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## Women's Health Initiative Study Shows Modest Diet Changes Yield Modest Results

On February 8, 2006, the *Journal of the American Medical Association* published three articles reporting the results of the Women's Health Initiative (WHI) Dietary Modification Trial. The study included 48,835 women, and tested a diet that aimed to reduce fat to 20 percent of energy and increase vegetable and fruit consumption.

After 8.1 years of follow-up, the cardiovascular effects of the diet change were minimal. Low density lipoprotein (LDL, or "bad") cholesterol fell 2.7 mg/dL and the risk of coronary heart disease fell by 3 percent while risk of all cardiovascular disease (including stroke and coronary heart disease) fell by 2 percent. Neither result was statistically significant.<sup>1</sup>

For breast cancer, risk was 9 percent lower in the intervention group, although this result did not reach statistical significance. One exception was for progesterone-receptor-negative tumors, for which the risk decreased by 24 percent.<sup>2</sup>

For colon cancer, the risk of incidence decreased by 3 percent with a 9 percent decreased incidence of polyps (which are often precursors to cancer).<sup>3</sup>

Some have taken the result to be a setback for low-fat diet advocates. However, the study confirms the findings of several others: Modest dietary changes yield modest results.

The WHI diet is reminiscent of the dietary changes advocated by the National Cholesterol Education Program, a dietary shift that reduces fat to no more than 30 percent of calories, with less than 7 percent of calories from saturated fat and less than 200 milligrams of cholesterol per day. White meat is favored over red meat, but the diet includes as much as six ounces of meat per day. This diet has been shown to reduce LDL cholesterol concentrations by only about 5 percent.<sup>4</sup>

Diets that go further achieve far better results. Studies with vegetarian diets have shown LDL reductions of approximately 15 to 20 percent.<sup>5,6</sup>

Moreover, the WHI diet yielded poor compliance. While the low-fat group was to have a total fat intake of 20 percent of calories, the group averaged 24 percent after the first year and 29 percent by the study's end. For comparison, the average American consumes about 33 percent of calories from fat (NHANES III, 2000); little difference from the WHI intervention.

Dramatic differences in cancer risk have been noted in international comparisons where dietary differences were far greater than those in the WHI.

The flaw was in the diet design. By attempting to construct a “low-fat” diet that included animal products, the researchers were left with an impossible challenge. The leanest beef derives about 28 percent of its calories from fat. The leanest chicken isn’t much better at 23 percent fat, and even low-fat milk ranges from 24 to 35 percent total fat. Fish can vary in fat content, but all have cholesterol and more fat than is found in most foods from plants.

The women participants were asked to reduce fat to 20 percent at which level “it was presumed that . . . intake of saturated fat would also be reduced.” However, their intake of red meat, fish and poultry, the major sources of saturated fat and cholesterol in the standard American diet, remained nearly unchanged.

A growing body of scientific evidence has shown that people on low-fat, plant-based diets have dramatically lower rates of cancer, heart disease, and other chronic illnesses than meat eaters. And while a modestly low-fat diet will yield modest results, a truly low-fat diet—that is, a vegan diet, without added fat—can be an effective and powerful tool for reducing cancer and heart disease risk.

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