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CAMBRIDGE INTERNATIONAL INSTITUTE FOR MEDICAL SCIENCE

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## THE PHYSICIAN'S CONCISE GUIDE TO:

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# The Truth Gets Published About PEOs in 2009/2008

*The AHA Champions Omega-6  
So Close Yet So Far—Omega-3 & Heart Disease  
Confirmed: EFA Derivatives Made "As Needed"*



*Dedicated to advancing and publicizing the science and discoveries of Prof. Brian Peskin.*

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There is simply no one better in the 21st century at developing practical health-related solutions based on the world's leading medical and nutritional science. **"Science - Not opinion" is Brian's trademark.** When Brian is through explaining a topic it is "case closed!" When he says it, you "can take the information to the bank!"

Unlike most of his peers' recommendations, Brian's health and nutritional recommendations have stood the test of time. **Brian has never had to reverse or significantly alter any of his medical reports—reports that have tackled everything from the dangers of soy, to the wrongly popularized need for fiber in the diet, to his warning about the potential harm of supplementing with copious amounts of omega-3.** In 1995 he published the report "Fiber Fiction" and finally, eleven years later, others in research are acknowledging the silliness of recommending fiber in the diet of a human being. Brian's latest crusade is to warn of the dangers of excess omega-3 (in particular, fish oil) and how it will lead to increased cases of skin cancer. The list goes on and on...

Brian received an appointment as an Adjunct Professor at Texas Southern University in the Department of Pharmacy and Health Sciences (1998-1999). **The former president of the University said of his discoveries: "...His nutritional discoveries and practical applications through *Life-Systems Engineering* are unprecedented."** Brian earned his Bachelor of Science degree in Electrical Engineering from Massachusetts Institute of Technology (MIT) in 1979. Brian founded the field of *Life-Systems Engineering Science* in 1995. This field is defined as *The New Science of Maximizing Desired Results by Working Cooperatively with the Natural Processes of Living Systems*. To many, Brian is THE MOST TRUSTED AUTHORITY ON HEALTH AND NUTRITION IN THE WORLD.

Brian continues to be a featured guest on hundreds of radio and television shows both nationally and internationally. His sheer number of accomplishments during the last decade of the 20th century and into the 21st century are unprecedented and uniquely designate him as the #1 authority in the world of what really works and why. Forget listening to the popular press or most popular so-called health magazines. Their editors simply don't understand the complicated science that they write about - they merely "parrot" what everyone else says without independent scientific verification. Their recommendations often have no basis in reality of how the body works, based on its physiology.

Brian has dedicated his life to provide the truth—which is almost always opposite to what everyone says. Here's why Brian is the #1 man in America to listen to when it comes to your health.

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## **Major Newsflash 2009: American Heart Association Champions Omega-6 PUFAs to Counter Popular Nutrition Advice.**

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There is important ground breaking information that all cardiologists need to know<sup>1</sup>:

A great deal of discussion in the world of nutrition has given omega-6 fatty acids a bad reputation, which, according to the American Heart Association is unfounded. The debate came about because one of the components of omega-6 fatty acids, called arachidonic acid, is a “building block” for some inflammation-related molecules. This had led to concern that omega-6 consumption would lead to a greater risk of heart disease.

“*That reflects a rather naive understanding of the biochemistry,*” says William S. Harris, Director of the Metabolism and Nutrition Research Center of the University of South Dakota Sanford School of Medicine and the nutritionist who led the science advisory committee that issued the report in *Circulation*. **‘Omega-6 fatty acids give rise to both pro-inflammatory compounds *and* anti-inflammatory compounds.** To say that they are bad because they produce pro-inflammatory compounds ignores the fact that **they [Parent omega-6] give rise to anti-inflammatory compounds** as well,’ he explains.

“‘There has been a lot of talk about this concern,’ says Dr. Robert H. Eckel, a professor of medicine at the University of Colorado and a **past president of the American Heart Association.** **‘I’m glad that the American Heart Association went ahead and looked into the evidence of such a harmful effect, and it just isn’t there.** This will comfort everyone who likes vegetable oil as part of a healthy diet.’

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1 The above newsflash was based on the following 3 articles: Heartwire 2009, © 2009 Medscape, January 28, 2009 (Dallas, Texas), based on *Journal of the American Heart Association*, Ref.: **AHA Science Advisory**, Harris WS, Mozaffarian D, et al., “Omega-6 Fatty Acids and Risk for Cardiovascular Disease: A Science Advisory From the American Heart Association Nutrition Subcommittee of the Council on Nutrition, Physical Activity, and Metabolism; Council on Cardiovascular Nursing; and Council on Epidemiology and Prevention,” *Circulation*, February 17, 2009; 119(6): 902 - 907, and American Academy of Anti-Aging Medicine referenced February 2, 2009 at [http://www.worldhealth.net/news/concern\\_about\\_omega-6\\_fatty\\_acids\\_lead.in](http://www.worldhealth.net/news/concern_about_omega-6_fatty_acids_lead.in).

“According to Dr. Dariush Mozaffarian (Harvard University, Boston, MA) one of the advisory writing group members, the AHA (American Heart Association) has zeroed in on omega-6s to *counter nutritional advice from other sources that has de emphasized the role for plant-based PUFAs.*

“‘[O]mega-6 PUFAs also have powerful *anti-inflammatory properties* that *counteract any pro inflammatory activity,*’ say the advisory authors. *‘It’s incorrect to view the omega-6 fatty acids as “pro inflammatory.” Eating less linoleic acid will not lower tissue levels of arachidonic acid* because the **body tightly regulates the synthesis** of [arachidonic acid] from [linoleic acid]...’ states lead author for the writing group, Dr. William S Harris.”

Dr. Harris continues:

“‘[W]e’re telling people **not to stop eating their omega-6.**’

“Advice to reduce omega-6 PUFA intakes is typically framed as a call to lower the ratio of dietary omega-6 to omega-3 PUFAs. (medical journal article references 1– 4) Although **increasing omega-3 PUFA tissue levels does reduce the risk for CHD**, (medical journal article references 77 and 78) *it does not follow that decreasing omega-6 levels will do the same. Indeed, the evidence considered here suggests that it would have the opposite effect. Higher omega-6 PUFA intakes can inhibit the conversion of alpha-linolenic acid to eicosapentaenoic acid,(79) but such conversion is already quite low, (80) and whether additional small changes would have net effects on CHD risk after the other benefits of LA consumption are taken into account is not clear.*

“**To reduce omega-6 PUFA intakes from their current levels would be more likely to increase than to decrease risk for CHD.**” [Emphasis added.]

## ► **Life-Systems Engineering Science Commentary**

The first quote above, “reflects a rather *naive understanding of the biochemistry*” says it all. You have already discovered that omega-6 is the substrate for PGE<sub>1</sub>, the body’s most potent anti-inflammatory. Unfortunately, today’s physicians, nutritionists, and athletic trainers simply and naively “parrot” what they read. Yet, nowhere to be found in any of these articles is there a

discussion about the adulterated, nonfunctional, non-oxygenating, destroyed omega-6 PEOs caused by food processing requirements, which stop oxygen transfer. That is the FUNDAMENTAL issue that was completely overlooked. Regardless, this is an amazing, long overdue revelation for the American Heart Association. For the cardiologists of the American Heart Association, this new line of reasoning is truly revolutionary.

There is more insight this article offers to health professionals. Although many physicians mistakenly think that parent-to-derivative conversions are very high, these researchers understand that the parent-to-derivative omega-3 conversions are ALWAYS very low (likewise with the omega-6 series conversions, too). As you have already discovered, the conversion rate is a mere 1% - 5% with at least 95% of the parent PEOs of both omega-3 and omega-6 series STAYING in PARENT form.

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## **Newsflash 2008: So Close, Yet so Far .... The Importance of Parent Omega-3 is Stressed in the article “Alpha-Linolenic Acid and Risk of Nonfatal Acute Myocardial Infarction”<sup>2</sup>**

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In a study of heart disease in Costa Rica some important discoveries confirm the science of parent omega oils you have already discovered in this book [*The Hidden Story of Cancer*]:

“Greater alpha-linolenic acid [**parent omega-3**] assessed either in adipose or by questionnaire was associated with **lower risk of myocardial infarction** [heart attack]. [Note: Finally, researchers are noting the importance of the “parent” EFAs.]

“Similarly, **low intakes of alpha-linolenic acid** can be found in developing countries where **cardiovascular disease is on the rise**. [Note: there is no mention of the importance of unadulterated parent omega-6.]

“**Fish intake was similar in cases and controls** and the variation within each group was large.... **Fish** or eicosapentaenoic acid [**EPA**] and docosahexaenoic acid [**DHA**] intake at the levels found in this population **did not modify the observed association**. [I want to make this very clear: **The level of fish consumption didn’t matter**. Given all of fish oils supposed miraculous claims, didn’t these researchers wonder why? However, the researchers understand that the parent omega-3 did something the derivatives didn’t do.]

“Alpha-Linolenic acid in adipose tissue ranged from 0.36% in the lowest decile to 1.04% in the highest decile. [Note: **parent omega-6 is approx. 15-35 times more** predominant in bodyfat (triglycerides) and even in plasma triglycerides **parent omega-6 is approx. 17 times**

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<sup>2</sup> Hannia Campos, PhD; Ana Baylin, MD, Dsc; Walter C. Willett, MD, DrPh, *Circulation*, 2008; 118:339-345.

**more predominant**, too.<sup>3</sup> Researchers should question why this is so.] The article continues...

*“Conclusions* – Consumption of vegetable oils rich in alpha-linolenic acid [**parent omega-3**] could confer **important cardiovascular protection**. The apparent protective effect of alpha-linolenic acid is **most evident among subjects with low intakes**.

“The potential anti-inflammatory effects of alpha-linolenic acid could be mediated in part through its conversion to EPA and DHA by the action of desaturase and elongase enzymes. However, the finding that this conversion is generally low (<8%) and the observation of poor correlations between dietary alpha-linolenic acid and long-chain fatty acids in adipose tissue, plasma, or erythrocytes in this study suggest that **alpha-linolenic acid could exert direct protective anti-inflammatory effects**. [Note: The researchers are aware of the fact and admit that there is little derivative conversion. Therefore, doesn't it occur to them that fish oil supplements give pharmacological overloads and that they should be warning America? The researchers are also misleading Americans.]

“In summary, consumption of vegetable oils rich in alpha-linolenic acid [**parent omega-3**] could confer **important cardiovascular protection**.” [Note: The researchers understand that parent omega-3 is important.] (Emphasis added.)

## ► *Life-Systems Engineering Science Commentary*

I'd expect much, much more from Harvard. In this *Heart Journal* article, these Harvard School of Public Health researchers show their woefully child-like knowledge of the physiology and biochemistry of EFAs and PEOs. No wonder these researchers continue to make so little progress. The researchers make the claim that because fish is becoming scarce and “the important omega-3 derivatives” (which you already discovered aren't fundamental) will be lacking, that parent omega-3 can take some of its place. This is a

3 Spector A., “Plasma free fatty acid and lipoproteins as sources of polyunsaturated fatty acid for the brain,” *J Mol Neurosci* 2001;16:159-165, Watkins, PA, Hamilton JA, et al., Leaf A, et al., “Brain uptake and utilization of fatty acids: Applications to peroxisomal biogenesis diseases,” *J Mol Neurosci* 2001;16:87-92, and Peskin BS, Report: “The Essential Cardiologist: A New Look at Cholesterol, Cancer, Clogged Arteries & EFAs,” pgs 26-27, Pinnacle Press, 2008, “Metabolism of essential fatty acids by human epidermal enzyme preparations: evidence of chain elongation,” R.S. Chapkin, et al., *Journal of Lipid Research*, Volume 27, pages 945-954, 1986. Additional reference: Agneta Anderson, et al., *American Journal of Endocrinological Metabolism*, 279: E744-E751.

completely backward and incorrect analysis. However, the case for parent omega-3 is becoming clear to these researchers. Tragically, they don't at all mention the vast importance of parent omega-6.

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## **2008 MAJOR NEWSFLASH: CONFIRMED—EFA Derivatives Made “As Needed”**

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I thank Soram Khalsa, MD, an extraordinary board-certified internist utilizing complementary medicine for sending me this article showing how PEOs do indeed allow creation of plenty of EFA derivatives in the body, exactly like this book, [*The Hidden Story of Cancer*] has stated.

“Flaxseed oil and fish-oil capsule consumption alters human red blood cell n-3 fatty acid composition: a multiple-dosing trial comparing 2 sources of n-3 fatty acid,” *American Journal of Clinical Nutrition*, Vol. 88, No. 3, 801-809, September 2008, reports the following:

**“Background:** An increase in plasma n-3 fatty acid content, particularly eicosapentaenoic acid (20:5n-3; EPA) and docosahexaenoic acid (22:6n-3; DHA), is observed after consumption of fish oil-enriched supplements. Because alpha-linolenic acid (18:3n-3; ALA) [parent omega-3] is the direct precursor of EPA and DHA, ALA-enriched supplements such as flax may have a similar effect, *although this hypothesis has been challenged because of reported low conversion of ALA into DHA.*

**“Conclusions:** The consumption of ALA-enriched supplements for 12 wk was sufficient to elevate erythrocyte EPA and docosapentaenoic acid content, *which shows the effectiveness of ALA conversion* and accretion into erythrocytes. *The amounts of ALA required to obtain these effects are amounts that are easily achieved in the general population* by dietary **modification.** (Emphasis added.)

Is there more confirmation of the fact that PEO derivative amounts in the body converted from ALA and LA are normally extremely low? YES. The medical journal *Lipids Research* published, “Long-chain conversion of linoleic acid and alpha-linolenic acid in response to marked changes in their dietary intake in men,”<sup>4</sup> with the very same type of result back in 2005, if anyone would care to look:

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4 Hussein, Nahed, et al., *Journal of Lipid Research*, Volume 46, 2005, pages 269-280.

“Although an increased intake of dietary ALA might be **expected to up-regulate ALA conversion**, *this has . . . not been found...*”

“Overall conversion rates of LA and ALA, calculated from peak [<sup>13</sup>C] LCP concentrations adjusted for dietary influences on pool sizes of LA and ALA, were low and of similar magnitude overall for AA and EPA (0.18% and 0.26%; Table 2). LA→DGLA and AA formation was significantly lower on the FXO diet in each case, with ALA→EPA and DPA formation on average higher on the FXO diet, although the differences were not significant. Conversion of tracers to DHA was much less. [Note: **We see PEO conversion rates of less than a mere 1%**. The same **less than 1% conversion rates** held for DGLA, DHA, and DPA.]

“Few studies have attempted more than **relatively crude estimates of isotope transfer** from tracer into the various trace pools, and it is recognized that AUC *values will overestimate true conversion rates* and provide only approximate relative rates of transfer.” [Note: **This is why so many health professionals have been misled into thinking the PEO-to-derivative conversion rates are much higher than they actually are.**] [Emphasis added.]

There were other published warnings about the overestimate of parent-to-derivative amounts. The article, “Comparison of bolus versus fractionated oral applications of [<sup>13</sup>C]-linoleic acid in humans,” *European Journal of Clinical Investigation*, Volume 29 Issue 7, Pages 603 - 609, had this to say regarding over-estimations of derivatives:

“Conclusions: Using areas under the curve [the simple, standard method of analysis] **overestimates the conversion**, because different residence times are *not considered*.” [Emphasis added.]

## ► *Life-Systems Engineering Science Commentary*

There you have it. **The conversion from “parents” into “derivatives” has been overestimated by most researchers.** Pharmacological overloads of derivatives, *particularly from fish oil* (or evening primrose oil alone and borage oil alone), are not required and can be extremely harmful. A dietary supplement should contain PEOs with few derivatives.