

Assessment of the longer-term effects of a dietary portfolio of cholesterol-lowering foods in hypercholesterolemia.

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Abstract:

Background: Cholesterol-lowering foods may be more effective when consumed as combinations rather than as single foods.

Objectives: Our aims were to determine the effectiveness of consuming a combination of cholesterol-lowering foods (dietary portfolio) under real-world conditions and to compare these results with published data from the same participants who had undergone 4-wk metabolic studies to compare the same dietary portfolio with the effects of a statin.

Design: For 12 mo, 66 hyperlipidemic participants were prescribed diets high in plant sterols (1.0 g/1000 kcal), soy protein (22.5 g/1000 kcal), viscous fibers (10 g/1000 kcal), and almonds (23 g/1000 kcal). Fifty-five participants completed the 1-y study. The 1-y data were also compared with published results on 29 of the participants who had also undergone separate 1-mo metabolic trials of a diet and a statin.

Results: At 3 mo and 1 y, mean (\pm SE) LDL-cholesterol reductions appeared stable at 14.0 \pm 1.6% ($P < 0.001$) and 12.8 \pm 2.0% ($P = 0.001$), respectively ($n = 66$). These reductions were less than those observed after the 1-mo metabolic diet and statin trials. Nevertheless, 31.8% of the participants ($n = 21$ of 66) had LDL-cholesterol reductions of 20% at 1 y ($x \pm SE$: 29.7, 1.6%). The LDL cholesterol reductions in this group were not significantly different from those seen after their respective metabolically controlled portfolio or statin treatments. A correlation was found between total dietary adherence and LDL-cholesterol change ($r = 0.42$, $P = 0.001$). Only 2 of the 26 participants with 55% compliance achieved LDL-cholesterol reductions 20% at 1 y.