

IMAGE AWARENESS HEALTHLETTER

WHY FIBER?

VOLUME 101 NO.2

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NOTICE

This newsletter is designed for educational purposes only. Any individual suffering from health problems which are mentioned or discussed should consult a physician for proper diagnosis and treatment.

OVERVIEW

Hippocrates, the father of medicine, realized the importance of dietary fiber. In the early 1800's Sylvester Graham, a pastor, created riots among the bakers of New England by denouncing their use of white flour. In 1837 he wrote, "It has been fully proved that 'bulk, or a due proportion of innutritious matter in our food, is quite as important to health as nourishment.'" Sylvester Graham introduced the world to the graham cracker—it was a high fiber food in his time. Most physicians of his time scoffed at Graham.

In the late 1800's Dr. T. R. Allinson was removed from the medical register for prescribing bran for constipa-

tion, hemorrhoids, varicose veins, headaches, miserable feelings, dullness and other ailments. Today physicians have come to recognize the validity of this course of therapy.

The current attention of the medical community upon the importance of fiber in the diet was stimulated by Dr. Denis Burkitt. He studied the stool and health of Africans and linked the appearance of many modern diseases to lack of fiber.

SURVEY OF BENEFICIAL EFFECTS

Recent scientific research has related fiber to a number of major western health problems:

1. Tooth Decay

The abrasive effect of fiber in foods helps to remove plaque from the teeth.

2. Diverticular Disease

This is believed to be the single most common disease in America. It apparently affects 40% of the population over 40 and 70% of the population over 70. Fiber has

been shown to help 88% of people with this problem.

3. Appendicitis

Appendicitis is the most frequent abdominal surgery in the United States. There are over 200,000 of these surgeries a year. The cause is believed to be a little pebble of fecal material called a fecalith which plugs up the opening of the appendix.

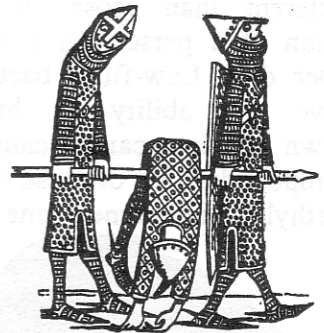


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4. Hiatus Hernia

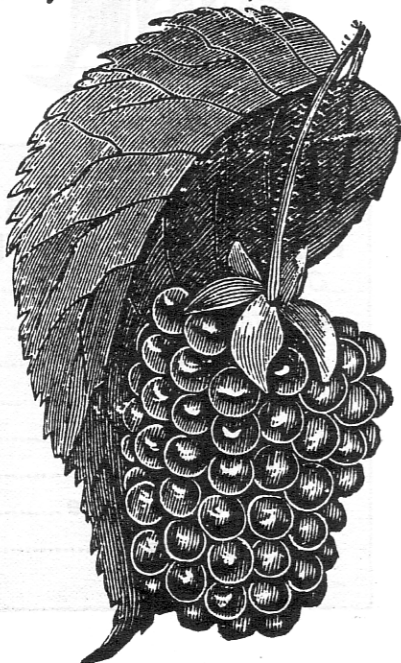
Straining at the stool can force the stomach through the diaphragm (a muscle that separates the lungs from the stomach). This can lead to constant heartburn, difficulty in digestion and pain. The normal pressure of the stomach against the diaphragm is 70 mm Hg. When the diet is inadequate in fiber this pressure can rise to 200 mm Hg.

5. Varicose Veins and Hemorrhoids

Straining at the stool due to lack of fiber can increase pressure on the veins to 2 1/2 to 3 times normal. This can destroy valves in the veins that keep blood flowing back toward the heart as well as stretching the veins.

6. Colon cancer

Bacteria in the diet of a person on a high-fiber diet are different than those in the colon of a person on a low-fiber diet. Low-fiber bacteria have the ability to break down bile into cancer causing compounds. One of these is 3-methyl-cholanthrene, one of



the most potent carcinogens in nature. High-fat intake also increases the numbers of bacteria that break down bile to form carcinogens. Low-fiber intake allows these carcinogens to remain in contact with the colon lining longer than they should increasing the risk of cancer.

7. Estrogen Accumulation

Excess estrogen in the body is complexed by the liver and dumped into the digestive tract. Bacteria in the digestive tract of the person on a low-fiber, high-fat diet release this estrogen and allow it to be reabsorbed. It is now believed that a high-fiber, low-fat diet helps prevent reabsorption of estrogens reducing risk of breast cancer and other estrogen imbalance problems.

8. Gallstones

Lack of fiber can cause bile to become supersaturated with cholesterol, which results in its forming stones in the gallbladder.

9. Obesity

Fiber helps keep an individual thinner in a number of ways. Firstly, it fills the stomach decreasing the appetite and desire for food. Secondly, soluble fibers slow the absorption of carbohydrates and sugars into the system by creating a thick or viscous contents in the digestive tract. Finally, fibers may increase bile excretion—bile is synthesized from fat.

10. Blood Sugar

Because soluble fibers function to slow the absorption of



sugars into the system they have been found quite beneficial for individuals suffering from blood sugar problems. Insulin levels after meals are decreased considerably when soluble fiber is included in the diet. This is of great significance for the diabetic.

11. Heart Disease

One of the factors which leads to heart disease is high insulin levels. Soluble fibers decrease the risk of heart disease to the extent that they reduce insulin and cholesterol levels in the body. Keeping weight down also decreases risk of heart disease.

References:

Burkitt, Denis, M.D., "Dietary Fiber" in *Medical Applications of Clinical Nutrition* ed Jeffrey Bland, New Canaan, Conn.: Keats Publishing, 1983, p. 269.

Reuben, David, M.D., *The Save Your Life Diet*, New York: Ballantine, 1975.

"Roughage in the Diet", *Medical World News*, September 6, 1974, pp. 35-42.

Burkitt, D.P., M.D. et. al., "Dietary Fiber and Disease", *JAMA*, August 19, 1974, Vol. 299, No. 8, pp. 1068-1074.

Painter, Neil, et. al., "Unprocessed Bran in Treatment of Diverticular Disease of the Colon", *British Medical Journal*, April 15, 1972, p. 138.

Toma, R.B., and Curtis, D.J., "Dietary Fiber: Its Role for Diabetics", *Food Technology*, February 1986, pp. 118-120.

FIBER CONTENT SELECTED FOODS

<i>Bran (1/2 cup)</i>	8.4 g
<i>Avocado (1)</i>	4.7 g
<i>Pear (1)</i>	4.1
<i>Blackberries (1/2 c)</i>	3.3 g
<i>Apple (1 medium)</i>	2.8 g
<i>Peanuts (1/2 cup)</i>	2 g
<i>(35 grams of fat)</i>	
<i>Soybean (1/2 c)</i>	1.5 g
<i>(5 g fat)</i>	
<i>Apricots (3)</i>	1.4g
<i>Strawberries (1/2 c)</i>	1.4 g
<i>Lentils (1/2 c)</i>	1.2 g
<i>Oats (1/2 c)</i>	1 g

References:

Kirschmann, John, Nutrition Almanac, New York: McGraw-Hill, 1984.

Toma, Ibid., loc. cit.

SOLUBLE AND INSOLUBLE FIBER

There are two major types of fiber. Insoluble fiber is found primarily in whole grains like wheat and rice. While these fibers may prove beneficial for diverticulosis, varicose veins, and appendicitis, they do little for blood sugar stability.

Soluble fiber is found in legumes and fruits. This kind of fiber slows the absorption of sugars from foods. The all-star champ of soluble fiber appears to be the legumes and especially soybeans.

The two types of fiber deliver different health benefits. Insoluble fiber increases the bulk of the stool, normalizing the functioning of the digestive tract and alleviating digestive disorders. Soluble fiber aids in regulat-

ing blood chemistry with regard to sugars and insulin levels. Fibers may also decrease the allergic response to foods as they regulate the digestive process.

THE GLYCEMIC INDEX

One of the most recent breakthroughs in the study of nutrition is the analysis of foods as they influence blood sugar. The rate of absorption of sugars from foods has been called the "glycemic index". Foods are compared with pure glucose (a common sugar) (value 100) to determine the glycemic index of that food. The higher the index the more rapidly the sugars in the food are absorbed.

Blood sugar is an extremely important component of overall health and disease. High blood sugar leads to diabetes, while hypoglycemia can occur when blood sugar is too low. The ability of foods to control blood sugar

offers great promise for those with blood sugar disorders.

The ability of foods to control blood sugar is related to their content of fat and soluble fiber. While fat tends to slow the absorption of sugars from foods and thus stabilizes blood sugar levels, consumption of large quantities of fat is a health risk. Thus the best foods for blood sugar problems are those with a high content of soluble fiber like the humble soybean, with one of the best ratings of all!



GLYCEMIC INDEX CHART OF FOODS

Foods in General

<i>Glucose</i>	100
<i>Honey</i>	87
<i>Cornflakes</i>	80
<i>Wholemeal Bread</i>	72
<i>White Rice</i>	72
<i>New Potato</i>	70
<i>Shredded Wheat</i>	67
<i>Brown Rice</i>	66
<i>Muesli</i>	66
<i>Banana</i>	62
<i>Spaghetti</i>	50
<i>Oats</i>	49
<i>Sweet Potato</i>	48
<i>Peas (Marrowfat)</i>	47

High Soluble Fiber

<i>Kidney Bean</i>	29
<i>Lentils</i>	29
<i>Soya Bean</i>	15

High Fat

<i>Ice Cream</i>	36
<i>Yogurt</i>	36
<i>Whole Milk</i>	34
<i>Sausage</i>	28
<i>Peanuts</i>	13

Reference: *Liebman, Bonnie, "Finetuning the Diabetic's Diet Glycemic Index", Nutrition Action Health Letter, September 1983, p. 11.*

AVERAGE FIBER INTAKE

The average American consumes little more than 18 grams of fiber a day. The recommended intake of fiber to prevent health problems is approximately 25-35 grams.

THE PRUNE STORY

Prunes contain pectin and fiber, but their fame in helping constipation comes from neither of these. Prunes contain a substance, called dihydroxyphenylisatin which appears to stimulate intestinal motility. This substance can create diarrhea if eaten to excess.

Reference: Ehrlich, David, *The Bowel Book*, New York: Schocken Books, Inc., 1981, p. 31.

PECTIN AN ANTI-DIARRHEAL

The ability of pectin to help in cases of diarrhea is a bit of a mystery. It is believed that pectin in an unstable digestive tract absorbs toxins or pulls harmful bacteria out of the system. Many commercial anti-diarrheal preparations contain pectin because of its well recognized usefulness for this purpose.

Reference: Nagy, Steven and Ataway, John, *Citrus Nutrition and Quality*, p. 119.

FLATULANCE OR GAS

Over sixty percent of those who add fiber to the diet can be expected to experience gas. It is important to realize

that this is only temporary. Building up fiber levels gradually may help. The flatulence usually disappears within three weeks but sometimes will last for as long as eight weeks.

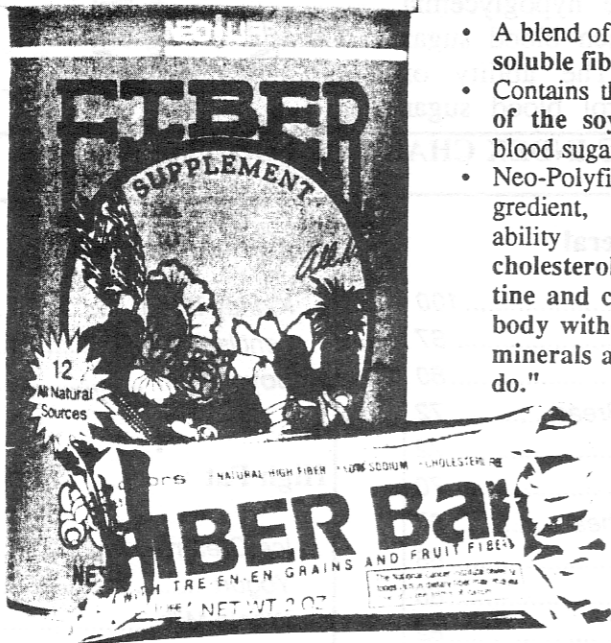
Reference: Painter, *Ibid.*, p. 138.

HOW MUCH FIBER IS ENOUGH?

Dennis Burkitt, the modern father of fiber, suggests that fiber is not adequate until the stool floats. Others have suggested an intake of fiber adequate to prevent straining at the stool by the creation of a soft stool that is easy to pass. This is usually about 12-14 grams of fiber a day, but will vary considerably with the quality of an individual's diet.

Reference: Painter, Neil, *Ibid.*, loc. cit.

Advertisement



Neo-Life Fiber Powder

- A blend of 12 soluble and insoluble fibers.
- Contains the cellular matrix of the soy to help stabilize blood sugar.
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Doctor's Diet Fiber Bar

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