Reference:

Effects of EPA on Coronary Artery Disease in Hypercholesterolemic Patients with Multiple Risk Factors: Sub-Analysis of Primary Prevention Cases from The Japan EPA Lipid Intervention Study (JELIS)


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Summary:

The Japan EPA Lipid Intervention Study (JELIS) large-scale clinical trial indicated the beneficial effects of EPA supplementation of coronary artery disease-related outcomes in hypercholesterolemic patients being treated with cholesterol-lowering stain therapy (Yokoyama et al., Lancet, 369:1090-1098 (2007)). The present evaluation studied the interrelationships between incident coronary artery disease (CAD), the number and types of risk factors in the hypercholesterolemic patients on the statin therapy and the impact of EPA treatment relative to a control group. The study design for JELIS included a total of 18,645 patients who were registered and randomly assigned to either the EPA (1800 mg/day) with statin (EPA group) or statin alone (control group). The majority of the patients (80%) had no history of CAD and were the subject of the present report. The follow-up period extended up to 5 years in duration with the mean follow-up being 4.6 years. The investigators reported that patients with abnormal (elevated) levels of fasting serum triglyceride (≥150 mg/dL and HDL-cholesterol

Dr. Holub's Comments:

The present results are of particular interest since the risk reduction (for CAD) was 53% with EPA supplementation in those patients with high triglyceride/low HDL- cholesterol levels as compared to an overall risk reduction of 18% for all patients (mixed) in the previously-published JELIS study. These current results indicate that subjects with elevated fasting triglyceride levels along with lower HDL-cholesterol levels can be expected to exhibit considerable benefits from
EPA supplementation (based on the presented dosage of 1.8 g/day) over and above that provided by statin treatment alone. There is extensive evidence in the published medical literature that high fasting ratios of triglyceride:HDL-cholesterol represent a particularly higher risk group for CAD and many patients with the metabolic syndrome show early and marked elevations in this important risk ratio. Finally, it is noted that the background Japanese diet likely provided approximately 800-1000 mg/day of DHA/EPA.