

WHAT IS FIBER?

Fiber is a virtually indigestible substance that is found mainly in the outer layers of plants. Fiber is a special type of carbohydrate that passes through the human digestive system virtually unchanged, without being broken down into nutrients. Carbohydrates constitute the main source of energy for all body functions.



Almost everyone hears about the need for enough fiber in the diet. But few people understand the importance of dietary fiber - or where to get it.

Fiber is important because it has an influence on the digestion process from start to finish:

- Because it demands that food be more thoroughly chewed, fiber slows down the eating process and helps contribute to a feeling of being full, which in turn can help prevent obesity from overeating.
- Fiber makes food more satisfying, probably because the contents of the stomach are bulkier and stay there longer.
- Fiber slows digestion and absorption so that glucose (sugar) in food enters the bloodstream more slowly, which keeps blood sugar on a more even level.
- Fiber is broken down in the **colon** (the main part of the large intestine) by bacteria (a process called fermentation), and the simple organic acids produced by this breakdown helps to nourish the lining of the colon.
- These acids also provide fuel for the rest of the body, especially the liver, and may have an important role in metabolism.

Substantial amounts of fiber can be found in foods such as:

- All-natural cereals
- Whole-grain breads
- Beans
- Fruits
- Vegetables
- Nuts

Nice To Know:

Only plants produce fiber. No matter how chewy or "tough" animal products may be, they do not contain fiber - not even bones or eggshells.

There are two main types of fiber, and they have different effects on the body:

- **Insoluble fiber** is mainly made up of plant cell walls, and it cannot be dissolved in water. It has a good laxative action.
- **Soluble fiber** is made up of polysaccharides (carbohydrates that contain three or more molecules of simple carbohydrates), and it does dissolve in water. It

has a beneficial effect on body chemistry, such as lowering blood cholesterol and blood sugar levels.

Nice To Know:

Dietary fiber is essentially the cell walls of plants. Cell walls provide the architecture or skeleton of a plant and serve several purposes:

- They enclose and package the nutritious parts of the plant, especially the storage organs that are rich in starch, and the parts of the cells that contain sugars, vitamins, and minerals.
- They provide a tough protective armor around the embryo of the future plant.

Nice To Know:

The understanding that **fiber**

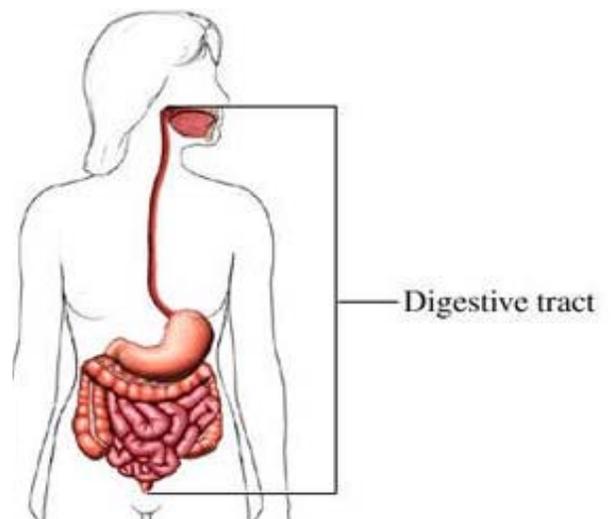
- is good for you is relatively new. Until the 1970s, fiber was regarded, at best, as a nonentity - and at worst, as a hindrance to good nutrition. This attitude stemmed from years of food shortages and widespread under nutrition, when the aim was "getting the most out of food."

Today, obesity is the most common form of malnutrition and is a factor in the two major causes of death - heart disease and cancers. So any food that helps people limit calories is desirable.

It was a naval doctor, T.L. Cleave (1906-83) who sparked the great re-think about fiber. He argued that refined or fiber-depleted carbohydrates are harmful in many ways. He was supported by a surgeon from East Africa, Denis Burkitt, who presented evidence that Western diseases are rare in Africa and other third-world countries where fiber intake is high.

Facts about fiber

- Fiber keeps stool soft and keeps the contents of the intestines moving.
- Americans consume only about 10% of the fiber that they did 100 years ago.
- A good diet should contain approximately 25 to 30 grams of fiber a day. The average American eats less than half of that.
- The change in the way wheat was processed into flour at the turn of the century - from a crushing to a finer rolling process - accounts substantially for the depletion in dietary fiber.
- Bran has the highest fiber content - about 25% to 45%.



Source: www.ehealthmd.com/library/fiber/FIB_what_is.html

WHAT ARE THE BEST SOURCES OF FIBER

The following foods are good sources of fiber:

- Whole grains (bran has the highest fiber content); this includes breads and cereals, whole-grain pastas, and brown rice
- Nuts and seeds
- Legumes (such as dried peas, beans, lentils)
- Fruits
- Vegetables
- A dietary supplement of fiber products such as *Citrucel* or *Metamucil*, which are mixed with water and provide about 4 to 6 grams of fiber in each 8-ounce glass



When foods are processed, fiber is often removed. Foods made from white flour (bleached or unbleached) are poor sources of fiber, including white breads, pizza crusts, and regular pasta. In general, foods that are less processed are higher in fiber.

Some high-fiber foods - such as some breakfast cereals and convenience foods - are also high in sugar and salt, so take care to read the label before purchase.

Need To Know:

Q: Do I have to get my fiber from food? Is taking a fiber supplement enough?

A: Supplements provide only a very restricted type of fiber. Eating a diet of high-fiber foods usually incorporates various kinds of fiber, and that's healthier. Fruits, vegetables, and oats have plenty of **soluble fiber**;

🕒 Whole grains, bran, legumes, and many fruits and vegetables are full of **insoluble fiber**

🕒 Both soluble and insoluble fibers add bulk and softness to the stool. Insoluble fiber remains pretty much unchanged by the time it reaches the intestines, whereas soluble fiber acquires a soft, jelly-like texture. Both make stools easier to pass.

THE FIBER FACTOR FOR LOSING WEIGHT

We are on the same program... why are they losing weight faster?

All calories are not the same. Each ounce of food is not the same in the way your body responds. Use foods for more benefit in losing weight.

Fiber binds with fats of which contain calories then carries them through the colon and keeps them from being absorbed. Each gram of fiber can flush with it 7 calories approximately. So the average American, who eats only 12 grams of fiber in a day, only flushes about 84 calories from their day. Health standards recommend eating 35 grams of fiber each day, thus flushing 245 calories. If you increase your fiber to 45 grams of fiber per day you will flush 315 calories. So, if you eat a 1200 calorie diet, you can flush $\frac{1}{4}$ of those calories simply by adding in food that are high in fiber at each meal, or supplement the fiber into your meals with powders and tablets.

If you follow the guidelines: three healthy meals and day and three healthy snacks, staying within the calorie guidelines, something wonderful will happen. Your metabolism will go UP, and you will start to drop your stored calories, which we all know as fat.

For a female who weighs 160 pounds, the target should be 1200 calories eating 45 grams of fiber and flushing 315 calories. She then has a net calorie day of 885 calories. Let's say this woman is not active. NO exercise, so her Active Metabolic Rate is 1600 calories. To lose 1 pound of body fat you need a deficit of 3500 calories. She is at a deficit of 715 calories. Repeat that deficit for 5 consecutive days and she will lose 1 pound of body fat. Repeat those 5 days for a month and she will lose 6 pounds, just from the fiber she is now consuming. Multiply that by a year and you could reach 72 pounds dropped in 12 months – just by eating fiber.

Solution: 1200 calories, 35 grams of fiber... So let's make it easy. For Breakfast and Lunch 250 calories 10 grams of fiber 20 grams of protein

Herbalife ShapeWorks Shake:

8 oz milk

2 heaping TBS Formula 1 Protein Powder (3 grams)

1 rounded teaspoon of Active Fiber powder (5 grams)

1 cup strawberries OR $\frac{1}{2}$ cup blueberries OR 1 banana (2 grams)

Choose 3 servings for 3 snacks each day

Herbalife Soy Nuts 110 calories 6 grams of fiber

1 cup of Blackberries – 60 calories 7.3 grams of fiber

1 cup of Blueberries – 80 calories 3.5 grams of fiber

Large Orange 86 calories – 4.4 grams of fiber

1 medium Pear – 100 calories 5.5 grams of fiber

Sliced Apple dipped in 1 TBS Peanut Butter -170 calories – 4 grams of fiber

Dinner: Meat, Veggie, Sweet Potato OR Rice (Brown or Parboiled) OR Whole Wheat Pasta

HIGH FIBER DIET

Increase your fluid intake. Drink WATER. Since dietary fiber is somewhat sponge like, it absorbs water. Additional amounts of water are helpful in pushing the fiber along its course.

Dietary fiber can help your colon and is an important part of the management of diverticulosis and irritable bowel syndrome. It speeds the progress of food passing through your digestive tract and promotes regular bowel movements. The increased ease of stool passage keeps the intestinal muscles in good shape and prevents the sluggishness

that leaves stool sitting in the colon for long periods of time. This may help to prevent diseases of the bowel, including the formation of polyps, which, when left unattended, may lead to bowel cancer. Furthermore, fiber may bind with or dilute cancer causing agents in some foods and help push them out of the body rather than allow them to be absorbed into the intestines.

WHAT IS FIBER?

Fiber is the structural part of fruits, vegetables, and grains that your digestive system cannot digest or break down. Increasing fiber in the diet can be an important factor in improving your overall wellbeing. For instance, bran has been found to reduce blood sugar and to lower cholesterol. Bran has become a friend to the dieter as well, because it is effective as part of an overall weight control program. Fibrous foods give you a sense of fullness because of the bulkiness of fiber. Fiber rich foods require more chewing. So eating takes longer and you feel satisfied sooner. Fiber has almost no calories because your intestinal system does not digest it.

WHAT FOODS CONTAIN FIBER?

Foods vary greatly in the amount of fiber they provide. Milk and its products, fats, meats, poultry, fish and eggs contain NO fiber at ALL. The richest source of fiber is whole grains. But nearly all the grains that we eat today are highly processed, and break down quickly in our systems to sugar, which then gets carried away by insulin to be stored for future use in our fat cells. And too many of us have too much stored! Your best sources of fiber are nutty whole grains: brown and wild rice, stonecut oatmeal and breads with the FIRST ingredient being whole wheat flour, along with raw fruits and vegetables. White rice, potatoes and white breads are low in fiber, and quickly convert to sugars when eaten.

HOW MUCH FIBER DO I NEED EACH DAY?

Aim for 25 to 35 grams of fiber daily, BUT work up to it as your system tolerates it. If you are currently consuming little or no fiber in your diet, make the change gradually. Don't shock your intestinal tract.

Introducing large amounts of fiber too abruptly may result in cramping, increased gas, or even diarrhea. If any of these occur, cut back on the portions of fiber you are eating, then gradually increase the amount until you can tolerate 35 grams per day, which will provide you with your fiber requirement.

ISN'T IT HARD TO EAT 35 GRAMS OF FIBER A DAY?

Not really. You don't have to eat it all at one sitting. There are numerous ways to get the fiber you need. Enjoyably: sprinkle bran on your other foods, like yogurt or custard. Add a spoonful to a bowl of cereal, add it with berries as a topping on ice cream, custard, and other more palatable foods. Cook with recipes that use bran or whole grain flours. Substitute half whole wheat flour for the white flour in your recipes. Try using bran instead of breading on chicken and fish, breakfasting with bran cakes, or making meatballs with bran filler. Remember fresh and frozen berries are a rich source of fiber, and delicious, too!

WHAT ELSE CAN I DO?

- Exercise, A daily walk or run helps to promote bowel regularity
- DO NOT overcook your vegetables; steaming and stir frying are excellent in preventing the breakdown of beneficial fiber.
- Choose healthy snacks. Try eating an apple instead of drinking apple juice. The juice provides NO fiber, while an apple can supply 3.5 grams of dietary fiber. High fiber snacks include popcorn, fruits and raw vegetables. It will also help you cut calories.

LIST OF HIGH FIBER FOODS

Fruits	Serving size	Total fiber (grams)
Pear	1 medium	5.1
Figs, dried	2 medium	3.7
Blueberries	1 cup	3.5
Apple, with skin	1 medium	4.4
Strawberries	1 cup	3.3
Peaches, dried	3 halves	3.2
Orange	1 medium	3.1
Apricots, dried	10 halves	2.6
Raisins	1.5-ounce box	1.6
Grains, cereal & pasta	Serving size	Total fiber (grams)
Spaghetti, whole-wheat	1 cup	6.3
Bran flakes	3/4 cup	5.1
Oatmeal	1 cup	4.0
Bread, rye	1 slice	1.9
Bread, whole-wheat	1 slice	1.9
Bread, mixed-grain	1 slice	1.7
Bread, cracked-wheat	1 slice	1.4
Legumes, nuts & seeds	Serving size	Total fiber (grams)
Lentils	1 cup	15.6
Black beans	1 cup	15.0
Lima beans	1 cup	13.2
Baked beans, canned	1 cup	10.4
Almonds	24 nuts	3.3
Pistachio nuts	47 nuts	2.9
Peanuts	28 nuts	2.3
Cashews	18 nuts	0.9
Vegetables	Serving size	Total fiber (grams)
Peas	1 cup	8.8
Artichoke, cooked	1 medium	6.5
Brussels sprouts	1 cup	6.4
Turnip greens, boiled	1 cup	5.0
Potato, baked with skin	1 medium	4.4
Corn	1 cup	4.2
Popcorn, air-popped	3 cups	3.6
Tomato paste	1/4 cup	3.0
Carrot	1 medium	2.0

Source: <http://www.mayoclinic.com/health/high-fiber-foods/NU00582>

What if my palate just doesn't like these fiber foods of fruits and veggies... is there another source of fiber? With the statistics surrounding colon cancer it is apparent that many do not make these foods a priority – yet there is another solution to seek! Supplementation!

Fiber Powder, as in Herbalife's Active Fiber Powder (simply 1 rounded teaspoon) easily mixed in any liquid, offers 5 grams of essential fibers to keep the system moving waste through the colon. When on a calorie controlled diet with meal replacements this added teaspoon of Active Fiber Powder keeps you feeling fuller and your appetite satisfied longer. This blend also encourages the growth of "friendly" bacteria.

Fiber supplements with acidophilus replenish the intestinal flora and support the healthy bacteria the counter balances the bad bacteria that festers and causes disease in our colon. Herbalife's Florafiber is an excellent solution to get the acidophilus in an easy tablet taken with meals

Fiber also binds with fats, and when eaten with meals that have fats will help bind them and take them through the colon to be eliminated and not absorbed into the body. The market likes to refer to these as "fat blockers" and Herbalife's Thermobond does just that. These binding fibers have also been proven to create a feeling of fullness.