

Long-term almond supplementation without advice on food replacement induces favourable nutrient modifications to the habitual diets of free-living individuals.

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Abstract:

Epidemiological and metabolic studies have shown that regular nut consumption may protect against risk of heart disease and diabetes. None has investigated the effect of adding nuts to a self-selected habitual diet (containing little or no nuts) on dietary patterns. The present study evaluated the impact of long-term almond supplementation in healthy men (n 43) and women (n 38) aged 25-70 years on nutrient profile and nutrient displacement. All subjects were followed for 1 year. During the first 6 months, subjects followed their habitual diets; in the second 6 months, subjects added almonds to their diets. Diets were assessed by seven random 24 h telephone diet recalls during each diet period. On average, the almond supplement was 52 g/d (about forty-two nuts) containing 1286 kJ. When subjects changed from their habitual diet to the almond-supplemented diet, the intakes of MUFA, PUFA, fibre, vegetable protein, α -tocopherol, Cu and Mg significantly ($P < 0.05$) increased by 42, 24, 12, 19, 66, 15 and 23% respectively; the intakes of trans fatty acids, animal protein, Na, cholesterol and sugars significantly ($P < 0.05$) decreased by 14, 9, 21, 17 and 13% respectively. These spontaneous nutrient changes closely match the dietary recommendations to prevent cardiovascular and other chronic diseases. Displacement estimates for total energy, total protein, total fat, SFA, MUFA, PUFA, total fibre, Ca, Fe, Mg, P, K, Zn and α -tocopherol ranged from 16 to 98 %; the estimates for total food weight, carbohydrate, sugars and Se were >245 %. A daily supplement of almonds can induce favourable nutrient modifications for chronic disease prevention to an individual's habitual diet.