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"The Forgotten Factor -- Dietary Fiber"

Your Life Your Health

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As we focus on vitamins, minerals, proteins and fats in our diets, and as we try to lose weight, we sometimes forget that there is another element to the human diet which is very important. That element is "fiber." The decrease in dietary fiber is a relatively modern condition. Processed foods, "white" bread and fast foods have all contributed to the unhealthy decrease in fiber in the American diet.

There is an adage which states, "The whiter the bread, the sooner dead!" And, when the benefits of dietary fiber, which is almost totally absent from "white" bread, are examined, the truth of this adage is confirmed. In fact, it has always been an amazement that in the processing of whole-grain wheat, 21 nutrients are removed. Then seven are added back to the bleached flour and the bread is called "enriched!" Little wonder that Americans are unhealthy, not only because of the lack of exercise and other "bad" habits, but because of the lack of fiber in the diet. Dietary fiber has been shown to have a positive effect on cholesterol levels, on coronary artery disease risk, on constipation, diverticulosis, irritable bowel syndrome and possibly on colon cancer.

Dietary fibers are the portions of plants that cannot be digested by the human digestive tract. There are two different kinds of plant fiber: water soluble fiber and insoluble fiber. Soluble fiber slows the appearance of glucose in the blood and decreases serum cholesterol. Major food sources of soluble fiber include oats, beans, dried peas, and legumes. Insoluble fibers speed up intestinal transit and increase stool weight. They promote bowel regularity. However, insoluble fibers have no effect on serum cholesterol. Major food sources of insoluble fiber include wheat bran, whole grain products, and vegetables. Fruits, vegetables, and barley are sources of both insoluble and soluble fiber. Nearly all fiber-containing foods have more insoluble than soluble dietary fiber. About two-thirds to three-fourths of the dietary fiber in typical mixed-food diets is insoluble fiber.

Americans presently consume 14 to 15 gm of dietary fiber daily, but should consume 20-35 grams per day. The American Dietetic Association recommends a diet that makes use of a variety of plant foods to achieve adequate fiber intake. People should include at least two to three servings of whole grains as part of the daily 6 to 11 servings of grains, 5 servings of fruits and vegetables daily, and legumes at least once or twice per week. In addition to fiber, minimally processed plant foods provide vitamins, minerals, and phytochemicals that have positive health effects. As the total fiber intake increases, fatal and non-fatal myocardial infarctions have been shown to decrease.

With increased dietary fiber, Low Density Lipoproteins, LDL, (bad cholesterol) decreases

and High Density Lipoproteins, HDL, (good cholesterol) is unchanged. The magnitude of the cholesterol reduction is related to the person's initial cholesterol level -- individuals with higher cholesterol levels respond more to soluble fiber than individuals with lower cholesterol levels. This makes soluble fiber a valuable tool for reducing cholesterol in those who would benefit the most.

Oat fiber is easily added to the diet, and is well tolerated by most people, producing very little gastrointestinal distention, bloating or gas. In response to a health claim petition filed by the Quaker Oats company in 1995, the Food and Drug Association (FDA) reviewed more than 37 studies that investigated the effects of oatmeal and oat bran on total cholesterol and LDL levels. Based on this extensive body of research, in 1997 the FDA approved the first food specific health claim for oatmeal and heart disease: "Soluble fiber from oatmeal, as part of a saturated fat, low cholesterol diet, may reduce the risk of heart disease."

Small amounts of beans are also readily incorporated into the diet and lower plasma total cholesterol and LDL. Although some people note increased flatulence initially, adding beans to the diet gradually helps to decrease this complaint. There are also supplements to help prevent flatulence. The following cooking tips also help: canned beans should be rinsed before use. Dried beans should be boiled, then allowed to soak for four hours, then drained and cooked with fresh water.

The laxative Metamucil (made from the husks of psyllium seed) is a rich source of soluble fiber. Metamucil has four to five times as much soluble fiber per ounce as oat bran. Psyllium was found to lower total cholesterol by 15 percent and LDL cholesterol by 20 percent in hypercholesterolemic men. The subjects took a teaspoon of Metamucil three times a day (before meals) over an eight-week period. Serum cholesterol dropped from an average of nearly 250 to about 215 mg/dl. A 1 percent decrease in serum cholesterol reduces the risk of coronary heart disease (CHD) by 2 percent. The 15 percent decrease in total cholesterol in the Metamucil study could theoretically reduce CHD risk by 30 percent in hypercholesterolemic people. An American Heart Association Science Advisory recommends a total dietary fiber intake of 25 to 30 grams per day from food (not supplements) to ensure nutritional adequacy and accentuate the lipid-lowering effects of a reduced-fat diet. Adding a fiber supplement to a diet otherwise high in saturated fat and cholesterol provides dubious cardiovascular benefits. However, the soluble fiber found in oats, barley, beans, soy products, and pectin-rich fruits and vegetables provides additional cholesterol-lowering benefits that are beyond those achieved with reductions in total fat and saturated fat.

The importance of dietary fiber should be stressed in all diet counseling, not just cholesterol-lowering programs. It's recommended that people consume high-fiber foods, rather than load up on oat bran or psyllium, because fiber-rich foods also provide nutrients and phytochemicals. Some people with hypercholesterolemia may benefit from fiber supplements when diet modification is not sufficient or practical.

A high-fiber diet can help lower cholesterol and may protect you from colon problems such

as diverticulosis, irritable bowel syndrome and colon cancer.

It may also help reduce your risk for diabetes.

Here are some practical ways of increasing your dietary fiber and of achieving the 25-30 grams-of-fiber-per-day goal:

- Increase your consumption slowly to avoid digestive upset, and
- remember to drink plenty of water - without it fiber can be
- constipating. Add a little each day and build up to the recommended level. Simultaneously, add more water to your diet.
- Eat vegetables and fruit raw whenever possible. Boiling them too
- long, for example, can cause up to one-half of the fiber to be lost
- in the water. Steam or stir-fry them if you have to cook.
- Pureeing doesn't destroy fiber, but juice does not have the fiber of
- the whole fruit if the pulp has been strained away.
- Always start your day with a bowl of high-fiber cereal -- one that
- has five or more grams per serving.
- Put fresh fruit on top of your high-fiber cereal to add another 1 g
- or 2 g of fiber.
- Buy and eat only whole grains. The operative word is 'whole.' Look
- for it on the ingredient panel. Wheat bread doesn't mean whole- wheat
- bread. On average, a slice of whole-wheat bread has 2 g to 3 g of fiber.
- Choose whole- wheat pasta instead of white, etc.
- Add beans to salads, soups and stews.
- Add bran cereal to muffins, breads and casseroles. Substitute oat
- bran for one-third of the all-purpose flour in baking.
- When you eat out, ask for fresh fruit instead of dessert.
- Have fruit or fresh vegetables for between-meal snacks.

As with all dietary issues relative to improving health, the increasing of fruits and vegetables in the diet improves the fiber intake. Limiting fast foods, decreasing animal fat, increasing exercise, increasing fiber and changing the processing of foods contribute more to the improvement of your health than all of the medical care which you can obtain. If you have a medical condition which requires pharmaceuticals, use them. But, while you are using them, take charge of your life by changing your eating habits. Remember, it is "your life" and it is "your health."