## DIETARY FIBER

Dietary fiber is an important part of a healthy diet. It helps move food and waste efficiently through the digestive system. Fiber is the part of plant foods that cannot be broken down by human digestive enzymes in the small intestine. Fiber is mostly complex carbohydrates. The two types of fiber are soluble and insoluble. While they work differently, both are needed for proper bowel function. Most fiber sources contain both kinds of fiber in varying amounts.

Insoluble Fiber cannot be dissolved in water. This type of fiber attracts water to the intestines, making stools bulky and soft. It also speeds the movement of food through the digestive tract. Therefore, insoluble fiber may help prevent diverticular disease, colon cancer, hemorrhoids, and constipation. Cellulose, hemi cellulose and lignin are insoluble fibers. They produce the tough, chewy texture of wheat bran, whole grains, corn bran, and some vegetables.

Soluble fiber, or fiber that can dissolve in water, slows the movement of food through the body but does not increase fecal bulk. Soluble fiber helps maintain a healthy cholesterol level, normalize blood sugar levels in diabetics and may even help reduce blood pressure. Pectins and gums are examples of soluble fibers, and they are found in beans, oat bran, psyllium husks, and some fruits and vegetables.

The target is 25-35 grams of fiber per day. The average American consumes about 14 grams of fiber daily. A daily menu with wheat bran cereal, whole grain breads, several servings of fruits and vegetables along with starchy foods can easily provide enough fiber to meet the recommended amounts.

The typical salad vegetables like lettuce and cucumber are generally poor sources of fiber, but root vegetables and beans are rich in this nutrient. Celery, cherries, and fruit juices, except tomato juice, are also poor sources of fiber. Dairy products and animal foods have no fiber. In grains, most of the fiber is in the bran, the outer covering of the grain. Bran is also high in thiamin, iron, phosphorus, and protein.

Don't confuse "wheat flour" used to make white bread and cake with "whole wheat flour", which includes the fiberrich bran. Whole grain bread has three times the fiber of white bread. Brown rice has 3.5 times the fiber of white rice. Grain products that are inadequate in fiber include French and Italian bread, macaroni, biscuits, pancakes, and piecrusts.

## TIPS TO INCREASE FIBER IN YOUR DIET

1. Choose whole grains such as whole-wheat bread, bagels and tortillas; brown rice and oats. On the labels, make sure the whole-grain ingredient is listed first. Try to buy cereals and grains with $\geq 3$ grams of fiber per serving.
2. Eat at least 5 servings of fresh fruits and vegetables per day. Make sure to wash and eat the peels.
3. Add cooked or canned dry beans, split peas and lentils to your favorite soups, stews and salads.
4. Choose snacks like popcorn, nuts, and dried fruits. Whole-wheat crackers, granola bars, crisp breads and nuts and seeds are also good sources of fiber.
5. Make sure to gradually increase your dietary fiber to avoid bloating, gas and discomfort.
6. Drink plenty of water and fluids to help avoid constipation. Constipation can result from a lack of both fiber and fluids in the diet.

## EXAMPLES OF GOOD SOURCES OF DIETARY FIBER

Fruits ( $\geq 3$ grams each): Apples, apricots, pears, blueberries, bananas, oranges, prunes, strawberries.
Vegetables ( $\geq \mathbf{2} .5$ grams per half cup): Peas, potatoes (with skin), carrots, yams, asparagus, broccoli, corn.
Breads ( $\geq 4$ grams per 2 slices): Light 100\% Whole Wheat, 9-grain, whole-wheat pita, whole-wheat tortilla.
Cereals ( $\geq 4$ grams per serving): All-Bran, Fiber One, Nabisco 100\% Bran, Raisin Bran, Shredded Wheat, Oat bran, Wheat Chex, Wheatena, Old fashioned Oatmeal, Low-fat Granola, Total or Wheaties.
Grains \& Pasta ( $\geq 3$ grams per serving): Barley, Bulgur, Garden burger, Buckwheat pancakes, brown rice, whole wheat couscous, pasta, macaroni.

## DIETARY FIBER CONTINUED FIGURE YOUR FIBER INTAKE

Use the chart below to track your daily fiber intake. Try to recall everything you ate yesterday. Enter the \# of servings in each group then multiply the \# of servings with the given values to get an approximate fiber amount per day. Once you have an idea of how much dietary fiber you already eat, gradually increase fiber-rich foods daily to get the recommend amount of 25-35 grams per day.

| FOOD GROUP | SERVING \# | VALUE FOR TYPICAL SOURCE OF FIBER | APPROXIMATE FIBER AMOUNT (GRAMS) |
| :---: | :---: | :---: | :---: |
| Grain products: <br> $1 / 2$ cup of cooked brown rice, bulgur, or regular oatmeal; <br> 1 slice of whole wheat bread <br> $1 / 2$ bran or whole grain muffin |  | $\times 2.0=$ |  |
| Refined grain products: <br> 1 slice of white bread <br> $1 / 2$ cup of cooked white rice, pasta, or other processed grains; <br> $1 / 2$ bagel or English muffin <br> 6 saltine crackers |  | $x 0.5=$ |  |
| Breakfast cereals: <br> Check the food label for serving size and amount of fiber per serving |  | $x$ _ grams $=$ |  |
| Vegetables: <br> $1 / 2$ cup of cooked dark green leafy vegetable, eggplant, squash, green beans, beets, carrots, cauliflower, potatoes; <br> 1 cup of raw vegetables (other than iceberg lettuce) |  | x $2.0=$ |  |
| Fruits: <br> 1 whole fruit, $1 / 2$ grapefruit, $1 / 2$ cup of berries or mixed fresh fruit, $1 / 4$ cup of dried fruit |  | x $2.5=$ |  |
| Dried beans, lentils, peas, or seeds: $1 / 2$ cup of cooked butter, kidney, lima, pinto, or white beans; $1 / 2$ cup of chickpeas, split peas, or lentils; $1 / 2$ cup of seeds or nuts |  | x $6.0=$ |  |
| Tofu (4 oz.) |  | x 1.5 = |  |
| Fast Foods: 1 slice of thin crust pizza, sandwich, burger, burrito |  | x 1.5 = |  |
| Miscellaneous <br> 1 slice of cakes or pie; 1 pastry or muffin; 2 cookies, or 1 oz . of pretzels or chips |  | x 1.5 = |  |
|  |  | TOTAL GRAMS OF FIBER PER DAY: |  |

