COMMENTARY 1

One More Study Confirming The Failure of Fish Oil

ONLINE FIRST (April 9, 2012)

Efficacy of Omega-3 Fatty Acid Supplements (Eicosapentaenoic Acid and Docosahexaenoic Acid) in the Secondary Prevention of Cardiovascular Disease

A Meta-analysis of Randomized, Double-blind, Placebo-Controlled Trials Sang Mi Kwak, MD; Seung-Kwon Myung, MD; Young Jae Lee, MD, MS; Hong Gwan Seo, MD, PhD; for the Korean Meta-analysis Study Group *Arch Intern Med.* Published online April 9, 2012. doi:10.1001/archinternmed.2012.262

- ❖ Background ❖ Although previous randomized, double-blind, placebo-controlled trials reported the efficacy of omega-3 fatty acid supplements in the secondary prevention of cardiovascular disease (CVD), the *evidence remains inconclusive*. Using a meta-analysis, we investigated the efficacy of eicosapentaenoic acid and docosahexaenoic acid in the secondary prevention of CVD.
- **❖ Methods ❖** We searched PubMed, EMBASE, and the Cochrane Library in **April 2011**. Two of us independently reviewed and selected eligible randomized controlled trials.
- * Results * Of 1007 articles retrieved, 14 randomized, double-blind, placebo-controlled trials (involving 20,485 patients with a history of CVD) were included in the final analyses. Supplementation with omega-3 fatty acids did not reduce the risk of overall cardiovascular events (relative risk, 0.99; 95% CI, 0.89-1.09), all-caused mortality, sudden cardiac death, myocardial infarction, congestive heart failure, or transient ischemic attack and stroke. There was a small reduction in cardiovascular death (relative risk, 0.91; 95% CI, 0.84-0.99), which disappeared when we excluded a study with major methodological problems. Furthermore, no significant preventive effect was observed in subgroup analyses by the following: country location, inland or coastal geographic area, history of CVD,

concomitant medication use, type of placebo material in the trial, methodological quality of the trial, duration of treatment, dosage of eicosapentaenoic acid or docosahexaenoic acid, or use of fish oil supplementation only as treatment.

❖ Conclusion ❖ Our meta-analysis showed *insufficient evidence of a secondary preventive effect of omega-3* fatty acid supplements against overall cardiovascular events among patients with a history of cardiovascular disease.

The journal article quote by Harvard investigators Frank B. Hu, MD and JoAnn E. Manson, MD, DrPH was, "To date, there is <u>no conclusive evidence to recommend fish oil supplementation for primary or secondary prevention of CVD</u>." The investigators used more accurate post 2010 data. Pre-2010 data showed positive association with many "studies" because they were poorly conducted.

First, you need to know where the entire "we need fish and fish oil" nonsense came from. Eskimos have less CVD than most other populations (although they have other ailments and often suffer horrible skin) so it was assumed that the lower CVD was from fish consumption. These investigators made a common mistake. They didn't look at their entire diet. Far from fish being the primary food, Eskimos rely more on mammal protein like seal, whale, caribou, bear, muskoxen, birds and their eggs. Incredibly, the initial investigation chose to focus only on the fish component in the Eskimo's diet. This mistake is causing millions of Americans and others around the world to be overdosed with this toxic substance.

Regardless of the FAILURE of fish oil once again, we predicted that its proponents are not encumbered by the facts, so they were able to trot out the typical responses...

Following will be the common refrain from the majority in the health/nutrition field, who for the most part, have a vested interest in promoting the fish oil myth:

1. Studies reviewed were of relatively "short duration."

Apparently, a few YEARS is not long enough. How long do you need to take an effective supplement to see a benefit? Ten years, twenty years, 150 years? The IOWA experiment showed incredible results in reversing heart disease — increasing arterial compliance making the arteries more flexible — reversing "hardening of the arteries." And this was accomplished in less than one year.

2. Patient population was skewed to males in their mid sixties. The participants already had heart and/or stroke issues that were undetected.

Wouldn't a high-risk population be the ideal population to use? They are at greatest risk, so logic would suggest they would also be most sensitive to any positive changes. The males in their sixties are tantamount to the canaries in the mines with respect to heart disease and stroke. Again, the IOWA experiment clearly shows reversal of heart disease in nearly everyone without regard to age or pre-existing condition.

3. Need a larger, longer-term study to have meaningful results.

I guess 20,000+ participants is not enough? If the supplement were effective wouldn't it be obvious in a group far smaller than 20,000 people. The IOWA experiment was so strong with less than 20 people that the statistics showed the confidence level was 99.85% and an NNT<3 — meaning you can take the results "to the bank." You require huge numbers of patients when the intervention is a failure so random chance may give the illusion of success.

4. Supplements are different than eating the natural product (fish).

While this is certainly true, logic would suggest that if their was a real benefit from eating fish one would derive that benefit, to some degree, by taking concentrated doses (through supplementation) of fish. You need to know that eating fish with the LEAST OIL — gives significantly better results, proving "parent" EFAs with fully functional omega-6 are much more important than overdosing on omega-3 or its derivatives.

5. Lifestyle is what matters. Other, unknown variables have influenced the results of this meta-study.

This is always true in a study and especially a meta-study. All studies are plagued by unknown variables, but if fish oil were at least on the right track there should be some measurable benefit. The IOWA experiment had no restrictions on the participants. In spite of this, the results were amazing.

The authors of this meta study got it right — "To date, there is no conclusive evidence to recommend fish oil supplementation for primary or secondary prevention of CVD." — It's time to discard fish oil and adopt a rational approach to EFA supplementation.