**Effect of Daily Macadamia Nut Consumption on Anthropometric Indices in Overweight and Obese Men and Women**

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**Objectives:** We sought to assess the effect of daily consumption of macadamia nuts as 15% of calories on body weight, BMI, waist circumference, percent body fat and skeletal muscle mass in overweight/obese men and women with elevated cardiometabolic risk.

**Methods:** Utilizing a randomized crossover design, we randomized 38 subjects to consume macadamia nuts daily as 15% of calories for 8 weeks (intervention) and their usual diet for 8 weeks (control), with a 2-week washout. Three subjects dropped out early; n = 35 for analysis. Subjects were healthy men and postmenopausal women with a BMI of 25–39, a waist circumference of >101.6 cm for men and >88.9 cm for women, and one additional cardiovascular risk factor (fasting plasma glucose >100 mg/dL, triglycerides ≥150 mg/dl, total cholesterol >200 mg/dL, LDL-C > 100 mg/dL, blood pressure ≥130/85 mmHg or taking anti-hypertensive medication). Macadamia nuts were provided in pre-weighed daily portions as 15% of calories calculated using the Mifflin-St. Jeor equation. Percent body fat and skeletal muscle mass (kg) were determined by bioelectrical impedance analysis. A mixed model analysis was performed with treatment, sequence, phase, and baseline values as fixed-effect terms and subjects as a random-effects term.

**Results:** Compared to control, consumption of macadamia nuts led to a mean weight change of –348 g (84.13 vs. 83.78 kg; $P = 0.15$) a mean BMI change of –0.15 kg/m$^2$ (30.61 vs. 30.47 kg/m$^2$; $P = 0.12$), and a mean waist circumference change of 0.17 cm (107.41 vs. 107.58 cm; $P = 0.61$). Percent body fat increased by an average of 0.26% after eating nuts (42.70 vs. 42.96%; $P = 0.16$). Skeletal muscle mass was slightly but significantly lower after eating nuts with a mean change of –0.237 kg (26.33 vs. 26.09 kg; $P = 0.017$).

**Conclusions:** Daily consumption of high-fat macadamia nuts for eight weeks in overweight and obese individuals did not change anthropometrics including body weight, BMI, waist circumference, and % body fat. Skeletal muscle mass was slightly lowered but likely not clinically relevant.

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