

# ABSTRACT

## The Effects Of A 4:1 Eicosapentaenoic Acid/ Docosahexaenoic Acid Fish Oil Supplement On Plasma Lipid Profile.

S. Henderson, J. Lampel, C. Hollenbeck. *J of Am Dietetic Assoc.* 2008 Sept;108;9:A104.

Learning Objectives: Participants will learn the effects of 4 weeks of supplementation with a 4:1 mixture of EPA/DHA on plasma lipids in normal healthy individuals

Abstract Text: Previous research reports that diet supplementation with omega-3 fatty acids in a 3:2 EPA/DHA ratio from fish oil has been associated with reduced risk of myocardial infarction and coronary heart disease. The purpose of this study was to assess the effects of 4:1 EPA/DHA fish oil supplements on plasma lipid levels.

A 4-week randomized, double-blind, placebo-controlled, parallel designed study was carried out in 25 healthy normal lipemic adult subjects. The experimental group (n=13) was supplemented with 3 g/day of 4:1 EPA/DHA fish oil capsules, while the control group (n=12) received a placebo containing 3 g/day of soybean oil. Both capsules contained lemon oil to disguise the nature of the oil. All subjects were instructed to maintain usual diet and lifestyle patterns throughout the study. Blood samples were obtained after a 12 hr fast at baseline and at 4 weeks following supplementation for the measurement of total cholesterol (Total-C), VLDL-C, LDL-C, HDL-C and total triglyceride (T-TG).

There were no significant differences in age, gender, T-TGs, VLDL-C, LDL-C, HDL-C, or T-TG at baseline between the experimental and control group. At the end of 4 weeks there was a small, quantitative increase in LDL-C in the experimental group, as a function of VLDL clearance, and a significant decrease in T-TGs ( $97\pm 13$  vs.  $74\pm 7$ ).

The results of the present study demonstrate that 3 g/day 4:1 EPA/DHA fish oil supplement had a significant effect on plasma triglyceride concentrations, and suggest that supplementation of omega-3 fatty acids may provide clinical benefit in healthy normal lipemic individuals.

Source: *J of Am Dietetic Assoc.* September 2008;108;9:A104.

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