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Inside

Oat Bran: New Reports Have Not Changed Dietary Advice

Don't purge the cupboards of oat bran products in response to the news that the miracle of oats may really have been the magic of advertising.

We're referring to the highly publicized report published in the *New England Journal of Medicine* (1) which disclaimed any significant lowering of blood cholesterol from eating oat bran.

Other studies involving larger numbers of subjects support the theory that soluble fibers, including that found in oat bran, have cholesterol lowering abilities. (2,3) "There are 11 other studies that show oat bran lowers cholesterol" says James W. Anderson, M.D., Professor of Medicine and Clinical Nutrition at the University of Kentucky. "I believe the research is really very solid in that area."

The Secret of Fiber. Soluble fiber is believed to be the ingredient in oats, as well as many other foods, that is effective in lowering serum cholesterol levels when eaten in tandem with a low-fat diet. Though not all soluble fibers are structurally or chemically alike, they all have the same physical characteristic of being able to absorb water. When ingested, these fibers form gel-like masses that surround food particles. Water-soluble nutrients leach out and are absorbed into the blood, but fats stay bound in the gel

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Just In

Olive Oil May Lower Blood Pressure

Olive oil has earned the reputation of being heart-healthy. New research from Italy suggests this is especially true for men.

A recent study of 4,903 Italian men and women compared the intake of various dietary fats—butter, olive oil and vegetable oils—with various risk factors for cardiovascular disease.

Consumption of olive oil was significantly associated with lower systolic blood pressure, blood glucose and blood cholesterol levels in both sexes. However, men showed a more significant reduction in diastolic blood pressure than did women.

This is the first large-scale study to suggest that consuming olive oil reduces blood pressure, an important risk factor for heart disease.

Journal of the American Medical Association, February 2, 1990, pp.688-692.

Are the Dangers of Salt Overstated or Underrated?

Picking up a salt shaker at the dinner table is likely to raise eyebrows. Salt is one of the dietary bad boys, with the U.S. Dietary Guidelines, The American Heart Association and the Surgeon General's Report agreeing unanimously that cutting back on sodium is the prudent thing to do.

Another blow was struck in the public health war against sodium when the 1989 edition of the Recommended Dietary Allowances (RDA's) announced that the average adult needs only 500 milligrams of sodium each day (equivalent to about 1/4 tsp of salt) to survive. The recent Diet and Health Report from the National Academy of Sciences recommends a moderate maximum of 2,400 milligrams per day, while the National Heart, Lung and Blood Institute, advises healthy adults to restrict their sodium intake to a maximum of 3,300 milligrams per day. Americans currently consume an average 4,000 to 5,800 milligrams of sodium daily.

Why Reduce Sodium? High blood pressure, which affects 60 million Americans, is one of three major controllable risk factors for coronary heart disease and stroke. Although the cause of high blood pressure is generally unknown, a high sodium intake is thought to exacerbate the problem in 25 to 60 percent of people who suffer high blood pressure, and sodium restriction is standard in the treatment of the disease.

It remains to be proven, however, that excess sodium actually *causes* high blood pressure, or that a reduced intake of sodium helps prevent the disease in people who have normal blood pressure.

Those in favor of across-the-board sodium restriction argue that even if cutting back on sodium doesn't help every person, it certainly won't cause harm, and it might help people who unknowingly suffer from hypertension. Others argue, however, that it's unfair

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Oat Bran

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and are excreted. This ability to hold water contributes to the laxative effect of many of these products.

How Cholesterol is Lowered. The mechanism by which these fibers lower cholesterol varies.

For example, some fibers, including oat bran, have been found to bind or absorb bile acids and increase their excretion. To replace the losses, cholesterol is then converted to bile acids and, as a result, less cholesterol is absorbed.

The soluble fiber in beans is thought to lower cholesterol when it is fermented by intestinal bacteria in the colon. The products of fermentation then inhibit the production of new cholesterol by the liver.

Low Fat *vs* High Fiber. All of the attention on single-food cures, such as oat bran, rice bran and psyllium, has overshadowed the more important role of diet in lowering blood cholesterol. The truth is, no amount of oat bran can offset the cholesterol-raising effect of a high-fat diet. Unfortunately, many of the new "oats-added" foods are high in fat. What's more, the amount of oat bran they contain is so small that unrealistic amounts of the products must be eaten to get a useful dose of oat bran. (See charts 1 and 2)

A diet low in fat (30% of calories or less), saturated fat (less than 10% of calories) and cholesterol (no more than 300 milligrams per day) is still the best approach for lowering blood cholesterol levels. An adequate intake of soluble fiber further helps to keep cholesterol down.

The HCF (High Carbohydrate and Fiber) Foundation, of which Dr. Anderson is president, recommends that the general public consume 20 to 35 grams of total fiber per day, with 6 to 10.5 grams as soluble fiber. People with high cholesterol levels, who are under a doctor's care, are advised to consume 35 to 50 grams of fiber each day, with 10.5 to 15 grams as soluble fiber.

Is Oat Bran Dead? *EN* believes that reports of the demise of oat bran have been greatly exaggerated. Oat bran is a good source of soluble fiber and soluble fiber from any source is an important part of a heart-healthy diet.

"Oat bran is still a good way to increase your intake of soluble fiber," says Dr. Anderson. "But a variety of fibers is even better."

Oat Bran Equivalents (OBE). Several studies have suggested that 35 grams of oat bran can produce a 3% to 6% drop in blood cholesterol if eaten every day in conjunction with a low-fat diet.

The accompanying charts 1 and 2 compare sources of soluble fiber, using 35 grams of oat bran as a desirable oat bran equivalent (OBE).

The OBE for products containing psyllium (chart 3) is based on 10.2 grams of psyllium, the amount that research has suggested will lower blood cholesterol by about 6%.

Fruits and vegetables are ranked according to their soluble fiber contents. (See chart 4.) A person can easily meet Dr. Anderson's recommendations for soluble fiber consumption, by following the National Academy of Sciences' recommendation to eat five or more servings of fruits and vegetables a day.

—*Robyn Flipse, M.S., R.D.*

(1) *The New England Journal of Medicine* January 18, 1990, pp. 147-152.
(2) *The Lancet*, May 17, 1975, pp.1116-1117.
(3) *Archives of Internal Medicine*, February, 1988, pp. 292-296.

Chart 1
A Comparison of Cereals Containing Oat Bran

Cereals are ranked according to the serving size needed to equal 35 grams of oat bran* from smallest to largest. Serving sizes are rounded to the nearest fraction of a cup.

Product	Oat Bran Equivalent (cups)	Calories	Fat (grams)
Quaker Oat Bran	4/5	125	2.5
Nabisco 100% Bran with Oat Bran	7/8	140	1.75
Quaker Oat Bran High Oat Bran Cereal	1 1/3	175	2.5
Kellogg's Common Sense	1 1/3	270	2.7
Health Valley Oat Bran O's	1 3/4	207	4.8
Kellogg's Cracklin' Oat Bran	2	429	15.6
General Mills Cheerios	5 1/2	484	8.8
Nabisco Shredded Wheat	8 1/4	1,250	12.5
Post Honey Bunches of Oats	23	3,850	70

*Based on reports that 35 grams of oat bran lowers blood cholesterol. These products may also provide other sources of soluble fiber that have their own cholesterol-lowering properties.

Chart 2
A Comparison of Baked Goods and Snacks Containing Oat Bran

Baked goods and snacks are ranked according to the serving size needed to equal 35 grams of oat bran from smallest to the largest.

Product	Oat Bran Equivalent	Calories	Fat (grams)
Health Valley Oat Bran Fancy Fruit Muffin	2 muffins	280	8
Sara Lee Oat Bran Muffin	3 1/5 muffins	672	25.6
Barbara's Oat Bran Pretzels	4 ounces	468	7.8
Kellogg's Common Sense Oat Bran Waffles	7 waffles	770	28
Thomas' Oat Bran English Muffins	7 muffins	840	7
Sara Lee Oat Bran Bagels	7 bagels	1,540	7

Chart 3
A Comparison of Supplements Containing Psyllium

Supplements are ranked according to the serving size needed to equal 10.2 grams of psyllium* from smallest to largest. Serving sizes are rounded to the nearest fraction of a teaspoon or tablespoon.

Product	Oat Bran Equivalent	Calories	Fat (grams)
Perdiem Fiber	1 3/4 tsp	7	0
Konsyl	1 3/4 tsp	0	0
Regular Metamucil	3 tsp	42	0
Sugar Free Fiberall	3 tsp	approx. 18	0
Orange Metamucil	3 tbsp	90	0

*Based on a report that 10.2 grams of psyllium lowers blood cholesterol similar to 35 grams of oat bran. *Journal of the American Medical Association*, June 16, 1989, pp.3419-3423.

Chart 4
A Comparison of the Soluble Fiber Content of Fruits and Vegetables

Fruits and vegetables are ranked according to their soluble fiber contents, from highest to lowest.*

Product	Serving Size	Soluble Fiber	Calories	Fat (grams)
Canned peas, young, green	1/2 cup	4	65	less than 1
Frozen corn, cooked	1/2 cup	3.5	75	less than 1
Red kidney beans, canned	1/2 cup	3.5	120	less than 1
Figs, dried	3	2.5	60	less than 1
Pinto bean, dried, cooked	1/2 cup	2.0	130	1
Split peas, dried, cooked	1/2 cup	1.7	115	less than 1
Red cabbage, cooked	1/2 cup	1.5	15	less than 1
Cauliflower, raw	1/2 cup	1.25	15	less than 1
Prunes, dried	3	1.1	50	less than 1
Apple, raw with skin	1 medium	.7	60	1

* Values from Plant Fiber in Foods by James W. Anderson, M.D., Diabetes Research Foundation, Inc., 1986