Effects of a dietary portfolio of cholesterol - lowering foods vs lovastatin on serum lipids and C-reactive protein.

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Abstract:
Context: To enhance the effectiveness of diet in lowering cholesterol, recommendations of the Adult Treatment Panel III of the National Cholesterol Education Program emphasize diets low in saturated fat together with plant sterols and viscous fibers, and the American Heart Association supports the use of soy protein and nuts. Objective: To determine whether a diet containing all of these recommended food components leads to cholesterol reduction comparable with that of 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitors (statins). Design: Randomized controlled trial conducted between October and December 2002. Setting and Participants Forty-six healthy, hyperlipidemic adults (25 men and 21 postmenopausal women) with a mean (SE) age of 59 (1) years and body mass index of 27.6 (0.5), recruited from a Canadian hospital-affiliated nutrition research center and the community. Interventions: Participants were randomly assigned to undergo 1 of 3 interventions on an outpatient basis for 1 month: a diet very low in saturated fat, based on milled whole-wheat cereals and low-fat dairy foods (n=16; control); the same diet plus lovastatin,20 mg/d (n= 14); or a diet high in plant sterols (1.0 g/1000 kcal), soy protein(21.4 g/1000 kcal), viscous fibers (9.8 g/1000 kcal), and almonds (14 g/1000 kcal)(n = 16; dietary portfolio). Main Outcome: Measures Lipid and C-reactive protein levels, obtained from fasting blood samples; blood pressure; and body weight; measured at weeks 0, 2, and 4 and compared among the 3 treatment groups. Results: The control, statin, and dietary portfolio groups had mean (SE) decreases in low-density lipoprotein cholesterol of 8.0% (2.1 %) (P= .002), 30.9% (3.6%) (P<.001),and 28.6% (3.2%) (P<.001), respectively. Respective reductions in C-reactive protein were 10.0% (8.6%) (P= .27), 33.3% (8.3%) (P= .002), and 28.2% (10.8%) (P= .02). The significant reductions in the statin and dietary portfolio groups were all significantly different from changes in the control group. There were no significant differences in efficacy between the statin and dietary portfolio treatments. Conclusion: In this