

## **REDUCE IT – Commentary by Dr. Howard Weintraub**

"There have been many trials that have examined the effects of triglyceride lowering medications in both primary and secondary prevention populations. Regrettably, most of these studies did not include hypertriglyceridemic subjects. Hence, it was not surprising to most that the studies did not produce the anticipated results. Omega-3 fatty acids have been used in a variety of populations but the majority of the trials only used 1 g daily and most commonly a combination of EPA and DHA. Only one trial used EPA alone, the JELIS study in Japanese subjects, that did demonstrate a significant improvement in ischemic outcomes. However there were several issues about this trial that prevented many people from fully embracing the results.

The REDUCE IT study evaluated the effects of a highly purified EPA containing omega-3 fatty acid, Icosapent Ethyl or Vascepa on cardiovascular outcomes in a hypertriglyceridemic population. 8179 patients were randomized with 90% of the subjects completing the study. The results of this trial have been lauded with a variety of praises, but phenomenal has been a frequently recurring description. In a group of patients on moderate or high dose statins with an average LDL-C of 76 mg/dL and an average triglyceride of 215 mg/dL a 25% relative risk reduction in the composite outcome (MACE), of cardiovascular death, nonfatal myocardial infarction, stroke, coronary revascularization and unstable angina was observed. The key secondary endpoint of cardiovascular death, MI and stroke was reduced by 26%. Both of these values were highly statistically significant. All of the individual components of the primary outcome were statistically significantly reduced, along with a very significant 20% reduction in cardiovascular mortality. Review of the baseline characteristics show that this was a very well treated population. Plus, the order of magnitude benefit of the addition of Vascepa to patients with underlying cardiovascular disease in the setting of moderate or high intensity statin use in more than 93% of patients is quite remarkable. Many other biomarkers were significantly reduced, including hsCRP.

There have been many authoritative interviews about this trial. Most of concluded that this study represents a "game changer". It certainly demonstrates the impact when the right patients are given the right medication in the right dose."

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