Prospective randomized controlled pilot study on the effects of almond consumption on skin lipids and wrinkles.

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Abstract:
Objective: Almonds are a rich source of fatty acids and antioxidants, and their supplementation is known to significantly modulate serum lipids. The effects of almond on the skin's lipid barrier and the appearance of wrinkles have not yet been elucidated. The aim of this study was to investigate the effects of almond consumption on facial sebum production and wrinkles. Methods: This was a prospective, investigator-blinded, randomized controlled trial in which subjects consumed 20% of their daily energy consumption in either almonds or a calorie-matched snack for 16 weeks. This study was completed at the UC Davis Dermatology clinic. Participants were a volunteer sample of generally healthy postmenopausal females with Fitzpatrick skin types 1 and 2. A facial photograph and image analysis system was used to obtain standardized photographs and information on wrinkle width and severity at 0, 8, and 16 weeks. Measurements of transepidermal water loss and sebum production were also completed at 0, 8, and 16 weeks. Results: Fifty healthy postmenopausal females were recruited, 31 participants were enrolled, and 28 completed the study. Under photographic analysis, the almond group had significantly decreased wrinkle severity and width compared with the control group at 16 weeks ($p < .02$). Changes in skin barrier function were nonsignificant, measured by the transepidermal water loss ($p = .65$) between the almond and control groups relative to baseline after 16 weeks. No adverse effects were reported. Conclusion: Our study demonstrates that daily almond consumption may reduce wrinkle severity in postmenopausal females to potentially have natural antiaging benefits.