Direct comparison of a dietary portfolio of cholesterol-lowering foods with a statin in hypercholesterolemic participants.

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Abstract:
Background: 3-Hydroxy-3-methyl-glutaryl-coenzyme A (HMGCoA) reductase inhibitors reduce serum cholesterol and are increasingly advocated in primary prevention to achieve reductions in LDL cholesterol. Newer dietary approaches combining cholesterol lowering foods may offer another option, but these approaches have not been compared directly with statins in the same persons. Objective: The objective was to compare, in the same subjects, the cholesterol-lowering potential of a dietary portfolio with that of a statin. Design: Thirty-four hyperlipidemic participants underwent all three1-mo treatments in random order as outpatients: a very-low saturated-fat diet (control diet), the same diet plus 20 mg lovastatin (statin diet), and a diet high in plant sterols (1.0 g/1000 kcal), soy protein foods (including soy milks and soy burgers, 21.4 g/1000 kcal),almonds (14 g/1000 kcal), and viscous fibers from oats, barley, psyllium,and the vegetables okra and eggplant (10 g/1000 kcal) (portfolio diets). Fasting blood samples were obtained at 0, 2, and 4 wk.Results: LDL-cholesterol concentrations decreased by 8.5±1.9%,33.3 ± 1.9%, and 29.6 ± 1.3% after 4 wk of the control, statin, and portfolio diets, respectively. Although the absolute difference between the statin and the portfolio treatments was significant at 4 wk(P = 0.013), 9 participants (26%) achieved their lowest LDL cholesterol concentrations with the portfolio diet. Moreover, the statin (n = 27) and the portfolio (n = 24) diets did not differ significantly(P=0.288) in their ability to reduce LDL cholesterol below the 3.4-mmol/L primary prevention cutoff. Conclusions: Dietary combinations may not differ in potency from first-generation statins in achieving current lipid goals for primary prevention. They may, therefore, bridge the treatment gap between current therapeutic diets and newer statins.