

August / November 2017: Three Seminal Journal Articles Confirm the Extraordinary Power of PEOs in Expediting Healing and Combating Diabetes, Cardiovascular Disease, and Cancer and a Major Study Confirming that Parent Omega-6 and Its Metabolites (Such as AA) are NOT Inflammatory

The fats you consume are critical. I thank physician Dr. Jeff Matheson, HBSc(Biochem), MDCM (Canada) for bringing these articles to my attention—adding to the existing understanding of why physicians and their patients experience such significant successes with PEOs (Parent omega-6 and Parent omega-3). Because of the highly technical research / biochemical nature of these discoveries, many medical professionals may not be familiar with them.

Since the birth of modern medicine, most of the energy and research in biochemistry has been directed towards nucleic acids and proteins—a sort of “cart before the horse” approach. This landmark research confirms what the visionary physiologist / biochemist David Horrobin, MD, PhD, hypothesized decades ago that “proteins are literally afloat in a lipid sea, and their functioning is dependent on the behavior of the configuration of that lipid sea.”

As the following two recent articles confirm, repairing your cell membranes with PEOs is fundamental to healing.

The first article, “Activation of the Unfolded Protein Response by Lipid Bilayer Stress,”¹ discusses a newly discovered **active role of**

1 Halbleib, K., et al., “Activation of the Unfolded Protein Response

lipid membranes in health, healing, and disease. It was previously known that if defective proteins are allowed to “run wild,” they can form clumps that clog cellular function and impede healing.

This new discovery details the cell membrane’s response to aberrant (adulterated) lipid compositions. We already knew how critical PEOs (Parent omega-6 and Parent omega-3) are to proper functioning of the cellular membrane. Now we know that their deficiency triggers chronic, long-term cellular stress.

It was just recently discovered that this inflammatory mechanism also *senses adulterated critical lipids*. The damage these defective lipids cause is at least equally bad, if not much worse. *PEO Solution* thoroughly discusses these lipids in detail so you can protect yourself. This article makes clear that if the source of these adulterated lipids isn’t eliminated / minimized **from the diet**, the cell will undergo long-term stress and chronic inflammation. This is horrific because it is now known that chronic inflammation directly leads to impeded healing and diseases such as diabetes, cardiovascular disease, and cancer.

Biological membranes may be a game changer for the understanding of a great variety of diseases.... We now have the conceptual framework to understand why secretory cells are **hypersensitive** to changes of their **membrane lipids induced by the diet**.²

by Lipid Bilayer Stress,” *Molecular Cell*, Vol. 67, Issue 4, pp 673-684.e8, August 17, **2017**.

2 “Molecular biologists discover an active role of membrane lipids in health and disease,” <https://phys.org/news/2017-08-molecular-biologists-role-membrane-lipids.html> (accessed September 23, **2017**.)

The second *highly technical article* details a **new discovery** into a fat-based mechanism that **minimizes the negative effects of eating carbohydrate (sugar)**. “Ketone Body Acetoacetate Buffers Methylglyoxal via a Non-enzymatic Conversion during Diabetic and Dietary Ketosis”³ details a highly toxic aldehyde (to be discussed later) byproduct of sugar (carbohydrate) metabolism that certain **fats detoxify**. Everyone—especially the diabetic patient—needs to know that these highly *toxic aldehydes destroy DNA* and cause harmful advanced glycation end products (AGEs), leading to many health-related complications and *impairment of the circulatory system and tissue healing*.

We have a worldwide diabetes epidemic with no end in sight. The substance, μ -oxoaldehyde methylglyoxal (MG), formed from carbohydrate metabolism, is known to be *involved in aging- and diabetes-related diseases and their complications*. Diabetics are known to have elevated levels. However, the researchers recently showed **that the damaging effect of MG is neutralized by a metabolite of burning fat** for energy (PEOs are special fats). They found the reaction to be “non-enzymatic.”

This means that the neutralizing substance (from PEOs) can simply surround and detoxify the problematic poisonous μ -oxoaldehyde methylglyoxal to a much less toxic substance in the bloodstream. From our work with physicians and their diabetic patients, we can now better

3 Salomón, T., et al., “Ketone Body Acetoacetate Buffers Methylglyoxal via a Non-enzymatic Conversion during Diabetic and Dietary Ketosis,” *Cell Chemical Biology*, Vol. 24, pp 935-943, August 17, **2017**.

explain how **simply taking the PEOs minimizes the damage caused by higher than normal blood glucose levels.**

The article refers exclusively to a product from the breakdown of fats (ketone bodies). I always knew that the proper PEOs would minimize the damage from higher than normal blood glucose levels, but I didn't have the (newly discovered) metabolic pathway; now I do. I thank the researchers for their excellent elucidation on the topic.

Obtaining sufficient fully functional/unadulterated PEOs in the diet is critical to your health and healing. **PEOs *naturally* fulfill your appetite, too.** As time proceeds, the medical research community continues to add more confirmation of the power of PEOs. By reading *PEO Solution*, you will quickly discover the remarkable health and healing improvements from simply adding PEOs to your diet.

For many years, we have incorrectly, but repeatedly, been told that we are overdosed on the very inflammatory omega-6. This is incorrect. *We are overdosed on **adulterated** Parent omega-6* (as you will discover in this book), and contrary to the prevailing wisdom, arachidonic acid (AA) is not inflammatory.

This **newly reported analysis** CONFIRMS OTHER STUDIES showing that both Parent omega-6 (LA) and arachidonic acid (AA) are not inflammatory—as measured by C-reactive protein (**CRP**), **a strong, key marker of inflammation.**

The data come from a patient population in eastern Finland between 1984–1989 reviewing over 2,500 men, selecting

approximately 1,200 men for study and published as the “Kuopio Ischaemic Heart Disease Risk Factor Study.”⁴ Both “Science Daily”⁵ and “MedicalXPress”⁶ wrote on this finding. This particular study was excellent in that it excluded potential participants with elevated CRP levels, etc.—all patients were healthy at baseline (**prospective trial**), and **quantitative blood analysis was performed**. Also, especially in this area of the world (Finland) back in the 1980s, there was much less consumption of adulterated Parent omega-6-containing oils—they were much more fully functional. Unfortunately, today, most studies in humans and animals are performed with adulterated, nonfunctional Parent omega-6 oils, which are known to cause both heart disease and cancer. This accounts for the inconsistency in today’s trials.

Although somewhat lengthy, this is critically important information—**based on serum fatty acid measurement**—that you need to know:^{4,5,6}

- “Chronic, **low-level inflammation** is associated with several chronic diseases, such as **cardiovascular disease, diabetes**, neurodegeneration and **cancer**.”

4 Virtanen, JK, et al., “The associations of serum n-6 polyunsaturated fatty acids with serum C-reactive protein in men: the Kuopio Ischaemic Heart Disease Risk Factor Study,” *European Journal of Clinical Nutrition*, online accessed November 18, 2017, <https://doi.org/10.1038/s41430-017-0>.

5 <https://www.sciencedaily.com/releases/2017/11/171113095430.htm>, “Omega-6 fatty acids do not promote low-grade inflammation,” accessed December 11, 2017.

6 <https://medicalxpress.com/news/2017-11-omega-fatty-acids-low-grade.html>, “Omega -6 fatty acids do not promote low-grade inflammation,” accessed December 11, 2017.

- "...[O]ur goal was to investigate the associations of the four serum n-6 PUFAs, LA [**Parent omega-6**], GLA, DGLA and AA, with high-sensitivity C-reactive protein (**CRP**), **a key inflammation marker**, among generally healthy, middle-aged men.

- **"Conclusions:** Serum n-6 PUFAs were **not associated** with increased inflammation in men. In contrast, the main n-6 PUFA linoleic acid [**Parent omega-6**] had a **strong inverse association** with the key inflammation marker, CRP [the higher the blood levels the **LOWER** the inflammation].

- **"Omega-6 fatty acids do not promote low-grade inflammation.**

- **"The odds ratio for elevated CRP (>3 mg/L) in the highest vs. the lowest quartile was 0.47 [less than half of the inflammation with highest levels of Parent omega-6] (95% confidence interval (CI) 0.25–0.87, P-trend=0.01). Arachidonic acid or the mainly endogenously produced n-6 PUFAs, gamma-linolenic acid and dihomo-gamma-linolenic acid, were not associated with higher CRP, either. Age, body mass index, or serum long-chain n-3 PUFA concentration [from fish oil supplements / fish consumption] did not modify the associations.**

- **"Despite the *potential* pro-inflammatory effects, even a relatively high intake of linoleic acid (LA), the predominant n-6 PUFA and a metabolic precursor to AA, *has not increased inflammation* in clinical trials [**it decreased inflammation**].**

- **"AA is indeed a precursor to eicosanoids with pro-inflammatory properties, but it is **also a precursor to compounds that have anti-inflammatory and pro-resolving (turning off inflammation) effects**, such as lipoxins and epoxy fatty**

acids. Furthermore, in addition to AA, LA is a precursor for several other metabolites, some of which, such as nitrated LA, have potent anti-inflammatory and pro-resolving properties. Therefore, the concept that LA is a precursor to AA, which in turn is a precursor to pro-inflammatory eicosanoids that would increase systemic inflammation, seems to be too **simplistic**.

- “The **higher** the serum linoleic acid [**Parent omega-6**] level, **the lower the CRP**.

- “The study found that a **low serum linoleic acid [Parent omega-6]** level was associated with **higher serum CRP [inflammatory] levels**.

- “Our findings of the **inverse associations** of the serum total n-6 PUFA or LA with CRP are **supported by several previous [underpublicized] epidemiological observations....** There is also evidence from randomized trials that even very large changes in LA intake do not substantially affect circulating AA concentrations and do not increase inflammation markers....”

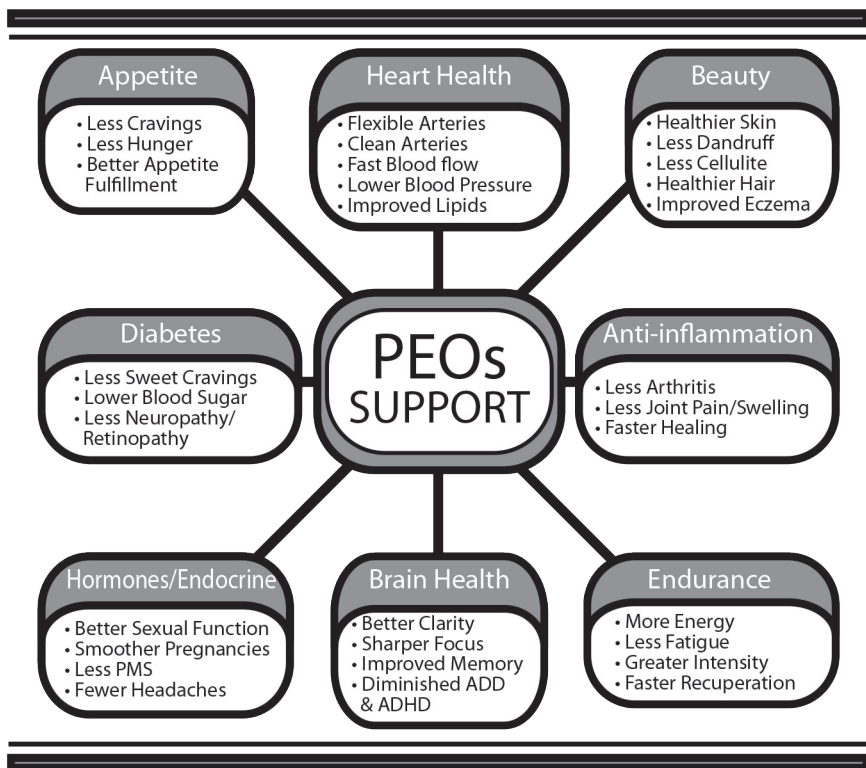
► **PEO Solution analysis:** When it comes to your health and healing, speculation and commonly held beliefs are inadequate. Strong, theoretical science supported by verifying clinical studies should be demanded as exemplified throughout *PEO Solution*. Clear metabolic pathways must be specified and understood. Otherwise we stay on the merry-go-round getting nowhere—with everyone getting sicker in spite of trying harder to stay healthy.

Eicosanoid expert Paul Beatty gives a brilliant summary of the problem in today’s lipid research:

“The **neglect of lipid biochemistry** in clinical medicine has **led to many incorrect assumptions** – the most misleading one that many researchers naively accepted – long-chain derivatives of Parent omega-6 EFAs promote inflammation. This is totally incorrect.”

The recent analysis of the “Kuopio Ischaemic Heart Disease Risk Factor Study” clearly details **how false and simplistic that assumption has been**. Both Parent omega-6 and Parent omega-3 are very important. However, Parent omega-6 is much more important. The quantitative predominance of Parent omega-6 and subsequent eicosanoids (long chain derivatives you will read about in this book) versus the much lower amounts of Parent omega-3 EFAs in most tissues bolsters the argument that Parent omega-6 must be more important. Calculations show 11 times more Parent omega-6 than Parent omega-3 in your body! The problem isn’t the amount; it’s often Parent omega-6’s *adulteration from the fully functional Cis form resulting in decreased functionality from the stereochemical change*. To extend shelf-life, food processors ruin it. High doses of omega-3 derivatives (EPA/DHA), so popular today in fish oils, significantly interfere with critical omega-6 metabolism. This tragically leads to deficiencies of both Parent omega-6 and its derivatives. Avoid processed oils and especially trans fats. Remember, the cell membrane structure and form is the contact point between the unit of life and the external factors of that unit. This is where the “rubber hits the road.” Would you put wheelbarrow tires on your Ferrari? Of course not, it wasn’t designed for them. Dietary manipulation of EFA metabolism and eicosanoids is not for amateurs.

Brian Scott Peskin



Patients appreciate these important benefits:

- * Less cravings for sweets/greater appetite fulfillment
- * Decreased stress levels
- * Healthier/smooth skin/decreased cellulite
- * Stronger/smooth nails
- * More luxurious faster growing hair
- * Fewer/less severe headaches
- * Increased hormonal efficiency/production
- * Increased athletic endurance/faster recovery
- * Faster healing (from procedures)
- * Less pain/maximum natural anti-inflammation ability (from painful procedures)