

Almond consumption is associated with better nutrient intake, nutrient adequacy, and diet quality in adults: National Health and Nutrition Examination Survey 2001-2010.

O'Neil, CE 2016
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Abstract:

The purpose of this study was to examine the association between almond consumption, the most widely consumed tree nut in the US, and nutrient intake, nutrient adequacy, diet quality, and weight/adiposity in adults. Methods: Data from adults (N=24,808), 19+ years, participating in the NHANES 2001-2010 were used. The NCI method was used to estimate the usual intake of almonds and selected nutrients. Almond consumers were defined as those consuming any amount of almonds/almond butter. Percentages of the consumers/non-consumers below the Estimated Average Requirement (EAR) or above the Adequate Intake (AI) for select nutrients were determined. To assess significant differences for the percentage of almond consumers vs. non-consumers with intakes less than the EAR or above the AI, a Z-statistic for differences in population proportions was used. Covariate-controlled linear regression was used to determine differences in diet quality, measured by the Healthy Eating Index-2010 (HEI-2010), between the consumer groups. Body mass indices and waist circumference were assessed. P was set at $p < 0.01$. Results: Almond consumers were more likely to be non-Hispanic white, older, of higher income, more physically active, and were less likely to be a current smoker than non-consumers. Usual intake of almonds among consumers was 29.5 ± 1.5 g/day. Usual intake of protein; dietary fiber; vitamins A, D, E, and C; thiamin; niacin; riboflavin; folate, calcium, copper, magnesium, iron, phosphorus, selenium, zinc, and potassium was higher in almond consumers. Almond consumers were less likely to be below the EAR for protein, vitamins A, D, E, B12, and C; riboflavin; calcium; copper; magnesium; iron; phosphorus; and zinc. They were also more likely to be above the AI for dietary fiber and potassium. Total HEI-2010 scores were approximately 15 points higher in almond consumers. Body mass indices and waist circumference measures were lower in almond consumers. Conclusions: Moderate consumption of almonds should be encouraged as part of a healthy diet.