High fiber good prevention, but not a cure-all!

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NEW ORLEANS - Is it true high fiber diets prevent disease?

Dr. Chesley Hines, Jr., a gastroenterologist at the Ochsner Clinic in New Orleans, said "dietary fiber can be quite beneficial when used in moderation and there is evidence to suggest that it keeps some diseases from getting worse. However, it is not a panacea for curing intestinal disorders."

Dr. Hines says the emphasis on the importance of dietary fiber in the diet began more than a decade ago when two British doctors working in Africa proposed that many of the ills of those living in industrialized countries were due to a lack of fiber in the diet. Dr. Hines worked in a bush hospital in the Kasai province of Zaire in 1964, and was "amazed at the absence of appendicitis, as well as diverticulitis and colon cancer" in the population.

Since then, much experimental evidence has been gathered to support the importance of fiber in the diet, particularly in the treatment of constipation, diverticular disease and diabetes, he says.

But what is dietary fiber? And how does it work in the disease process?

"Dietary fiber is a general term referring to all non-digestible plant material which cannot be degraded or broken down by the enzymes of the human digestive tract. Fiber can be grouped into two categories - water soluble and water insoluble.

Insoluble fiber can be found in vegetables, wheat, and most grains. Soluble fiber is contained in fruits, oats, barley, beans and peas," Dr. Hines explains. "Cereals can provide a particularly practical, concentrated and convenient source of dietary fiber in the form of bran, the outside covering of the grain."

However, he cautions that although bran is the most concentrated form of fiber, the presence of the word "bran" in a cereal label does not necessarily ensure that the cereal contains an adequate fiber supplement, since the bran content in cereal is variable.

Fiber acts in numerous ways inside the body. In the stomach, soluble fiber delays emptying, which may create a sense of fullness. In the small intestine, insoluble fiber increases passages of contents through the intestine, whereas soluble fiber delays it. In the colon, it is possible that fiber may bind or dilute carcinogens, or cancer causing factors, he points out.

"The primary use of fiber is in the prevention of constipation. The laxative effect of fiber has been known for centuries. Bowel function is affected differently by different types of fibrous foods, for example, bran is almost twice as effective in increasing stool bulk as an equivalent amount of fiber from cabbage or carrots," he says.

"In diverticular disease, it has been clearly shown that patients on a high fiber diet had fewer complications from their disease. Studies have also shown that dietary fiber may exert a protective effect against cancer of the colon and rectum. However, what objective evidence there is available suggests that the presence of dietary fat and animal protein may be more important than the lack of fiber as a cause of colon and rectal cancer," he adds.

Both success and failure have been reported with the use of high fiber diets in the treatment of irritable bowel syndrome. This condition is a collection of symptoms characterized by alternating constipation and diarrhea, constipation only, diarrhea only, with or without associated lower abdominal pain.

In diabetics, high fiber diets can reduce insulin requirements, improve the control of blood sugar and also lower cholesterol and triglyceride values.

Diets rich in fiber lower serum cholesterol. Weight loss is also promoted by high fiber diets, he points out. "More energy must be spent in absorbing and digesting high-fiber foods. They require more chewing and therefore take longer to eat, thus increasing satisfaction. They also slow stomach emptying, contributing to a feeling of fullness. In addition high fiber diets lower serum insulin which then diminishes appetite," he says.

Several studies have associated high fiber intake with lower incidence of coronary heart disease and with lowering blood pressure although the way in which it does so is thus far unknown.

For all of its effectiveness, he emphasizes, some people cannot tolerate high fiber diets because of the bloating or flatulence and diarrhea which may occur. This is particularly true in elderly people who may have dental or swallowing disorders. High fiber diets must also be used with great caution in bedridden patients since they may develop a fecal impaction in which a mass of stool forms which cannot be evacuated by natural means, he cautions.

"The average daily consumption of dietary fiber in the United States is less than 25 grams a day, whereas in less developed countries it may be as high as 60 to 90 grams a day. For those who wish to increase their fiber intake without going on a high fiber diet, there are a wide variety of fiber supplements which could be used after consulting a physician," he says.