

## **Nuts and plasma lipids: An almond diet lowers LDL-C while preserving HDL-C.**

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### **Abstract:**

Objective: To compare lipid-altering effects of an almond-based diet with an olive oil-based diet, against a cheese and butter-based control diet. Methods: Forty-five free-living hyperlipidemic men (n=12) and women (n=33) with a mean plasma total cholesterol (TC) of  $251 \pm 30$  mg/dL followed one of three diets: almond-based, olive oil-based, or dairy-based for 4 weeks. Total fat in each diet was matched, and the study-provided sources of fat comprised the major portion of fat intake. Results: Reductions in TC and low-density lipoprotein-cholesterol (LDL-C) between the three groups were significantly different from the almond group (both  $p < 0.001$ ). Within group analysis revealed that the almond-based diet induced significant reductions in TC ( $p < 0.05$ ), LDL-C ( $p < 0.001$ ), and the TC:HDL ratio ( $p < 0.001$ ), while HDL-C levels were preserved. TC and HDL-C in the control diet were significantly increased from baseline (both  $p < 0.05$ ). while the olive oil-based diet resulted in no significant changes over the study period. Weight did not change significantly. Conclusion: Results suggest that the more favorable lipid-altering effects induced by the almond group maybe due to interactive or additive effects of the numerous bioactive constituents found in almonds.