

FUN WITH FIBER

How to Add Fiber to Your Diet

Adding fiber to your diet doesn't mean topping everything you eat with wheat germ. Nor does it mean a life-long commitment to bran flakes for breakfast. Adding fiber to your diet can be fun, when you try some of these easy, tasty tips.

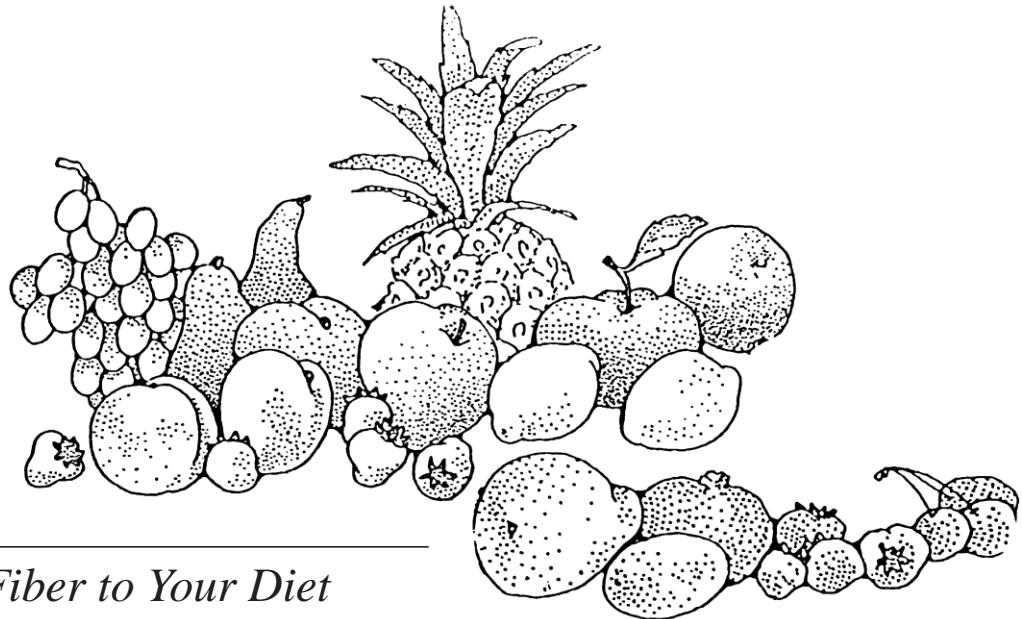
Cook With Fiber

An easy way to sneak some additional fiber into your meals is to use it as a "filler" in your favorite recipes:

- ❖ Add grated carrots, zucchini, or celery to meatloaves and fish, chicken, or meat salads.
- ❖ Toss a handful of rolled oats into the same meatloaf, or use the oats to top casseroles such as macaroni and cheese.
- ❖ Add chickpeas (garbanzo beans) or kidney beans to rice dishes for a fiber (and flavor) boost.
- ❖ Use unpeeled fruits in dessert.
(There's more fiber in the peels.)
- ❖ For a low fat "cream style" soup, use pureed vegetables added to cooking broth.
- ❖ When baking cakes or cookies, use oat flour for $\frac{1}{2}$ the flour called for in the recipe, or add oat bran or rolled oats for extra flavor and crunch.

Food Preparation Tips

You can also increase your fiber intake by following these food preparation ideas:



- ❖ Clean vegetables with a brush instead of peeling them.
- ❖ Don't overcook vegetables – the fresher the better.
- ❖ Steam or microwave vegetables instead of boiling them.
- ❖ Reserve vegetable cooking liquids and add to soups.
- ❖ Mash potatoes with the peels on.

Fiber-Rich Foods

Buying and using foods that are naturally high in fiber is perhaps the best way to incorporate more fiber into your diet.

- ❖ Use whole grain rather than refined flours, breads, cereals, and pastas.
- ❖ Use "brown" instead of "white" rice.
- ❖ Eat at least one "meatless" meal weekly using legumes, grains, and vegetables for your main dish.
- ❖ Instead of drinking the juice, eat the entire fruit.
- ❖ Try eating more vegetables raw instead of cooking them

Fiber Facts

By eating just 20-35 grams of fiber daily from a variety of sources, you may be able to reduce your risk for heart disease, gastrointestinal problems, and some forms of cancer. When you consider how easy it is to add fiber to your diet, it only makes sense to give it a try!

The Facts on Fiber

According to a recent U.S. Department of Agriculture survey, Americans eat between 12 and 17 grams of fiber every day. But many experts believe this simply isn't enough. The American Dietetic Association recommends a daily diet of between 20 and 35 grams of fiber to ensure the maximum health benefits from this important food component. Here are the facts on fiber.

What is Fiber?

Dietary fiber is any part of a food plant – from oranges to oats – that cannot be broken down by human digestive enzymes. It includes those elements of the plant that give it shape, structure and strength. There are two basic types of dietary fiber:

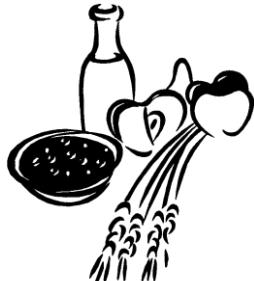
Insoluble Fiber (cellulose, hemicellulose, lignin) is sometimes called "roughage". It remains virtually intact as it wends its way through the body. The fiber provides bulk, helping to speed food through the system.

Soluble Fiber (gums, mucilages, pectins), on the other hand, forms a gel when it comes in contact with water and increases the viscosity and stickiness of the stomach contents. This slows down the passage of food from the stomach. When it reaches the colon, it is broken down by bacteria to produce fatty acids that can be absorbed by the body.

Most plants contain both types of fiber, although one may predominate over the other.

Where it is Found?

Grain products, vegetables and fruits are the principal sources of fiber in our diet. There is no fiber in meat, fish, eggs, milk and cheese.



In terms of *grain products*, whole-grain flour and foods made from whole grains contribute the greatest amount of fiber. Rye is the highest on the list, followed by wheat, barley, oats, brown rice and corn. Bran – the outer layer of the grain kernel – contains the most fiber, up to 90% depending on how it is processed.

Among *vegetables*, legumes (dried beans, peas and lentils) are the richest in dietary fiber. But potatoes, carrots, cabbage and tomatoes often contribute more fiber to our daily diet – despite their lower fiber content – simply because we eat them more frequently.

Vegetables, fruits and grain products are important parts of a varied diet. They are generally low in fats and help increase the amounts of dietary fiber and carbohydrates in our bodies. Because foods differ in the kinds of fiber they contain, it is best to eat a variety of fiber-rich foods.

How Much Should We Eat?

The *Dietary Guidelines for Americans*, issued by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services suggests we eat the following every day:



Three or more servings of various vegetables (a serving is a cup of raw leafy greens or other kinds)

- Have dark green leafy and deep yellow vegetables often
- Eat dry beans and peas often
- Also eat starchy vegetables such as potatoes and corn.

Two or more servings of various fruits (a serving is 1 medium apple, orange or banana; $\frac{1}{2}$ cup of small diced fruit; $\frac{3}{4}$ cup of juice)

- Have citrus fruits or juices, melons or berries regularly
- Choose fruits as desserts and fruit juices as beverages

Six or more servings of grain products such as breads, cereals, pasta and rice (a serving is 1 slice of bread; $\frac{1}{2}$ a bun, bagel or English muffin; 1 oz of dry ready-to-eat cooked cereal, rice or pasta)

- Eat products from a variety of grains such as wheat, rice, oats and corn
- Have several servings of whole-grain breads and cereals daily.

Too Much of a Good Thing

According to the *Guidelines*, some of the benefit from a high-fiber diet may be from the food that provides the fiber, not from the fiber alone. For this reason, *it's best to get fiber from foods rather than from supplements*. In addition, excessive use of fiber supplements is associated with greater risk for intestinal problems. Finally, the American Dietetic Association suggests that eating too much of a good thing – more than 50 or 60 grams of fiber a day – may decrease the amount of vitamins and minerals your body absorbs. Following the guidelines above is one way to ensure you receive sufficient amounts of fiber without going overboard.

Vegetables tend to have less fiber than cereals because they are higher in water.

Fruits and nuts are often underestimated sources, although they account for up to 30% of the total dietary fiber intake in a typical Western diet.

Why Do We Need Fiber?

Insoluble fiber – nature's dietary "cleaner" – promotes normal bowel function. It is helpful in preventing and treating constipation and has also been prescribed for the treatment of diverticular disease, and intestinal disorder. Researchers also believe it may play a role in reducing the incidence of colon cancer. Insoluble fiber is most frequently found in whole-grain products such as whole-wheat bread.

Several studies have linked soluble fiber – found in fruits, vegetables, dry beans and peas and some cereals such as oats – with reducing the level of cholesterol in the blood and in managing diabetes.

Fiber may also help fight obesity because it holds water, creating more bulk to help your stomach feel satiated. Soluble fiber empties from the stomach more slowly, which means that "full" feeling stays longer.

Check Your Diet . . .

The U.S. Department of Agriculture suggests you check your diet for adequate starch and fiber . . .

	Seldom Or never	1 or 2 x/week	3 to 4 x/week	Almost Daily
How often do you eat:				
Several servings of Pasta or rice?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vegetables like potatoes, corn, peas or dishes made with dry beans or peas?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole-grain breads or cereals?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole fruit with skins and/or seeds (berries, apples, pears, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The best answer for all of the above is ALMOST DAILY.

Charting Your Courses

The following chart, developed by the American Dietetic Association, shows a selection of foods and the amount of dietary fiber each contains. It can help serve as a guide in planning your meals. It is important to note, however, that fiber contents are subject to considerable natural variation and also depend on the nature of the food, how it is prepared or processed and the size or weight of the serving. For example, one slice of whole-wheat bread may seem to have fewer grams of dietary fiber than say, an apple – but if the fiber content is compared on a same-weight basis, the bread would win hands down.

Food	Amount	Grams of dietary fiber	Calories
Fruits:			
Apple (with skin)	1 Medium	3.0	81
Banana	1 Medium	1.8	105
Blueberries	½ cup	1.7	41
Cantaloupe	¼	1.1	47
Figs, dried	2	3.5	95
Orange	1 Medium	3.1	62
Peach (with skin)	1	1.4	37
Pear (with skin)	1 Medium	4.3	98
Prunes, dried	3	1.8	60
Raisins, seedless	¼ cup	1.9	108
Strawberries	1 cup	3.9	45
Vegetables, cooked:			
Broccoli	½ cup	2.0	23
Brussels sprouts	½ cup	3.4	30
Potato, baked (with skin)	1 Medium	3.6	220
Spinach	½ cup	2.0	21
Summer squash (Zucchini)	½ cup	1.3	18
Sweet Potato	½ Medium	1.7	59
Vegetables, raw:			
Carrots	1 Medium	2.3	31
Celery	1 stalk	0.6	6
Cucumber, sliced	½ cup	0.5	7
Lettuce, romaine	1 cup	1.0	8
Mushrooms, sliced	½ cup	0.5	9
Spinach	1 cup	1.5	12

		Food	Amount	Grams of dietary fiber	Calories
Legume, cooked:					
		Baked beans, plain or vegetarian, canned	½ cup	9.8	118
		Kidney beans	½ cup	7.3	110
		Lentils, cooked	½ cup	3.7	97
Breads, grains, and pasta:					
		Bagel	1	1.2	163
		French bread	1 slice	0.8	102
		Pumpernickel bread	1 slice	1.9	79
		Rice, brown, cooked	½ cup	1.7	109
		Spaghetti, cooked	½ cup	1.1	99
		Whole wheat bread	1 slice	1.9	61
Snack foods:					
		Peanuts, dry-roasted	¼ cup	2.9	214
		Popcorn, air-popped	1 cup	0.9	23
		Sunflower seeds, oil-roasted	¼ cup	1.4	193
		Walnuts, English	¼ cup	1.4	193
Breakfast cereals:					
		Bran flakes	¾ cup	5.3	93
		Cornflakes	1¼ cup	.06	121
		Granola	¼ cup	3.2	149
		Fiber One	¾ cup	13	
		Oat bran, raw	½ cup	4.9	76
		Oatmeal, regular, quick and instant, cooked	¾ cup	1.6	108
		Raisin Bran	¾ cup	4.8	115

HOW TO GET MORE FIBER IN YOUR DIET

Increasing the fiber in your diet can be very helpful to your health. Increased fiber can improve constipation, and help reduce hemorrhoids, diverticulosis (tiny outpouchings of the colon), and irritable colon, a condition that causes abdominal pain, worsens constipation, and leads to diarrhea. Some also feel that a high-fiber diet may help people with diabetes or high cholesterol levels, and can possibly prevent colon cancer and some forms of heart disease.

Try to get at least 25 to 30 grams of fiber each day

Here are some ways you can get more fiber in your diet:

1. Add 1 or more servings of fresh fruits and vegetables to your regular diet each day. At least 5 servings of vegetables and fruits a day are recommended. Some examples of high-fiber fruits (3 grams of fiber each) and vegetables (2 ½ grams of fiber per half cup) are:

<u>Fruits</u>	<u>Vegetables</u>
Apple	Broccoli
Banana	Brussels sprouts
Pear	Carrots
Orange	Corn
Prunes	Peas
Raisins	Potato (with skin)
Strawberries	Spinach

2. Change from white bread and white rice to unrefined whole-grain breads and cereals and brown rice. The fiber content is about 2 ½ grams per slice or ½ cup serving of cereal.
3. Try bran cereal for breakfast. Check the label for the amount of fiber, which will be listed in grams. For example, All-Bran® and 100% Bran® have the highest fiber (8-10 grams per ¼ cup). Bran Flakes and other cereals have less.

Additional Options:

4. Gradually begin adding ¼ cup or more of oat bran or wheat (miller's) bran (found at most grocery stores) to foods that you eat regularly. For example, adding this amount of fiber to cooked cereal or applesauce will give you about 7 grams of fiber per ¼ cup.
5. Add some cooked legumes (dried beans) to your diet each week. Some familiar legumes include pinto and kidney beans, lentils and chili beans.

Make Changes Slowly

Each of these diet changes can add quite a bit of fiber to your diet. Pick the change that is most appealing to you and try it. After you get used to that change, wait several days to a week before adding more fiber to your diet.

Avoiding Bloating and Gas

Many people are bothered by bloating, cramping, or intestinal gas when they first start adding fiber to their diets. The way to avoid this is to start with small changes, such as adding one serving of fresh fruit or 1 tablespoon of bran to your diet each day. Then slowly increase the amount of fiber. This will help your body adjust to the fiber and will lessen gas, bloating or a crampy feeling. Your body will adjust to the new foods, and bloating and gas will disappear.



Drinking Plenty of Liquids

Just like a sponge, fiber tends to hold water, so you need to increase your intake of liquids as you increase your fiber intake. Unless you already drink more than 6 glasses of water or other fluids each day, **add at least 2 glasses of water to your diet each day**. For example, you will need to add 1 glass of water for each tablespoon of bran.

A Final Note

If these dietary changes are not enough, many physicians suggest that you add psyllium seed (Metamucil® or Modane®, etc.), 1 or 2 teaspoons twice daily, mixed with water or with juice. (Each teaspoon contains about 3.5 grams of psyllium fiber).

Try a Fresh Fruit Smoothie (Makes 3-4 Cups)

Each cup has 160 calories, 0 grams of fat, 3 grams of protein, 1 mg of cholesterol and 6 grams of fiber

2 medium oranges, peeled, cut into bite sized pieces (1 cup)
1 cup non-fat yogurt
1 cup fresh or frozen fruit (blueberries, raspberries, strawberries, mango) to suit personal taste
 $\frac{1}{4}$ tsp. vanilla
 $\frac{1}{2}$ cup Fiber One, All Bran, GoLean, or Kashi cereal
1 cup crushed ice
6 tsp. honey

Blend all ingredients, except ice, in food processor or blender until smooth. Add ice, blend briefly and serve.



Helpful Hints

How to calculate daily fiber

Age + 5 x 2 = total grams. (Maximum 30 grams per day).

Example: If your child is 7 years old the calculation should be $7 + 5 = 12 \times 2 = 24$ grams per day.

How to calculate daily fluid intake.

One 8 ounce glass of water per year of age up to 10 glasses per day.

Example: If your child is 7 years of age he would require 7 glasses per day.



Tips To Get Your Daily Fiber

Fiber information obtained from Fiber One cereal box.

Scan for Bran. Look for "bran", "whole grain" and "whole wheat" on product packages and ingredient labels. These ingredients can help boost fiber intake. Fiber One Cereal contains 14 grams of fiber per $1\frac{1}{4}$ cups.

Grab the whole food. Munch on a whole piece of fruit, in place of drinking a glass of juice. You'll get the nutrients and the fiber, too. (1 medium orange = 3 grams fiber)

Screen for Beans. Replace your typical side dishes with high fiber dried peas and beans such as kidney, pinto, lentils or black-eyed peas. These fiber-packed legumes make it easier to meet daily fiber goals. ($\frac{1}{2}$ cup red kidney beans = 8 grams fiber)

Savor the Skins. Eat fruit and vegetables with the skin on. Eating the skin helps to bump the fiber, plus it provides texture and a bonus of other nutrients. (1 medium baked potato with skin = 4 grams)

Go Nuts. Jazz up salads, vegetables, snacks and desserts with almonds, sunflower seeds, or soy nuts. Nuts and seeds add fiber and fun-to-chew crunch to foods. (1 oz. roasted almonds = 3 grams fiber)

Be Berry Wild. Choose raspberries, blackberries and boysenberries to add variety to your cereals. These berries have twice the fiber of many other fruit selections. ($\frac{1}{2}$ cup brown rice = 4 grams of fiber)

Bring on the Brown. Use brown rice instead of white. Switch to whole-wheat pasta, whole-wheat flour, whole-wheat breads and whole-grain crackers instead of regular white versions. (1 cup brown rice = 3 grams of fiber)

Skip the Chips. Select snacks are a good source of fiber. Instead of potato chips go for low-fat popcorn, whole-grain pretzels or oven-crisp whole-wheat pita triangles. (3 cups of popcorn = 4 grams of fiber)

Drink it up. Water is a healthy beverage choice - especially as you up the fiber your body needs more water to help process the added fiber you eat. (Aim for eight 8 oz. glasses of water each day)

Sneak in some Fiber One Original Mix. Mix Fiber One Original into your favorite side dishes, top yogurt, salads or oatmeal. Even a small amount of Fiber One makes a difference. ($\frac{1}{4}$ cup Fiber One = 7 grams)

Fiber Content of Everyday Foods

A high fiber and fluid diet is a healthy diet and is suitable for all the family. You should encourage a regular meal pattern and increase the whole family's fiber and fluid intake at every meal. By doing this you will increase the water content of stools making them softer and easier to pass.



Dietary Fiber Content

Food Group	Amount	Grams of Fiber	Food Group	Amount	Grams of Fiber			
Fruits:								
Pear	½ large	3	Corn:	½ cup	3			
Apple	1 med.	3	Drained Solids	1 med.	1			
Blackberries	½ cup	3	Cob					
Raisins	3 Tbsp.	3	Rice (cooked):					
Strawberries	1 cup	3	Brown	½ cup	2			
Grapefruit	1 med.	3	White	½ cup	0			
Blueberries	½ cup	2	Pasta:					
Dates (dried)	3	2	Whole Wheat spaghetti	1 cup	4			
Figs (dried)	1 cup	2	Macaroni	1 cup	1			
Mango	1	2	Noodles	1 cup	1			
Nectarine	1 med.	2	Spaghetti	1 cup	1			
Orange	1 med.	2	Soups:					
Peach (fresh)	1 med.	2	Bean, Lentil, Pea	¾ cup	2			
Peaches (canned)	1 cup	2	Minestrone	1 cup	1			
Pear (canned)	1 cup	2	Broth	Any	0			
Pineapple	1 cup	2	Vegetables:					
Plums	2 med.	2	Lima Beans	½ cup	5			
Prunes	2 med.	2	Peas	½ cup	4			
Tangerine	1 large	2	Turnip Greens	¾ cup	4			
Grapes	1 cup	1	Tomato (raw)	1 large	4			
Applesauce	½ cup	1	Broccoli (boiled)	½ cup	2			
Apricots	2 med.	1	Green Beans	½ cup	2			
Banana	½ med.	1	String Beans	½ cup	2			
Cantaloupe	¼	1	Beets	½ cup	2			
Cherries	10 large	1	Brussels Sprouts	½ cup	2			
Honeydew Melon	1 cup	1	Cabbage	½ cup	2			
Watermelon	1 cup	1	Carrots (raw)	1 large	2			
Meats, Eggs, Fish & Cheese:								
Peanut Butter (smooth)	2 Tbsp.	2	Carrots (boiled)	½ cup	2			
Beef, lamb, pork, fish, eggs and cheese	any	0	Cauliflower	¾ cup	2			
Starches (potato):								
Sweet	1 large	4	Coleslaw	½ cup	2			
Baked	1 med.	3	Eggplant	½ cup	2			
Boiled (peeled)	1 med.	2	Okra	½ cup	2			
French Fried	10 strips	1	Desserts:					
Mashed	½ cup	1	Fruit Pie	½ of 9" pie	2			
Dried Peas & Beans:								
Baked Beans	½ cup	9	Coffee Cake with Nuts	2½" square	1			
Kidney Beans	½ cup	7	Cupcake (frosted)	1	1			
Navy Beans	½ cup	6	Gelatin, ice cream, or pudding	any	0			
Pinto Beans	½ cup	5						
Dried Peas	½ cup	5						
Lima Beans	½ cup	4						
Lentils	½ cup	4						