

High-Fiber Diet

WHAT IS FIBER

Dietary fiber is the part of a plant that provides and maintains its structure. Your body can't digest this fibrous material, but it plays a very important role in your digestive health. As fiber moves through the colon undigested, it adds to the soft bulk of the stool and helps your bowels pass waste easily and quickly. In this way, fiber helps to prevent and correct many digestive tract disorders and to keep the bowels functioning smoothly.

Most fiber-rich foods contain both soluble and insoluble fiber:

- Insoluble fiber doesn't dissolve in water. Wheat, rye, bran and other grains, as well as most vegetables and berries, are good sources of insoluble fiber, which adds bulk to the stool.
- Soluble fiber does dissolve in water. It forms a gelatinous substance in the bowel and helps promote good bacteria in the gut. Soluble fiber is found in oatmeal, psyllium, barley, legumes, seeds, and most tree fruits.

FUNCTION OF THE COLON

The main job of the colon (large intestine) is to complete the digestion process. It does this by removing excess water from food waste entering from the small intestine and then sending the remaining waste, or stool, on to be eliminated. When waste passes through the intestines too quickly, it retains too much water, resulting in watery stools and diarrhea. When waste passes too slowly, too much water is absorbed, which can cause hard stools, constipation and straining. These simple problems occasionally lead to more serious disorders.

THE IMPORTANCE OF DIETARY FIBER

Fiber (also called roughage or bulk) promotes wave-like contractions that keep food moving through the intestines. Along the way, it absorbs many times its weight in water, resulting in softer, bulkier stools.

Studies show that rural Africans, who eat diets high in fiber, eliminate food waste in a third of the time that it takes people from urban westernized cultures. Their stools are also larger and softer. It is believed that this greater bulk and speed of foods through the digestive tract sweeps out harmful substances before they can cause problems. In fact, these rural people do have fewer of the digestive tract diseases that plague Westerners — a benefit that may be related to their diet.

Here are just a few examples of the health benefits of a high-fiber diet:

- A softer, larger stool helps prevent constipation and straining, which can help avoid or relieve hemorrhoids. More bulk means less pressure in the colon, which helps relieve and treat irritable bowel syndrome and diverticulosis.
- A daily intake of 30 grams of fiber has been shown to help people lose weight, lower blood pressure, prevent diabetes, and reduce the risk of colon polyps and cancer of the colon.
- Soluble fiber seems to bind up cholesterol, allowing it to be eliminated with the stool. If enough is removed, it can lower blood cholesterol by 10-15%.

FIBER AND IRRITABLE BOWEL SYNDROME

Irritable bowel syndrome (IBS) is one of the most common disorders of the lower digestive tract. IBS causes pain related to altered bowel habits — constipation, diarrhea, or both alternately. There may also be bloating, cramping and spasm. An attack of IBS can be triggered by emotional tension and anxiety, certain medications, and poor dietary habits. Increasing fiber in the diet can help relieve IBS symptoms by producing soft, bulky stools and normalizing the time it takes for stool to pass through the colon.

FIBER AND COLON POLYPS/CANCER

Most colon cancer starts out as a colon polyp — a benign, mushroom-shaped growth. In time it grows larger, and in some people it becomes cancerous. Colon cancer is usually curable if polyps are removed when they're found or if surgery is performed at an early stage.

People can inherit a risk of developing colon cancer, but diet may be important, too. There is a very low rate of colon cancer in countries where grains are unprocessed and retain their fiber. The theory is that in developed countries, where processed grains are more common, cancer-containing agents (carcinogens) remain in contact with the colon wall for a longer time and in higher concentrations. So, a higher-fiber diet may act to dilute these carcinogens by moving them through the bowel more quickly, resulting in fewer polyps and cancers.

FIBER AND DIVERTICULOSIS

Prolonged, vigorous contraction of the colon, usually on the lower left side, may cause diverticulosis, a condition in which increased pressure causes small and eventually larger ballooning pockets to form in the weakened walls of the colon. These pockets usually cause no problems, but sometimes they can become infected (diverticulitis) or even break open (perforate), causing infection or inflammation in the lining of the abdomen (peritonitis).

In the past, some professionals recommended that people with diverticulosis avoid seeds and nuts, but newer research has found that this doesn't help. On the contrary, the data suggest that a high-fiber diet may increase bulk in the stool and reduce pressure within the colon, which may reduce or even stop the formation of pockets. Many gastroenterologists now allow and even encourage consuming these foods, depending on an individual's tolerance.

FIBER RECOMMENDATIONS

The daily recommended fiber level for adults is 25-35 grams; however, the average American gets only 15 grams per day. Most people could benefit from increasing their fiber intake. To improve your diet, add foods that contain more dietary fiber, such as:

- Whole-grain foods, such as bran cereals and whole-grain breads
- Fresh fruit, including the skin and pulp

- Dried fruits, such as prunes, raisins and apricots
- Root vegetables, such as carrots, turnips and potatoes
- Raw or fresh vegetables, such as broccoli, Brussels sprouts, kale and cabbage (lettuce is actually low in fiber)

A good rule is to increase fiber slowly and steadily over 4-8 weeks. Increasing your intake too quickly, particularly with soluble fiber, can cause gas and bloating.

When you start eating more fiber, you also need to start drinking more fluids. Fiber in its natural form, such as fruits and vegetables, provides some fluid of its own. However, manufactured foods, such as breads, crackers and cereals, have no fluid; eating more of these foods without drinking enough water can worsen constipation.

About 93% of Americans get far less fiber than recommended. That said, it's possible, though rare, to get too much, which can decrease nutrient absorption and cause gas, bloating, abdominal pain and occasionally intestinal blockage. For most adults, more than 50 grams is considered too much.

A DIETARY FIBER SUPPLEMENT MAY BE HELPFUL

Some people don't tolerate fibrous foods well. If you can't consume enough fiber in your diet, certain stool-softening and bulking agents may help, such as:

- Metamucil and Konsyl, which contain psyllium mucilloid and come from the seed of the psyllium plant
- Benefiber (wheat dextrin) and FiberCon (polycarboxisal), which are good sources of soluble fiber
- Citrucel (hemicelluloses), which is a bulking agent

These can be very useful in preventing and treating digestive tract disorders.

FIBER CONTENTS OF FOODS

Goal: 25-35 grams per day

The Dietary Guidelines for Americans lists good food sources of dietary fiber at <https://bit.ly/fiber-food>. Aim to include fiber from all sources. (Note: Meat and dairy foods are not good sources of fiber.) Foods that are good sources of fiber are also typically low in fat.

SAMPLE MENU	
Food	Grams of fiber
<u>Breakfast</u>	
3/4 cup cooked oat bran cereal	2
1 tablespoon chunky peanut butter	1
1/2 cup berries	1
1 cup 1% or plant-based milk	0
<u>Mid-morning snack</u>	
1 oz. dry-roasted almonds	3
<u>Lunch</u>	
1 cup chili with beans	8
2 slices tomatoes	1
1 slice part-skim Mozzarella cheese	0
1 small pear	3
<u>Mid-afternoon snack</u>	
10 baby carrots	3
1/4 cup bean dip or hummus	3
<u>Dinner</u>	
1 chicken breast	0
1 small yam	3
1/2 cup green beans	2
1 cup romaine lettuce salad with tomatoes, bell peppers and carrots	3
Oil and vinegar dressing	0
TOTAL FIBER (GRAMS)	33