

**Effect on Plasma Fatty Acids of Diets with Walnuts or Fish**

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Studies indicate that n-3 fatty acids reduce CHD risk. Walnuts contain 18:3n-3 and fish the long chain 20:5n-3 and 22:6n-3. Our objective was to compare the effect incorporating walnuts or fish in recommended amounts on plasma fatty acid profiles. Under controlled metabolic conditions, subjects (n=25) were fed in random order a fish diet (227 g per week), a walnut diet (255 g per week), or a diet free of fish and nuts as control for 4 weeks each. Plasma lipids were separated by thin-layer chromatography and analyzed by capillary gas chromatography. Results shown in the table are differences between diets computed as least-squares means and the standard error (SE) of the mean for fatty acid changes in lipid components and analyzed using mixed linear statistical models.

	Walnut-Control	Fish-Control	Walnut-Fish
Phospholipids	Difference, mol%		
18:3n-3	0.25 (0.02)*	-0.01 (0.02)	0.25 (0.02)*
20:5n-3	-0.01 (0.14)	1.33 (0.14)*	-1.34 (0.14)*
22:5n-3	-0.06 (0.18)	2.71 (0.18)*	-2.77 (0.18)*
Cholesterol esters			
18:3n-3	0.67 (0.05)*	-0.05 (0.05)	0.72 (0.04)*
20:5n-3	0.11 (0.10)	1.59 (0.10)*	-1.48 (0.10)*
22:5n-3	-0.03 (0.03)	0.50 (0.03)*	-0.54 (0.03)*

\* $P < 0.001$

Moderate walnut consumption increases 18:3n-3: whereas, moderate fish consumption increases 20:5n-3 and 22:6n-3 in plasma phospholipids and cholesterol esters.

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