GRAB AND GO LESSONS FOR EARLY CHILDHOOD FAMILY EDUCATION PROGRAMS

Building a Healthy Plate: Cooking with Whole Grains

WHAT ARE WHOLE GRAINS?

Common grains include wheat, oats, corn, and brown rice.

A grain is made up of three parts:
- A) Endosperm: the starchy source of energy inside the seed.
- B) Germ: in the seed, the embryo of a new plant.
- C) Bran: the hard, outer coating of the grain.

Grains can be processed in two ways:
- In a whole grain, the whole kernel is ground up and used in foods. A whole grain contains all three parts of the kernel in their original proportions: bran, endosperm and germ.
- When grain is refined, the bran and germ are removed, and just the endosperm is used in foods. Removing the bran and the germ removes important nutrients, such as B vitamins. When the nutrients are added back, it is called enriched.

Whole grains have many health benefits:
- Whole grains contain B vitamins, polyunsaturated fats, antioxidants, phytonutrients, iron, and fiber.
- Diets rich in whole grains reduce risk of heart disease, type 2 diabetes, stroke, and certain types of cancer.
- Whole grains are important for people of all ages, because preventing chronic disease must start early in life.

Are children getting enough whole grains?
- On average, children are not meeting Dietary Guidelines recommendations for consumption of whole grains. In fact, in order to meet recommendations, most children need to eat two to four times more whole grains.
- Children are already eating refined grains, so there is an opportunity to encourage families to make the switch to whole grains for their breads, pastas, breakfast cereals and snacks.

How much whole grain should we eat?
- A good rule of thumb is to make half your grains whole.

Additional resources:
- Make Half Your Grains Whole – 10 Tips series from MyPlate
  www.choosemyplate.gov/sites/default/files/tentips/DGTipsheet4MakeHalfYourGrainsWhole.pdf
- Build a Healthy Plate with Whole Grains
GRAB AND GO LESSON ONE: BREAD TASTING (10 MINUTES)

Objective:
Participants will recognize whole grain breads have different characteristics.

Materials needed:
- 4 different types of bread.
  - 100% whole wheat bread (2 varities)
  - Whole grain white bread (100% whole wheat if available or a partial whole wheat)
  - Multi-grain bread (not 100% whole wheat)
- 4 large paper plates
- 1 Permanent Marker
- Cutting board and Bread knife
- Napkins – 1 per participant
- Pens or pencils – 1 per participant

Preparation:
- Label the loaves of bread A, B, C, and D.
- Label the plates A, B, C, and D.
- Cut bread into bite size cubes (enough for 1 per person) and place on the corresponding plate. Cover with plastic wrap.

Lesson:
Introduce the bread tasting activity, saying something like:
“Let’s see whether you are able to taste the difference between a whole grain bread and a refined grain bread.”

Distribute a napkin and a pencil to each participant. Give instructions for setting up for the tasting activity:
“Use your pencil to create four separate spaces on your napkin or paper plate. [Show your prepared plate or napkin as an example.] In each space write the letters ‘A,’ ‘B,’ ‘C,’ and ‘D.’ This is where we’ll place each of our four bread samples. I’ll now be passing out the bread samples; do not eat them until I tell you to.”

Pass out the four samples of bread to participants. Ask participants to place the “A” bread sample in their “A” space on their plate, and do the same for samples “B,” “C,” and “D.”

Beginning with sample “A,” ask participants to describe the bread using these characteristics:
- Color (brown or white)
- Texture (smooth or chunky)
- Moisture (dry or moist)
- Smell (nutty or yeasty)

After you have discussed the characteristics of the bread, instruct participants to taste the bread. Ask participants: “How would you describe the bread’s taste?”

Ask participants: “Do you think bread A is 100 percent whole wheat, a partial whole wheat, or a refined wheat food?” Clarify that a partial whole grain food means it contains whole grains, but not as the first ingredient listed on the package.

Allow participants to guess and then tell them what type of wheat flour the bread contained. Pass around the corresponding bread package, e.g., a bread bag.
Follow up by asking participants: “Do you think the children in your child care would like this bread. Why or why not?” Repeat for samples “B,” “C,” and “D”.

**GRAB AND GO LESSON TWO: LABEL READING (10-15 MINUTES)**

**Objective:**
Participants will be able to use food packages to identify whole grains.

**Materials:**
- Empty packages. (1-2 per person) that include whole grains, partial whole grains, and refined grains foods. Use the list below for ideas:
  - Breakfast cereal
  - Pasta
  - Bread
  - Crackers
  - Hard-shelled corn tortillas
  - Flour tortillas
  - Granola bars or breakfast bars
  - Rice or rice dishes
- Let’s Read Labels handout (1 per participant)

**Lesson:**
Introduce the concept of reading labels, saying something like:
“As you have seen from the bread tasting activity, it is hard to identify a whole grain food by look and taste alone. We are going to discuss things you can look for on a food package to determine if a food is a whole grain.”

Review the different ways to identify whole grains. Show examples of each.

1. **Ingredient list:**
   - The first ingredient is the ingredient with greatest quantity (by weight) in the food.
   - Look for the word “whole,” as in “whole wheat flour” or “whole corn meal” as the first ingredient. In the case of rice, ingredient lists will probably say “brown rice.”
   - Refined and enriched grains will usually be shown as “enriched,” as in “enriched wheat flour” or “enriched corn meal.” Enriched grains are not whole grains.

2. **Percentage label:**
   - Foods with 100% whole grains will often say so right on the front of the package
   - 100% means it is made with ALL whole grain
   - 50% whole grain still helps to “make half your grains whole.”

3. **Number of grams of whole grain.**
   - 16 grams of whole grain is considered one serving
   - Adults should get three servings, or 48 grams, of whole grains per day

4. **Yellow “Whole Grains Council” stamp**
   - The stamp will indicate whether the food is 100% whole grain and grams per serving
   - Companies pay to use the stamp, so some products (often store brands) don’t have the stamp and are still whole grain.

Introduce the activity by distributing copies of the Let’s Read Labels handout and saying something like:
“Let’s practice looking at food packages to determine whether or not they are whole grain foods. Find a partner to work with on this activity. I’m going to give each of you two food packages. Write the names of the foods you are reviewing in the left column of your Reading Food Labels handout. For each food, look at the package to see if it contains any of the four indicators we discussed that tells you it is a whole grain food. If the package contains one or more indicators, mark an ‘X’ for those methods on your handout. Finally, decide if the food is a 100% whole, partial, or refined grain food. I’ll give you several minutes to work on this and then we will discuss as a large group.”

Facilitate a discussion based on what participants learned from food packages.
GRAB AND GO LESSON THREE: SIMPLE WHOLE GRAIN RECIPES

Objectives:
Participants will learn a simple low-cost whole grain food they can prepare.

Materials: •
- Container of quick-cooking oats
- Snack-size clear zip-top bags (1 per participant)
- 1/4 cup measure
- Measuring spoons
- Ingredients: brown sugar, white sugar, raisins, cinnamon, nutmeg, cocoa powder
- Oatmeal packet instructions handout (1 per participant)

Lesson:
Introduce oats as a tasty, easy and low cost whole grain by saying something like,

“Oats are a unique grain because they are almost always used whole grain, even in processed foods. In addition, oatmeal makes a great breakfast because it is cheap, healthy, generally appeals to people, and can be very quick and easy to make.”

Several different kinds of oats can be purchased to eat for breakfast or to use in recipes.

- Old-fashioned oats: Kernels of oats are rolled flat. Old-fashioned oats cook in boiling water in about 5 minutes.
- Quick-cooking oats: Kernels of oats are rolled very flat and cut into pieces. Because they are smaller, quick-cooking oats cook in boiling water in 1 to 2 minutes.
- Instant oatmeal: Kernels of oats are steamed (pre-cooked), then are rolled very small. Instant oats can be cooked in hot or boiling water for about 1 minute. A microwave or stovetop are not required.
- Steel-cut oats: Kernels of oats are cut into pieces rather than rolled. Because they are thicker, steel cut oats require about 20 minutes to cook.

All these different kinds of oats are whole grains, with have very few nutritional differences. However, it is important to know that instant oatmeal packets are often high in sugar and tend to contain salt and other additives. In addition, pre-packaged instant oatmeal is about double the cost of buying quick oats in a canister.

Activity: For each station, you will need the materials and ingredients listed above and an instruction sheet. You may choose to set all the ingredients at one station, or do three stations, each with a different recipe.

*Note – Oatmeal bubbles over easily in the microwave. Advise parents to use a large bowl to avoid the oatmeal bubbling outside of the bowl.
GRAB AND GO LESSON FOUR: STORY TIME AND ACTIVE TIME WITH WHOLE GRAINS

Objective:
Participants will learn activities to use when introducing whole grain foods to children.

Materials:
- Books on whole grains (see ideas below)
- Supplies needed for selected activities

Lesson:
Children can be introduced to whole grains through stories and activities. The following are just a few ideas to teach children learn about whole grains. Pick and choose which activities would work best for your group.

Whole Wheat

Story Time
- *From Wheat to Pasta* – by Robert Egan
- *The Wheat We Eat* – by Allan Fowler

Play Time
- Use a toy farm combine and pretend to harvesting wheat.
- Help children string together whole grain pastas (rings and penne work best) to create a necklace or chain. Don’t do this with young children who might choke on small objects.
- Use whole wheat pasta boxes to create towers and other objects.

Active time
- Spaghetti streamers: Cut 2-3 feet of 2 crepe paper. Ask the students to pretend their crepe paper is cooked spaghetti. Play music and ask students to wave their strands of spaghetti. (Notes: Tell children not to wrap the crepe paper around their neck.)

Corn

Note: popcorn is a choking hazard for young children. Popcorn books and activities are intended for older children. Younger children will still enjoy the activities even if they can’t eat popcorn.

Story Time
- *The Popcorn Book* – by Tomie de Paola
- *Corn* – by Gail Gibbons

Play Time
- Glue popcorn kernels, popped popcorn, whole corn ready to eat cereal. Children can use other whole grains such as brown rice, wheat berries (wheat kernels) or whole wheat pasta.
- Help children make a trail mix using whole corn cereals and other cereals.

Active Time
- Popcorn music: Play music and ask children to jump up and down to the music like popcorn. Try slower and faster music.
• Popcorn numbers: First, ask children to pretend they are unpopped “popcorn” kernels by squatting down in the pan (on the floor). Next, roll dice and ask children to “pop up” the number of times shown by the dice. For example, if you roll a six, the children should pop up six times.

**Brown Rice**

**Story Time**

- *Food Rice* – by Louise Spilsbury
- *Everybody Cooks Rice* - by Norah Dooley

**Play Time**

- Place brown rice in a sensory table along with measuring cups, spoons, and other items of your choice.
- Seek and Find- Hide small objects in a small plastic jar of brown rice. Glue on the lid and have children shake the rice around to find the objects.

**Active Time**

- Brown rice shakers: Fill plastic eggs or small plastic containers with brown rice, and tape to ensure they stay shut. Turn on music and ask children to follow your actions while you raise your shakers over your head, under your leg, and behind your back. Have children take turns leading the actions.
Let’s Read Labels

**Directions:**
1. Mark an “X” in the box if the food label contains that example.
2. Circle the food(s) that have at least one “X”. This is a whole grain food.

<table>
<thead>
<tr>
<th>Food</th>
<th>100% whole grain on label</th>
<th>Whole Grain stamp</th>
<th>Grams of whole grain listed</th>
<th>First ingredient is a whole grain</th>
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OATMEAL PACKETS

INGREDIENTS

- Plastic snack or sandwich bag with zip top
- ¼ cup oatmeal (quick oats)
- Other optional ingredients, as desired
- 1 cup water (when ready to cook)

DIRECTIONS

1. Put ¼ cup oatmeal into bag. Add other optional ingredients, as desired.
2. Close bag and store for future use.
3. To make: Pour contents into a large bowl and add ½ cup of water (do not cover).
4. Microwave on high 1½-2 minutes.
5. Hint: Use a large bowl to prevent the oatmeal from bubbling over.

VARIATIONS

- **Apple Cinnamon Oatmeal** - To each packet, add 1 teaspoon sugar, ¼ teaspoon cinnamon and 1–2 tablespoons chopped, dried apples.
- **Cinnamon Raisin Oatmeal** - To each packet, add 1 teaspoon brown sugar, ¼ teaspoon cinnamon, and 1–2 tablespoons raisins.
- **Cinnamon-Spice Oatmeal** - To each packet, add 1 teaspoon sugar, ¼ teaspoon cinnamon, and ⅛ teaspoon nutmeg.
- **Cocoa Oatmeal** - Add 1 teaspoon baking cocoa and 1 teaspoon sugar to each packet or 2 teaspoons ‘quick-type’ chocolate drink powder.
- **Sweetened Oatmeal** - Add 1 teaspoon sugar or 1 teaspoon brown sugar to each packet.

Kids in the Kitchen

1. Children can help make the individual packets.
2. Have children make packets to give as gifts. Expand the activity and have children make labels to go with the packets.
3. Have children create their own packets by adding dried banana chips, nuts, almonds, or dried cranberries.

Money Saving Tip

Instead of using small plastic bags, put mix in a reusable jar. Or try making a larger batch of each variation and scoop out ¼ cup as needed.


Visit the website for more recipes: z.umn.edu/TheRecipeBox
WHOLE GRAIN TRAIL MIX

INGREDIENTS

1 cup each of four types of whole grain cereals:
- Wheat
- Rice
- Corn
- Oats
- ½ cup of raisins, dried apples, or other dried fruit

Makes 9 ½-cup servings.

DIRECTIONS

1. Pour cereals into large mixing bowl
2. Add raisins or other dried fruit; stir all ingredients with mixing spoon.

FINISHING UP

1. Place serving spoons in bowl and bring to table.
2. Wash dishes and bring extra food to central location.

MATERIALS

- ½ cup dry measuring cup
- 1 cup dry measuring cup
- Large mixing bowl
- Large mixing spoon
- 2 serving spoons

Visit this website for more recipes: z.umn.edu/TheRecipeBox

SIMPLY GOOD EATING