

RESEARCH & PRACTICE INNOVATIONS: STRATEGIES FOR LIFESTYLE CHANGES (PART 1)**Dried Fruit Consumption Associated with Improved Diet Quality and Reduced Overweight or Obesity in Adults: NHANES, 1999-2004**

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Learning Outcome: To determine the associations of dried fruit consumption with diet quality, nutrient intake, and body weight in adults.

NHANES, 1999-2004, data were used to examine the associations of dried fruit consumption with diet quality, nutrient intake, and body weight in adults 19+ years (n=13,292). Group definitions were non-consumers vs. consumers of >1/8 equivalent cup fruit/day from dried fruit (eaten out of hand or contained in foods). In addition to diet, overweight/obesity (BMI >25 kg/m²) was assessed. Sample-weighted means, standard errors, and ANOVA (adjusted for covariates) were determined using SUDAAN. Diet quality, measured using HEI-2005, was higher in dried fruit consumers than non-consumers (59.3 ± 0.5 vs. 49.4 ± 0.3, p<0.01). Total fruit (3.33 ± 0.08 vs. 2.04 ± 0.05, p<0.01), whole fruit (3.44 ± 0.07 vs. 1.77 ± 0.04, p<0.01), and other HEI-2005 component scores were higher in dried fruit consumers than non-consumers. Adjusted for energy intake, between-group differences in adult shortfall nutrients were all positive (p<0.01): fiber (+6.6 g/d), vitamin E (+1.5 mg AT/d), calcium (+103 mg/d), magnesium (+72 mg/d), and potassium (+432 mg/d). Adjusted for physical activity and other lifestyle measures, weight (-2.7 kg, p<0.01), BMI (-1.1 kg/m², p<0.01), prevalence (%) and risk for overweight/obesity (56.0 ± 2.4 vs. 65.8 ± 0.7, p<0.01; OR=0.64, 95% CI = 0.51-0.81) were all lower in dried fruit consumers than non-consumers. Dried fruit consumption was associated with improved diet quality, lower BMI, and reduced overweight/obesity in adults.

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Effect of Point-of-Selection Nutrition Information (POSNI) on Food Choices in an All-You-Care-to-Eat University Dining Facility

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Learning Outcome: To explain whether point of selection nutrition information (POSNI) affects food choices in an "all-you-care-to-eat" dining facility, where cost of food is not a variable.

The effects of point of purchase nutrition information on food choices are of public health interest, but are largely unknown. In this quasi-experimental study, self-serve habits of students choosing French fries (FF) for lunch in an all-you-care-to-eat university dining commons (DC) were covertly observed for 10 weeks: the first 4 weeks without point of selection nutrition information (POSNI) (control); the middle 4 weeks with POSNI (intervention) and the last 2 weeks without POSNI (retention). Intervention was a photograph (sign) of two different portion sizes of FF on a plate (i.e., large > 15 FF; small < 15 FF), along with the associated calorie and fat content; signs were attached to the glass directly in front of the FF serving area. Participants included all students who eat in DC. Repeated measure ANOVA revealed POSNI significantly decreased FF consumption (p<0.001). With POSNI, significantly more students took smaller portions (i.e. 40 vs. 66%; intervention vs. control; p< 0.001). After signs were removed, percentage of students choosing FF remained the same, but within 2 wks, percentage taking large vs. small portions was evenly split. POSNI had a more pronounced effect on males. This study is the first to report POSNI significantly affected choice and portion size in a dining facility where cost is not a variable. Importantly, it also shows without POSNI, many students quickly revert back to their old habits of consuming large portions.

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Innovative Dietary Strategies Complement Medical Management to Reduce Risk Factors in Diabetic Patients with Coronary Artery Disease

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Learning Outcome: Participants will understand the components of an aggressive dietary strategy that can be used by patients to reduce cardiovascular risk factors.

Background: Secondary prevention strategies can improve outcomes and prognosis in high risk patients with coronary artery disease. Therefore, we investigated the magnitude of cardiovascular risk reduction associated with the consumption of an innovative dietary strategy in parallel with standardized medical management in the post-operative diabetic patient.

Methods: Thirty patients with type II diabetes, 6 weeks post bypass graft surgery received detailed individualized dietary counseling on a modified Portfolio Diet: a low cholesterol, low saturated fat diet that includes viscous fibres (8g/1000 kcal), soy protein (17g/1000kcal) and almonds (22g/1000kcal). Physical activity and food intake check lists were completed daily. Low density lipoprotein (LDL) cholesterol as well as markers of cardiovascular risk, endothelial function, glycemic control and oxidative stress were measured at base line and following four weeks of dietary intervention.

Results: Consumption of the dietary portfolio resulted in a significant decline in homocysteine (10.1±2.7 vs 7.9±4, p=0.006). Despite being on statin therapy, significant reductions in total cholesterol (3.6±1 vs 3.2±0.8, p<0.001), LDL cholesterol (1.9±0.8 vs 1.6±0.6, p<0.001) and apolipoprotein B (0.8±0.2 vs 0.7±0.1, p<0.001) were observed with no change in high density lipoprotein cholesterol (p=0.8). No changes in blood glucose, fructosamine or insulin were observed, although this was not unexpected as these patients were relatively well controlled at the onset of the study.

Conclusion: Our results suggest that the dietary portfolio is an effective and well tolerated secondary prevention strategy in patients with multiple risk factors and known coronary artery disease.

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