Direct comparison of dietary portfolio vs statin on C-reactive protein.

Jenkins, DJA 2005
European Journal Of Clinical Nutrition
59:851-860.

Abstract:
Background: 3-Hydroxy-3-methyl-glutaryl-coenzyme A (HMG-CoA) reductase inhibitors (statins) markedly reduce serum cholesterol and have anti-inflammatory effects. The effect of cholesterol-lowering diets on inflammatory biomarkers is less well known. Objective: To compare the efficacy of a dietary combination (portfolio) of cholesterol-lowering foods vs a statin in reducing C-reactive protein (CRP) as a biomarker of inflammation linked to increased cardiovascular disease risk. Methods: In all, 34 hyperlipidemic subjects completed three 1-month treatments as outpatients in random order: a very low saturated fat diet (control); the same diet with 20 mg lovastatin (statin); and 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) (portfolio). Fasting blood samples were obtained at weeks 0, 2, and 4. Results: Using the complete data, no treatment reduced serum CRP. However, when subjects with CRP levels above the 75th percentile for previously reported studies (>3.5 mg/l) were excluded, CRP was reduced similarly on both statin, -16.3±6.7% (n=23, P=0.013) and dietary portfolio,-23.8±6.9% (n=25, P=0.001) but not the control, 15.3±13.6% (n=28, P=0.907). The percentage CRP change from baseline on the portfolio treatment (n=25) was greater than the control (n=28, P=0.004) but similar to statin treatment (n=23, P=0.349). Both statin and portfolio treatments were similar in reducing CRP and numerically more effective than control but only the change in portfolio was significant after the Bonferroni adjustment. Conclusions: A combination of cholesterol-lowering foods reduced C-reactive protein to a similar extent as the starting dose of a first-generation statin.