 1

Grain food packages. Try to find packages that do not say whole grains on the front of the package. See below under “**Preparation Needed Prior To Lesson.**” You will need at least 1 per participant or if you divide the class into groups, 1 for each group.

Print Picture of Whole Grain at the end of this lesson.

Grain Foods List. See below under “**Preparation Needed Prior To Lesson.**”

*All Grains Are Not Created Equal* card found at end of lesson. Laminate if you like

*Whole Grain* and *Not Whole Grain* cards printed on both sides of one sheet. This way you have a card that says *Whole Grains* on one side and *Not Whole Grains* on the other. These cards are found at the end of the lesson. You should make enough so that each participant or group depending on how you decide to do Activity 1. You can laminate if you like

Optional: 1 bag of popped light popcorn

Small paper cup. You will need 1 per participant

### Activity 2

NOTE: You can freeze any bread or perishable grain products that you don't use for the next time you do the lesson. You can also adjust the amount of each kind of bread that you bring to class if you decide to have more than 2 tasters.

1 slice whole grain bread cut in ½. Place each ½ in a Ziploc ® or other small plastic storage bag labeled “whole grain.”

1 slice refined grain bread that does not have the word “whole” in any grains in the first three ingredients, like 7-grain, wheat bread or multi-grain bread. Do not use white bread. Cut in ½. Place each ½ in a Ziploc ® or other small plastic storage bag labeled “refined grain.”

2, 1/4 cup portions of whole grain cereal. Be sure that the word “whole” is in the ingredient in front of the grains contained in the cereal. Put each in a Ziploc ® or other small plastic storage bag labeled “whole grain.”

2, 1/4 cup portion of refined grain cereal-be sure the word “whole” does not appear in the ingredient list in front of the grains in the cereal. Put each in a Ziploc ® or other small plastic storage bag labeled “refined grain.”

- 1, 6-inch whole wheat tortilla cut in ½. Place each ½ in a Ziploc ® or other small plastic storage bag labeled “whole grain.”
- 1, 6-inch refined flour tortilla cut in ½. Place each ½ in a Ziploc ® or other small plastic storage bag labeled “refined grain.”
- 6 large paper plates
- 2 blindfolds
- Hand sanitizer
- Juice or pitcher or container filled with water – NOTE: The Grant does not allow us to buy bottled water.
- Plastic cups, 1 per participant

### Activity 3

- 1 slice whole grain bread in a Ziploc ® or other small plastic storage bag
  - 1 cup of whole grain cereal in a Ziploc ® or other small plastic storage bag
  - 1, 6-inch whole wheat tortilla in a Ziploc ® or other small plastic storage bag
- If you would like you can use food models that are the same size and look like whole grain foods.
- Copies of each participants’ Daily Food Plan  
MyPlate individualized grain chart with 1 ounce equivalents  
([http://www.choosemyplate.gov/food-groups/grains\\_counts\\_table.html](http://www.choosemyplate.gov/food-groups/grains_counts_table.html))

### **Preparation Needed Prior To Lesson:**

#### Activity 1: Grain food packages and Grain Foods List

1. Use the participants’ diet recalls to choose grain foods that the participants commonly eat. Look for items like bread, cereal, English muffins and rice. If you need to you can also choose the grain foods if your participants do not eat a lot of grain foods.
2. Use the product nutrition facts label that is usually on the back of the package and the background information to help you choose. Be sure to cover up the nutrition fact label and the ingredients information.
  - an equal amount of whole grain foods and
  - refined grain foods that may **appear** to be whole grain, but really ARE NOT.

Some foods that appear to be whole grain foods but really are not have the following words in their names:

- multi-grain
- stone-ground
- 100% wheat
- cracked wheat
- seven-grain
- bran
- wheat

Check the ingredients on the nutrition facts label to be sure that the word “whole” appears in front of the grains in the whole grain foods and does not appear in the refined grain foods that appear to be whole grain.

3. Once you have all of your grain food packages, fill in the Grain Foods List handout found at the end of the lesson. Use this as a reference during Activity 1 to remind you which foods are whole grains and which are not.

**Time The Activity Is Expected To Take:**

Before You Begin: 2-5 minutes

Activity 1: 20 - 25 minutes

Activity 2: 15 - 20 minutes

Next Week’s Goals: 5 minutes

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## Lesson Plan:

### Before You Begin (2 - 5 minutes):

1. Ask the participants if they worked on their goals from the last lesson. Ask them which goals they worked on and how or what they did to work on them. Try to get people to tell the class what they did. If they did not work on the goals, ask them to work on them before the next class.
2. Tell the participants what the objectives are for today's lesson.

### Activity 1: "All Grains Are Not Created Equal" (20 - 25 minutes)

1. Place all of the grain food packages at the front of the class. Ask each participant to come to the front of the class and pick 1 of the grain food packages that they commonly eat. If a participant does not eat any of the items ask them to pick a food he or she would try. Give each participant a Whole Grains/Not Whole Grains card.
2. Have the class not to read the label and to put the items aside for now. Tell them to turn up the side of the card that think matches their package – "Whole Grain" or "Not Whole Grain and place it in front of them.
3. Tell the class that there has been a lot of talk about whole grain foods in the news lately. Ask them what they have heard about whole grain foods and why they think they are important to eat.

*If they do not mention the following, tell the class that eating whole grain foods:*

- *May lower your risk of heart disease;*
  - *May reduce your risk of getting type 2 diabetes;*
  - *May lower your risk of certain cancers like colon cancer;*
  - *Will add more vitamins and minerals to your diet which will help you stay healthy; and*
  - *Will add more fiber to your diet. Adding fiber will keep your food moving through your body to help you stay healthy and can provide a feeling of fullness with less Calories, which may help you lose weight.*
4. Display the grain picture and tell the class that:
    - Whole grain foods are made with all of the parts of the grain kernel. The grain kernel has three parts.

- The first part is the outer shell or bran and protects the grain. It has minerals, B vitamins, antioxidants and most of the fiber in the grain.
  - Inside the kernel or the endosperm is where the plant stores its energy. This part has most of the carbohydrates and protein in the grain and some vitamins and minerals.
  - The last and smallest part of the grain, the germ, gives the kernel the things it needs to grow. It has a lot of B vitamins, some fiber and minerals. It also has vitamin E and antioxidants.
  - Some other foods are called refined grain foods and they have most of the bran and germ removed during food processing. This removes most of the vitamins, minerals and fiber and antioxidants.
  - Most refined grains are enriched, meaning the some vitamins and minerals are put back in, but it is still better to eat whole grains. Whole grains are better for your body because they have more fiber and protein than refined grains.
5. Ask the class if they remember what you told them before about why whole grains are important to eat. If they don't remember, remind them of the following:

- May lower your risk of heart disease;
- May reduce your risk of getting type 2 diabetes;
- May lower your risk of certain cancers **like colon cancer**;
- Will add more vitamins and minerals to your diet which will help you stay healthy; and
- Will add more fiber to your diet. Adding fiber will keep your food moving through your body to help you stay healthy and can provide a feeling of fullness with less Calories, which may help you lose weight.

Tell the class that the nutrients in the whole grain are the things that can help lower the risk of the diseases you mentioned.

Remind them that the fiber they get in whole grains will help prevent problems with their intestines like diverticulosis and can also help them feel full and maybe eat less.

6. Go around the room and ask each participant to tell you if they think the food that they chose is a whole grain food. Ask them to tell you why they think it is or is not a whole grain food. Do not tell them if they are right or wrong yet. Let them know you will let them know if they chose right at the end of the activity.
7. Tell the class that picking out whole grain foods can be tricky. Many foods appear to be whole grain when really they are not. Tell the class that you are going to play a game. Hold up 1 of the All Grains Are Not Created Equal Cards. Ask the participants to tell you which of the 2 foods on the cards they

think are a whole grain food. After the participants have made their guesses, tell them the correct answer. The correct answers are bolded below. Repeat for each card.

Wheat bagel vs. **whole wheat flour**

**Popcorn** vs. multi-grain bread

**Whole grain bread** vs. 100% wheat bread

**Brown rice** vs. white rice

Grits vs. **oatmeal**

**Whole wheat pasta** vs. Tri-color pasta

**Whole oat cereal** vs. Honey wheat pretzels

Bran muffin vs. **shredded wheat cereal**

**Whole wheat rolls** vs. corn bread

8. Ask the class how many of them picked the food that was whole grain.
9. Ask the class to think of any ways to tell if a food is made with whole grains. *Answers will vary. Be sure to review the information below if the class does not mention any of these steps.*

*Tell them they can find out which food is whole grain and which is not by looking at the list of ingredients on the Nutrition Facts Label on foods. Tell the class you are going to pass out some labels for them to look at. They should make a note of which food is a whole grain food and which is not based on the following 3 steps.*

*#1. Check the name of the grain ingredient under the ingredient part of the label. All whole grain foods have the word “whole” before the name of the grain. For example:*

- *whole wheat*
- *whole oats*
- *whole rye*
- *or in the case of rice, brown rice*

*#2. Tell the class that if a food is a good source of whole grain it should list whole grain as 1 of the first 3 ingredients on the list. Some examples of foods that have whole grains as one of their first three ingredients are:*

- *brown rice*
- *popcorn*
- *hot oatmeal cereal*
- *Cheerios® or any other whole oat cereal*

*#3. Tell the class they can also look for the “whole grain claim” on the front of the label. If more than ½ of the food is made with whole grains, you will see a health claim on the package. It will say, “Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat and cholesterol, may help reduce the risk of heart disease and certain cancers.”*

***If not mentioned, make sure to tell them that step 1 and step 2 are really the best ways you can tell a food is made from whole grains since you can’t tell just from looking at a food. Step 3 can also be helpful. Write them on the chalkboard or flipchart***

10. Tell the class that there are some labels that make products look like they are whole grain products when they ARE NOT. If you want to be sure an item is a whole grain food, check the ingredients to see if “whole” appears before the grains. Some examples of words that are used to make a product appear to be whole grain when it is not are:
  - multi-grain
  - stone-ground
  - 100% wheat
  - cracked wheat
  - 7-grain
  - bran
  - wheat
11. Have the class think about whether or not the food they chose at the start of the lesson is a whole grain food. Ask the class if any of them want to change their answer about whether it is whole grain food or not before you give them the answer. If they do, they should flip their *Whole Grain/Not Whole Grain* card to the other side
12. Using your Grain Foods List, tell the class which foods they chose are whole grain foods and which are refined grain foods. Ask them if they were surprised by any of the answers.
13. Ask the class which of the foods on the labels you passed around is a whole grain.
14. Ask the class which of the foods on the labels you passed around is not a whole grain.
15. Ask the class if they can now tell you some of the ways they will check grain products to make sure that they are whole grain. Tell the class to refer to the chalkboard or flipchart for help.

*Answers may vary. However if you don’t get any of the answers below – remind the class of these things.*

*To check if a food is a whole grain food you can:*

- *Check to see if the whole grain is 1 of the first 3 ingredients on the list found at the bottom of the label.*
- *Check to see if the name of the item has “whole” before the name of the grain.*
- *Look for the whole grain claim, “Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat and cholesterol, may help reduce the risk of heart disease and certain cancers.*

16. **Optional:** Give each participant some popcorn in a small cup. Remind them that popcorn with little or no added salt or butter is a healthy whole grain snack.

### **Activity 2: “The Great Grain Taste Test” (15 - 20 minutes)**

1. Ask for 2 or more volunteers to help you, whatever will work in your class. Tell them that they will be trying some grain foods like bread, cereal and tortillas.
2. Tell the volunteers to wash their hands. If soap and water are not available, use the hand sanitizer.
3. Give each volunteer a cup of water.  
**NOTE:** We are **not allowed** to purchase bottled water with grant funds. Please use water from a tap, a water fountain or bring water with you in a container from your office.
4. Ask the volunteers to sit down in the front of the room and blindfold them. If volunteers do not want to be blindfolded tell them to hold their hand over their eyes. The idea is that they should not be able to look at what they taste. Give each volunteer a Ziploc ® bag—1 with the whole grain bread and 1 with the refined grain bread. **DO NOT** tell them which is which. Ask the volunteers to taste each and tell you which bread they think is whole grain and why.
5. Tell the volunteers that they can take their blindfolds off. Tell everyone which food was made with whole grains and which one was made with refined grains. Ask the volunteers:
  - If it was hard to tell which food was whole grain just by tasting it?
  - If they were surprised by the answers.
  - How the tastes of the refined and whole grain versions compared.
  - If they liked the whole grain food and would be willing to eat it at home.
6. Ask the volunteers to put the blindfolds back on. Give each volunteer a Ziploc ® bag—1 with the whole grain cereal and 1 with the refined grain cereal. **DO**



NOT tell the volunteers which is which. Ask the volunteers to taste each and tell you which cereal they think is a whole grain cereal and why.

7. Repeat step 5.
8. Ask the volunteers to put the blindfolds back on. Give each volunteer a Ziploc® bag—1 with the whole grain tortilla and 1 with the refined grain tortilla. DO NOT tell the volunteers which is which. Ask the volunteers to taste each and tell you which tortilla they think is a whole grain tortilla and why.
9. Repeat step 5.
10. If your participants request it and you would like you may give everyone the different grains products to taste once the test is over.
11. Thank the volunteers for their help.

Note to the Educator: If you chose you can use different volunteers for each step.

### **Activity 3: Not All Servings Are Equal (10 minutes)**

Tell the class that there is often a lot of confusion about how much 1 ounce of a grain food is. This is an important measurement to know. The information about portion size for grains on MyPlate is given in 1-ounce servings. How many ounces of grains you should eat will be based on your age, whether you are male or female and how active you are.

Tell them they can check their personal recommendation on their Daily Food Plan they were given in the second class. Most people eat between 1600 and 2000 calories. These people should eat 4-6 ounces of grains per day. Ask the class how many ounces of **whole** grains a person should eat if MyPlate tells that person to eat 6 ounces of grains each day.

*Answer: 3 ounces of grain foods a day should be whole grains for a person eating 6 ounces of grains a day.*

1. Pass around the Ziploc® bags with the bread, cereal and tortilla in them. Tell the class that the bags contain:
  - 1 slice bread
  - 1 cup cold cereal
  - 1, 6-inch tortilla

Tell the class that each of the bags contains a 1 ounce serving from the grain group.

2. Tell the class that the items listed below are also equal to a 1 ounce serving (write on the board or the flipchart and if you like use food models pictures or food models):
  - ½ cup of cooked or 1 packet instant oatmeal
  - 3 cups popped popcorn
  - ½ English muffin
  - 2 – 3 inch or 1- 4 ½ inch pancake
3. Tell the class that it can be pretty easy to make ½ of your grains whole grains each day. Ask each participant to name 1 way he or she will add more whole grains to their diets.

*If participants do not mention the following, tell them that they could:*

- *Choose whole grain cereals at breakfast like oatmeal, shredded wheat (check trademark) or original plain Cheerios® or any other whole oat cereal.*
  - *Choose whole grain breakfast foods like whole wheat bagels, whole wheat pancakes and waffles.*
  - *Use whole grain breads for sandwiches instead of white bread.*
  - *Choose brown rice instead of white rice.*
  - *Try whole wheat pasta and noodles.*
  - *Have popcorn or whole grain crackers as a snack instead of potato chips.*
  - *Choose oatmeal or whole grain cookies.*
  - *Make a snack mix of whole grain cereals.*
  - *Use whole grain breadcrumbs.*
  - *Add whole barley to soups.*
  - *Substitute ½ of the white flour in recipes with whole wheat flour.*
4. Remind the class that by looking at their personal Daily Food Plan which you gave them at the second class or which they can get a by going to:  
<http://www.choosemyplate.gov/supertracker-tools/daily-food-plans.html>  
(write this on the board or flipchart) they can find out how many ounces of grains they need each day. Tell them you found this by going to that site and typing in their age, if they are male or female, height, weight and the activity level they gave you on the diet recall they did in the first class. Pass out each person's individualized MyPlate plan if you have not already done so.

Ask the participants to look at their Daily Food Plan (Note to Educator: you might want to bring copies to class) and tell you if they think, based on their food plan if they eat the right amount of grains each day. Ask a couple of volunteers to restate how many ounces of grains they should eat each day and if what they eat meets their recommended amounts. Ask them if they have any ideas about how they can eat what is recommended. Ask them what they eat or think they need to eat to get what they need.

5. Tell the class to look at the serving of grains they should eat each day. Tell them to divide that by two. Tell the class that the divided number is the amount of ounces of whole grains they should eat each day.
6. Ask the class if they have any questions about their personalized food plan. Tell the class that if they have access to a computer, they can do this for their family and friends.

**Activity 4 (optional): Prepare one of the attached recipes. If you like, you can make one of the recipes ahead of time and share it with the class**

Note: You may replace Activity 2 or 3 with Activity 4.

1. Tell the class that today they are going to prepare (name of recipe)
2. Ask for volunteers to help
3. Follow instructions to prepare in the recipe.
4. Share with class.

## Next Week's Goals: (5 minutes)

1. Ask the participants to name 1 thing that they learned in today's class that they will use. Make sure that each learning objective is mentioned, and if not, be sure to re-state that objective. Ask them to choose a goal to work on during the week. Let them know that they will be asked to share their progress at the next class.
2. Invite comments, suggestions or questions.
3. Thank the participants for coming and tell them what the next lesson will be about.

## For The Teacher: "What Makes This Lesson Behaviorally Focused?"

- Activity 1 is not behaviorally focused. The participants choose foods that they commonly eat and learn how to tell whether or not they are whole grain foods. They are asked if they would be willing to read labels to help them choose whole grain foods.
- Activity 2 is behaviorally focused. The volunteers compare the taste of whole grain foods to refined grain foods. They decide if they can add these foods into their diet.
- Activity 3 is behaviorally focused. The participants are asked to name ways that they will add whole grain foods to their diets.



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## Grain Foods List

Whole Grain Foods	Refined Grain Foods
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.
11.	11.
12.	12.
13.	13.
14.	14.

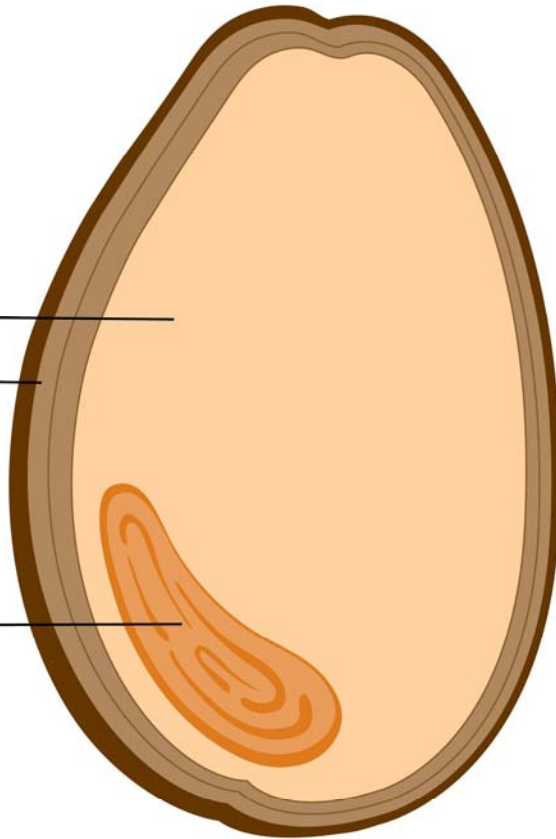
# Whole Grain Kernel

## **Bran**

“Outer shell” protects seed *Fiber, B vitamins, trace minerals*

## **Endosperm**

Provides energy  
*Carbohydrates, protein*



## **Germ**

Nourishment for the seed,  
*Antioxidants, vitamin E, B vitamins*

All Grains Are Not  
Created Equal  
Cards

**Whole Grain**



**Not**

**Whole Grain**



**Whole Wheat Rolls**



**Corn Bread**



"Whole Wheat Flour." Burwell Photography. *Istockphotos.com*  
<http://www.istockphoto.com/stock-photo-18302848-whole-wheat-flour.php?st=af6c99d>

**Wheat Bagel**



**Whole Wheat Flour**



**Popcorn**



**Multi-grain Bread**



**Whole Grain Bread**



cross duck - flickr

**100% Wheat  
Bread**



**Brown rice**



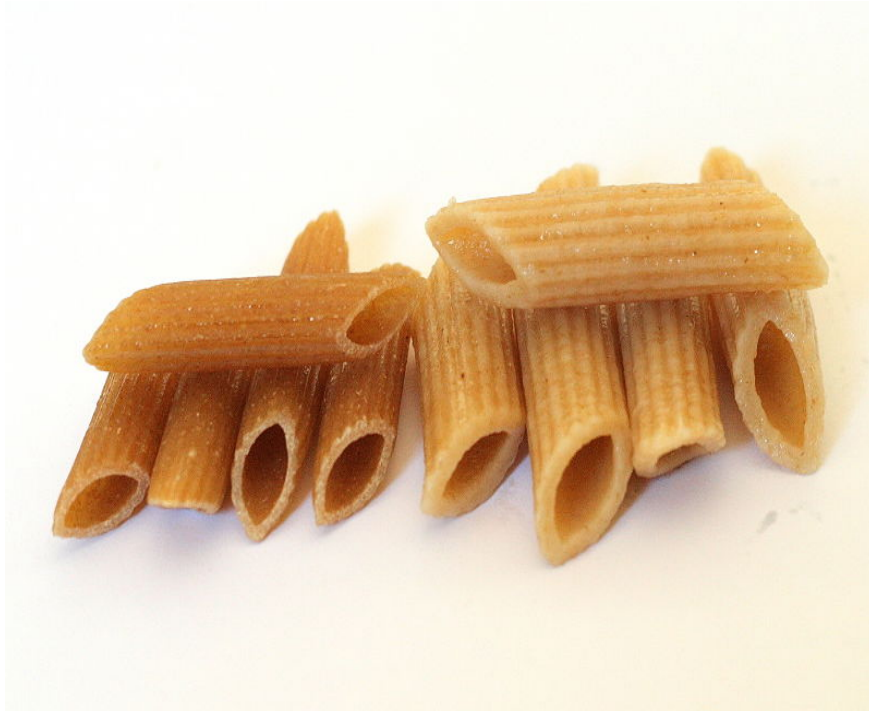
**White rice**



**Grits**



**Oatmeal**



**Whole Wheat pasta**



**Tri-color pasta**





**Whole oat cereal**



**Honey wheat  
pretzels**



**Bran muffin**



**Shredded Wheat  
cereal**

# Awesome Granola

**Serving Size:** 1/2 cup

**Recipe Makes:** 10 cups

**Prep Time:** 10-15 minutes

**Cooking Time:** 10 minutes or until brown

**C means cup    T means tablespoon    t means teaspoon    oz means ounce**

## What you need:

- 3 C uncooked oatmeal
- 1/2 C shredded or flaked coconut
- 1 C chopped pecans, walnuts, or peanuts
- 1/4 C honey
- 1/4 C melted butter
- 1+1/2 t cinnamon
- 2/3 C raisins



## What to do:

1. Wash your hands
2. Heat oven to 350°F.
3. Combine everything in a large bowl, except raisins. Mix well.
4. Bake in 13 x 9 inch baking pan for 25-30 minutes or until golden brown.
5. Stir every 5 minutes.
6. Stir in raisins.
7. Cool thoroughly.
8. Store in tightly covered container.

## Nutrition Facts

Amount Per Serving		1/2 cup
<b>Calories</b>	380	Calories from Fat 160
%Daily Value*		
<b>Total Fat</b>	17g	26%
Saturated Fat		5g 25%
<b>Cholesterol</b>	10mg	3%
<b>Sodium</b>	0mg	0%
<b>Total Carbohydrate</b>	51g	17%
Dietary Fiber		7g 28%
Sugar		16g
<b>Protein</b>	10g	
<b>Vitamin D</b>	0.5%	
<b>Calcium</b>	4%	

\*Percent Daily Values are based on a 2,000 calorie diet.

**FK=3.9; 5/2/13**



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# Chili Popcorn

**Serving Size:** 1 cup

**Prep Time:** 5 minutes

**C means cup**

**T means tablespoon**

**Recipe Makes:** 4 cups

**Cooking Time:** 3 minutes

**t means teaspoon**

**oz means ounce**

## What you need:

4 cups popped corn

1 T melted margarine

1 t chili powder

dash each garlic powder



## What to do:

1. Wash your hands
2. Mix popcorn and margarine in a bowl.
3. Mix seasonings well.
4. Sprinkle over popcorn.
5. Mix well.
6. Serve right away.

## Nutrition Facts

Amount Per Serving		1 cup
Calories 60		Calories from Fat 30
		%Daily Value*
<b>Total Fat</b>	3g	5%
	Saturated Fat .5g	3%
<b>Cholesterol</b>	0mg	0%
<b>Sodium</b>	40mg	2%
<b>Total Carbohydrate</b>	7g	2%
	Dietary Fiber 1g	4%
	Sugar 0g	
<b>Protein</b>	1g	
<b>Vitamin D</b>	0%	
<b>Calcium</b>	0%	

\*Percent Daily Values are based on a 2,000 calorie diet.

**FK=3.5; 5/2/13**



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# Apple-icious Oat Bars

**Serving Size:** 1 square

**Prep Time:** 15-20 minutes

**C means cup    T means tablespoon    t means teaspoon    oz means ounce**

**Recipe Makes:** 9 servings

**Cooking Time:** 40-45 minutes

## What you need:

### CRUMBLY CRUST

- 3/4 C old-fashioned rolled oats
- 1/2 C all-purpose flour
- 1/4 C whole-wheat flour
- 1/2 C lightly toasted almond or pecans
- 1/2 C light-brown sugar
- 1/2 t ground cinnamon
- Pinch of baking powder
- 3 T unsalted butter, melted
- 3 T canola oil

### FOR THE FILLING

- 4 Granny Smith apples or any other apple you like
- 1/4 C dried cranberries or raisins
- 1 T honey, maple syrup, or light-brown sugar
- 1 T all-purpose flour



(Joanna Hard, <http://www.flickr.com/photos/jhard/3804789034/>)

## What to do:

1. Wash your hands and all cooking utensils
2. Preheat oven to 350 degrees
3. FOR CRUST: Mix dry ingredients together.
4. Add butter and oil and mix again until the topping is crumbly and looks like little pebbles.
5. Put 1/2 this mixture into a baking pan.
6. FOR FILLING: Mix filling ingredients together.
7. Pour the filling on top of the crust in the baking pan.
8. Using a spatula, to press the mixture down until the filling is flat and even.
9. Put the rest of the crust mixture on top and pat it down
10. Bake about 40-45 minutes or until the top is lightly browned and the apples are soft.
11. When done, pat down mixture again
12. Set aside to cool.

## Nutrition Facts

Amount Per Serving		1 square
<b>Calories</b>	280	Calories from Fat 120
		<b>%Daily Value*</b>
<b>Total Fat</b>	14g	22%
	Saturated Fat 3.5g	18%
<b>Cholesterol</b>	10mg	3%
<b>Sodium</b>	0mg	0%
<b>Total Carbohydrate</b>	39g	13%
	Dietary Fiber 4g	16%
	Sugar 22g	
<b>Protein</b>	3g	
<b>Vitamin D</b>	0%	
<b>Calcium</b>	2%	

\*Percent Daily Values are based on a 2,000 calorie diet.

**FK=4.4; 5/2/13**



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# Whole Wheat Muffins

**Serving Size:** 1 muffin

**Recipe Makes:** 12 muffins

**Prep Time:** 15 minutes

**Cooking Time:** 25 minutes

**C means cup    T means tablespoon    t means teaspoon    oz means ounce**

## What you need:

- 1 C all-purpose flour
- 1 C whole wheat flour
- 1/2 t salt
- 2 t baking powder
- 1/4 C brown or white sugar firmly packed
- 1 C milk
- 2 eggs
- 1 t vanilla (optional)
- 1/4 C melted margarine or butter or 1/4 C vegetable oil



From CHOPCHOP Magazine

## Topping:

- 1 tablespoon sugar
- 1/2 teaspoon ground cinnamon

## What to do:

1. Wash your hands
2. Preheat oven to 400 degrees.
3. Lightly oil or coat a 12 cup muffin pan with non-stick spray, or use paper muffin cups.
4. Mix together sugar and cinnamon and set aside.
5. In a large bowl, stir together flour, salt, baking powder and sugar.
6. Pour milk into a bowl, then add eggs, vanilla (if using), and melted shortening or oil.
7. Mix with a fork until egg is mixed in well.
8. Pour milk mixture over flour and stir with a spoon, about 20 strokes. Flour should just be moist and batter will be lumpy and thick.
9. Fill muffin cups 2/3 full with batter. Sprinkle 1/4 teaspoon of the cinnamon and sugar topping over each muffin.
10. Bake in oven for 20 to 25 minutes until golden brown.

## Nutrition Facts

Amount Per Serving		1 muffin
<b>Calories</b>	150	Calories from Fat 45
		%Daily Value*
<b>Total Fat</b>	5g	8%
Saturated Fat		1.5g 8%
<b>Cholesterol</b>	35mg	12%
<b>Sodium</b>	160mg	7%
<b>Total Carbohydrate</b>	22g	7%
Dietary Fiber		1g 4%
Sugar		7g
<b>Protein</b>	4g	
<b>Vitamin D</b>	3 %	
<b>Calcium</b>	8 %	

\*Percent Daily Values are based on a 2,000 calorie diet.

**FK=5.5; 5/2/13**



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