

1. Women's Health Initiative (WHI) (NIH-funded)¹

An 8-year randomized, controlled clinical trial, on nearly 49,000 women, testing the hypothesis that a USDA diet (Dietary Patterns), reduced in fat and saturated fat, can help prevent cancer, heart disease, obesity and diabetes.

Conclusions:

The low-fat diet had no effect on risk of invasive colorectal cancer; The low-fat diet had no significant effect on risk of CHD, CVD, or stroke; The low-fat diet had no significant effect on invasive breast cancer incidence over a mean of 8.1 years; The low-fat had a very small yet significant effect in reducing risk of ovarian cancer; The low-fat diet produced a very small (0.5kg), albeit significant, weight loss; A low-fat diet showed no evidence of reducing diabetes risk after 8.1 years.

2. Oslo Diet-Heart Study²

A 5-year randomized, controlled clinical trial on 412 men to test the hypothesis that saturated fats cause heart disease.

Conclusion: Replacing saturated fat with polyunsaturated fat had no significant effect on cardiovascular or total mortality.

3. "L.A. Veteran's Trial"³ (NIH-funded)

An 8-year randomized, controlled clinical trial on 846 men to test the hypothesis that saturated fats cause heart disease.

Conclusion: Compared to a standard American diet, a diet reduced in saturated fat and increased in unsaturated linoleic acid significantly reduced total fatal atherosclerotic events but had *no significant effect* on sudden-death or myocardial infarction. The group on the vegetable-oil diet had higher death rates due to cancer.

¹ Howard, Barbara V., JoAnn E. Manson, Marcia L. Stefanick, et al. "Low-Fat Dietary Pattern and Weight Change Over 7 Years: The Women's Health Initiative Dietary Modification Trial." *Journal of the American Medical Association* 295, no. 1 (January 4, 2006): 39–49; Beresford, Shirley A. A., Karen C. Johnson, et al. "Low-Fat Dietary Pattern and Risk of Colorectal Cancer: The Women's Health Initiative Randomized Controlled Dietary Modification Trial." *Journal of the American Medical Association* 295, no. 6 (February 8, 2006): 643–654; Howard, Barbara V., Linda Van Horn, Judith Hsia, et al. "Low-Fat Dietary Pattern and Risk of Cardiovascular Disease: The Women's Health Initiative Randomized Controlled Dietary Modification Trial." *Journal of the American Medical Association* 295, no. 6 (February 8, 2006): 655–666; Prentice, Ross L., Bette Caan, Rowan T. Chlebowski, et al. "Low-Fat Dietary Pattern and Risk of Invasive Breast Cancer: The Women's Health Initiative Randomized Controlled Dietary Modification Trial." *Journal of the American Medical Association* 295, no. 6 (February 8, 2006): 629–642; Prentice, Ross L., Cynthia A. Thomson, Bette Caan, et al. "Low-Fat Dietary Pattern and Cancer Incidence in the Women's Health Initiative Dietary Modification Randomized Controlled Trial." *Journal of the National Cancer Institute* 99, no. 20 (October 17, 2007): 1534–1543; Tinker LF, Bonds, DE, Margolis, KL, et al. "Low-fat dietary pattern and risk of treated diabetes mellitus in postmenopausal women: the Women's Health Initiative randomized controlled dietary modification trial," [Arch Intern Med.](#) 2008 July 28;168(14):1500A11.

² Leren, Paul. "The Effect of Plasma Cholesterol Lowering Diet in Male Survivors of Myocardial Infarction: A Controlled Clinical Trial." *Acta Medica Scandinavica Supplementum* 466 (1966): 1–92.

³ Dayton, Seymour, Morton Lee Pearce, Sam Hashimoto, Wilfrid J. Dixon, and Uwamie Tomiyasu. "A Controlled Clinical Trial of a Diet High in Unsaturated Fat in Preventing Complications of Atherosclerosis." *Circulation* 40, no. 1, suppl. 2 (1969): IIA1–IIA63.

4. **Minnesota Coronary Survey (NIH-funded)**⁴

A 4.5-year randomized, controlled clinical trial on 9,200+ men and women, to test the hypothesis that saturated fats and dietary cholesterol cause heart disease.

Conclusion: The intervention resulted in “no difference between the treatment and control groups were observed for cardiovascular events, cardiovascular mortality, or total mortality.

Note: A 2016 **analysis of previously unpublished data from this trial**,⁵ found that “There was a 22% higher risk of death for each 30 mg/dL reduction in serum cholesterol.”

5. **Medical Research Council Study (London)**⁶

A 2-year randomized controlled clinical trial on 393 men.

Conclusion: Compared to controls, men who had experienced a heart attack and then replaced saturated fat with soybean oil for two to four years was *no difference* on adverse cardiac events or mortality.

6. **“MRFIT Trial”⁷ (NIH-funded)**

A 7-year randomized, controlled clinical trial on 12,866 men, to test the hypothesis that a multifactorial intervention, including a reduction in saturated fats and cholesterol, can prevent heart disease.

Conclusion: The intervention had *no significant effect* on CHD mortality and total mortality.

7. **Helsinki Businessmen Study**⁸

A 5-year randomized controlled clinical trial with a multifactorial intervention including dietary advice to replace saturated fat with polyunsaturated fats, as well as to reduce alcohol, sugar, as well as anti-hypertensive drug treatment, on 3,490 men

Conclusion: The intervention with vegetable-oils and anti-hypertensive drugs significantly increased the risk of fatal primary CHD [Coronary Heart Disease] in men with at least one risk factor after 15 years of follow-up.

⁴ Frantz, Ivan D., Emily A. Dawson, Patricia L. Ashman, et al. “Test of Effect of Lipid Lowering by Diet on Cardiovascular Risk. The Minnesota Coronary Survey.” *Arteriosclerosis, Thrombosis, and Vascular Biology* 9, no. 1 (January–February 1989): 129–135.

⁵ *BMJ* 2016;353:i1246

⁶ Research Committee to the Medical Research Council, “Controlled Trial of Soya-bean Oil to the Medical Research Council” *The Lancet* 2, no. 7570 (September 28, 1968):693A9.

⁷ Multiple Risk Factor Intervention Trial Research Group, “Multiple Risk Factor Intervention Trial: Risk Factor Changes and Mortality Results,” *Journal of the American Medical Association* 248, no. 12 (1982): 1465–1477.

⁸ Strandberg, T.E. et. al. “Cardiovascular morbidity and multifactorial primary prevention: Fifteen-year follow-up of the Helsinki Businessmen Study.” *Nutr Metab Cardiovasc Dis* 5, 1995, 7A15.

8. Multifactor Primary Prevention Trial (Sweden)⁹

A 10-year trial with a multifactorial intervention including a cholesterol-lowering diet on 10,004 men

Conclusion: The intervention had *no significant effect* on mortality and coronary heart disease morbidity.

⁹ Wildhelmsen, et. al. "The Multifactor Primary Prevention Trial in Goteborg, Sweden, European Heart Journal, 7, 1986, 279A288.