DHA/EPA Supplementation Improves Arterial Elasticity
Monday, 01 October 2007 14:25

Reference:

Fish Oil Supplementation Improves Large Arterial Elasticity in Overweight Hypertensive Patients


Department of Cardiology, Ion Channel Disease Laboratory, Environment and Disease Associated Gene Ministry of Education Intensive Laboratory, First Affiliated Hospital, School of Medicine of Xi’an Jiaotong University, Xi’an, Shaanxi, China.

Summary:

A progressive decrease in arterial elasticity is becoming increasingly recognized as a predictor of cardiovascular outcomes in patients with hypertension. The present clinical trial was a double-blinded, randomized and placebo-controlled study wherein 52 overweight hypertensive patients were allocated to one of two groups: 26 were assigned to the placebo (control) and 26 to the fish-oil group. The latter consumed encapsulated fish oil containing omega-3 fatty acids so as to provide a daily intake of 360 mg DHA + 540 mg EPA (900 mg total) for an eight week period. Arterial elasticity measurements were performed at the beginning and following the 56 days of intervention.

A significant improvement (by 21% overall) in the large artery elasticity was found in the fish oil group at day 56 compared to entry (baseline) whereas no such effects were observed in the placebo group. While the specific mechanisms underlying these favorable effects could not be investigated with the present experimental design, the authors suggest that the rapidity with which fish oil improved arterial elasticity may indicate significant effects on various functional components that regulate elasticity including potential benefits on endothelium-related arterial relaxation at the level of the smooth muscle layer in the artery. It is further noteworthy that the effects observed in this study were obtained independent of any significant changes in blood lipid/lipoprotein levels.
Dr. Holub's Comments:

This study adds to previous publications in the clinical literature which have indicated that omega-3 fatty acids from fish oil can improve arterial elasticity in normotensive subjects with blood lipid elevations, obesity, or diabetes. It is of interest to note that the daily dose employed herein (900 mg of DHA/EPA combined per day) is the target recommended by the American Heart Association for patients with coronary heart disease and also reflects levels of intake which are commonplace among many adults in Japan.