

High Fiber Diet

Purpose

Dietary fiber is the part of a plant that provides and maintains the plant's structure. Cellulose, hemicellulose, polysaccharides, pectins, gums, mucilages, and lignins are dietary fibers. These fibers are unrelated chemically, however, they all have one thing in common – the human body can't digest them. For this reason, they can help correct disorders of the large intestine (colon), and keep it functioning normally. Therefore, it is important to increase the amount of fiber in the diet.

Function of the colon

The main job of the colon is to complete the digestion process. This occurs by removing excess water from food wastes entering from the small intestine. When wastes pass through the intestines too quickly, not enough water is absorbed. Watery stools and diarrhea are the result. In contrast, if the passage of waste is too slow, too much water is absorbed. This results in hard stools and constipation, which often leads to straining. These simple problems occasionally lead to more serious disorders.

The Importance of Dietary Fiber

Fiber (also called roughage or bulk) promotes the wavelike contractions that keep food moving through the intestine. Also, high-fiber foods expand the inside walls of the colon. This eases the passage of waste. Fibrous substances pass through the intestine undigested. They also absorb many times their weight in water, resulting in softer, bulkier stools.

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

A high-fiber diet causes a large, soft, bulky stool that passes through the bowel easily and quickly. Because of this action, some digestive tract disorders may be avoided, halted or even reversed simply by following a high fiber diet. A softer, larger stool helps prevent constipation and straining. This can help avoid or relieve hemorrhoids. More bulk means less pressure in the colon, which is important in the treatment of irritable bowel syndrome and diverticulosis (defects in the weakened walls of the colon). In addition, fiber appears to be important in treating diabetes, elevated cholesterol, colon polyps, and cancer of the colon.

Fiber and Diverticulosis

Prolonged, vigorous contraction of the colon, usually in the left lower side, may result in diverticulosis. This increases pressure causing small and eventually larger ballooning pockets to form. These pockets usually cause no problems. However, sometimes they can become infected (diverticulitis) or even break open (perforate) causing pockets of infection or inflammation of the sac lining the abdomen (peritonitis). A high-fiber diet may increase the bulk in the stool and thereby reduce the pressure within the colon. By so doing, the formation of pockets is reduced or possibly even stopped.

Some professionals recommend restricting the following foods in diverticulosis diets: nuts, poppy seeds, caraway seeds, rye seeds, popcorn, crunchy peanut butter, corn, cucumber, and squash; as well as fruits and vegetables with seeds such as strawberries, figs and tomatoes. However, there has never been any medical proof that these foods are injurious. Many gastroenterologists allow and even encourage consuming these foods, depending on an individual's tolerance.

Fiber, Cholesterol and Gas

Insoluble fiber is found in wheat, rye, bran and other grains.

It is also the fiber found in most vegetables. Insoluble fiber means it does not dissolve in water. It also cannot be used by intestinal-colon bacteria as a food source, so these beneficial bacteria generally do not grow and produce intestinal gas.

Soluble fiber, on the other hand, does dissolve in water forming a gelatinous substance in the bowel. Soluble fiber is found in oatmeal, oat bran, fruit, psyllium (Metamucil, Konsyl), barley, and legumes. Soluble fiber, among its other benefits, seems to bind up cholesterol allowing it to be eliminated with the stool. If enough is removed it can lower the blood cholesterol 10-15%.

The down side of soluble fiber is that it can be metabolized by gas forming bacteria in the colon. These bacteria are harmless but for those who have an intestinal gas or flatus problem it is probably best to avoid or carefully test soluble fibers to see if they are contributing to intestinal gas. Whenever possible, both soluble and insoluble fiber should be eaten on a daily basis.

You should also try to follow these dietary rules:

1. Drink plenty of liquids, including fruit or vegetable juices and water. Drink at least six cups of water or fluid a day.
2. Eat slowly. Chew your food thoroughly. This allows the saliva and digestive juices of the stomach, liver, and pancreas to break down food more easily. It may also help prevent problems from developing in the lower digestive tract.
3. Eat your meals at regular intervals.