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Does Dietary Fat Reduction Alter the Risk of Cardiovascular Events in Women?

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Does dietary fat reduction alter the risk of cardiovascular events in women?

Evidence-Based Answer

A decrease in dietary fat does not alter the risk of coronary heart disease (CHD), stroke, or cardiovascular disease (CVD) in postmenopausal women (SOR: **B**, based on a single RCT), nor does it significantly alter CHD in women aged 30 to 55. (SOR: **B**, based on a single cohort study.) However, CVD in women is epidemiologically linked to higher trans-fat consumption and lower polyunsaturated fat consumption.

An RCT of more than 48,000 postmenopausal women aged 50 to 79 assessed the long-term association between dietary fat intake and cardiovascular events. Forty percent of the women received intensive intervention to encourage a reduction in dietary fat consumption to 20% of their total caloric intake and to encourage vegetable and fruit consumption. The women were followed on average for 8.1 years, and their dietary behavior and health changes were monitored quarterly.[1]

Compared with the control group not receiving the dietary intervention, women in the test group reduced their dietary fat intake by 8.2%. The decrease in CHD, stroke, or CVD was not significant. There was a small, insignificant trend toward CVD reduction in women who reached the lowest levels of saturated fat and trans-unsaturated fat. Of the 19,541 dietary intervention participants, a total of 1,357 developed CVD by the end of the trial, compared with 2,088 of the 29,294 control participants (HR 0.98; 95% CI, 0.92–1.05). Low-density lipoprotein-cholesterol decreased in the intervention group from 133.3 (SD 35.3) mmol/L at baseline to 123.2 (SD 33.1) mmol/L at 3 years (P<.05). The authors concluded that the reductions were not at a high enough magnitude to significantly reduce the risk of cardiovascular events. The limitations of the study were that it targeted only a specific age group (women aged 50–79) and did not track consumption of other CVD-risk–altering foods.[1]

The Nurses' Health Study, a 20-year cohort study with 121,700 women, surveyed participants for dietary information every 2 years for the duration of the project. A subset of 78,778 were included in a study focusing on the effect of dietary fat intake on CHD.[2]

During the study there was an overall decrease in dietary fat intake, in addition to decreases in saturated fat, monounsaturated fat, and trans-saturated fats, and increases in polyunsaturated fat. Decreasing dietary fat intake did not reduce the risk of CHD. An increase in polyunsaturated fat intake, however, decreased the risk of CHD (RR=0.75; 95% CI, 0.6–0.9; P=.004), as did increased linoleic acid intake (RR=0.77; 95% CI, 0.62–0.95; P=.01). Increased trans-saturated fat intake increased the risk for CHD (RR=1.33; 95% CI, 1.07–1.66; P=.01). The positive benefits of polyunsaturated fats were more pronounced in younger women (age <65) and overweight women (BMI >25 kg/m^2). The researcher noted that one weakness of this study was a lack of blood lipid measurements.[2]

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2. Oh K, Hu FB, Manson JE, Stampfer MJ, Willett WC. Dietary fat intake and risk of coronary heart disease in women: 20 years of follow-up of the nurses' health study. *Am J Epidemiol*. 2005; 161(7):672–679. **[LOE 2b]**

What are the best treatment options for Friedreich ataxia (FA)?

Evidence-Based Answer

The free-radical scavenger idebenone has been shown to be more effective than placebo in decreasing interventricular septal (IVS) thickness and left ventricular mass (LVM) in FA patients. The drug may also yield improvement in neurologic function at high doses. (SOR: **B**, based on 2 small RCTs.)

FA is the most prevalent inherited ataxia, affecting roughly 1 in 50,000 in the US Caucasian population. It is an autosomal-recessive degenerative disorder, primarily affecting the central nervous system, spinal cord, and peripheral nerves, as well as the heart and pancreas. Clinical manifestations include neurologic dysfunction, cardiomyopathy, and diabetes mellitus. The major causes of death are complications related to cardiomyopathy or bulbar dysfunction, leading to an inability to protect the airway.

In a 1-year RCT, 28 patients with IVS thickness or left ventricular posterior wall (LVPW) thickness of at least 12 mm on echocardiography were randomized to receive idebenone (5 mg/kg per day) or placebo divided