The effect of combining plant sterols, soy protein, viscous fibers, and almonds in treating hypercholesterolemia.

Jenkins, DJA 2003
Metabolism-clinical And Experimental
52(11):1478-1483.

Abstract:
Reductions in low-density lipoprotein-cholesterol (LDL-C) result from diets containing almonds, or diets that are either low in saturated fat or high in viscous fibers, soy proteins, or plant sterols. We have therefore combined all of these interventions in a single diet (portfolio diet) to determine whether cholesterol reductions could be achieved of similar magnitude to those reported in recent statin trials which reduced cardiovascular events. Twenty-five hyperlipidemic subjects consumed either a portfolio diet (n = 13). very low in saturated fat and high in plant sterols (1.2 g/1,000 kcal), soy protein (16.2 g/1,000 kcal), viscous fibers (8.3 g/1,000 kcal), and almonds (16.6 g/1,000 kcal), or a low-saturated fat diet (n=12) based on whole-wheat cereals and low-fat dairy foods. Fasting blood, blood pressure, and body weight were obtained at weeks 0.2, and 4 of each phase. LDL-C was reduced by 12.1% ± 2.4% (P < .001) on the low-fat diet and by 35.0% ± 3.1% (P < .001) on the portfolio diet, which also reduced the ratio of LDL-C to high-density lipoprotein-cholesterol (HDL-C) significantly (30.0% ± 3.5%, P < 001). The reductions in LDL-C and the LDL:HDL-C ratio were both significantly lower on the portfolio diet than on the control diet (P < .001 and P < .001, respectively). Mean weight loss was similar on test and control diets 11.0 kg and 0.9 kg, respectively). No difference was seen in blood pressure, HDL-C, serum triglycerides, lipoprotein(a) [Lp(a)1], or homocysteine concentrations between diets. Combining a number of foods and food components in a single dietary portfolio may lower LDL-C similarly to statins and so increase the potential effectiveness of dietary therapy.