

Scientific Support for Appendix III

1. **Lean fish WINS:** “The *reduction in fasting blood glucose* and in the glucose area under the curve during the day was *significantly greater with the n-6 [from lean fish]* than with the n-3 [fatty fish] diet [showing 21% less insulin production with fatty fish compared to lean, non-fatty fish containing more PEOs].”¹
 2. “Therefore, the activation of autophagy that we documented could explain the **prosurvival effects of the ω -6 PUFAs [Derivatives] AA and DGLA** in conditions of food deprivation and food abundance.”²
 3. **Higher linoleic acid (Parent ω -6)** was associated with **reduced risks of low-grade and total prostate cancer**.³ Yes, the fish oil proponents complained loudly. I spent significant time writing journal articles with high-level medical science to explain why this result is predicted and true.
 4. **Parent omega-3 is significantly lower** in patients **with dementia**.⁴
 5. Wherever they saw **fatty streaks (an early state of atherosclerosis)**, they also found a **deficiency in Parent Omega-6**.⁵
 6. A vegetarian diet **WITH NO FISH** was found to sensitize subjects to **insulin (making it MORE EFFECTIVE)**. The researchers believed it to be related to a **greater proportion of LA – Parent omega-6** – in their serum phospholipids.⁶
- Recall, noted cardiologist Eric Topol’s comments on fish oil’s tragic failure in a major

¹ Karlström, BE, et al., “Fatty fish in the diet of patients with type 2 diabetes: comparison of the metabolic effects of foods rich in n-3 and n-6 fatty acids,” *American Journal of Clinical Nutrition*, **2011**; 94:26-33.

² O’Rourke, Eyleen, J., et al., “ ω -6 Polyunsaturated fatty acids [**Parent omega-6 derivatives**] extend life span through the activation of autophagy,” *Genes & Development*, **2013**, 27:429-440.

³ Brasky, Theodore, M., et al., “Plasma Phospholipid Fatty Acids and Prostate Cancer Risk in the SELECT Trial,” *Journal of the National Cancer Institute*, Vol. 105, No. 15, **2013**, pp. 1132-1141.

⁴ Cherubini, A., et al., “Low Plasma N-3 Fatty Acids and Dementia in Older Persons: The InCHIANTI Study,” *The Journals of Gerontology: Series A: Biological Sciences and Medical Sciences*, **2007** October; 62(10): 1120-1126.

⁵ Das, U.N., “A defect in the activity of D6 and D5 desaturases [that the fully functional omega-6 series fulfills] may be a factor in the initiation and progression of atherosclerosis,” *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 76 (2007) 251-268.

⁶ “Vegetarian diet-induced increase in linoleic acid [Parent omega-6] in serum phospholipids is associated with improved insulin sensitivity in subjects with type 2 diabetes,” *Nutrition & Diabetes*, **2013** Jun 17;3 (online).

current study as reported in *The New England Journal of Medicine*.⁷ In this study, more than 12,000 very high-risk patients were followed by 860 primary care physicians. Topol said,

“There’s no difference. There’s no difference on any end point: death, stroke, heart attack, hospitalization, you name it....”

⁷ “The Risk and Prevention Study Collaborative Group. “N-3 Fatty Acids in Patients with Multiple Cardiovascular Risk Factors,” *The New England Journal of Medicine*, **2013**;368:1800-8.