Whole Grains and Fiber
The term fiber refers to carbohydrates, specifically plant products, that are not digestible by the human body. Fibers can be classified as soluble or insoluble. Soluble fiber partially dissolves in water, while insoluble fiber does not. Sources of soluble fiber include oatmeal, oat bran, nuts and seeds, peas, beans, and fruits such as apples, pears, strawberries, and blueberries. Soluble fiber has been shown to help lower blood cholesterol, which can decrease one’s risk for heart disease. Insoluble fiber from whole grains, wheat bran, carrots, cucumbers, zucchini, and celery aids the body in moving foods through the digestive system and in having normal bowel function.

In addition to lowering the risk of heart disease, diets high in fiber have also been shown to protect against type 2 diabetes. A study done by Harvard School of Public Health showed that diets high in refined foods such as white bread, white rice, refined cereals, and white pasta were twice as likely to lead to diabetes than diets containing high fiber foods.

In order to determine how many grams of fiber a child should have each day, you should add five to the child’s age in years. For example, a ten-year-old should get about 15 grams of fiber each day. Information about the fiber content of foods is found on their nutrition labels.

(Sources: USDA, Harvard School of Public Health, American Heart Association)

Club Roll Call: What is your New Year’s fitness or nutrition resolution?

Physical Activity Calendars
Collect the December Physical Activity Calendar from each participant. Record each individual’s total number of activity minutes on the Get Up and Move! Club Chart.

Have a short discussion to review the Physical Activity Pyramid and reflect on each one’s activity for the past month. Have each individual look closely at his or her calendar to see how his or her activity matches the advice from the Physical Activity Pyramid.

Reflection Questions:
Did you see an increase of physical activity over days in December?
What types of physical activity have you been doing indoors since it is colder outside?
What types of outdoor activity have you been able to do?

Pass out the January Physical Activity Calendar.

Educational Activity
In this month’s physical activity, members will participate in two activities that will get them up and moving and also give them a chance to practice team-building skills. The first activity is “The Human Knot” in which members will work to disentangle themselves by wiggling, turning, stepping over hands, and ducking under arms. In the second activity, members will hold hands, forming a large circle, and work to move a hula hoop all the way around the circle. These activities are sure to be fun and bring members closer together!
Recipes/Snacks
This month’s snack features bulgar wheat. Bulgar wheat has been produced and served around the world for thousands of years, eaten by both Chinese and Roman emperors. Today it is most often found in Mediterranean, Indian and Middle Eastern dishes. A serving of whole grain bulgur (half a cup, cooked) has more than four grams of dietary fiber and only a quarter of a gram of fat. It also has a high level of minerals such as calcium, phosphorus and potassium and vitamins A and K. This month’s recipe is for **Bulgar Wheat and Vegetables**.

Family Activity
This month’s family activity is the **Whole Grain Challenge**. Families will explore the benefits of whole-grain bread and will consider eating it instead of white bread. They are also challenged to replace white rice with whole-grain rice and regular pasta with whole-grain pasta. Another activity families can do is the **Bread Scavenger Hunt**. This will help them learn more about whole-grain options! As a physical activity option, member families can arrange a visit to a local wall-climbing center.

Community Activity
The January community activity encourages members to take a neighborhood survey to see what types of bread people eat the most – whole-grain or white. They are encouraged to create a short presentation about the benefits of whole-grain products and present it to those neighbors and friends who eat white bread in hopes of persuading them to commit to switching for one week. Members can report their findings at the February club meeting. Another option is to give the short presentation at a senior citizen center or club or at a civic group, such as a Rotary or Kiwanis meeting.

Ties to 4-H Projects
This month’s community activity allows those members enrolled in **Public Presentations** to practice their speech skills by talking to neighbors about the importance of whole grain foods. Members can also make posters to take with them on their neighborhood visits to practice their display making skills. Members in **Small Grains** might want to learn more about the parts of a whole grain kernel – the bran, the germ, and the endosperm. Both the 4-H **Breads and Cereals** and **Fruits and Vegetables** projects will allow members to explore these high-fiber foods and dishes they can make using them.

All materials can be found on the State 4-H website at [http://www.4-h.uiuc.edu/opps/move](http://www.4-h.uiuc.edu/opps/move).

Get Up and Move!
Each day fill in what physical activity you did and how many minutes you did it.

Name ____________________________

For more resources visit: www.4-h.uiuc.edu/opps/move

University of Illinois • U.S. Department of Agriculture • Local Extension Councils Cooperating
University of Illinois Extension provides equal opportunities in programs and employment.

Fiber-rich Foods
Fill in the blank letters to find food rich in fiber!

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<thead>
<tr>
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<th>w o l wh a b ea</th>
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Bulgur Wheat and Vegetables

**Bulgur Wheat**
Bulgur is made from several different wheat species, but is most often made from durum wheat. Bulgur comes from wheat kernels that are partially cooked by boiling or steaming, then dried and cracked. Because bulgur is partially cooked, it is fast-cooking.

Bulgur wheat has been produced and served around the world for thousands of years, eaten by both Chinese and Roman emperors. Today it is most often found in Mediterranean, Indian and Middle Eastern dishes. A serving of whole grain bulgur (half a cup, cooked) has more than four grams of dietary fiber and only a quarter of a gram of fat. It also has a high level of minerals such as calcium, phosphorus and potassium and vitamins A and K.

1 medium chopped onion
1 cup chopped broccoli
1 cup shredded carrots
1 small green pepper, chopped
2 tablespoons dried parsley
1 teaspoon vegetable oil
1 1/2 cups dry bulgur
2 cups chicken broth, low-sodium
8 ounces canned chickpeas, drained

Wash and chop onion, broccoli, carrots, and pepper. Heat oil in a large skillet. Add onions and cook until soft.

Add bulgur and stir to coat. Add chicken broth and bring to a boil. Lower heat, add remaining vegetables and chickpeas. Cook for 10 minutes or until the liquid is absorbed.

Add parsley and stir. Serve warm or cold.

Serves 8.

---

**Nutrition Facts**

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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Amount Per Serving</th>
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<tbody>
<tr>
<td>Calories from Fat 15</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
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<tr>
<td>Cholesterol 0mg</td>
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<td>Total Carbohydrate 27g</td>
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<tr>
<td>Dietary Fiber 7g</td>
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<tr>
<td>Sugars 2g</td>
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<table>
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<th>Protein 5g</th>
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<tr>
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<tbody>
<tr>
<td>Calcium 4%</td>
<td>Iron 8%</td>
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*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

<table>
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<tr>
<th>Calories per gram:</th>
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<tbody>
<tr>
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<tr>
<td>Carbohydrate 4</td>
</tr>
<tr>
<td>Protein 4</td>
</tr>
</tbody>
</table>
Get Up & Move!

Team Building Games (25 minutes)

Items needed for this activity:
- 1 hula hoop (additional hula hoops may be helpful if your group is larger than 12-15 people)

Activity set up:
- Set aside a large area, enough for members to stand in a circle

Step 1: Information to share with club members (5 minutes)
How many of you ate an apple today? (Ask members to raise hands). How many ate wheat bread? Beans? Carrots? Oatmeal? Cereal? Other types of fruit? Good! When you ate these foods, did you know that you were eating fiber? Does anyone know where fiber comes from? (Wait for responses). Yes, fiber comes from plants. Actually, fiber is the part of plants that humans can’t digest. It is a very important type of carbohydrate that the body needs.

Fiber helps the body in many ways. It can help guard against diseases such as heart disease. It helps to keep our cholesterol levels low so that our arteries can be clear and our blood can move like it is supposed to. Fiber is also important in preventing a disease called diabetes.

How can you make sure you are getting plenty of fiber in your diet? One way is to stick to the right foods. MyPyramid tells us to eat 1 ½ cups of fruit every day and 2 ½ cups of vegetables. We should also eat about six ounces of grains per day, and make half of them whole grains. By following these rules, you should be getting plenty of fiber per day!

What is a grain? Grains are divided into two groups – whole grains and refined grains. Whole grains contain the entire grain kernel – the bran, germ, and endosperm. Refined grains have been milled, a process that removes the bran and germ. This is done to give grains a finer texture and to improve their shelf life. But milling removes dietary fiber, iron, and B vitamins. Many refined grains are enriched – or have the B vitamins and iron added back. But fiber is not added back to enriched grains.

The USDA recommends that half of the grains we eat are whole grains in order to get all the fiber we need and keep our bodies healthy. Does anyone know what types of grains are whole grains? (Wait for responses). Great! Whole grains include whole-wheat flour, bulgar, oatmeal, whole cornmeal, popcorn, and brown rice. When you eat grain products, like cereal, bread, rice, and pasta, try to make sure the ingredient list includes “whole grain” or “whole wheat.” This will help you ensure that you are getting enough whole grains in your diet!

(Sources: USDA, Harvard School of Public Health, American Heart Association)
Step 2: Group Activity 1 (10 minutes)
Today we are going to do an activity called the Human Knot. This will get you up and moving and let you practice working as a team. I want everyone to stand in a circle facing each other. Next, I want everyone to reach out and grab the hands of two people across from you in the circle. You cannot grab the hands of the person standing next to you and you must be holding two different peoples’ hands. (Ensure that everyone has grabbed the hands of two different people). Now, until the game is over, you cannot let go of these hands. This would be breaking the knot.

Okay, the goal of this game is to find a way to “untie the knot” and return to the original circle with everyone still holding hands. You can twist, turn, go under arms, step over hands – anything you need to do to untie the knot except letting go. If you let go, you must rejoin hands and reconnect the circle just like it was before you disconnected.

(Let members attempt to untie the knot.)

Step 3: Group Activity 2 (10 minutes)
Great job everyone! We are going to do another team building activity. I want everyone to stand in a circle again, but this time, I want you to hold hands with the people on either side of you. I am going to place a hula hoop on the arm of (a member). (Disconnect the hands of two members and place a hula hoop over the arm of one. Have them rejoin hands). Now the object of this game is to get the hula hoop all the way around the circle, without letting go of hands or using your hands. You can wiggle, turn, jump, crawl, stretch – or anything else you need to do. Ready, GO!

(Let members get the hula hoop around the circle. If you have time, you can try variations on this game. Some you can try are: everyone has to kneel, keeping one knee on the floor at all times; only one foot touching the floor at any given time; eyes closed, etc. You can even let youth make up their own rules!)

Get Up & Move!
Whole Grains and Fiber
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In addition to lowering the risk of heart disease, diets high in fiber have also been shown to protect against type 2 diabetes. A study done by Harvard School of Public Health showed that diets high in refined foods such as white bread, white rice, refined cereals, and white pasta were twice as likely to lead to diabetes than diets containing high fiber foods.

In order to determine how many grams of fiber a child should have each day, you should add five to the child's age in years. For example, a ten-year-old should get about 15 grams of fiber each day. Information about the fiber content of foods is found on their nutrition labels.

(Sources: USDA, Harvard School of Public Health, American Heart Association)

Making Fiber Part of Your Family's Diet
Although many kids often cringe at the mere mention of fiber, they're probably eating fiber every day without even realizing that it's so good for them. And there are plenty of creative, fun, and even tasty ways to incorporate these fiber-rich foods into your child's diet.

Breakfast
- Make oatmeal (a whole grain) part of your kids' morning meals.
- Opt for whole-wheat or other whole-grain cereals that list ingredients such as whole wheat or oats as one of the first few items on the ingredient list.
- Make pancakes with whole-grain (or buckwheat) pancake mix and top with apples, berries, or raisins.
- Serve bran or whole grain waffles topped with fruit.
- Offer whole-wheat bagels or English muffins, instead of white toast.
- Top fiber-rich cereal with apples, oranges, berries, or bananas. Add almonds to pack even more fiber punch.
• Mix your child's favorite cereal with a fiber-rich one or top it with a tablespoon of bran.

Lunch and Dinner
• Make sandwiches with whole-grain breads (rye, oat, or wheat), instead of white.
• Serve whole-grain rolls with dinner, instead of white rolls.
• Use whole-grain spaghetti and other pastas, instead of white.
• Serve wild or brown rice with meals, instead of white rice. Add beans (kidney, black, navy, and pinto) to rice dishes for even more fiber.
• Spice up salads with berries and almonds, chickpeas, cooked artichokes, and beans (kidney, black, navy, or pinto).
• Use whole-grain (corn or whole wheat) soft-taco shells or tortillas to make burritos or wraps. Fill them with eggs and cheese for breakfast; turkey, cheese, lettuce, tomato, and light dressing for lunch; and beans, salsa, taco sauce, and cheese for dinner.
• Add lentils or whole-grain barley to your child's favorite soups.
• Include fresh fruit as part of your child's packed school lunch.

Snacks and Treats
• Bake cookies or muffins using whole-wheat flour, instead of regular. Or use some whole-wheat and some regular flour, so that the texture of your baked treats won't be drastically different from what your child is used to. Add raisins, berries, bananas, or chopped or pureed apples to the mix for even more fiber.
• Add bran to baking items such as cookies and muffins.
• Top whole-wheat crackers with peanut butter or low-fat cheese.
• Offer popcorn - a whole-grain food - as a mid-day treat or while your child watches TV or movies. Aim for popcorn without lots of added fat or sugar. (However, only give popcorn to kids over 4 years old because the popular snack can be a choking hazard.)
• Top ice cream, frozen yogurt, or regular yogurt with whole-grain cereal, berries, or almonds for some added nutrition and crunch.
• Serve apples topped with peanut butter.
• Make fruit salad with pears, apples, bananas, oranges, and berries. Top with almonds for added crunch. Serve as a side dish with meals or alone as a snack.
• Make low-fat breads, muffins, or cookies with canned pumpkin.
• Leave the skins on when giving your child fruits and veggies as snacks or as part of a meal.

(Sources: USDA, Harvard School of Public Health, American Heart Association, www.kidshealth.org)
Get Up & Move!

Family Activity Series 3: January

Take the Wheat Bread Challenge!

At this month’s meeting, you learned about the many health benefits of whole grains and fiber. One easy way to get more whole grains and fiber is by eating whole wheat bread instead of white bread. If your family doesn’t eat whole wheat bread or another type of whole-grain bread already, you might want to take the Wheat Bread Challenge this month!

In order to participate in the challenge, all you have to do is switch your regular white bread to a whole-grain bread. Whenever you have a sandwich or toast, you will be getting fewer refined grains and more fiber! Try to get everyone in your family to try this new bread and explain to them the health benefits they are getting! Your family can replace refined pasta and rice with whole-grain products, too!

Another family activity you can do the next time you visit the grocery store is the Bread Scavenger Hunt. In this activity you will use the Nutrition Facts label on bread products and explore the fiber content and ingredients. You will even get to think of ideas for foods you would like to try that use whole-grains! The Bread Scavenger Hunt may be downloaded from http://www.nichd.nih.gov/msy/program_materials.htm and is on pages 186-187 of the “Facilitator’s Guide.”

For a physical activity this month, try an activity that is great for cold weather since it is done indoors. Visit a local wall-climbing facility with your whole family. Check local sporting goods stores and recreational facilities to see if they have a climbing wall. This fun activity will build your strength and stamina and give you a great workout! What other indoor activities can you think of that your family can try?
Today you’re going on a scavenger hunt for information. Tour the bread section and answer the questions below.

### Nutrition Information

Don’t forget the “5–20” rule when looking at the fiber content on Nutrition Facts label of breads. 5% daily value (DV) or less means the product is low in fiber, and 20% DV or higher means the product is high in fiber.

Choose one loaf of sliced white bread and one loaf of sliced whole-grain bread. Read the Nutrition Facts labels and ingredient lists, and fill in the chart.

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<tr>
<th>Breads</th>
<th>White Bread</th>
<th>Whole Grain Bread</th>
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<tr>
<td>BRAND NAME:________</td>
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1. **How many words that mean “whole grains” can you find on the ingredient list?**
   Look for: Whole wheat, whole-grain oats, bulgur, whole rye, and whole-grain com.

2. **How many words that mean “refined grains” can you find on the ingredient list?**
   Look for: Unbleached flour, wheat flour, enriched flour, and degemerminated com meal.

3. **How much fiber is there per serving?** (Look under “Total Carbohydrate” on the Nutrition Facts label.)

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<th>GRAMS:</th>
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<td>%DV:</td>
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Choose someone in your group to read this paragraph out loud:

Breads made from whole grains have a higher amount of fiber than breads made from refined grains, such as white flour. Dietary fiber is important because it helps keep the digestive system healthy. Whole grains are an important source of the fiber your body needs. When you’re choosing a grain food like bread, remember: The higher the number of grams of fiber per serving, the better.
4. Which bread has more “whole grain” words on the ingredient list?

________________________________________________________________________________________

5. Which bread has more “refined grain” words on the ingredient list?

________________________________________________________________________________________

6. Compare grams of fiber and the % DV for the breads you listed above. Which bread offers more fiber?

________________________________________________________________________________________

7. What type of bread do you and other young people you know usually eat?

________________________________________________________________________________________

8. Find three types of whole-grain breads that you would like to eat, and list their names (English muffins, pita bread, and tortillas are breads, too!)

1: ______________________________

2: ______________________________

3: ______________________________

Circle the one you will choose the next time you go to the store.

9. Think of and write down one sandwich idea that uses whole-grain bread.

_______________________________________________________________________________________

_______________________________________________________________________________________

_______________________________________________________________________________________

10. Name one interesting fact you learned about the bread aisle. You can think about the nutrition content, packaging, or location of the bread on the shelves.

_______________________________________________________________________________________

_______________________________________________________________________________________

Congratulations! You have finished the Bread Scavenger Hunt!
This month you learned about whole grains and the nutritional value they have over non-whole grains. One common food that you can buy in either form is bread. For this community activity, you will take a survey of people in your community to see which type of bread they usually eat. Tally your results in the boxes below.

Before you take your survey, prepare a short (30 – 60 second) presentation explaining the benefits of whole-grain bread over white bread. When you encounter a person who eats white bread, give your presentation and help them to understand the health benefits of switching to whole-grain bread. Ask them to commit to eating whole-grain bread instead of white bread for one week by signing below! Report back to your next 4-H meeting about how many people you were able to persuade!

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<thead>
<tr>
<th>Whole-grain bread</th>
<th>White Bread</th>
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Total:                                      Total:

For my health, I pledge to switch to whole-grain bread for one week:

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