



OPTIONS NUTRITION TOPIC



Fiber – Start Roughing It!

Fiber is one of those things that many of us know is important but that remains a bit of a mystery. Exactly what is it? What are the best sources of fiber? And what are its health benefits? Here we try to answer these and other questions.

Two Types of Fiber

As food moves through the stomach, intestine and colon, starches are digested by enzymes. Dietary fiber is largely plant-cell material that resists digestion, moving unaltered through your stomach and small intestine and into your colon.

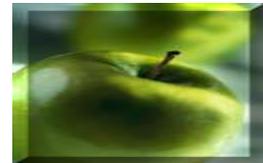
The kinds of fiber are:

- **Digestible** – This type of fiber has been shown to help lower cholesterol and blood sugar (glucose). You can find this type fiber in generous quantities in fruit, peas, products that contain psyllium, beans (legumes) and oats.
- **Indigestible** – This type of fiber speeds the movement of food through your colon because it absorbs water as it passes through your digestive tract, creating softer, larger stools. It's found mainly in wheat bran, vegetables, and whole-grains.

SOURCES OF FIBER (Most beneficial foods listed first.)	
Digestible Fiber	Indigestible Fiber
Best apples pears strawberries blueberries citrus fruits peas psyllium oat bran nuts and seeds	Best wheat bran carrots cucumbers zucchini celery tomatoes seeds

<p>Least oatmeal legumes dried peas beans lentils</p> 	<p>Least whole grains barley couscous brown rice bulgur</p> 
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- **Pectins** – found abundantly in apples, strawberries and citrus fruits. Pectins are the most reliable form of fiber for lowering cholesterol and triglycerides.
- Pectins also:
 - ✓ Reduce Arterial plague
 - ✓ Help stop diarrhea
 - ✓ Do **not** cause bulking



**** Wheat bran** – helps regulate estrogen. Most people are not allergic to this part of the wheat. When introducing more fiber to the diet, it is best to build it up slowly to avoid causing digestive stress, such as bloating. Extra water is needed with extra fiber.

Fiber works by increasing the movement of digested food through your colon. By softening and adding bulk to stools, fiber may improve or regulate bowel frequency and help relieve constipation by retaining water in the stool.

Current recommendations suggest that adults consume *20-35 grams of dietary fiber per day*. Children over age 2 should consume an amount equal to or greater than their age plus 5 grams per day. On a daily average, Americans eat only 14-15 grams of dietary fiber.

Health Effects of Eating Fiber

Long heralded as part of a healthy diet, fiber appears to reduce the risk of developing various conditions, including heart disease, diabetes, diverticular disease and constipation.

Fiber is absolutely essential for normal health and detoxification because it:

- ✓ Cleanses the intestinal tract.
- ✓ Dilutes and speeds the removal of toxins.
- ✓ Slows digestion and thereby helps stabilize blood sugar levels.
- ✓ Helps remove excess cholesterol and triglycerides
- ✓ Reduces arterial plaque (some forms).
- ✓ Helps remove estrogen and estrogen-like compounds.
- ✓ Helps maintain intestinal micro flora.
- ✓ Helps relieve constipation along with enough fluid.
- ✓ Is found in vegetables and fruits, bran of grains, legumes, seeds and nuts.
- ✓ Is not found in meat, fish, eggs, or dairy products.

Fiber and Heart Disease

In the United States, coronary heart disease is a leading cause of death for both men and women. This disease is characterized by a buildup of cholesterol in the coronary arteries, the arteries that feed the heart, causing them to become hard and narrow, a process referred to as atherosclerosis. Total blockage of a coronary artery produces a heart attack.



A high dietary fiber intake has been linked to a lower risk of heart disease in a number of large studies that followed people for many years. In a Harvard study of over 40,000 male health professionals, researchers found that a high total dietary fiber intake was linked to a *40 percent lower risk of coronary heart disease*, compared to a low fiber intake. Cereal fiber, the fiber found in grains, seemed particularly beneficial. A related Harvard study of female nurses produced quite similar findings

Fiber and Type 2 Diabetes

Type 2 diabetes is the most common form of diabetes. It is characterized by sustained high blood sugar levels. It tends to develop when the body can no longer produce enough of the hormone insulin to lower blood sugar to normal levels or cannot properly use the insulin that it does produce. There are several important factors that may help lower your risk for type 2 diabetes: maintaining a healthy weight, being physically active, and not smoking. Researchers are also trying to pinpoint any relevant dietary factors, one of which seems to be a high-fiber diet. The studies of male health professionals and female nurses both found that a diet high in cereal fiber was linked to a lower risk of type 2 diabetes.

When it comes to factors that increase the risk of having diabetes, a diet that's low in cereal fiber and at the same time high in high glycemic index foods (which cause big spikes in blood sugar) seems particularly bad. Both Harvard studies--of nurses and of male health professionals--found that this sort of diet more than doubled the risk of type 2 diabetes when compared to a diet high in cereal fiber and low in high glycemic index foods.

Foods that have a *high glycemic index* include potatoes, refined foods such as white bread, white rice, refined cereals (corn flakes, Cheerios), white spaghetti, and sugar.



Foods with a *low glycemic index* do not raise blood sugar levels as quickly and, therefore, are associated with a lower risk of type 2 diabetes. Low glycemic index foods include legumes, whole fruits, oats, bran, and whole-grain cereals. [See article on Carbohydrates and Glycemic Index.]

Fiber and Diverticular Disease

Fiber has long been used in the prevention of diverticulitis, an inflammation of the intestine that in Western society is one of the most common age-related disorders of the colon. In North America, this painful disease is estimated to occur in one-third of all those over age 45 and in two-thirds of those over age 85. The Harvard study of male health professionals found that eating dietary fiber, particularly insoluble fiber, was associated with about a *40 percent lower risk of diverticular disease*.

Fiber and Constipation

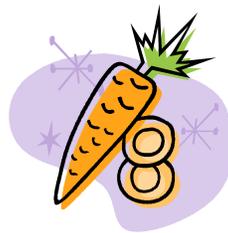
Constipation is the most common gastrointestinal complaint in the United States and is of particular concern to the elderly. The gastrointestinal tract is highly sensitive to dietary fiber, and consumption of fiber seems to relieve and prevent constipation. The fiber in wheat bran and oat bran seems to be more effective than similar amounts of fiber from fruits and vegetables. Experts recommend increasing fiber intake gradually rather than suddenly. The intake of water and other non-caffeinated beverages should also be increased, as fiber absorbs water. Healthy people should drink at least eight 8-ounce glasses of water each day.

The Bottom Line Recommendations for Fiber Intake

Fiber is an important part of a healthy diet, and you should get at least the minimum recommended amount of 20-35 grams of dietary fiber per day for adults. For children over age 2, the recommended intake is the child's age + 5 grams. The best sources are fresh fruits and vegetables, nuts and legumes, and whole-grain foods.

Sources:

*Harvard School of Public Health
Janet Lang, D.C. Lang Nutritional Seminars*



Options Center for Health and Education
4316 N. Prospect Road • Peoria Heights, IL 61616
Phone: (309) 685-7721
email: options@mtco.com • www.options-center.com