



A fresh look at
fiber



NATIONAL FIBER COUNCIL

www.nationalfiberCouncil.org

The resource for credible information
about the benefits of dietary fiber

1-866-749-5296

Fiber: Boost Your Health



You probably already know that fiber is an important part of your diet and that it's good for regularity and constipation. However, you may be surprised at how many other ways a high-fiber diet benefits health.

Fiber not only promotes general wellness and intestinal health, it lowers the risk of developing many diseases and conditions that can put your life in danger:

Heart attack

Stroke

Diabetes

Obesity

High blood pressure

Certain cancers

To reap the full benefits of fiber, you need to get enough of it. How much fiber do you need? That depends on your age and if you are a man or a woman. **The National Fiber Council recommends about 32 grams of dietary fiber per day** – based on 25 grams for women and 38 grams for men. Unfortunately, most Americans only get about half of this amount, consuming about 10-15 grams per day. The good news is that getting more fiber is fairly simple. You just need to know where to look, which is usually no further than your pantry, refrigerator, grocery aisle or pharmacy shelf.



did you know?

Fiber helps lower
your cholesterol.

The Skinny On Fiber

did you know?

Apples, bananas, oranges, pears and berries are rich in fiber.

Fibers, also known as roughage or bulk, are sugars and starches from plants. Fruits, vegetables, whole grains and legumes, such as peas and beans, are excellent (and delicious) sources of fiber. Another way to get fiber is through natural supplements such as psyllium, which is made from the seed of a shrub-like herb.

Unlike protein and fat, your body does not digest and absorb fiber. But rest assured, as fiber passes unchanged through your stomach and small intestine into the large intestine (colon), it is working hard to keep you healthy.



The Many Benefits of Fiber

In the...	Fiber Acts to	And Benefits Your Health by
Stomach and small intestine	<ul style="list-style-type: none"> Cause a sense of fullness Trap cholesterol and fats Slow absorption of sugars 	<ul style="list-style-type: none"> Regulating weight Lowering cholesterol Improving blood glucose (sugar) levels
Large intestine (colon)	<ul style="list-style-type: none"> Cause fermentation and promote growth of healthy bacteria Absorb water, adding "bulk" to stool 	<ul style="list-style-type: none"> Enhancing immune system to fight infection and chronic disease Promoting regularity and elimination, minimizing constipation

Fiber Myths and Facts



1. All forms of dietary fiber are the same.

Myth or Fact? Myth. Fiber can be classified into two types: soluble (dissolves in water and may form a gel) and insoluble (does not dissolve in water). Soluble fiber can help to lower cholesterol and regulate glucose levels as well as promote regularity. Examples of soluble fiber include oats, fruits and vegetables, beans, barley and psyllium. Insoluble fiber adds bulk to the stool and contributes to bowel regularity. Examples are whole-wheat flour, wheat bran and some vegetables. Virtually all plant foods contain soluble and insoluble fiber.

2. Certain fiber supplements can help build bone strength.

Myth or Fact? Fact. Fiber itself does not contribute to bone strength or calcium metabolism, but some fiber supplements do contain calcium as an ingredient which will help with good bone health. Examples are calcium polycarbophil in Fibercon® and Metamucil® Capsules Plus Calcium.

3. Dense meats such as steak and pork are good sources of dietary fiber.

Myth or Fact? Myth. Dietary fiber is derived only from plant products.





4. A high-fiber diet may promote weight loss.

Myth or Fact? Fact. Dietary fiber enhances satiety (feeling full while eating) and may prevent over eating. High-fiber diets tend to have more volume and less calories than other types of diets.

5. You only need dietary fiber if you suffer from constipation.

Myth or Fact? Myth. In addition to promoting regularity, fiber lowers the risk of developing many life-threatening diseases and conditions, such as heart disease, certain forms of cancer, diabetes, stroke and obesity. Soluble fibers for instance, like those found in oat bran, oranges, apples, carrots and dried beans, entraps cholesterol components in the blood which can help lower cholesterol and prevent heart disease. And because fiber is not digested, it keeps you feeling full for longer, which can minimize or eliminate unnecessary snacking that can lead to obesity and/or certain types of diabetes.

6. A high-fiber diet helps prevent colon cancer.

Myth or Fact? Fact. Some studies show that a high-fiber diet will prevent colon cancer. However, the best approach to preventing colorectal cancer is to undergo regular screening for and removal of colon polyps, along with smoking cessation, a diet low in saturated fat, maintaining a normal body weight and engaging in normal physical activity.



Choose The Same Food ... But A Better Form ...



Sound confusing? Many foods you already enjoy have fiber, but there may be a better form of that food that packs a full-fiber punch.

Good	Better	Best
Applesauce	Peeled apple	Apple with peel
Mashed potatoes	Peeled potato	Potato with skin

The bottom line is that most of us don't eat enough fruits, vegetables, cereals and grains. However, when you increase your intake you'll find that you feel fuller longer, and derive the benefits of extra fiber and the additional nutrients and antioxidants from the fiber-containing food.



Fiber choices lower in calories	Fiber choices higher in calories and fat
Air-popped popcorn	Buttered popcorn
Steamed asparagus	Asparagus with hollandaise sauce
Bran cereal with fat-free milk	Bran cereal with whole milk (or bran cereal used in high-fat muffins, cookies, etc.)
Tossed salad with low or fat-free dressing	Tossed salad with creamy dressing
Oatmeal with 1% milk and raspberries	Oatmeal with cream

did you know?

Peels and skins of fruits and vegetables will always boost your fiber intake.

Nutrition Facts

Serving Size 1 slice (38g)	
Servings Per Container 18	
Amount Per Serving	
Calories 90	Calories from Fat 10
% Daily Value*	
Total Fat 1g	2%
Saturated Fat 0g	0%
Trans Fat 0g	
Polyunsaturated Fat 0g	
Monounsaturated Fat 0g	
Cholesterol 0mg	0%
Sodium 190mg	8%
Total Carbohydrate 18g	6%
Dietary Fiber 3g	12%
Sugars 3g	
Protein 4g	

- BAKED WITH WHOLE GRAINS
- NO TRANS FAT
- GOOD SOURCE OF FIBER

See back panel for nutrition information

Keep in mind that most fiber-rich foods are low in calories. That quickly changes, however, depending on how you actually eat the foods – mostly in terms of added fat and/or sugar.

It's easy to know how much fiber is packaged in foods. Look at the Nutrition Facts panel on the back of your packaged foods for this information. Dietary fiber is listed as a sub-category of the total carbohydrates.

In addition, some food manufacturers will flag an item with the words “high fiber, good source; more or added fiber.” The Food and Drug Administration (FDA) defines these descriptors and food products must meet those standards.

If your label says ... The fiber count is ...

High fiber	5 grams or more per serving
Good source	2.5 to 4.9 grams per serving
More or added fiber	At least 2.5 grams more (than traditional food) per serving

NFC Menu Plan



This menu is based on approximately 2,000 calories per day, and contains 32 grams of fiber as recommended by the National Fiber Council. According to USDA Food Guide this level of calories “is appropriate for many sedentary* males 51 to 70 years of age, sedentary females 19 to 30 years of age and for some other gender/age groups who are more physically active.”

Adjust your calorie levels according to your age, gender and activity levels. Meanwhile, try to keep your fiber intake as close to 32 grams per day as possible. You may want to consult a registered dietitian (RD) to help create the plan best suited to your needs.



Finally, remember to drink at least 8 to 10 glasses of water a day. Fiber acts on its ability to bind water, so it's important to have adequate amounts of water each day.



NFC Menu Plan

Food	Fiber (grams)	Calories**
Breakfast:		
1/2 cup high-fiber cereal	5	60
8 ounces low-fat (1%) milk	0	110
1 medium banana, sliced	3	105
Coffee, tea, decaf	0	0
Snack:		
1 cup non-fat plain yogurt	0	110
Lunch:		
Turkey sandwich on whole-grain bread:		
2 slices whole-grain bread	4	140
3 ounces white meat turkey	0	105
Large salad (3 cups greens)		
2 tablespoons "Light" dressing	0	80
8 ounces orange juice	0	110
1/4 cup raisins	1	110
Snack:		
1 ounce dry-roasted almonds (22 pieces)	3	169
Dinner:		
4 ounces lean pork tenderloin, OR beef tenderloin, OR salmon filet	0	220
1 medium baked sweet potato with skin	4	105
1 cup cooked spinach	4	40
1 tablespoon trans-fat free spread	0	80
1 medium orange	3	70
Snack:		
1 cup non-fat plain yogurt	0	110
1/2 cup fresh blueberries	2	32
Discretionary Calories:		200

**Sedentary* is light physical activity associated with typical day-to-day life.
 **Note: Some numbers are rounded up and may also vary by brand.

Fiber In Your Pantry: Top Five Items To Keep In Your House



It's much easier to make changes in your diet when you have the right foods on hand. So here are five items you should always have in your pantry or freezer. Though many people prefer fresh fruits and vegetables, these items can spoil if not used in a relatively short period of time. Keep in mind that frozen and canned foods can actually be just as nutritious as fresh foods – if the fresh foods have been in the refrigerator for a while they actually lose some nutritional value. Choose frozen and canned items that have little or no added fat, sodium or sugar (in some cases, small amounts of sodium or sugar act as a preservative in the processing).

1. Corn niblets – Corn is a good source of fiber (3 grams per 1/2 cup serving). Whether it's fresh, canned or frozen, corn is a great addition to chili, soups, salads, stews – or delicious on its own.

2. Beans – Canned or dry beans are a super-star of fiber because they provide anywhere between 5 and 10 grams per 1/2 cup serving (cooked). Beans are also a good source of protein and contain several vitamins and minerals. They come in a wide array of colors and shapes that make them visually appealing any way you use them. Drain canned beans then use as the main ingredient in a dip; or add them to salads, soups, casseroles and stews. Soak dried beans





overnight in a large pot of water; drain. Then cook in a large pot of water for about an hour or until tender.

3. Dried prunes – For anyone with a sweet tooth, this is an ideal snack. Buy the pitted variety so you can add them to cereal (more fiber!) or yogurt. Many savory stews call for dried prunes to add contrast to other flavors. Dried prunes are also available in jars and cans; and they are great for keeping in the kitchen cupboard. Five dried prunes have 3 grams of fiber; and dried prunes in jars or cans contain 4 grams per 1/2 cup serving.



4. Cereals – Ready-to-eat breakfast cereal can be a powerhouse of fiber. Some contain up to 14 grams per 1/2 cup serving! Read the label before you make your final choice in the supermarket. Top any of these cereals with fruit and you'll get even more fiber. Remember, cereal is not just for breakfast – it makes a great light lunch or dinner!



5. Sweet potatoes – Other than holidays, this nutritious and fiber-rich vegetable is often overlooked. A medium, baked sweet potato with skin has almost 5 grams of fiber. Sweet potatoes are an excellent source of vitamin A (in the form of beta-carotene) and a very good source of vitamin C. In addition, they provide vitamin B-6 and the minerals copper, iron and potassium.

Not All Fiber Is The Same

There is no doubt that fiber is good for you, but not all fiber is the same. Different types of fiber have distinct actions in the body and keep you healthy in different ways. The two main types of fiber are soluble (dissolves in water) and insoluble (does not dissolve in water).



Type of fiber	What it does for your body	Where to find it
Soluble	Dissolves in water and may form a gel that traps sugars, fats and cholesterol	Oat cereals, beans, fruits like apricots and oranges, vegetables like broccoli and kale are sources of fiber Fiber supplements such as psyllium
Insoluble	Absorbs water to increase stool bulk, helps contents pass through colon quickly, promotes regularity	Bran cereals, whole-grain breads, fibrous vegetables like beets and spinach, and grainy fruits like blackberries and kiwi Bulk-forming laxatives made from natural or man-made complex carbohydrates

did you know?

A high-fiber diet can lower your risk of heart disease by 30%, compared to a low-fiber diet.

Taking Soluble Fiber To Heart

While both types of fibers are good for you, soluble fiber plays a vital role in heart health. It aids in weight regulation, helps lower cholesterol and stabilizes

did you know?

Although they are popular, high-protein/very low-carbohydrate diets may help you lose weight, but they are often low in fiber.

blood sugar. In fact, one-third of your daily fiber intake should be from soluble fiber.

Psyllium

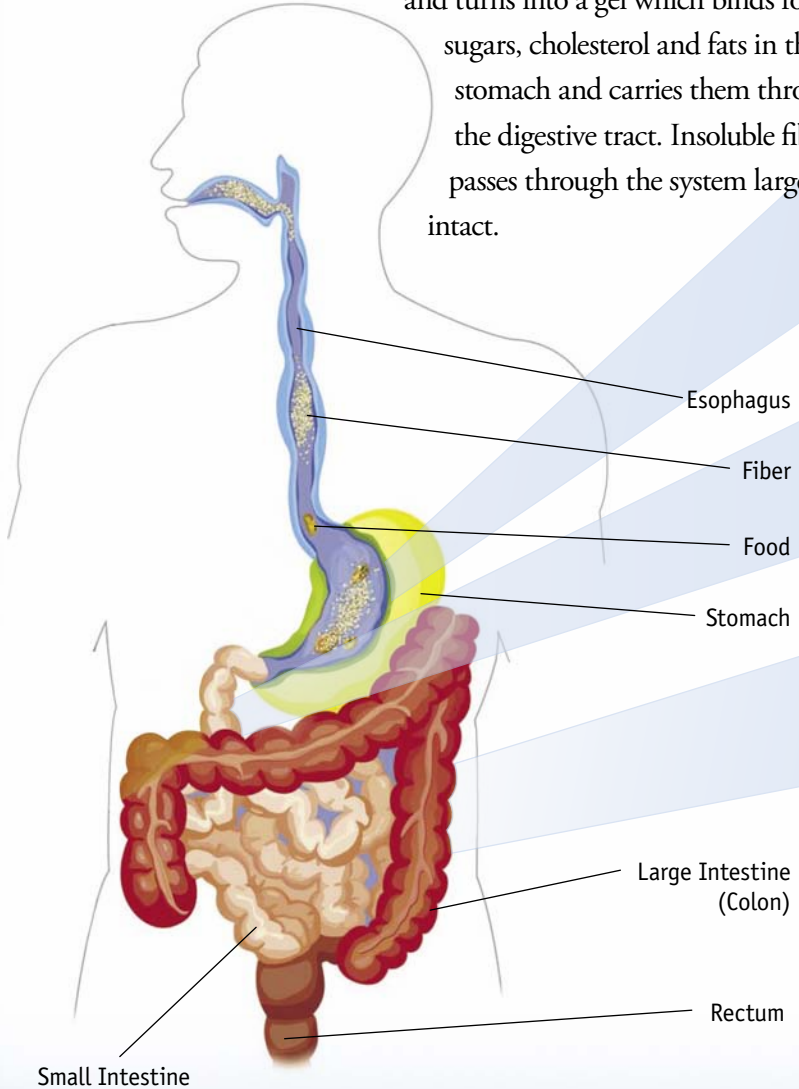
While the name might sound “silly,” this natural fiber supplement has some positive health benefits. Made from the seed of a shrub-like herb, psyllium is high in soluble fiber and also is a source of insoluble fiber.

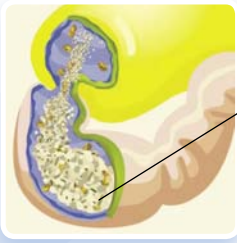
Psyllium is one of the most effective soluble fiber sources to lower cholesterol – a well-known risk factor for heart disease. Just seven grams of soluble fiber per day from psyllium may reduce the risk of heart disease. The U.S. Food and Drug Administration now allows products containing psyllium to state that these items, eaten as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease. Oats and barley are the only foods that can make this claim.



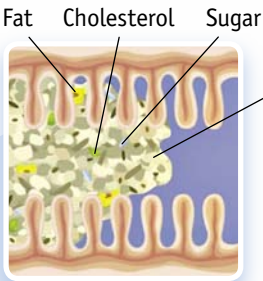
How Fiber Works: Soluble and Insoluble

After soluble fiber is ingested, it absorbs water and turns into a gel which binds food, sugars, cholesterol and fats in the stomach and carries them through the digestive tract. Insoluble fiber passes through the system largely intact.

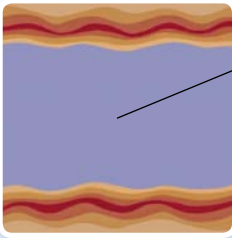




Soluble fiber mixes with fluid and partially digested food in the stomach



In the small intestine, soluble fiber binds sugars, cholesterol and fat and slows their absorption into the blood stream



Insoluble fiber and psyllium move through the large intestine and promote regularity

Examples of Soluble Fiber

Oat/oat bran
Dried beans and peas
Barley
Flax seed
Oranges, apples, carrots
Psyllium

Examples of Insoluble Fiber

Whole-wheat products
Wheat oat
Corn bran
Flax seed
Green beans, cauliflower and potato skins
Fruit skins and root vegetable skins

Final Facts About Fiber



1. As you add fiber to your diet, remember to **drink extra water** as well. Fiber acts on its ability to absorb water and that helps to move it through the digestive tract.

2. **Add fiber to your diet gradually.** Increase the amounts of fruits, vegetables and grains as you decrease fat and sugar. This reduces added calories and maintains a feeling of fullness. Remember, a healthy diet is all about better food choices.

3. Reaching 32 grams of fiber every day can be made easier by **adding a natural supplement to your daily routine.**

4. Count them! The only way to know how much fiber you're eating is to keep track of what you eat. **Write down all meals and snacks for about three days** in the fiber food chart provided. Then add up the amount of fiber grams you consumed using the fiber content chart available at www.nationalfiberCouncil.org. The chart provides information on the fiber content of common foods according to serving size. This will give you a baseline from which to adjust your diet.

5. Before making any drastic change to your diet, you should always **talk to your health care professional.**



Fiber Food Chart

Day 1			
<i>Food</i>	<i>Fiber per serving</i>	<i>Serving(s) consumed</i>	<i>Grams of fiber consumed</i>
Breakfast:			
Snack:			
Lunch:			
Snack:			
Dinner:			
Day 2			
Breakfast:			
Snack:			
Lunch:			
Snack:			
Dinner:			
Day 3			
Breakfast:			
Snack:			
Lunch:			
Snack:			
Dinner:			
Total:			

Comparison of Fiber Supplements

The best way to consume 32 grams of fiber per day is through a healthy diet, but that may not always be possible. Fiber supplements are available without a prescription to help increase fiber consumption.

I. Comparison of Powder Fiber Brands

	Active ingredient	Is active* natural?	FDA approval for laxation?	Grams of active/day for laxation	Amount of active/dose	Required # of doses/day for laxation	Soluble fiber/insoluble fiber?
METAMUCIL®	Psyllium husk	Natural	Yes	2.5 – 30 grams	3.4 grams	1	70% soluble
CITRUCEL®	Methylcellulose	Semi-Synthetic	Yes	4 – 6 grams	2 grams	2	100% soluble
BENEFIBER®	Wheat dextrin	Natural	No	Not approved for laxative	3 grams	Not approved for laxative	100% soluble
FIBERSURE®	Inulin	Natural	No	Not approved for laxative	5 grams	Not approved for laxative	100% soluble

II. Comparison of Solid Dose Fiber Brands

	Active ingredient	Is active natural?	FDA approval for laxation?	Grams of active/day for laxation	Amount of active/dose	Required # of doses/day for laxation	Required # of caplets/day for laxation
METAMUCIL® CAPSULES	Psyllium husk	Natural	Yes	2.5 – 30 grams	.525 grams/capsule 5 capsules/dose	1	5
FIBERCON® SWALLOWABLE CAPLETS	Calcium Polycarbophil	Synthetic	Yes	4 – 6 grams	.625 grams (eq. 0.5 grams polycarbophil)/caplet. 2 caplet/dose	4	8
CITRUCEL® SWALLOWABLE CAPLETS	Methylcellulose	Semi-Synthetic	Yes	4 – 6 grams	0.5 grams/caplet 2 caplets/dose	4	8
FIBERCHOICE®	Inulin	Natural	No	5 grams	2 grams/tablet 2 tablets/dose	n/a	n/a

*Active refers to the active ingredient in the supplement.



Active holds water?	Active forms a gel?	Active bulks stools?	Active traps bile acids?	Active is fermentable?	Helps lower blood cholesterol?	Helps lower blood pressure?	Helps lower blood sugar?	Helps lower the risk of heart disease?
Yes	Yes	Yes	Yes	Partially fermentable	Yes	Yes	Yes	Yes
Yes	No	Partially	No	No	No	No data	No data	No data
No	No	No	No	No	May	No data	No data	No data
No	No	No	No data	n/a	No data	No data	No data	No data

Soluble fiber /insoluble fiber?	Active holds water?	Active forms a gel?	Active bulks stools?	Active traps bile acids?	Active is fermentable?	Helps lower blood cholesterol?
70% soluble	Yes	Yes	Yes	Yes	Partially fermentable	Yes
100% insoluble	Yes	Yes	Yes	No data	No	No
100% soluble	Yes	No	Partially	No	No	No
100% insoluble	No	No	No	No data	No	No



NATIONAL FIBER COUNCIL
www.nationalfiberCouncil.org

303 E. Wacker Drive
Suite 440
Chicago, IL 60601
1-866-749-5296



**P&G Health
Sciences Institute**
Improving lives every day

The National Fiber Council receives support and sponsorship from the Procter and Gamble Health Sciences Institute
www.pghsi.com