

Incorporating Almonds in Diet Improves Plasma Alpha Tocopherol Levels.

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Almonds are a good source of α -tocopherol (α -TOH). Plasma α -, β -, and γ -tocopherols and blood lipids were examined in 16 subjects not on vitamin E containing supplements at entry in a crossover, metabolic feeding study with almonds. After a 2-week adaptation period, subjects were fed in random order a low-almond diet (10% energy from almonds), a high-almond diet (20% energy from almonds) and a diet free of nuts as control, each for 4 weeks. Dietary α -TOH content of diets were: control (0.908 mg/100g); low (0.965 mg/100 g); and, high (1.57 mg/100 g). Plasma tocopherols were determined by HPLC with fluorescence detection. Ratios of α -tocopherol to plasma cholesterol (Chol) and total lipid (TL) were computed with total lipid as the sum of plasma cholesterol plus triglyceride.

<u>Plasma</u>	<u>Diets</u>		
	<u>Control</u>	<u>Low Almond</u>	<u>High Almond</u>
α -TOH ($\mu\text{g/ml}$)	11.5 \pm 3.17	12.9 \pm 5.19*	13.1 \pm 3.76*
α -TOH:Chol ($\mu\text{g/mg}$)	5.41 \pm 0.71	5.94 \pm 1.45*	6.40 \pm 0.84*
α -TOH:TL ($\mu\text{g/mg}$)	3.55 \pm 0.56	3.90 \pm 0.88*	4.16 \pm 0.47*

*Significantly different from control diet (one-way ANOVA), $P < 0.001$.

Plasma α -TOH levels increased significantly in low and high almond diets when compared to the control diet whereas levels of β and γ tocopherols decreased. When adjusted for total cholesterol and total lipids, plasma α -tocopherol to cholesterol and total blood lipid ratios increased significantly in both low and high almond diets. Almond containing diets simultaneously lower serum lipids and improve plasma antioxidant status.