Reference:

Hypertriglyceridemia: its etiology, effects and treatments


Robarts Research Institute, London, Ontario, Canada.

Summary:

This newly published review article in the Canadian Medical Association Journal reviews the causes and classification of elevated triglyceride levels.

Dr. Holub's Comments:

I am responding to the informative and well-written article by Drs. Yuan, Al-Shali, and Hegele entitled “Hypertriglyceridemia: its etiology, effects and treatments” as published in CMAJ April 10, 2007: 176 (8): 1103-1120. I wish to provide evidence-based information herein to correct statements made in this article with respect to the potential use of omega-3 fatty acids from fish oils in the form of DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid) for triglyceride lowering.

The article states that “Daily consumption of 4g of omega-3 fatty acids, along with restricted energy and saturated-fat intakes, can reduce plasma triglyceride levels by as much as 20%. However, omega-3 fatty acids are rarely effective when used as the sole triglyceride-lowering therapy.” In an earlier review in the CMAJ (1), evidence for more pronounced triglyceride-lowering upon DHA/EPA supplementation was outlined. As given in detail at www.dhaomega3.org.
, a freely-accessible website on DHA/EPA – health related topics, calculations from the 65 intervention trials as reviewed by Harris (2) indicates expected lowerings of 25-30% for those with baseline fasting triglyceride levels of 1.70-2.82 mmol/L with DHA/EPA (combined) supplemental intakes of 3g/day as the sole triglyceride-lowering therapy. These typically occur within a 4-wk interval in the absence of any significant dietary advice or change. It is also noteworthy that the American Heart Association Scientific Statement (3) states “for individuals with hypertriglyceridemia, 2 to 4g of DHA/EPA per day, provided as capsules under a physician's care, are recommended.”

Triglyceride-lowering of 30% or more with 4g/day of EPA/DHA may be accompanied by a small but significant rise in LDL-cholesterol levels (5-10%). (2) It is noted that the indirect determination of LDL-cholesterol by the Friedwald equation in our health-care system will often yield a small rise in the estimated levels whenever triglyceride levels are lowered. It is reasonable to suggest that EPA/DHA supplementation should be considered as an added strategic option to the authors' Table 1 while offering efficacy, safety in most patients, compliance and cost-savings to triglyceride management. This is supported by a recent review (4) directed to family physicians in the U.S.

Finally, a recent review (5) has concluded that combination therapy with statins and EPA/DHA supplementation has been ‘consistently shown to be effective, safe, and well-tolerated treatment for combined dyslipidemia”.

It is clearly recognized that consideration to all aspects of a patient's condition and management needs evaluation by the responsible clinician. This response is directed solely towards DHA/EPA omega-3 fatty acids as potentially effective options for triglyceride lowering.

References:


