

HOME ECONOMICS

GUIDE



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Adding Fiber To Your Diet

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In the past century, people in the United States have been eating less fiber because of changing food habits and the use of more highly refined foods. Recently, the public has shown an increasing interest in dietary fiber because of its possible role in the treatment and prevention of disease.

While fiber is not a "miracle food," adding fiber-rich foods to your diet can have many healthful benefits. Also, many high-fiber foods give you more for your grocery dollar because they contain the added nutritional bonus of vitamins, minerals, and protein.

What Is Fiber?

Fiber is a type of *carbohydrate* found only in plants. It provides support or structure to plant cell walls, and is often called bulk or roughage. While many animals such as cattle and sheep can digest fiber, humans cannot. Because it is not absorbed, fiber provides no calories.

Fiber passes through the human intestinal tract without being taken into the blood stream, absorbing water as it moves along. This causes a larger, softer mass that is easier for the body to eliminate during a bowel movement. Because of this feature, fiber helps prevent constipation and reduces the risk of hemorrhoids. It reduces the symptoms of other long-term (chronic) intestinal problems such as diverticulosis, a condition causing painful outpouchings, or ballooning, of the intestinal wall.

Fiber is helpful in weight reduction because high-fiber foods are bulky, causing you to feel full quickly without adding calories to the diet. There is growing evidence that adding certain types of fiber foods to your diet may lower blood cholesterol, thereby decreasing your risk of heart attack. Also, there is evidence that high-fiber foods may decrease your risk of getting cancer of the large bowel (colon cancer). The reason for this may be that large, soft stools pass

through the intestinal tract faster, and therefore, any cancer-causing agents in the stool will be in contact with the intestinal wall for less time. More research is needed in this area because other factors may be causing colon problems.

Unprocessed plant foods are the best natural sources of fiber. Examples of fiber-rich foods are whole grain breads and cereals, nuts, dry peas and beans, raw and unpeeled vegetables, and fruits including berries with edible seeds. Animal foods do not add fiber to the diet. A piece of meat may be tough, but it contains protein rather than fiber.

Dietary Guidelines for Americans recommend that we avoid too much sugar, eat foods with adequate starch and fiber, and maintain ideal weight. These three recommendations are all directly related to dietary fiber. To help lower our consumption of simple carbohydrates, like sugar, it is recommended that we replace some of the sugars in our diet with *complex carbohydrate foods*, which are rich sources of dietary fiber, as well as many essential nutrients. Replacing simple carbohydrates with complex carbohydrates can also help maintain your ideal weight, because high-fiber foods are "bulky", causing a feeling of fullness. Therefore, less food is eaten. Simple carbohydrates can be a compact source of *calories*, or energy. This means that a small amount of food can contain many calories, but few nutrients.

Moderation Is The Key

Moderation is the key when adding fiber to your diet. Eat a wide *variety* of good fiber sources. It is also good advice to drink plenty of liquids; otherwise, excess fiber may actually cause constipation. Add high fiber foods to the diet gradually because too much at once may have uncomfortable results. It's best to get fiber from foods, rather than "pills, powders or wafers," because high-fiber foods also add many important nutrients to make your diet well balanced.

Fiber in Food

Food Item	Serving Size	Dietary Fiber (grams)	Food Item	Serving Size	Dietary Fiber (grams)
I Milk Group			B. Cereals		
Cottage Cheese, 2% lowfat	½ cup	0	*All-Bran cereal	½ cup (1 oz.)	9.0
Ice Cream, vanilla	½ cup	0	*Bran Buds cereal	½ cup (1 oz.)	8.0
Ice Cream, chocolate	½ cup	0	*Cracklin' Bran cereal	½ cup (1 oz.)	4.0
Ice Milk	½ cup	0	*40% Bran Flakes cereal	¾ cup (1 oz.)	4.0
Lowfat Milk, 2% fat	1 cup	0	*MOST cereal	¾ cup (1 oz.)	4.0
Pudding, chocolate, butter-scotch, banana or vanilla, made with milk	½ cup	0	*Raisin Bran cereal	¾ cup (1.3 oz.)	4.0
Sherbet	½ cup	0	C. Crackers, Cookies and Cake		
Skim Milk	1 cup	0	Coffee Cake	1 piece - 2½" x 2¾" x 1¼"	0.7
Whole Milk	1 cup	0	Cupcake, frosted	one 2½" diam.	0.9
Yogurt, Plain unflavored	1 cup	0	Fruit pie	⅛ or 9" diam. pie	2.6
Yogurt, fruit varieties	1 cup	0	Rye Wafers	three 3½" long	2.3
II Vegetable Group			Saltines	4 squares	0
Asparagus	4 medium spears	0.9	Vanilla Wafers	four 1⅜"	0
Asparagus, boiled, cut	½ cup	1.1	D. Soups		
Avocado, fresh	½ whole	2.2	Lentil, homemade	1 cup	5.5
Bean Sprouts	½ cup	1.6	Minestrone, prepared with water	1 cup	1.2
Beets, boiled, diced or sliced	½ cup	2.1	E. Starchy Vegetables		
Broccoli, boiled and drained	½ cup - ½" pieces	3.2	Baked Beans	½ cup	11.0
Brussels Sprouts, boiled and drained	½ cup	2.3	Chili	½ cup	8.6
Cabbage, shredded, boiled, drained	½ cup	2.0	Corn, drained solids	½ cup	3.1
Carrots, boiled, drained and sliced	½ cup	2.3	Corn, on the cob, boiled	1 ear - 5" long	5.9
	1 raw - 7½" x 1⅛" diam.	2.3	Corn, popped	1 cup popped	0.4
	6 strips (1 oz. raw)	0.8	Potato, baked with skin	1 medium - 2½" diam.	3.0
Cauliflower, boiled and drained	½ cup	1.1	boiled, peeled	1 medium	2.7
Celery, raw	1 stalk	0.7	French fried	10 strips	1.6
	½ cup-chopped or diced	1.1	mashed with milk and butter	½ cup	0.9
Coleslaw	½ cup	1.7	sweet, boiled, peeled	one 5" long x 2" diam.	3.5
Cucumber, raw	6 slices (1 oz.)	0.1	Rice, white enriched, long grain	½ cup	0.8
	1 small - 6⅜" x 1¼" diam.	0.6	V Meat Group		
Eggplant, peeled, cooked, diced and drained	½ cup	2.5	Beef: Corned	3 ounces	0
Green Beans, French, cut and boiled	½ cup	2.0	Patty	3 ounces	0
Green Pepper	2 rings	0.2	Rib Roast	3 ounces	0
	1 medium - 2¾" x 2½" diam.	0.8	Roast	3 ounces	0
Lettuce	⅙ head	1.4	Steak	3 ounces	0
	6 medium leaves	0.7	Chicken, dark meat	3 ounces	0
Mushrooms, raw	½ cup	0.9	Chicken, white meat	3 ounces	0
Okra	½ cup	2.6	Chicken, fried: 1 drumstick	1.3 ounces	0
Onions, raw sliced	1 cup	0.7	1 thigh	2 ounces	0
raw, chopped	1 Tbsp.	0.1	½ breast	3 ounces	0
boiled and drained	½ cup	1.4	Chicken, roasted: 1 drumstick	1.3 ounces	0
spring or green	2 medium	0.9	(without skin) 1 thigh	2 ounces	0
Peas, boiled and drained	½ cup	4.2	½ breast	3 ounces	0
Pickle, dill	1 medium - 3¾" x 1¼" diam.	1.1	Fish Fillet: Flounder	3 ounces	0
Radishes	10 medium	0.5	Halibut	3 ounces	0
Sauerkraut, solids and liquids	½ cup	3.3	Fish Cakes	3 ounces	0
Spinach, boiled and drained	½ cup	5.7	Fish Sticks, breaded	3 ounces	0
Tomato, raw	1 medium - 2⅝" diam.	2.0	Frankfurter	2 ounces (1)	0
Tomato Juice	½ cup	0	Haddock, breaded	3 ounces	0
Tomato Sauce	½ cup	2.6	Ham, boiled	3 ounces	0
Turnips, boiled and mashed	½ cup	3.2	Lamb Chop	3 ounces	0
Watercress, cut	½ cup - 5 sprigs	0.6	Lamb, roast	3 ounces	0
III Fruit Group			Liver, beef	3 ounces	0
Apple, with peel	1 medium - 3" diam.	3.3	Liver, calf	3 ounces	0
Apple, with peel	1 small - 2½" diam.	2.1	Meatloaf	3 ounces	0
Apple Juice	½ cup	0	Meat Salads: Chicken	½ cup	0.3
Applesauce, canned, unsweetened	½ cup	2.6	Tuna	½ cup	0.5
Apricots	2 medium	1.6	Pork: Chop	3 ounces	0
Banana	½ small - 7¾" long	1.6	Loin	3 ounces	0
Cantaloupe	¼	1.6	Sausage	1 ounce	0
Cherries, sweet	10 large	1.2	1 link	0	
Dates, dried	5	3.1	Salmon Steak	3 ounces	0
Fig	1 medium	2.4	Salmon, smoked	3 ounces	0
Fruit Salad, with syrup	½ cup	1.4	Shrimp, boiled	3 ounces	0
Grapefruit, fresh	½ whole	0.6	French fried	3 ounces	0
Grapefruit, canned, syrup packed	½ cup	0.5	Tuna, in oil, drained solids	3 ounces or ½ cup diced	0
Grapefruit Juice, sweetened	½ cup	0	Turkey, roasted: dark meat (without skin)	3 ounces	0
Grapefruit Juice, unsweetened	½ cup	0	white meat	3 ounces	0
Grapes, seedless	12	0.3	Veal Cutlet	3 ounces	0
Honeydew Melon	1 wedge (⅒ melon)	1.3	Substitutes (May be used in place of one ounce of meat)		
Lemon, fresh	1 slice	0.5	Cheese: American	1 ounce	0
Lemon Juice	1 Tbsp.	0	Cheddar	1 ounce	0
Lemonade, frozen	1 cup	0	Colby	1 ounce	0
Lychees	5	0.3	Monterey	1 ounce	0
Mango	1	3.0	Mozzarella	1 ounce	0
Nectarine	1 medium - 2½" diam.	3.0	Mozzarella, part skim	1 ounce	0
Olives	10 medium	2.1	Muenster	1 ounce	0
Orange	1 small - 2½" diam.	2.4	Parmesan	1 ounce	0
Orange Juice	½ cup	0	1 Tbsp. grated	0	
Oranges, Mandarin	½ cup	0.3	Provolone	1 ounce	0
Peach, fresh	1 medium - 2½" diam.	1.4	Swiss	1 ounce	0
Peaches, canned halves/light syrup	½ cup	1.2	Egg, soft or hard cooked	1 large	0
Pear, fresh	1 small - 2½" diam.	2.6	Peanut Butter, Smooth	2 tbsp	2.4
Pineapple, fresh	½ cup	0.9	Peanuts, roasted and salted	¼ cup	2.9
Pineapple, canned/heavy syrup	½ cup	1.1	Peanuts, Spanish	20	.7
Pineapple Juice, unsweetened	½ cup	0	Walnuts, chopped pieces	¼ cup	1.6
Plums, fresh	2 medium - 1" diam.	0.4	halves	¼ cup	1.3
Prunes, uncooked	2 medium	2.0	NOTE: Meat may be prepared by baking, roasting, broiling or boiling. Serving size refers to the weight of the meat after cooking and after bone, skin and fat have been removed.		
stewed w/o sugar added	½ cup	7.8	VI Fat Group		
Raisins	2 Tbsp.	1.2	Bacon, cooked and drained	2 medium strips	0
Raspberries	½ cup	4.6	Butter	1 pat (about 1 tsp.)	0
Rhubarb, stewed with sugar	½ cup	2.8	Cheese Sauce	¼ cup	0
Strawberries	½ cup	1.7	Cooking or Salad Oil	1 Tbsp.	0
Tangerine	1 medium - 2⅝" diam.	1.6	Cream Cheese	1 Tbsp.	0
IV Bread Group			Dressings:		
A. Breads			French Style, low calorie	1 Tbsp.	0
Bran Banana Bread, made with:			French Style, regular	1 Tbsp.	0
*All-Bran cereal or			Italian Style, low calorie	1 Tbsp.	0
*Bran Buds cereal	½ slice	1.8	Italian Style, regular	1 Tbsp.	0
*40% Bran Flakes cereal	½ slice	1.0	Margarine	1 tsp.	0
*Cracklin Bran cereal	½ slice	1.1	Mayonnaise	1 Tbsp.	0
Bran Muffin, made with:			Sour Cream	1 Tbsp.	0
*All-Bran cereal or			Tartar Sauce, low calorie	1 Tbsp.	0
*Bran Buds cereal	1	3.2	Tartar Sauce, regular	1 Tbsp.	0
*40% Bran Flakes cereal	1	1.3	White Sauce, medium	¼ cup	0
*Cracklin Bran cereal	1	2.0	VII Miscellaneous		
Bread: Cracked Wheat	1 slice	2.1	Beer	12 ounces	0
Pumpnickel	1 slice	1.2		1 cup	0
Raisin	1 slice	0.4	Bouillon	1 cube	0
Rye	1 slice	1.2		1 tsp. powder	0
White	1 slice	0.8	Coffee	1 cup	0
Whole Wheat	1 slice	2.1	Diet Soft Drink	12 ounces	0
Dinner Roll	1 ¾" x 2½" x 1¼"	0.8	Gelatin	½ cup	0
Frankfurter Roll or Bun	one 6" long, 2" wide	1.2	Jelly	1 tsp.	0
Hamburger Roll or Bun	one 3½" diam., 1½" high	1.2	Ketchup	1 Tbsp.	0
Pancake, Plain or Buttermilk	one 4" diam., ⅜" thick	0.5	Maple or Cane Syrup	1 Tbsp.	0
Taco Shell (Tortilla)	1	0	Mustard	1 tsp.	0
			Pickle Relish	1 Tbsp.	0.1
			Sugar	1 tsp.	0
			Tea	1 cup	0
			Vinegar	1 Tbsp.	0
			Wine - Dessert	½ cup	0
			Wine - Table	½ cup	0
			*Kellogg's products		
			*Dietary fiber refers to the part of the plant food that cannot be broken down by human digestive enzymes.		
			Total Dietary Fiber should range from 18 to 36 grams per day.		
			(Adapted from "Kellogg's Fiber Diet Planner", Kellogg Company, 1981.)		
			The use of trade names is not intended as an endorsement, nor is criticism of unnamed products implied.		

Adding fiber to the diet can be done with little effort. Choose from a wide variety of fiber-rich foods to replace some of the simple carbohydrates such as sugars, syrups, jams, jellies, soft drinks, and candy, and for some of the animal fats in your diet. Begin to check labels for the words "whole grain" or "whole wheat" on bread and cereal products. The milling of wheat that produces white flour also removes most of the fiber; therefore, whole grain products are preferred.

Add fresh fruits and raw vegetables to the diet. Those that are unpeeled or have edible seeds are the best fiber sources. Peeling, cooking, or pureeing reduces the usable fiber in fresh fruits and vegetables. Having a salad for lunch and fresh fruit for dessert at dinner are good ways of increasing dietary fiber. Nuts and seeds, such as sunflower and sesame, are also good sources of fiber. Sprinkling nuts and seeds over

cereal is one way to add them to your diet. Search out interesting new recipes for dry beans and dry peas which are good sources of fiber as well as low cost sources of protein, vitamins, and minerals.

Summing It Up

Fiber, roughage, bulk—at one time the average American diet contained an ample supply. Times have changed, and today, many of the procedures that are used to process foods also remove the fiber. This, along with changing food patterns, has made the average American diet low in fiber. The more highly refined a product and the more "instant" its preparation, the lower its fiber content. Replacing some of the sugars and animal fat in your diet with fiber-rich foods will have many health benefits, including better nutrition and maintenance of your ideal weight.

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