



A COMMENT ON OMEGA-3 DIETARY SUPPLEMENTS

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To some, the fish recommendations that I presented previously in the *Journal of Lancaster General Hospital* are hard to remember. Because of the mercury and other contaminants in many fish, patients who are pregnant, expect to become pregnant soon, or have young children, may wish to carry a copy of the recommendations (as I do). The Physicians for Social Responsibility website has a guide that fits nicely in a wallet or pocketbook.¹

For patients who are taking Omega-3s on the advice of a physician, or because they read about them in a magazine, commercially available capsules or liquids that have been tested and found to be free of contaminants are best. Constant vigilance is necessary, however, because the FDA does not regulate dietary supplements, and concentration and purity can vary among lots even from the same company. For example, Boots recently became the second British Company in less than a month to withdraw fish oil supplements from the market due to excessive dioxin levels. *Consumer Reports* in July of 2003 studied about a dozen brands of fish oils that they considered "safe." Their report can be found on their website or in a library copy of the magazine, and I give a copy to my patients who are taking (or wish to take) fish oils or Omega-3's. Also note that a new prescription medication with Omega-3 Ethyl Esters has recently been released for those with triglycerides over 500 (Omacor Reliant).

Some have suggested that many of fish's benefits can be obtained from soy and other foods, but one placebo-controlled trial demonstrated that soy isoflavones can increase the rate of endometrial hyperplasia in post-menopausal women. The American Heart Association recently reported (*Circulation*, January, 2006) that soy protein and particularly soy isoflavones lack health benefits, and the AHA does not recommend isoflavone supplements in food or pills. Others recommend foods containing soy anyway, because of their high content of polyunsaturated fats, fiber, and vitamins.

Now let's look at some of the topics discussed in studies that were specifically concerned with Omega-3s, as many of them have been published since the previous issue of JLGH:

1. Chronic Obstructive Lung Disease: In last December's *Chest* an article suggested that Omega-3 fatty acids may improve lung function in COPD, but the study had a very small sample size, and follow-up was short.
2. Psychiatric Treatment: Nothing can yet be concluded concerning the clinical utility of Omega-3s in psychiatric conditions, though there is a suggestion of some potential as a short-term intervention for supplemental treatment in schizophrenia.²
3. Eye Health: More study is needed.³
4. Cognitive Function: No strong conclusions can be drawn regarding their effects on neurological health.⁴
5. Child and Maternal Health: Studies revealed the absence of a notable safety profile. Also, results on pregnancy outcomes and on development of infants showed no effect or were primarily inconclusive.⁵
6. Cancer: No studies confirm a significant association with either the incidence of cancer, or with outcomes after cancer surgery.⁶
7. Asthma: It is impossible to conclude anything definitive about the value of Omega-3's for patients of any age with asthma.⁷
8. Mortality, Cardiovascular Disease and Cancer: A search of randomized controlled trials found no clear effect of long chain or shorter chain Omega-3s on total mortality, combined cardiovascular events, or cancer.⁸
9. Sudden Death: A number of studies found an association between sudden death and low blood levels or low dietary intake of Omega 3s, but the Dart-2 Trial in 2003 in men with stable angina found an excess of total cardiac deaths, which was clearest in those taking fish oil capsules rather than eating oily fish.⁹ Another study in patients with an implantable

cardioverter defibrillator and a recent episode of ventricular tachycardia, found a mild proarrhythmic effect from Omega-3s.¹⁰ A 2005 NIH workshop reviewed the current confusing state of affairs.¹¹

Dr. Mike Knapton of the British Heart Foundation put it all in proper perspective: “More research is needed before people change their fish or Omega-3 fat intake. Omega-3s are essential fatty acids that the body cannot make. Whatever amount of oily fish you consume, the impact on your risk of heart disease is negligible compared to

the benefits of quitting smoking, doing regular exercise, and eating a diet low in saturated fats.”

The bottom line, I feel, is what grandmother taught us – *everything in moderation!* Except during pregnancy or in young children, fish is still a low calorie, nutritious food source to round out the diet, but more study is needed to further elucidate its risks and benefits.

Excuse me now, as I sit down for my delicious tilapia dinner smothered with plant stanol trans-fat-free spread!

REFERENCES

1. www.mercuryaction.org
1. www.ahrq.gov-PublicationNo.05-E022-1
3. www.ahrq.gov-PublicationNo.05-E008-1
4. www.ahrq.gov-PublicationNo.05-E011-1
5. www.ahrq.gov-PublicationNo.05-E025-1
6. www.ahrq.gov-PublicationNo.05-E010-1
7. www.ahrq.gov-PublicationNo.04-E013-1
8. Hooper L, Thompson R, Harrison R, et. al. British Medical Journal 2006;332:752-760.
9. Burr ML, Ashfield-Watt PA, Dunstan FD, et al. Eur. J. of Clin. Nutr. 2003;57:193-200.
10. Raitt MH, Connor WE, Morris C et al. JAMA 2005;293:2884-91.
11. http://ods.od.nih.gov/pubs/coagulation/NHLBI-ODS_Omega-3_Arrhythmogenesis_Workshop_Summary.pdf

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