



DIETARY FIBER: MAKE HALF YOUR GRAINS WHOLE

Granny Called it “Roughage”

As research continues into the impact of diet on health, Granny’s advice to “eat more roughage” for what ails us is looking wiser than ever. While the typical college student conversation rarely focuses on fiber intake and digestive health, it’s a smart idea to get the scoop on healthy poop. And fiber has much more to do with health than digestion alone. As dietary fiber intake increases, both cardiovascular disease risk and the risk of several forms of cancer drop. Researchers at Harvard found that the risk for heart disease decreased by 40% in men who consumed a high fiber diet, contrasted with men who ate little dietary fiber. The study involved 40,000 men. (2) Similar results from a different study at Harvard were found for women. (3) And the soluble fiber component in the diet seemed to have the most significant impact in reducing disease risk. An analysis of 7 different studies concluded that a person was 21% less likely to suffer from cardiovascular disease if he/she consumed 2.5 servings of whole grains daily than those who ate less than 2 servings weekly(1).

REFINED, milled grains produce a fluffier, lighter textured product but lose 90% of the Vitamin E content and greater than 50% of the many B Vitamins. Mandatory fortification restores B vitamins to refined grain products.

Dietary Fiber Defined:

Dietary fiber is an indigestible complex carbohydrate originating from the thick cell wall of plants.

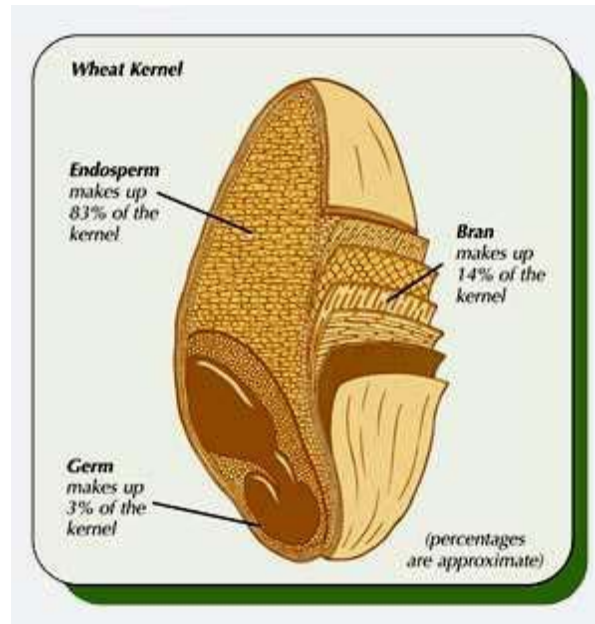
Health Benefits of Dietary Fiber

The benefits of eating more whole grains include:

- Cardiovascular Health
 - Decreased Total Cholesterol
 - Decreased LDL (bad) Cholesterol
 - Decreased Triglycerides
- Diabetes (Type II) Risk Reduced
 - Decreased insulin levels
 - 30% reduction in development of Type II diabetes with high intake of soluble fiber (4)
- Cancer Prevention
 - Specific protection against colorectal cancer (5, 6)
 - Reduced risk of breast cancer development
- Digestive Health
 - Prevention of hemorrhoids and constipation
 - Reduced risk of diverticular disease

Cracking the Secret Code

Look for breads and grains which claim to be **WHOLE** grain or **WHOLE** wheat. Foods labeled as 100% wheat bread or cracked wheat can still have all of the wheat germ and bran (fiber) removed, yielding 1 gram or less of dietary fiber per serving.



The Whole Grain Picture

There are three layers to nature's grain:

- The outside layer is the tough, fibrous **bran** which protects the kernel.
- The bulk of the grain head comprises the **endosperm**, rich in starch and stored energy.
- The inside **germ** is the reproductive kernel rich in unsaturated oils, vitamins and minerals.

Increase Your Fiber Intake

1. Transition gradually to more fiber. Your digestive tract needs time to adjust to the change. Increasing fiber too quickly can result in bloating, excess gas formation, abdominal cramps and/or diarrhea.
2. Drink generous amounts of non-caloric fluids. Fibers absorb water. Too little water intake can result in both constipation and body cell dehydration. Guys should drink about 12 eight ounce glasses of water daily, while gals should drink at least 9 eight ounce glasses of water.
3. Eat fresh fruits and vegetables in preference to juices, when possible. The pulp/ membranes and skins offer valuable fiber and nutrients (wash skins first).
4. Start replacing white rice and pasta with brown rice and whole grain pastas.
5. Substitute legumes (dried beans and peas, cooked) for meat a few times weekly.
6. Purchase/ select fiber-containing snacks. Choose from raw veggies, low-fat popcorn, whole grain crackers, fresh & dried fruits.

Gotcha!

Thanks to progress, we now pay for our refined, fortified grain products PLUS the fiber products that were originally contained within the whole grain foods. Save some money for your health; purchase grains in their original whole grain goodness.

***Fiber Food Sources**

Food Serving Fiber (grams)	Serving	Fiber (grams)
Barley	½ c. cooked	4
Brown Rice	“”	1.8
Oatmeal	“”	2
Oat Bran	“”	3
Spaghetti, whole wheat	“”	3.2
Black Beans	“”	5.5
Northern Beans	“”	5.5
Black-eyed Peas	“”	5.5
Kidney Beans	“”	6
Navy Beans	“”	6
Chickpeas	“”	6
Lima Beans	“”	6.5
Pinto Beans	“”	7
Lentils	“”	8
Acorn Squash	“”	3.2
Beets	“”	1.7
Broccoli	“”	2.8
Brussels Sprouts	“”	4.5
Cabbage	“”	2
Carrots	“”	2.5
Canned Corn	“”	2.3
Green Beans	“”	2
Mushrooms	“”	1.7
Peas & Carrots	“”	2.5
Snow Peas	“”	2.5
Spinach	“”	2.2
Potato, Bkd. w/ skin	Medium	3.8
Apple	“”	4
Avocado	“”	8.5
Banana	“”	3
Kiwi	“”	2.6
Orange	“”	2
Nectarine/ Peach	“”	2
Pear	“”	4
Plum	“”	1.5
Blackberries	½ c. raw	3.8
Strawberries	“”	2.4

*Sources: Bowes & Church Food Values of Portions Commonly Used & <http://www.nhlbi.nih.gov/chd/Tipsheets/solfiber.htm>

Improving Your Digestive Health

- Shortly after waking up, drink an 8-10 ounce cup of room temperature water to do the same for your intestinal tract.
- Aim to relax during meal times, calling “time out” to stressful thinking. Laughter helps the digestion; anguish & mental stress impede it.
- Squeeze fresh lemon or sprinkle vinegar on some foods. Even 1/2 tsp. of either condiment helps improve digestion of fats.
- Take a 15-minute walk after meals, especially after your largest meal of the day.
- When your body’s under fire, eat more easily digestible foods including fish, brown rice and steamed vegetables.

Types of Fiber

INSOLUBLE FIBERS: Pass through the intestinal tract relatively intact, without change. They help move bulk through the intestines and control the acid/alkali level in the environment of the intestines. Any toxins in the intestine are removed more quickly with the aid of insoluble fibers.

Whole wheat breads and wheat bran

- Brown Rice and Couscous
- Carrots, cucumbers, celery, potato skins
- Rye and corn bran
- Seeds and nuts

SOLUBLE FIBERS: Form a gel as they combine with water. These fibers bind with fatty acids and help remove cholesterol from the body. They prolong emptying time of the stomach, causing sugars to be released and absorbed more slowly.

- Oatmeal and oat bran; rice bran
- Legumes, lentils, beans, dried peas
- Apples, pears and berries; citrus fruits
- Vegetables including broccoli & carrots
- Ground psyllium and flax seeds (meal)

Additional Reading & Resources

- <http://www.ncbi.nlm.nih.gov/pubmed/8627965?dopt=Citation>
- <http://www.ncbi.nlm.nih.gov/pubmed/10479204?dopt=Citation>
- <http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/health-gains-from-whole-grains/index.html>
- <http://www.ncbi.nlm.nih.gov/pubmed/17490973?dopt=Citation>
- <http://www.ncbi.nlm.nih.gov/pubmed/17605083?dopt=Citation>
- <http://www.nhlbi.nih.gov/chd/Tipsheets/solfiber.htm>
- <http://medicine.plosjournals.org/perlserv/?request=getdocument&doi=10.1371/journal.pmed.0040261&ct=1&SESSIONID=2b48ac6be1872205fb49ce499e8bae06>
- *Bowes & Church's Food Values of Portions Commonly Used, 18th edition* by Jean Pennington and Judith S. Douglass