



## Nutrition for Health and Fitness: Fiber in Your Diet<sup>1</sup>

Linda B. Bobroff<sup>2</sup>

There are many names for fiber. We used to call it **roughage** or **bulk**. Now we talk about **dietary fiber**, **total fiber**, or just plain **fiber**. Eating foods that contain fiber is good for your health. This fact sheet will give you tips on how to include foods with fiber in your diet.

**FACT:** Total fiber in your diet is the sum of dietary fiber plus functional fiber.

### What is Fiber?

Dietary fiber is the parts of plants that we cannot digest. Only foods that come from **plants** contain dietary fiber. Fruits, vegetables, legumes, and whole grain foods all contain dietary fiber.



### Fiber and Your Health

Fiber has varied uses in our bodies. Fiber adds **bulk** to our diet. Having enough bulk in the foods we eat helps prevent **constipation**. Fiber also may decrease our risk of getting **diverticular disease**. Diverticular disease is a bowel problem that can cause discomfort and sometimes severe pain. It often is treated with a high fiber diet.

**FACT:** Eating foods with fiber can help keep your digestive tract healthy.

Some foods have "functional" fiber added to them. Functional fibers have various effects in the body, like decreasing blood cholesterol or increasing stool bulk. Oat bran, pectin, and psyllium are functional fibers. They may be added to foods that otherwise would not contain fiber.



Fiber can help us fight high blood cholesterol. Certain kinds of fiber remove excess cholesterol from our bodies. This helps prevent heart disease in some people.

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2. Linda B. Bobroff, Ph.D, RD, LD/N, associate professor, Foods and Nutrition, Department of Family, Youth and Community Sciences, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611. Reviewed by Jennifer Hillan, MSH, RD, LD/N, Department of Family, Youth and Community Sciences, University of Florida, and Meredith C. Taylor, M.S., Suwannee County Extension Service.

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### Check Your Diet for Fiber

Answer the questions below, then see how your diet stacks up. (Put a check in only one box for each question.)

Seldom or Never      1 or 2 Times a Week      3 to 5 Times a Week      Almost Daily

How often do you eat:

1. Whole grain breads, cereals, or pasta?
2. Dishes made with dry beans, lentils, or peas?
3. At least 3 servings of vegetables a day?
4. Whole fresh fruit with skins and/or seeds (like berries, apples, peaches, pears, etc.)?


The best answer for all of these is **Almost Daily**. If most of your answers are in the first 2 columns, your diet may be low in fiber. Use the tips in this fact sheet to put more fiber in your diet.

### Is All Fiber the Same?

No! There are different kinds of fiber, and they are good for us in different ways. This is why we need to eat a variety of foods each day. Fibers are either insoluble or soluble in water. Most foods high in dietary fiber contain both types of fiber, but they have them in different amounts. Soluble and insoluble fiber have different effects on our health.

**Insoluble fiber** adds bulk to the stool. This helps prevent and treat constipation and diverticular disease. In severe cases, diverticular disease is treated with a low fiber diet.

You can get **insoluble fiber** from:

- whole grain breads, cereals, and pastas
- fruit with edible peel or seeds.
- vegetables



**Soluble fiber** helps lower blood cholesterol when eaten as part of a low fat diet.

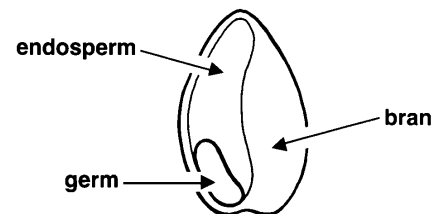
You can get **soluble fiber** from:

- oat bran
- oatmeal
- apples, oranges, and grapefruit
- cabbage
- legumes (dry beans, lentils, or peas)



### A Look at Whole Grains

**Whole grains**, and foods made from whole grains, are better sources of fiber than **refined grains**. Whole grains include the germ, endosperm and bran parts of the grain. Refined flour includes only the endosperm. The bran and germ contain most of the fiber in the



grain. Refined flour is low in fiber because it is missing the bran and germ.

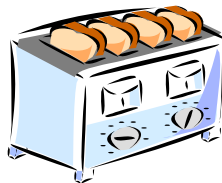
There are many kinds of grains that you can choose, depending on which you like. You can learn to cook and eat lots of new grain foods for variety!

- Whole wheat
- Cracked wheat
- Bulgur
- Whole cornmeal
- Barley
- Popcorn
- Brown rice
- Whole rye
- Oatmeal
- Quinoa



Some foods contain both whole grains **and** refined grains. Check the ingredient label to know what you are getting. The following foods usually contain both a whole grain and refined grains. Including some of these in your diet will help to increase your fiber intake.

- Wheat bread
- Cornbread
- Bran muffins
- Oatmeal bread
- Cracked wheat bread
- Pumpnickel bread
- Graham crackers
- Rye bread



### How Much is Recommended?

Most Americans eat very little fiber, about 10 to 15 grams per day. The amount recommended to help protect against heart disease is 14 grams of dietary fiber per 1,000 calories eaten. Older people need fewer calories, so their fiber needs are less. However, they should get enough fiber (and fluids) to stay "regular."

See chart for more details on fiber recommendations. They are based on the

Dietary Reference Intakes for total fiber that were introduced in 2002.

If you eat this many calories a day:	Your daily dietary fiber needs are:
1,600	22 grams*
2,000	28 grams
2,200	31 grams
2,500	35 grams
2,800	39 grams
3,200	45 grams

\* 20 grams is the lowest fiber intake recommended for all calorie levels below 2,000.

**Sources:** Food and Nutrition Board, Institute of Medicine

As with anything we eat, too much fiber can cause problems, such as gas pains and diarrhea. Read the next section to see how to avoid discomfort as you increase fiber in your diet.

### Increasing Fiber in Your Diet

#### Start Slowly

Many of us are not used to eating lots of foods with fiber. Changing your fiber intake too quickly can cause gas pains. So, increase fiber in your diet **slowly**. Here are some suggestions:

#### Step 1.

Add one fresh fruit and one serving of whole grain (or two servings of part whole grain) bread, cereal, or pasta to your daily diet. Choose any fruit that is in season and that you like. One grain serving is:



- 1 slice of bread, or
- ¾ cup of ready-to-eat cereal, or
- ½ cup of cooked cereal or pasta

## Step 2

After a few days, add one serving (about  $\frac{1}{2}$  cup) of a fresh or frozen vegetable **and** another serving of a whole grain product to your daily diet.



## Step 3.

Keep adding servings of vegetables and whole grain until **every day** you eat at least:

- 2 servings of fruits, and
- 3 servings of vegetables, and
- 3 servings of whole grain breads, cereals, or pasta

The number of servings depends on your total calorie needs. Also, every week include several servings of legumes. Legumes include dry beans, lentils, and peas.

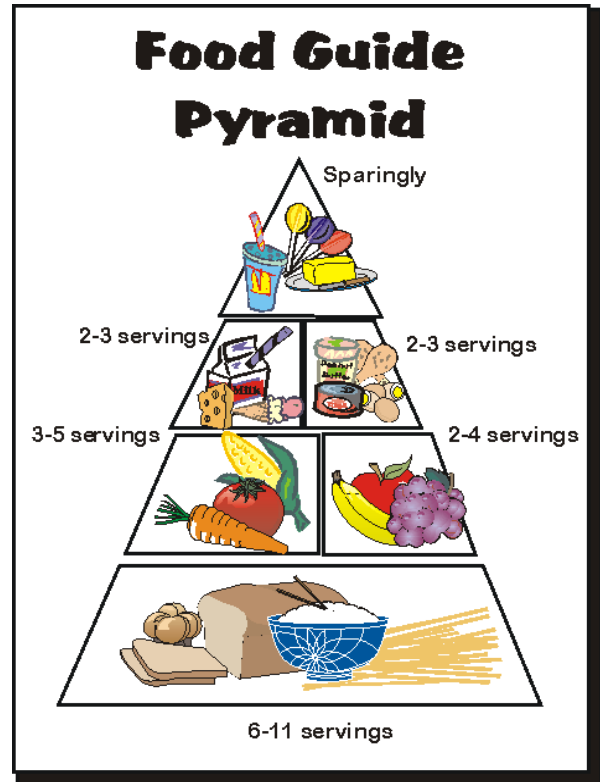
### Remember to Drink Water!

Be sure to drink at least six to eight glasses of fluid, especially water, each day. This will decrease side effects from the increased fiber in your diet.



Get into the habit of drinking a tall glass of water first thing in the morning. Enjoy water with your meals.

**FACT:** The Food Guide Pyramid recommends that we eat 6 to 11 servings of grain foods each day. At least half of these servings should be whole grain foods.



The next section will show you how to use food labels to see how much fiber is in packaged foods that you eat.

## Using Food Labels

Food labels help you compare the fiber content of foods to plan a healthy diet. Food labels have both nutrition and ingredient information.

### Nutrition Labeling

Nutrition information is given in the Nutrition Facts panel. The fiber content is **required** to be included as part of the Nutrition Facts on most foods.

Since almost all foods have the Nutrition Facts panel, it's easy to compare the fiber content of different foods. You can compare the amount of fiber in different brands of the same food since the **servicing size** on the label must be the same for all brands of that food.

<b>Nutrition Facts</b>	
Serving Size 1 cup (228g)	
Servings Per Container 2	
<b>Amount Per Serving</b>	
<b>Calories</b> 260	Calories from Fat 120
% Daily Value *	
<b>Total Fat</b> 13g	<b>20%</b>
Saturated Fat 5g	<b>25%</b>
<b>Cholesterol</b> 30 mg	<b>10%</b>
<b>Sodium</b> 660 mg	<b>28%</b>
<b>Total Carbohydrate</b> 31g	<b>10%</b>
Dietary Fiber 3g	<b>12%</b>
Sugars 5g	
<b>Protein</b> 5g	
Vitamin A 4%	Vitamin C 2%
Calcium 15%	Iron 4%
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9; Carbohydrate 4; Protein 4	

Fiber is listed in Nutrition Facts as **Dietary Fiber**, and the amount is given in **grams (g)** and **Percent Daily Value**.

The Daily Value for fiber is 25 grams for a 2,000 calorie diet. This is slightly less than the newer recommendation of 28 grams for a 2,000 calorie diet (see Table on page 3). You may want to aim for a higher level of fiber from a variety of fruits, vegetables, whole grains, and legumes.

### Ingredient Labeling

Food labels of most packaged foods include a list of ingredients. Ingredients are listed in order by weight. The item present in the greatest amount by weight is listed first and the item present in the least amount is last. Look for

foods with high fiber ingredients listed first or second. Some high fiber ingredients are:

- Brown rice
- Bulgur
- Cracked wheat
- Legumes (dry beans, peas, lentils)
- Oatmeal or oatbran
- Rye bran
- Scotch barley
- Wheat bran
- Whole cornmeal
- Whole rye flour
- Whole wheat flour

### What About Food Label Claims?

The food label may include claims about fiber. These claims have certain definitions:

<b>If the label says:</b>	<b>It means:</b>
<b>High fiber</b>	a serving has 20 percent or more of the Daily Value (5 grams or more of dietary fiber for a 2,000 calorie diet).
<b>Good source of fiber</b>	a serving has 10 to 19 percent of the Daily Value (3 to less than 5 grams of dietary fiber for a 2,000 calorie diet).

Keep in mind that even if a food provides only 2 or 3 grams of fiber in a serving, it contributes to your total fiber intake for the day. The Nutrition Facts label on this page is for a "good source of fiber," since the food provides 12% of the daily value. If you eat several servings each day of a

food with 2 grams of fiber, that food is an important source of fiber for **you**.

**FACT:** Legumes are a good source of dietary fiber. Lentils and dried beans and peas are legumes. Enjoy them at least two to three times a week as a main dish.



### Increasing Fiber in Recipes

Try some of these ideas to add fiber to your diet.

Instead of:	Use:
White rice	Brown rice
White flour	Whole wheat flour or half white and half whole wheat. Also, use rye flour, oatmeal, oat bran, or wheat to replace <b>some</b> of the white flour in breads, muffins, and quick bread recipes.
Peeled vegetables	Vegetable with peels, if possible.
Peeled fruits	Fruits with peels, if possible.

More tips for increasing dietary fiber in your diet:

- Two or more times each week serve bean, pea, or lentil main dishes instead of meat, chicken, or fish.
- Serve whole grain bread with dinner when it fits into the meal. (Go easy on the butter or margarine!)



- Eat a whole orange instead of orange juice for breakfast more often.



- Have fresh fruit for dessert instead of sweets.



- Grate fresh carrot into cole slaw and other salads (this also adds vitamin A).

- Add sliced banana, peach, or other fruit to your cereal.



- Keep prepared carrot and celery sticks, cucumber rounds, and other fresh vegetables at work for a quick, high fiber (and low fat) snack.

- Keep whole wheat crackers at work for an easy, high fiber snack.

All of these tips will help you include enough fiber in your diet for good health. **Remember**, to have an overall healthy diet, eat a variety of foods from the five food groups each day, and go easy on foods high in calories, fat, cholesterol, and sodium.

### For More Information

Contact your county Extension Family and Consumer Sciences agent, a Public Health Nutritionist or a Registered Dietitian (RD).

You can also get information from the Internet. Be sure the sites you visit are reliable! Try those that end in <.gov> <.edu> . They are government or university/school sites and have information you can trust. Other sites may have good information also. Just check them out carefully. To start out, try these sites:

<http://www.nutrition.gov>  
<http://www.nal.usda.gov/fnic>  
<http://5aday.nci.nih.gov>

<http://www.cce.cornell.edu/food>  
<http://www.wheatfoods.org>

## High Fiber Recipes

### Black Beans and Rice

Serve black beans over rice or as a thick hearty soup.

3 (16 oz) cans black beans, drained  
2 tablespoons olive oil  
1 cup onion, chopped  
1 green bell pepper, chopped (can use yellow, orange, or red bell pepper)  
1 clove garlic, crushed  
4 cups hot cooked rice  
1 sweet onion, chopped (optional)

In a small skillet, heat olive oil over **low** heat. Add 1 cup onion, green pepper, and garlic. Sauté for several minutes. Put beans into a saucepan; add the Sautéed vegetables and heat. Serve the beans over rice and sprinkle with the chopped sweet onion. Makes 8 servings.

Each serving provides approximately:

Calories: 280  
Fat: 4 g  
Dietary Fiber: 10 g.

### Fruity Oatmeal

For a change of pace, try this tasty breakfast treat!

$\frac{2}{3}$  cup water  
 $\frac{2}{3}$  cup low-fat milk (1 percent)  
 $\frac{1}{2}$  teaspoon cinnamon  
 $\frac{1}{4}$  teaspoon salt (optional)  
 $\frac{1}{2}$  small apple, washed and chopped  
 $\frac{1}{2}$  cup rolled oats (**not** quick-cooking)  
3 tablespoons oat bran  
1 tablespoon brown sugar  
1 small (or  $\frac{1}{2}$  medium or large) banana

Bring milk and water almost to a boil. Add cinnamon, (salt), apple, rolled oats, and oat bran. Cook uncovered about 5 minutes until liquid is mostly absorbed. Add brown sugar and sliced banana. Makes two servings.

Each serving provides approximately:

Calories: 235  
Fat: 3 g  
Dietary Fiber: 6 g

### Oven “French Fries”

An old favorite minus the deep frying! Try a variation by using unpeeled **sweet** potatoes cut into sticks (sprinkle with cinnamon and sugar).

- 2 pounds potatoes, scrubbed with vegetable brush, unpeeled, cut into large sticks
- 2 tablespoons corn oil or safflower oil
- ½ teaspoon pepper
- ½ teaspoon paprika

Preheat oven to 375 degrees. In a large bowl, combine potatoes, oil, pepper, and paprika; toss to coat well. Arrange the potatoes in a single layer on a nonstick baking sheet. Cover with aluminum foil. Bake 20 minutes. With a spatula, loosen potatoes and toss gently. Bake 20 minutes longer, uncovered. Remove potatoes to a serving plate. Makes 6 servings.

Each serving provides approximately:

Calories: 90  
Fat: 4½ g  
Dietary Fiber: 4 g

### White Bean and Tomato Salad

- 2 cups canned white beans, drained
- 2 tablespoons olive oil
- freshly ground pepper to taste
- 2 large ripe tomatoes, seeded and diced
- ¼ cup red onion, peeled and finely diced
- 2 teaspoons dried oregano

In a small bowl gently mix beans, olive oil, and pepper. Add tomatoes, onion, and oregano; toss to mix. Makes 4 servings.

Each serving provides approximately:

Calories: 230  
Fat: 7½ g  
Dietary Fiber: 7½ g