

## UW HEALTH - ONLINE HEALTH FACT

### Fiber

An important part of a healthy diet is eating a variety of fiber-rich foods, including whole-grain breads and cereals, fruits and vegetables, beans and nuts.

Fiber is an important part of your diet. This booklet will explain what fiber is, where it's found, and how to increase the amount of fiber in your diet.

#### ***What is fiber?***

Fiber is a component of plant foods that is indigestible. There are two types:

- Insoluble fibers or “roughage,” are found in fruit and vegetable skins and in the bran layer of whole wheat.
- Soluble fibers form a gel in water. Good sources include citrus fruit, barley, oatmeal, oat bran, and dried peas and beans.

#### ***What does fiber do?***

Insoluble fibers absorb water in the intestine which softens and increases the bulk of the stool. This action helps relieve constipation and curtail development of diverticular disease and hemorrhoids.

Water soluble fiber can help you lower your blood cholesterol level. Pectin in fruits, guar gum in dried peas and beans, and rolled oats and oat bran are good additions to a low cholesterol diet.

All types of fiber can help you lose weight. Fiber is indigestible, so it doesn't add extra calories to your diet. The added bulk helps you feel full with less food. Since fibrous foods take longer to chew, it also helps you slow the pace of your meals.

#### ***Can I eat too much fiber?***

Fiber can combine with certain vitamins and minerals to make them “unavailable” to your body. However, if you eat a balanced diet, this effect is not great enough to cause nutrient deficiencies. Even vegetarians, whose diets are very high in fiber, have normal vitamin and mineral levels.

#### ***Do I need to take a fiber supplement?***

There is no need for you to take concentrated fiber supplements. A variety of foods high in bulk provide adequate fiber and at the same time supply essential vitamins and minerals.

#### ***How should I increase the fiber of my diet?***

Each day eat at least 5 servings of fresh or cooked vegetables and fruits and at least 2 servings of whole grain products. The recommended goal for daily fiber intake is 25-35 grams.

It's best to increase the amount of fiber in your diet over several weeks. This prevents problems with stomach aches, bloating, gas, and diarrhea.

Fiber and water work together in bowel regulation. Be sure to drink eight to ten (8 ounce) glasses of fluid every day. Without adequate fluid, a high fiber diet can be constipating since fiber absorbs large amounts of water.

**Compare these two meal plans. Which one is most like your diet?**

Menu low in fiber

*Breakfast*

Orange juice  
Scrambled eggs  
White toast  
Margarine  
Milk

*Lunch*

Tomato soup  
½ tuna salad sandwich on white bread  
fudge brownie  
milk

*Dinner*

Baked chicken  
Buttered noodles  
Green beans  
Butterscotch pudding  
Milk

Menu high in fiber

*Breakfast*

Fresh whole orange  
Scrambled eggs  
Oat bran muffin  
Margarine  
Milk

*Lunch*

Minestrone soup  
½ tuna salad sandwich on wheat bread  
fresh strawberries  
milk

*Dinner*

Chicken/broccoli stir-fry on brown rice

Fresh fruit salad

Apple crisp

Milk

**Fruits**

Fruits are grouped by the average amount of fiber in a serving. The fruits are fresh unless otherwise noted. The serving size is ½ cup unless otherwise noted.

High Fiber Fruits

*Over 3 grams fiber per serving*

Prunes, 5 dried	3.1
Raisins	3.2
Apple, 1 lg, unpeeled	3.6
Avocado, ½	3.8
Dates, 3 dried	4.3
Pear, 1 unpeeled	4.7
Blackberries	4.9

*2.1-3.0 grams fiber per serving*

Blueberries	2.1
Orange, 1 medium	2.2
Apple, 1g, peeled	2.6
Raspberries	2.6

Low Fiber Fruits

*1.1-2.0 grams fiber per serving*

Apricots, 4 halves	
Fresh, dried or canned	1.3
Strawberries	1.4
Peach, peeled	1.4
Cherries, sweet	1.5
Mango	1.5
Applesauce, cooked	1.5
Tangerine, 1 medium	1.5
Nectarine, 2-1/2”	1.6
Pears, 2 peeled halves	1.7
Banana (8-3/4 “ long)	1.9

*Under 1 gram fiber per serving*

Fruit juices	.2
Mandarin oranges	.3
Watermelon	.3

Grapefruit sections	.4
Olives, 5 green	
or black	.4
Friar & prune plum	.5
Honeydew melon	.5
Grapes, green or red	.5
Cantaloupe	.6
Pineapple	.7
Cherries, sour canned	.8
Fruit cocktail,	
canned	.9

### **Vegetables**

Vegetables are grouped by the average amount of fiber in a serving. The serving size is  $\frac{1}{2}$  c. fresh vegetable unless otherwise noted.

Note: Sometimes there appears to be a discrepancy between the amount of fiber in a cooked versus fresh vegetable (e.g. mushrooms). There is often a greater volume of vegetable in a  $\frac{1}{2}$  c. cooked portion compared to a  $\frac{1}{2}$  c. raw portion. Therefore, there is more fiber in cooked mushrooms or spinach compared to  $\frac{1}{2}$  c. raw.

### High Fiber Vegetables

#### *Over 3 grams fiber per serving*

Brussels sprouts	3.1
Pumpkin, canned	3.5
Potato with skin, 1 lg	4.7
Lima beans, cooked	5.1
Pork and beans,	
cooked	5.6
kidney beans, cooked	6.6

#### *2.1-3.0 grams fiber per serving*

Mushrooms, canned	2.0
Carrot, 1 lg.	2.1
Turnip greens,	
cooked	2.1
Rhubarb, cooked	2.2
Spinach, cooked	2.3
Spinach, raw, 2 c.	2.3
Broccoli	2.7
Green peas	2.8

## Low Fiber Vegetables

### *1.1-2.0 grams fiber per serving*

Peppers	1.1
Celery	1.1
Onions	1.3
Green beans	1.4
Cauliflower	1.4
Asparagus	1.8
Sweet potatoes, Peeled	1.9

### *Under 1 gram fiber per serving*

Mushrooms, fresh	.3
Lettuce, iceberg/leaf	.4
Chinese cabbage	.4
Cucumber, peeled	.5
Radish	.6
Zucchini	.7
Cabbage, raw	.7
Bean sprouts	.8
Tomato, ½ c. or 2-1/2" fresh	.8
Potatoes, peeled	.9

## **Bread, Cereal, Rice, and Pasta**

The Nutrition Facts information on food labels will list fiber content.

### *High Fiber Foods*

Bran, including oat and wheat bran  
Brown rice  
Buckwheat  
Oatmeal  
Foods made with whole oats  
Peanut flour  
Rye flour  
Soybean flour  
Wild rice  
Whole wheat flour  
Breads labeled "healthy" or mixed grain breads

### Cereals

Read food labels and choose high fiber cereals. Cereals that contain 5 grams of fiber or more are considered high fiber.

*Try this muffin recipe for a tasty way to add fiber.*

#### Bran Muffins

5 tsp. baking soda

1 qt. Buttermilk

5 cups flour (3 whole wheat, 2 white)\*

2 cups sugar

1 package (15 oz.) Raisin Bran cereal

2 tsp. salt

4 eggs slightly beaten, or 1 cup egg substitute

1 cup oil

\*1/2 cup wheat germ may be substituted for 1/2 cup whole-wheat flour.

- Dissolve baking soda in buttermilk.
- Mix together remaining dry ingredients
- Add eggs, oil, and buttermilk mixture and stir
- Fill greased muffin tins about two thirds full.
- Bake at 400 degrees for 18-20 minutes. Makes 48 muffins.

One serving (1 muffin) = 174 calories, 26 g carbohydrate, 4 g protein, 6 g fat, 4 g fiber  
(For diabetics: 2 bread exchanges, 1 fat exchange)

#### **Additional Information**

Dietary fiber can be categorized as either soluble or insoluble. Naturally occurring fibers in food are usually a mixture of different types. Each type has unique properties.

Insoluble fibers are cellulose, hemicellulose and lignin. Insoluble fibers are highest in foods such as whole grain breads and cereals, vegetables and seeds.

Soluble fibers are in pectins, gums, and mucilages. The soluble fibers are highest in foods such as fruit, barley, oatmeal, oat bran and legumes. Although these foods are considered high in soluble fiber, no food is more than about 40% soluble fiber.

Plant foods usually contain a mixture of both soluble and insoluble fiber.

It is important to note that although we label various fiber as soluble or insoluble, all fibers within a group do not necessarily have the same effects on bowel function and health.

Appearance, coarse texture, or color are not good indicators of fiber content in foods. Some grain products, especially bread, contain purified fibers that appear light in color and very fine. Read the food label for accurate information on fiber content.