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CAMBRIDGE INTERNATIONAL INSTITUTE FOR MEDICAL SCIENCE

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THE PHYSICIAN'S CONCISE GUIDE TO:

- 8 -

The Scientific Calculation of the Optimum PEO Ratio

Parent Essential Oils: Omega-6/-3, Defined

"Quite possibly the most important calculation of your life."

- David Sim, M.D.

Board Certified Interventional Cardiologist



Dedicated to advancing and publicizing breakthrough discoveries in the health sciences

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.

The Easy Solution: The Peskin Protocol PEOs

Parent Essential Oils (PEOs): The DIFFERENCE

I am often asked how my EFA-based recommendations differ from others. The answer is simple but very significant. The term “Essential Fatty Acids” is being misused so frequently that I was forced to coin a new phrase, *Parent Essential Oils* (PEOs).

This term “Parent Essential Oils” refers to the only **two true essential fatty acids**: parent omega-6 (LA) and parent omega-3 (ALA). The term “parent” is used because these are the whole, unadulterated form of the only two essential fats your body demands, as they occur in nature. Once **PEOs** are consumed your body changes a small percentage of them – about 5% – into other biochemicals called “derivatives,” while **leaving the remaining 95% in parent form**.

This is crucial to understand. There are a host of omega-6 and omega-3 oils being sold as EFAs that are *not* EFAs, but rather nonessential derivatives such as EPA, DHA, and GLA. Fish oils are made up almost exclusively of omega-3 *derivatives*. Scientifically and biochemically, calling derivatives such as EPA, DHA and GLA by the term “EFA” is wrong. **Derivatives are not EFAs because they are not essential** – your body has the ability to make them *as needed*. My research has shown that supplementing with the derivatives so commonly found in the marketplace and mislabeled as “EFAs” can easily be harmful to your health.

Why are the parent forms – PEOs – so important? Many of the EFAs sold in the stores consist of manufactured EFA derivatives. To be clear, your body doesn’t need or want these derivatives, because it makes its own derivatives out of the **Parent Essential Oils** (PEOs) you consume *as it needs them*. Taking fish oil and other health-food-store “EFAs” often overdoses you with derivatives, which can be very harmful.

Don’t make the common “EFA mistake” by unknowingly substituting derivatives for parents! **Since the term has become so confused by so many it is time to focus on the essence of what they are and why they are so vital to our health and well being.**

From this point forward it is Parent Essential Oils (PEOs) that get center stage.

Real-Life Increased Oxygenation Results

“Dear Brian,

July 20, 2005

“I MUST inform you about our positive outcome that my fellow players of the ‘Banditi Flag Football Team’ in Ferrara expressed very strongly this past Sunday. We played in a Championship Bowl where **teams from all over Italy competed**. We were able to reach the finals but unfortunately we lost. The sports event started at 10 a.m. and finished at 5 p.m. My team played very well in all 5 games and since the summer heat was incredibly intense, many players from other teams were close to heat exhaustion.

“The majority of the ‘Banditi’ players were full of energy and said to me that the PEO-containing oils that you suggested were remarkable and they couldn’t believe the positive outcome. No player from the ‘Banditi’ team had muscle spasms or **any signs of muscle lactic acid (meaning increased oxygenation)** due to over-use or **exhaustion, except for 3 players who refused to take the PEO oils**. These, Brian, are *real-life* results and proof that the oxygen exchange is far more open to relieve and prevent muscle metabolic exhaustion thanks to the PEOs’ biological and physiological properties. You ‘hit the nail on the head’ with your description of this event in your book, *The Hidden Story of Cancer*.

“I would like to give you the maximum credit for this discovery because **all my teammates said that your PEO recommendations are fantastic and miraculous....**

“We all met up at practice last night and all the players that **followed your oil recommendations were painless and had never experienced such an outcome**. Last year, after any ‘bowl game,’ many players needed 2 to 3 days to relieve the metabolic insufficiency, especially for the pain syndrome.

“Please feel free to contact me in reference to this remarkable outcome of *real-life* results!!!! Thanks for your time and consideration.”

Dr. Stephen Cavallino
Ferrara, Italy

Preface

I had previously been aware that we needed more **unprocessed** omega-6 in our diet than the leading “experts” claimed. Determining the right ratio of omega-6 to omega-3, based on medicinal science, eluded everyone. Nothing comprehensive was published on the topic.

For close to 6 months during 2003, I had unknowingly been the subject of an omega experiment – taking a supplement that contained at least 2.2/1 omega-3 to omega-6 – **a backwards ratio**. The result was awful. I could only imagine how much worse the results would be if you were taking the highly promoted fish oil supplements, which are mainly omega-3 “derivatives” or flax oil supplements, which are more than 3/1 in favor of “parent” omega-3 compared to omega-6!

After more painstaking research I **finally pieced the puzzle together**. As another confirmation of my conclusions, I had a routine dental examination in June 2004. With all the “picking,” probing, flossing, and brushing there was not one drop of bleeding. The hygienist was in disbelief and stated this had never happened before.

She then pulled my chart and to her astonishment told me something shocking. Six months prior, at my last cleaning, there was “heavy bleeding.” She said nothing like this reversal had ever happened before. I had brushed my teeth the night before like I do every evening. I did nothing different EXCEPT to change the ratio of the omega-6/-3 blend taken during the last six months, in favor of much more “parent” omega-6. Furthermore, there was no pain whatsoever during the cleaning. Previously, there would always be significant pain while “poking” and cleaning.

The evening before I brushed and flossed like I do every day, just like 6 months prior. Everything but the PEOs were constant.

This *real-life* result led me to further research the hazards of overdosing on omega-3. **Most every physician, nutritionist, and medical journal raves about its benefits. They are all misled!** Little do any of them know the full story based on medicinal science – not opinion. The results of their mistake rival the damage caused during the great 50-year carbohydrate eating *experiment*, turning most Americans into oversized, diabetic, exhausted shadows of what they should look like and how they should feel! **I discovered that overdosing on omega-3** (requiring less than you may think) **can cause great harm!**

PLEASE take a few minutes to discover what Dr. Sim, interventional cardiologist, calls “...[T]he **most important calculation of your life**” to learn the truth of what you require; based on science – not opinion. As my idol,

Nobel Prize-winner Richard Feynman stated, "It doesn't make any difference how smart you are, who made the guess, or what his name is – if it disagrees with real-life results, it is wrong. That's all there is to it." I am delighted to have complete *real-life* personal verification of my analysis.

Thank You

Note: At times, this paper is highly technical. Sometimes, the truth is complicated and there is simply no way around it. Calculating the optimum *parent* omega-6/-3 ratio is one such case. I have tried to make an extremely complicated subject as easy to comprehend as possible. Without this level of complexity the problem is unsolvable and that's why virtually all recommendations to date have not been based on proper science and are incorrect and harmful.

CASE STUDY — David MacPhail, age 62 (02/14/07)

Results of High Omega-3/Fish Oil Supplements

vs.

Scientifically Correct Parent Omega-6/3 Ratio

When I contacted you prior to converting to your recommended ratio of Omega-6 to Omega-3, you said I would be amazed by the results of the scientifically correct parent omega-6/3 ratio. **I am more than amazed.**

I have been taking the suggested oil mixture (1 teaspoon per day or four 725 mg. capsules) for about two weeks. The results to date have **far exceeded my expectations**. A few areas of marked improvement are:

Weight Loss

Since starting on your program **I have lost 6.5 lbs and 1.5 inches** at my waist.

Cravings

For most of my life I was a “carboholic,” craving sweets and other carbohydrates. I could, and often did, eat large amounts of pasta and bread. This is one of the big factors that brought on type II diabetes (it is also abundantly clear now that I suffered from long-term chronic EFA deficiency, which is common to most, if not all, diabetics). Since starting on the EFA mix, my **carbohydrate cravings have mostly disappeared**. And my **appetite has greatly decreased**.

Bruising and Cuts

I noticed that my gums started to bleed profusely a few months after I began taking fish oils. Also, minor cuts did not easily clot.

Surprising to me, after taking the correct EFA mixture for only two weeks, my gums do not bleed at all – not one drop of blood. In fact, I have noticed that I am **much more resistant to bruising** and minor cuts. I am amazed, just as you said I would be. Note that *The Hidden Story of Cancer* explained precisely why this result would be expected to happen and *does* happen.

Skin

I have had skin problems most of my life. These became chronic after I was exposed to photo finishing chemicals between 1965 and 1973. During that

period I developed weeping eczema on my face and neck. Later I developed chronic psoriasis on my scalp, with the characteristic itching and scaling of the skin. Also, since a teenager I have suffered from chronic dry skin and often heavy flaking in the area of my eyebrows.

Starting in approximately 1975 I have suffered from chronic red blotchy inflammation and irritation of the skin on my face. This was frequently accompanied by small open sores as well as oozing sores on my scalp. Interestingly, high omega-3 oils like flax and fish oils seemed to exacerbate my skin conditions. When taking these oils, I would develop on an intermittent basis a severe inflammation accompanied by a psoriasis-like scaling of the skin around the base of my nose

Specifically, when I started taking **fish oils, the inflammation and blotchiness of my face was exacerbated and the skin burned and stung almost constantly.**

Amazingly, after taking the correct EFA mixture for only two weeks, my face has almost completely cleared up. The skin now feels like velvet. The constant burning sensation has been replaced by a soothing, cool feeling. When I have a bath, the skin on the back of my hands takes on a pink translucent appearance, like the skin of a new born baby. At times you can now see all the blood vessels through the skin – pink and vibrant.

Also of interest is the change in the tension of the skin in my eyelids. For some years now, the flesh of my eyelids has been somewhat inflexible so that the lids did not open and close properly. Because of this, I was constantly pushing the flesh of my brow back to stretch the eyelids. This problem has disappeared in the past few days.

Hearing

I awakened about 5:00 AM today to an unfamiliar silence. I have had tinnitus (ringing of the ear), sometimes severe, for more than 15 years. When I got up **it was gone and has not returned.** I am overjoyed.

Pulse

Also of significance is the softening of my pulse over the past few days. For the past four or five years my pulse has felt so strong that I would often feel the flow of blood pulsing in my neck. When lying in bed at night, I could often hear my heart beating. This greatly concerned me. My pulse is now so soft it is hard to detect in the carotid artery.

Exercise

When I was taking fish oil supplements I was getting lactic acid accumulation, causing the familiar “burning” from what I would categorize as minor physical activity. Something as simple as bending over for a prolonged period left my back and thighs aching for hours, sometimes days. Now that I have greatly reduced my carbohydrate consumption and added your suggested EFA supplementation with the scientifically correct parent n-6 to n-3 ratio, **I am cycling 40-50 miles most days with good energy, minimal hunger and no lactic acid build-up. My legs may get fatigued, but they do not ache.**

Energy

I was “continually dragging” when I was on fish oils. I was constantly tired and fatigued no matter how long I slept.

Wonderfully, after taking the EFA mix for only two weeks, my energy is “off the scale.”

Instead of going to bed at 9:30 or 10:00 PM, I am often wide awake at 12:00 AM or later. Of late I am waking completely alert and rested at 5:00 AM or 5:30 AM.

I am energized all day with no flat spots.

The problem I am having now is getting to sleep at night. Yep... I now have **MANY extra productive hours.**

Mental Clarity

On fish oils I often felt sluggish and it was an effort to concentrate. After taking the EFA mixture for only two weeks, my ability to focus for extended periods is fantastic.

Blood Speed

I recently cut myself. I was surprised to see how quickly the blood gushed from the wound and ran down my arm. It was as thin as water and ran just as fast. However, after only a few seconds of pressure applied to the wound the flow of blood quickly stopped.

In Conclusion

With fish oils gaining momentum as the “salvation of mankind,” I imagine you will run into one heck of a fight on all flanks (if you are not already in one). At the end of the day most people are entrenched in a position within

their field for one reason – money. So it will be really interesting to see who is really in the health field for humanitarian reasons.

Dr. Warburg could not have made the primary cause of cancer more obvious if he kicked in people's front teeth. Yet the only response he got was a collective "DUHHH.....we don't get it" from the medical community. I hope you have better luck.

Your book is a disturbing indictment of the inability, or perhaps more to the point, a conscious and premeditated unwillingness on the part of the scientific and professional community to pursue scientific fact. To paraphrase another philosopher, Thoreau:

"For every scientist and medical professional hacking at the roots of cancer, there are tens of thousands hacking at the branches or even studying the leaves of the tree."

You have the cancer issue "by the throat" while others are clueless. Thank you for this superb development. I can see why Dr. Vonk said of your work:

"Impeccable research and novel insights of sheer genius. Brian's accomplishment is singular-no groups, no public money, only elegant science showing how proper use of EFAs is the missing link for practical application of Otto Warburg's discovery. This knowledge is priceless for your future health."

Brian N. Vonk, MD
Board certified: Internist, Cardiologist, Radiologist

How Do I Know A Parent Omega-6/3 EFA Deficiency is Solved?

There are three indications. The deficiency is solved when all three conditions occur simultaneously:

- 1) Appetite is fulfilled with significantly less cravings. You rarely become "starving;" hunger is much slower to occur.
- 2) Skin is very smooth, especially on the backside of hand between forefinger and thumb. Even people with significant dry skin become "soft as a baby's behind" when the deficiency is solved.
- 3) Pickup a fairly heavy dumbbell. Hold it with your arm slightly above being parallel to the floor. After holding about 10 seconds, you should be dropping it due to fatigue. Otherwise, use a heavier dumbbell and repeat. There should be no "lactic acid burn" that plagues bodybuilders. There should simply be muscle failure from exhaustion. This is proof of increased oxygen preventing the lactic acid buildup **in the muscle** occurring from the muscular fermentation process.

Skin growths like "skin tags" shrink. If you have previously taken fish oil supplements, skin tags increase in size and amount; the opposite of what we desire. With the proper parent omega-6/3 ratio the condition is remedied, The reason? You will discover that skin contains no omega-3!

PEO Supplement Analysis

WARNING: Everyone is Overdosing on Omega-3! Fish oil decreases immunity!

Analysis of the western diet shows a significant preponderance of omega-6 compared to omega-3 — most people's diets consist of foods that contain approximately twelve times more omega-6 than omega-3. Physicians and nutritionists tell us that we are therefore "overdosed" on omega-6 from our food, while under supplied with omega-3. This is why they say that we need to supplement with mostly omega-3 PEOs and few if any omega-6 PEOs. But there are *crucial mistakes* in this line of thinking. *The truth is that we are now actually overdosing on Omega-3, and this is a mistake that can make you more susceptible to illness.*

The following article shows how omega-3 derivatives in the dosages often recommended by physicians and nutritionists, *in particular from fish oil*, will **significantly decrease your immune system response to infection**. This information comes from the proceedings of the International Society for the Study of Fatty Acids and Lipids (ISSFAL) the 4th Congress, June 9, 2000, in Tsukuba, Japan.¹

Prepare to be shocked!

"... [S]tudies indicate that at the levels used, **fish oil** [largely omega-3 derivatives] **decreases a wide range of immune cell responses** such as natural killer cell and cytotoxic T lymphocyte activities, lymphocyte proliferation and production of IL-2 and IFN- γ (1,2)

"... **Recent studies have indicated that relatively low levels of the long chain omega-3 fatty acids** (EPA or DHA at a level of 4.4% of total fatty acids or 1.7% of dietary energy) **are sufficient to bring about some of the suppressive effects, that dietary EPA and DHA both inhibit lymphocyte proliferation, and that dietary EPA but not DHA inhibits natural killer cell activity.**"

These articles reveal that only a relatively small quantity of omega-3 derivatives can trigger these immune problems. This is an immediate danger

¹ The report is titled "Omega-3 Polyunsaturated Fatty Acids, Inflammation and Immunity," by Philip C. Calder, Institute of Human Nutrition, University of Southampton, Bassett Crescent East, Southampton, UK.

to the public, given the strong promotion and sale of fish oil capsules (which are mainly omega-3 derivative-based). If you consume **fish oil supplements**, then you will be taking a quantity of **omega-3 derivatives** that is significantly in **excess of the immune-suppressing threshold** amount given in the article above. We therefore *do not recommend taking omega-3 derivatives from a supplement*. You may eat all the fish you desire, but supplement using the following guidelines.

Fish Oil Recommendations are Worthless or Even Hazardous to your HEALTH!

The greatness of fish and fish oil in the prevention of cardiovascular disease is shouted from every mountaintop. However, few human trials have examined whether fish oil supplements actually decrease heart disease risk. In those that did, the results were negative—**fish oil either did nothing to prevent heart disease or made it worse! Furthermore, fish oil worsened the blood sugar in diabetics.** Did that evidence proving fish worthless in preventing cardiovascular disease or helping to reduce existing cardiovascular disease force the “experts” to tell you they were only guessing about fish oil’s supposedly positive health effects—guessing that it works? No. As you will discover, **fish oil is worthless at best and harmful at worst.**

1. A 2002 article in the medical journal *Cardiovascular Research*, titled “Effect of dietary supplementation with omega-3 fatty acids on progression of atherosclerosis [plaque buildup in interior of arteries] in carotid [heart to brain] arteries,” by Angerer, P., et al.,² details the results of a randomized trial undertaken with the primary objective to clarify the effect of omega-3 polyunsaturated fatty acids on cerebral arteries or stroke. Contrary to what you are told about the supposed positive benefits of fish, fish oil supplements, and omega-3, here are their findings:

Both **fish oil** groups and the control groups showed close to equal atherosclerotic progression (**getting more clogged**).

Fish oil **did not stop thickening of the artery**. On the contrary, the artery wall got thicker (bad) with fish oil ingestion!

“In this group of selected patients with documented coronary artery disease, omega-3 PUFA [polyunsaturated fatty acids] **given for 2 years did not demonstrate an effect on slowing progression** of atherosclerosis in carotid arteries as measured by ultrasound.”

1.65 grams per day of fish oil supplement were taken. This is a great enough dose to cause adverse immunity and bleeding effects.

² Angerer, P., et al., *Cardiovascular Research*; 54:183-190, 2002.

► Life-Systems Engineering Science Commentary

These results were published in 2002 showing the failure of fish oil in specific arterial clogs or prevention of stroke. This article should have forced the “experts” to re-evaluate their fish oil recommendations. Unfortunately, it didn’t.

If fish oil supplements worked, they should have been able to at least stop a preexisting arterial clog from worsening. If they couldn’t, then there is no reason to assume that the fish oil could possibly prevent a clog from *beginning*. There would be no causal mechanism that would allow that effect. Examining an existing clog’s growth rate is a very good test, similar to examining the growth of an existing cancer tumor.

However, when science, instead of opinion was used, the results were shocking: Fish oil supplements alone were found worthless.

2. The article, “The Effect of Dietary Omega-3 Fatty Acids on Coronary Atherosclerosis: A Randomized, Double-Blind, Placebo-Controlled Trial,”³ states that “Ingestion of fish or other sources of omega-3 fatty acids, such as fish oil capsules, has been called a comprehensive strategy toward the prevention of atherosclerosis.” Here is why their study showed that assertion is incorrect:

- At the end of two years, BOTH groups had **worsened clogging** – the same NEGATIVE result as above.

3. Harvard Medical School was involved in the next study, called “Controlled Trial of Fish Oil for Regression of Human Coronary Atherosclerosis,”⁴ The daily dose was 6 grams of fish oil vs. 6 grams of olive oil in the control group.

- Their conclusion was “Fish oil treatment for two years **DOES NOT** promote major **FAVORABLE CHANGES** in the diameter of atherosclerotic coronary arteries.” That means clogging was not decreased with the fish oil supplement.

4. Here’s more negative news of the incorrectness of widespread omega-3 supplement overdose recommendations by physicians and nutritionists. With growing support among health advocacy organizations for consuming fish rich in omega-3, the following study by Burr et al., “Lack of benefit of dietary advice to men with angina: results of a controlled trial,”⁵ has reported **no**

3 Clemens von Schacky, et al., *Annals of Internal Medicine*;130:554-562, 1999.

4 Frank M. Sacks, et al., *Journal of the American College of Cardiology* Vol. 25, No. 7, June 1995: 1492-8.

5 *Eur J Clin Nutr* 2003, 57:193-200.

benefit of oily fish and an ADVERSE (harmful) effect of fish oil supplements on CHD mortality (death). In this study, even consuming fish didn't help keep you from dying!

This study looked at patients with angina (severe heart pain caused by restricted blood flow) to be divided into two groups: those consuming more fish and those consuming fish oil supplements. Here are the results:

- Those patients eating **two servings of fish weekly, had no “protection” benefit from death** due to cardiovascular causes. If consuming fish improved heart-related health then one would expect to see fewer deaths from the fish eaters. This did not happen.
- Those patients consuming three (3) **fish oil capsules** (mainly omega-3-derivatives) daily had an adverse (*negative*) **effect!** The fish oil capsules harmed them since that group had more cardiovascular-related deaths.

► Life-Systems Engineering Science Commentary

Again, these four studies showed the **opposite result from what we have been told to expect** regarding the supposed benefits of fish and fish oil supplements. Everyone is looking in the wrong direction, wasting time and money, for the answer to increased blood flow – thus increasing oxygenation.

WARNING: Fish Oil Increases Platelet Aggregation!⁶

- “... In patients with atherosclerosis, prostacyclin biosynthesis... fell by a mean [average] of 42% during the fish-oil period.

► Life-Systems Engineering Science Commentary

You recall prostacyclin (PGI₂) is the body's natural blood thinner and keeps platelets apart naturally. The last thing a CVD patient needs is a reduction in this critical substance. CVD patients require more, NOT less PGI₂. Decreased PGI₂ significantly increases, not decreases, the severity of heart attack – the opposite effect.

⁶ Knapp, H, et al., “In vivo indexes of platelet and vascular function during fish-oil administration in patients with atherosclerosis,” The New England Journal of Medicine, Vol. 314, April 10, 1986, No. 15, pages 937-942.

2010 Newsflash: Fish Found Worthless in Decreasing Abnormal Heart Rhythm (AF- atrial fibrillation)⁷

Contrary to many report claims, as reported in the American Journal of Cardiology in 2010, eating lots of fish did nothing to help an abnormal heartbeat. However, parent omega-6 did help reverse AF.⁸

2004: Fish Oil Also Worthless in preventing arterial inflammation!

Maybe you've been told that consuming fish protects you against arterial inflammation. In the medical field C-reactive protein (CRP) is known to be a strong marker indicative of vascular problems. Guess what? *Current Atherosclerosis Reports* tells us:

Fish oil did absolutely nothing significant to decrease the inflammation as evidenced by the failure of CRP to decrease. Here is the medical journal's quote: "...[T]here *was no evidence for an anti-inflammatory effect as judged by CRP levels ...*"⁹

***** WARNING: Excess Omega-3 in Any Form is Hazardous! *****

Fish oil supplements can significantly decrease the effectiveness of your immune system, increasing your risk of contracting cancer. Here's what the International Society for the Study of Fatty Acids and Lipids (ISSFAL) 4th Congress, June 4-9, 2000, in Tsukuba, Japan reported, in the article titled "Omega-3 Polyunsaturated Fatty Acids, Inflammation and Immunity," by Philip C. Calder, Institute of Human Nutrition, University of Southampton, Bassett Crescent End, Southampton, UK:

- "...[S]tudies indicate that at the levels used, fish oil [mainly omega-3 derivatives] **decrease a wide range of immune cell responses** (natural killer cell, cytotoxic T lymphocyte activities, lymphocyte proliferation and production of IL-2 and IFN-γ (1,2))..."¹⁰

7 Berry, J, et al., "Dietary Fish Intake and Incident Atrial Fibrillation (from the Women's Health Initiative)," *The American Journal of Cardiology*, Vol. 105, Issue 6, Pages 844-848 (15 March 2010).

8 Riemersma, RA, et al., "Dietary fatty acids and ischemic arrhythmias," *Lancet*, 1988;i:285-6.

9 *Current Atherosclerosis Reports*; 6:461- 467, 2004, Mori, Trevor, et al., "Omega-3 Fatty Acids and Inflammation."

10 This is a very small amount of fish oil, just a couple of capsules, to cause so much damage.

- “...Recent studies have indicated that **relatively low levels** of the long chain omega-3 fatty acids (EPA or DHA – omega-3 derivatives)...are sufficient to **bring about some of the suppressive effects** ...”
- “... This decrease (of inhibited lymphocyte proliferation and natural killer cell activity) causes **increased cellular bacteria** [infection] and **impaired tumor cell killing**.”

***** WARNING: Fish Oil Lowers Immunity! *****

As if the above wasn't warning enough, an even stronger warning was published in the outstanding medical journal focusing exclusively on lipids. Here's what they had to say:

- “However, high **fish oil** intake may **not be beneficial long term**, i.e., it may **compromise host immunity** and may address only the secondary consequences of immune activation in some clinical conditions.
- “In summary, there is therefore much evidence for an **essential role of the n-6 fatty acids [parent omega-6]** and their oxygenated metabolites [parent omega-6 derivatives] in the lymphoid system **but not for n-3 fatty acids**.¹¹ (Emphasis added.)

Not much fish oil (current nutritional recommendations) is needed as a supplement to be considered a “high intake.”

On the contrary, *Omega-6 and its derivatives do not cause this immunosuppressive effect*. Therefore, to avoid this risk, we recommend taking a conservative amount of *parent* omega(s) and much less of their derivatives – in particular, omega-3 and its derivatives. Overdosing on parent omega-3 from flax seed and other parent omega-3-containing oils can also be very harmful.

If the above information wasn't shocking enough, there is more bad news regarding fish oil supplements. The publication titled “Dose-Response Effects of Dietary Marine Oil on Carbohydrate and Lipid Metabolism in Normal Subjects and Patients With Hypertriglyceridemia,”¹² states:

11 Harbige, L., “Fatty Acids, the Immune Response, and Autoimmunity: A Question of n-6 Essentiality and the Balance Between n-6 and n-3.” *Lipids*, Vol. 38, no 4(2003).

12 Stacpoole, P, Alig, A., Ammon, L, and Crockett, E., published in *Metabolism*, Vol. 38, No 10 (October), 1989, pages 946-956.

“The glycemc [blood sugar] control of [all of] the four insulin-dependent **diabetic patients worsened during the fish oil administration.**

“...[T]he **insulin** dose of the subjects **had to be increased** throughout the six-month period of fish oil administration to maintain constant blood glucose and glycosylated hemoglobin concentrations (HbA_{1c}, average blood sugar level).

“Despite the stable body weight by patients on the basal diet, glycosylated hemoglobin levels **after six months of fish oil administration increased 16% from 4.9% to 5.7%.** Note: This is an awful effect for a diabetic.

“Another important finding of our investigation was that consumption of a fish oil-enriched diet **worsens glycemc tolerance.**”

Furthermore, there is additional recent confirmation that fish oil significantly reduces the glucose metabolic clearance rate; an awful effect to a diabetic. You need to know that *British Medical Journal of Nutrition* (2003), 90, 777-786 published, “Fish-oil supplementation reduces stimulation of plasma glucose fluxes during exercise in untrained males”:

“It is concluded that **fish oil reduced Rd glucose [rate of glucose disappearance] by 26% by reducing glucose metabolic clearance rate ...**”

“[I]t was observed in healthy human subjects that a 3-week supplementation of the diet with **fish oil (6g/day) decreased by 40% the insulin response** to an oral glucose challenge without altering either endogenous glucose production or plasma glucose utilization.

“[N]-3 long-chain fatty acids are incorporated into **membranes whose composition remains altered at least 18 weeks after interruption of fish-oil supplementation...**

“The main observation of the present study is that a supplementation of the usual diet with **6 grams fish oil / day during a period of 3 weeks reduced stimulation of both HGP [hepatic glucose production] (-21%) and Rd glucose (-26%) during exercise.**”

► Life-Systems Engineering Science Commentary

You don't want a substance to increase blood glucose or force higher insulin levels (insulin resistance) to control blood sugar, negatively impact natural tumor killers, or compromise your immune system. Fish is not protective against heart disease since it has an excess harmful omega-3 derivatives. Fish oil does the opposite of what is desired in four areas: decreasing natural tumor cell killing ability, increasing harmful infection from bacteria, failing to stop arterial inflammation, and raising havoc with your blood glucose system (insulin resistance). With four strikes against it – the fish oil myth is out.

Rather than supplementing with fish oils, we recommend a **plant-based omega** formulation (from various seeds) that contains **parent omega-6 and omega-3 PEOs**, and **FEW, if any omega derivatives**.

Below, in the section, "The Supplement Calculation," we provide for the first time a thoroughly worked-out scientific analysis of the correct ratios of omega-6 to supplement with, as well as why very little omega-3 – from any supplement source – should be taken! First, let's explore the incorrect logic regarding omega-6 recommendations.

Why everyone is wrong in maintaining that no more omega-6 is required in your diet:

1. The "tests" used to determine the properties of omega-6 DON'T use organic, unprocessed oils. **Unbelievably, they use processed oils that are known to cause both cancer and heart disease¹³** and they blame the omega-6 for the problems!
2. Tests **outside the body** (in *vitro*) vs. inside the body (in *vivo*) are often used. This leads to incorrect results because the body has hormonal and numerous biochemical interactions that tests in vitro overlook. **Therefore, the results are incorrect.**
3. **There is no science of physiology used** to determine what the tissue ratio of parent omega-6/-3 is or how these omega oils are actually used in the body. The "experts" are correct in stating there is a lot of omega-6 in the diet. However, they completely **overlook any science to intelligently determine** what amount you do require.
4. The amount of omega-3 used in the body and in the "derivatives" is highly overestimated. This leads to the wrong recommendation that more omega-3 is required to "fuel" all these derivatives – a mistake that if followed, can be harmful.

¹³ *American Journal of Cancer*, 1939, 5:21, *Lancet*, 1956, *Cancer Research* 1975.

5. **“Parroting” by the medical and nutritional community from incorrect information.** There is no independent verification of the truth. Does this remind you of the great 50-year carbohydrate eating *experiment* where all the “experts” stated how great carbohydrates were? Their recommendation was **NOT based on science.** In that case, they were ALL WRONG. **Here, too, the “experts” are ALL WRONG AGAIN, and their wrong recommendations can cause you great harm!**

WARNING! Fish oil causes brain damage in adults and infants.

That’s right. Experiments performed between 1988 and 1992 conclusively showed **abnormalities in brain tissue resulting from administration of fish oil.** If anyone cared to look before issuing fish oil recommendations, here’s what the researchers reported in the article titled, “The Effects of Dietary n-3/n-6 Ratio on Brain Development in the Mouse: A Dose Response Study with Long-Chain n-3 Fatty Acids,”¹⁴ reported:

- “Feeding of **fish oil** [mainly omega-3 “derivatives”] to **adult rats** resulted in a **rapid increase** in levels of 22:5n-3 and 22:6n-3 as well as 20:5n-3 [**omega-3 series**] (which is **usually present in brain in only trace amounts**) with corresponding **decreases in** 22:5n-6 as well as 20:4n-6 [**omega-6 series**], suggesting that the **brain may be vulnerable to an excess of long-chain n-3 PUFA [polyunsaturated fatty acid].**”¹⁵
- “The **developing brain**, because of its affinity for long-chain n-3, may be **particularly susceptible to such effects.**”
- “There is **particular concern** that decreases in 20:4n-6 [omega-6 series] may be associated with **adverse effects.**”
- “Nevertheless, the findings may be of **relevance to questions concerning the provision of long-chain n-3 FA [from fish oil] in human infant feeding.**”¹⁶ (emphasis added)

14 P.E. Wainwright, et al., *Lipids*, Vol. 27, no 2 (1992), pages 98-103.

15 Bourre, J.M., et al., “*Biochim. Biophys. Acta* 969, 1988, pages 458-461 and Bourre, J.M., et al., *Biochim. Biophys. Acta* 1043, 1990, pages 149-152.

16 Carlson S.E. and Salem Jr., N. *Health Effects of ω3 Polyunsaturated Fatty Acids in Seafoods*,

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One must always exercise caution regarding animal studies' application to humans. However, mice make good animal models in this case since Lands et al. showed that EFA metabolism in rodents is similar to that in humans. (Lands WEM, Morris A, and Libelt B, "Quantitative effects of dietary polyunsaturated fats on the composition of fatty acids in rat tissues."¹⁷) Therefore, **overdosing on omega-3 can be hazardous to your brain and your health at any age.**

How Much Omega-3 and Omega-6 Are We Taking In?

What nutritionists and health commentators are missing is that **most of the omega-6 PEOs in today's foods are ruined** – they are either hydrogenated into transfats, cooked, or otherwise adulterated so they won't go bad on the supermarket shelf.

Looking at the harmful transfat content alone in commercial oils and oil products doesn't tell the whole story. Analysis of commercial "omega-6" oils show, in addition to lots of cancer-causing, non-oxygenating transfats, the presence of harmful preservatives and additives. Many of these additives and preservatives ruin the oils' oxygen-transfer capability. That's why traditional margarine, with perhaps a 30% transfat content, can still be kept unrefrigerated in the garage for years and no living animal will eat it – nor will it oxidize and become rancid. The remaining 70% *unhydrogenated* oil that supposedly isn't "treated" has *also* lost its oxygenating ability, because of preservatives and additives. Even though the oils in margarine started out with lots of healthy PEOs before processing, there is no remaining ingredient in margarine that makes it valuable.

A medical article titled "Who's afraid of n-6 polyunsaturated fatty acids [omega-6]" was published in 2001, but few in the medical and nutrition fields saw it. This article detailed why it is wrong to simply use only omega-3 or only omega-6 in experiments, and why experimental results are often misinterpreted. As mentioned above, most nutritionists and even physicians wrongly state that any extra omega-6 is "bad." This is because **they are NOT using organic unadulterated oils** in most of their experiments. Researchers use ruined omega-6-containing oils, like those found at your local commercial supermarket. These are loaded with cancer-causing transfats, preservatives and other additives, so you'd expect a problem using them.

But the basic reason for researchers' distorted results are that, under real-life conditions (which *Life-Systems Engineering Science* ALWAYS utilizes), (edited by Simopoulos, A.P., et al.), Karger, Basel, Switzerland, Vol. 8, 1991, pages 74-86. ¹⁷ *Lipids*, Vol. 25, 1990, pages 505-51.

the two healthy essential oils are consumed *together* most of time and only rarely apart. Researchers weren't adhering to *real-life* conditions, so the test results were wrong. It's that simple.

The following is the pertinent phrase from the medical journal article, "Who's afraid of n-6 polyunsaturated fatty acids?"¹⁸

"N-6 Fatty Acids [omega-6] are **Essential for Normal Growth...** and it is therefore **wrong to condemn only n-6 fatty acids in their etiology.**"

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We **require plenty of unadulterated, unprocessed omega-6**, regardless of what you may be told.

Additionally, the following quote from a medical textbook article makes it clear that omega-6 and omega-3 fatty acids in combination, even at low doses, are more effective than omega-3 alone at a high dose. The following is the pertinent phrase:

"...[There is a] **synergistic effect** of n-6 [omega-6] and n-3 [omega-3] fatty acids at low doses **which is greater than the effect of high doses of n-3 fatty acids alone.**" (*Prostaglandins in the Cardiovascular System*, 1992.)

Perhaps this information won't stop most people from following the popular health press and medical authorities and incorrectly thinking that any extra omega-6 is "bad," and all omega-3, at almost any dosage, is "good." But you will soon see **how easy it is to overdose on omega-3 by following these bad recommendations.**

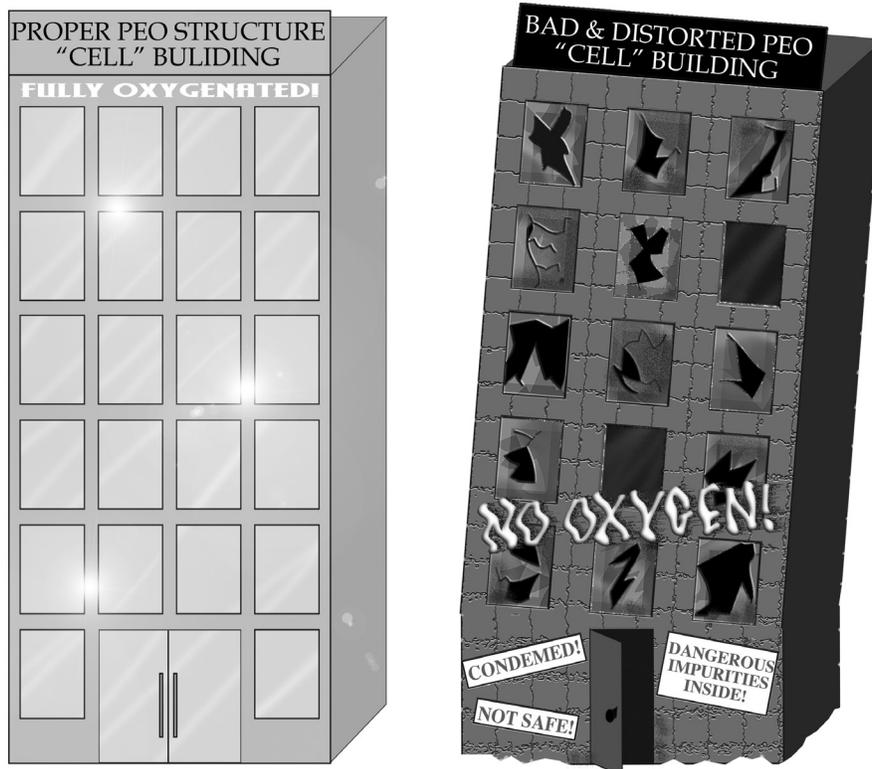
It Doesn't Take Much to Harm You!

Even when margarine and other hydrogenated products contain relatively few trans fats – as little as 1%-2% – this translates to an enormous number of trans fat molecules. In absolute numbers there are some 1×10^{21} molecules (one followed by 21 zeros, or 1,000 million trillion!) in each tablespoon of oil. Therefore, the potential for them to cause damage, either used integrally in the cellular structure, or in biochemical reactions, is highly significant, because only a tablespoon of defective oil provides **some 100,000 defective oil molecules for each cell in our body – a tremendous overload potential.** Many of us consume much more than a single tablespoon of processed oil each day. Add to this number of defective oil molecules the huge number

¹⁸ *Nutr Metab Cardiovasc Dis.* 2001 Jun;11(3):181-8.

of defective fat molecules from other processing sources and you will be terrified at what you and your family have been consuming for decades!

Here is how that figure of 100,000 defective oil molecules per cell is derived: The molecular weight of a triglyceride (any EFA-containing oil; good or bad) is approximately 1,000. A liter (quart) of oil contains approximately 1,000 grams (about 2 pounds), and from chemistry a mole (gm molecular weight) of any substance contains about 6×10^{23} molecules. Therefore, there is a mole of triglycerides in a liter of cooking oil. There are 60 Tablespoons per liter – let's say it's approximately 100 tablespoons (instead of 60) per liter to keep it easy to calculate. Therefore, there are on the order of 10^{21} (one thousand million trillion molecules of oil) per Tablespoon (10^{23} molecules per 100 Tablespoons = 10^{21} molecules). The defective amount is about 1% (1/100) or 10^{19} molecules. The body contains about 100 trillion cells (10^{14} cells). Therefore, the overload potential of bad EFAs on body cells is $10^{19/14}$, or 100,000 bad EFAs overwhelming each of your body's cells.



What Percentage of PEOs In Your Food Have Been Ruined?

As mentioned above, most of the omega-6 PEOs in today's foods are ru-

ined—either hydrogenated into trans fats or adulterated with chemicals and preservatives so the foods that contain them don't go bad at the supermarket or on your shelf at home. Everything from peanut butter and frozen foods to salad dressings and cooking oils is loaded with ruined omega-6 PEOs.

We can obviously deduce that, at the *very minimum*, the majority (51%) of the oxygen transfer capability in commercial omega-6 oils and oil-containing foods has been ruined from trans fats, preservatives, and chemicals. The proof of this is that any of these oils can stay open and exposed to air for weeks before going bad, instead of just days, as unprocessed oils do! (It is obvious when oil has turned because it smells and tastes bad and gives off gases when the container is opened.) Most commercially available oils have been ruined through such processing or they would not be so "spoil-proof."

Now, with western diets containing an estimated twelve times the amount of omega-6 as omega-3, and the fact that at the very minimum, at least 51% of omega-6 PEOs are ruined as to their oxygen transfer ability, we obtain at most a 49% effectiveness of the omega-6 PEOs eaten in the normal diet. If we round these figures to 50% ruined versus 50% effective, it equates to an estimated **6 to 1 ratio of effective omega-6 PEOs to omega-3 PEOs obtained in the diet**. This is actually the greatest amount of effective PEOs in the diet we could reasonably expect to find. We will see below that this ratio falls slightly under our calculation of the average human requirement for PEOs. But there are further factors to consider that will affect what our ratio of omega-6 to PEO supplementation should be.

Even if you consumed the above ratio so you were getting a 6 to 1 ratio of effective omega-6 PEOs to omega-3 PEOs in your foods, given that at least half of it is adulterated, you would need even more "good," organic, unadulterated, parent omega-6 than that *to compensate for the bad*. Importantly, **the amount of omega-3 required stays the same because** there are few foods containing omega-3 that are "ruined" in the way that omega-6 PEOs are. Let's continue.

Are There Other Things We Need to Know?

Yes, and the first one is a whopper! Virtually everyone is missing a key point concerning "competition" in the body between ruined and good omega-6: **your body still uses the defective EFAs, even though they don't work!** That is correct—your body will use the "next best thing" in the cells if it can't get the parent omega-6 PEO it needs. It will use adulterated or *transfat* parent omega-6, it will use an EFA derivative, or it will be forced to even use the non-essential oleic acid (omega-9) that your body can either manufacture on its own or can come from foods like olive oil. But these substitutes do not provide the highest level of oxygenation for the cells. They are nearly worthless for protection. You must therefore "overpower" the defective

EFA's you are taking in through the diet with adequate pure, unprocessed and unadulterated omega-6 PEOs to take their place.

A further consideration showing the need for more omega-6 supplementation in relation to omega-3 is the fact that the omega-3 that you get from foods is usually *not* adulterated. Thus there is no "competition" between good omega-3 PEOs from supplements and the bad omega-3 from food, and no need to overwhelm any bad omega-3 EFA's.

The last factor, described in the next section, is the simple fact that the body needs and uses much less omega-3 than omega-6 overall.

All these facts show why, for maximum protection, you should take much smaller quantities of omega-3 PEOs in relation to your omega-6 supplementation than is recommended by most nutritionists, health writers and supplement manufacturers. Yet few if any in this field have worked through this analysis. Let's continue with an examination of body tissue composition to discover what PEO ratio we require.

Important Organ and Tissue PEO Ratios—We Need to Know This

It is necessary for us to study the PEO composition of various tissues and organs like your brain, skin, heart and muscle to discover the overall PEO requirement of the body. It is known from pathology studies that the brain and nervous system have a ratio of one hundred parts parent omega-6 to one part omega-3 (100:1).

Here's a shocker that appeared in the medical journal article: "Fatty acid profile of skeletal muscle phospholipids in trained and untrained young men":¹⁹

A little-known but very key fact about muscle structure that many nutrition writers overlook is that **muscle contains from 5.5 to 7.5 times more omega-6 than omega-3**, depending on the degree of physical condition! Extremely fit individuals require less omega-6 because their oxygen-transferring efficiency, including an increased number of cell mitochondria, is greater than in non-exercising individuals. But because most of us are not elite athletes, we require an even greater amount of omega-6.

So, on average, a muscle contains 6.5 times more omega-6 than omega-3 (a ratio of 6.5 to 1). Also, one must understand most other tissues in the body contain a 4 to 1 ratio of omega-6 to omega-3.

The next thing to consider is what percentage of your body weight do the various organs constitute? We find that brain and nerve-related organs make up only about 3% of body weight, a very small quantity. The

¹⁹ Agneta Anderson, et. al., *American Journal of Endocrinological Metabolism*, 279: E744-E75.

remaining organs, such as your heart, liver, skin and pancreas, make up approximately 9% of body weight. And the last – a very important figure – is the percentage of body weight your muscles comprise. Muscle accounts for close to half of human body weight (50%). Skin comprises approximately 4% of body weight.

Shockingly, there is virtually NO omega-3 in skin!²⁰ This is a reason why omega-3 recommendations have done nothing to decrease the skin cancer epidemic.

Ratio of Tissue Composition		
Tissue	Omega-6 PEO	Omega-3 PEO
Brain/Nervous System	100	1
Skin	1000	1
Organs and Other Tissues	4	1
Adipose Tissue (bodyfat)	22	1
Muscles	6.5	1

*There is virtually NO omega-3 in skin tissue.

Now, many nutritional writers state that the brain has a 1 to 1 omega-6 to 3 ratio, so a 1 to 1 omega-6 to 3 ratio makes the ideal supplement. But this analysis is wrong. The brain has a 100:1 parent omega-6/-3 ratio as the above chart details. It should be obvious from the table below that the majority of our PEO-containing tissues and organs require much more *unadulterated* omega-6 than omega-3 to function properly. If we use the PEO ratio of just 1 to 1, all of your tissues and organs will be shorted on omega-6 PEOs. On the other hand, keeping these tissues supplied with enough unprocessed omega-6 is the key that most nutrition writers overlook. Letting *any* tissues run short on these omega-6 PEOs, as will occur if you follow the most prevalent

²⁰ “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.

nutritional recommendations, creates a significant omega-6 deficit.

Ratio of Tissue Composition			
Tissue	Percentage of Total Body Weight	Omega-6 PEO	Omega-3 PEO
Brain/Nervous System	3	100	1
Skin	4	1000	1
Organs and Other Tissues	9	4	1
Adipose Tissue (bodyfat)	15-35	22	1
Muscles	50	6.5	1

Footnote reference below.²¹

We have been misled into thinking that our tissues and organs require lots of omega-3. As the above chart, based on human physiology details, they don't. The ratios are quite conservative; there is actually even more parent omega-6 than indicated above.

One Last Important Question About Supplementation

You may be wondering why the animal protein that we consume from beef, other red meats, poultry, eggs, pork and fish doesn't give us enough of the required parent omega-6. Why should we need to acquire so much through supplementation?

To answer this, you need to understand several things. First, heat significantly destroys **both** omega-3 (extremely heat sensitive) and omega-6 (very heat sensitive) PEOs. The less cooked the proteins are, the better sources they are of parent omega-6 and 3. However, few people enjoy or can stomach meat, fish or eggs that are raw or only lightly cooked (and there *are* health safety concerns that may arise with under-cooked meats, fish and eggs, such as parasitic and bacterial infection of the foods). So large quantities of PEOs are lost through cooking.

Additionally, most meat, fish and eggs today have significant residues

21 Spector, A.A., "Plasma Free Fatty Acids and Lipoproteins as Sources of Polyunsaturated Fatty Acid for the Brain," *Journal of Molecular Neuroscience*, Vol. 16, 2001, pages 159-165., "Most of the plasma free fatty acid (EFA) is derived from the triglycerides stored in the adipose tissue [bodyfat]." Note: Organs, including the brain use these EFAs for structural incorporation. "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 954-959, 1986, Markides, M., et al., "Fatty acid composition of brain, retina, and erythrocytes in breast- and formula-fed infants," *The American Journal of Clinical Nutrition*, 1994;60:189-94 and Agneta Anderson, et. al., *American Journal of Endocrinological Metabolism*, 279: E744-E751. and Agneta Anderson, et. al., *American Journal of Endocrinological Metabolism*, 279: E744-E751.

from the pesticides, hormones, preservatives and other chemicals added to the foods that are fed to animals and farm-raised fish. Thorough cooking decreases *some* of these additives' harmful effects but *significantly lessens* the PEO content in the process.

On top of this, the parent omega-6 content of the tissues and organs of animals can vary greatly depending on what the animals are fed. While cattle and other grazing animals' original natural foods—live grass and other plants growing in pastures—have a more balanced PEO content, the grains that much of the cattle being raised today are fed have a highly unbalanced PEO content in favor of omega-6 by as high as 10 to 1. This sounds wonderful—just what we need—until you factor in that cooking renders a significant portion of those omega-6s inactive. Also, PEO damage occurs as a result of the chemically assisted farming methods begun in the 1900s to treat both soils and crops.

In light of all these factors, the best answer is to cook protein foods thoroughly and supplement your PEOs based on the calculation below.

Eicosanoids

There is widespread misunderstanding concerning these interesting and critical substances—another misunderstanding that is responsible for widespread, yet incorrect, nutritional recommendations telling us to “take lots of omega-3.” Eicosanoids are your body's cellular analogy to hormones. But unlike hormones, they work in your body with lightning speed and don't last long. Furthermore, they act locally in the cells and don't actually enter the bloodstream, because their function is so rapid.

Eicosanoids include *prostaglandins* (influence cholesterol and cardiovascular health, etc.) and *leukotrienes* (influence allergies and asthma, etc.). These substances act like *cellular hormones*, although they act much faster and have much shorter life spans. They do not enter the bloodstream the way hormones do. Prostaglandin function is often misunderstood. There are three classes of prostaglandins that concern us: PGE₁, PGE₂, and PGE₃.

Omega-3's derivative PGE₃ isn't nearly as powerful or as effective as Omega-6's PGE₁. The function of omega-6 and its derivatives like AA (arachadonic acid) is to prevent, not cause inflammation (unless required by the body to seal a wound). The mistake often made by researchers is *the assumption* that increased AA automatically increases PGE₂—an inflammatory. This assumption is incorrect because **the body manufactures PGE₂ AS NEEDED**. All EFA derivatives are manufactured as needed and this is no exception.

Arachadonic acid is anything but harmful: **AA is the precursor to prostacyclin—the most potent anti-aggregatory agent (a natural “blood thinner”) and inhibitor of platelet adhesion.**²² AA contributes to smooth working of

²² S. Bunting, S. Moncada, and J.R. Vane, “Prostacyclin—Thromboxane A₂ Balance: Pathophysiological and Therapeutic Implications,” *British Medical Journal*, (1983) Vol. 39, No. 3, pages

vascular function and blood flow. AA provides eicosanoids for response to injury – acting as a healer – helping to seal the wound. It is critical.

While the *parent* omega-3s and 6s are used throughout your body predominantly “as is,” **just a small amount** of omega-3 and omega-6 *derivatives* are *made into* these eicosanoids after many biochemical modifications, “*as needed*.” For example, the eicosanoids made from omega-3 PEOs come from the EFA derivatives DHA and EPA (which your body makes from parent omega EFAs “as needed”). Another example is the eicosanoids made from omega-6 PEOs – your body manufactures them by modifying arachidonic acid (which your body makes from parent omega-6 or takes from animal fats ready-made – if they aren’t adulterated). Omega-6 eicosanoids are critical:

PGE₁ eicosanoids formed from parent omega-6 are known from the medical textbooks to be fast-acting, anti-inflammatory and to have significant immune-enhancing properties. We need to ensure that plenty of them can be made. They are much more powerful than omega-3’s PGE₃.²³

It is also vital to note that the omega-3 and omega-6 eicosanoids work together in a complementary manner. Neither is ever found alone in your body. For example, one increases blood pressure while the other decreases blood pressure. This required natural balance is another reason that the current nutritional recommendations to highly favor *unprocessed* omega-3 PEOs over omega-6 PEOs are harmful. Doing so will unbalance your system. In fact, we must warn that **overdosing on omega-3 can lead to profuse internal bleeding from eicosanoid overproduction!**

Debra, my wife, used to frequently develop “black and blue” marks from bumping into furniture. She could never figure out what was causing them. It was only after she started taking PEOs with more omega parent 6 than “parent” omega-3 that this excessive bruising stopped.

The bottom line is that Nature makes both omega-3 and 6 eicosanoids AS NEEDED from parent PEOs and doesn’t require our direct intervention. So supply unadulterated parent omegas and let Nature do her job.

271-276.

23 *Smart Fats*, Michael A. Schmidt, Ph.D., pgs. 27-30.

The Correct Supplement Calculation

What are safe and effective quantities of omega-3 and omega-6 PEOs for supplementation? As explained above, the western diet is estimated to contain an effective (still capable of oxygen-transference) ratio of a *maximum* of **6 to 1** omega-6 to omega-3. Additionally, we have seen that **the majority of cells in the body require a ratio of at least 6.5 to 1 omega-6 to -3.**

The difference between the estimated good PEOs obtained from the diet and the cells' requirement is 0.5 parts of parent omega-6. This amount needs to be supplemented. To this amount we will add an amount of extra parent omega-6 to allow the "good" omega-6 to effectively combat and overpower the "bad" (transfats and otherwise adulterated) parent omega-6 in the diet: For this purpose we will add a conservative 0.5–1.0 parts organic parent omega-6. Therefore, we conclude that we need to supplement an additional 1.0-1.5 parts of organic parent omega-6 for every 1 part of organic parent omega-3 to meet the body's needs. You will soon discover that additional omega-6 is required for "derivative" manufacture.

An EFA supplement should contain a minimum ratio of **at least 1:1 parent omega-6, at the lowest end, up to 2.5:1 organic, parent omega-6 to 3 at the upper end.** Empirically, we find that these oils don't add according to the standard chemical rules of proportionality. Once the additional EFA requirements are identified, the supplement calculation is almost completely determined. The only additional information needed is a detailed analysis of the omega derivatives rates and the understanding of beta-oxidation of most parent omega-3, which follows. This difference is another reason that most researchers miss deducing the correct supplemental parent omega-6/-3 ratio.

A supplement containing a ratio of between **1:1 parent omega-6 to omega-3, to 2.5:1 parent omega-6 to 3** meets these requirements. This is calculated by adding the supplemented PEOs to the estimated good PEOs obtained in the diet. The result is that the final ratio of "good" omega-6 to omega-3 PEOs totals between 7:1 to 8.5:1 parts omega-6 to 3. This amount of extra omega-6 (the difference between our body requirement of 6.5:1 and the higher total ratio of 7:1 to 8.5:1) allows the "good" omega-6 to effectively combat and overpower the "bad" omega-6, giving us the advantage that is required for protection.

Case Closed: There is NO NEED to reduce unprocessed "Parent" Omega-6 intake! In fact, more IS required—The "Experts" & Popular Press are wrong again!

As one of the world's leading nutritional scientists, MA Crawford, states in *Prostaglandins Leukot Essent Fatty Acids* 2000 Sep;63(3):131-4, in an article titled "Commentary on the workshop statement. Essentiality of and recommended dietary intakes for Omega-6 and Omega-3-fatty acids," "I have some **difficulty with the statement on the need to reduce LA** (parent omega-6) of the diet because 'This is necessary to reduce adverse effects of excess of arachidonic acid (AA-an EFA derivative) and its eicosanoid products.' **Linking LA and AA in this way also implies** a direct conversion of LA to AA, **which is not the case**. In fact, a very high dietary LA will reduce membrane AA. Also, I have some **difficulty with the concept of a unitary ratio [1:1] when there is clear disunity [significantly GREATER omega-6] in the biological activities of the different parent and LCP (long chain polyunsaturated) PEOs. Hence the concept of omega-6/3 ratios based on activity equality between omega-6 and 3 does not reflect the biological reality.**"

Professor Crawford clearly understands how much more parent omega-6 is used in tissue and biochemical activity than parent omega-3. The American diet provides much more parent omega-6 than parent omega-3. Our analysis adds in the factor that the majority of the omega-6 in the modern diet is processed (ruined); therefore, that we need "a little extra" of the organic, unprocessed parent omega-6 to overpower the processed, adulterated (damaged) omega-6 found in numerous supermarket and restaurant products.

Comments on Supposed Adverse Effects of Arachidonic Acid [an omega-6 derivative]. Dr. Crawford Continues...

"...The comment on adverse effects of AA [arachidonic acid] seem to me misleading... The adverse effect idea arose because of the role of AA as a precursor of thromboxane and other eicosanoids participating in activating thrombus formation and the inflammatory process." Here is what we need to know:

" In practice, **AA is a major component of the endothelial** [inner arterial lining] **phosphoglycerides**, particularly on the inner cell membrane layer. **AA and adrenic acid are consistent companions** in other **cell membranes**. It is the precursor for prostacyclin: a **vasodilator and inhibitor of platelet adhesion**.

"...AA acts as **contributor to the smooth working of blood flow and vascular function**."

"... If there is **damage to the endothelium, such as in bruising, infection or cutting**, then the phospholipases *release AA*. In the free

form, and in conjunction with activated platelets, **AA** is peroxidized to **provide eicosanoids for the response to injury**.

“Thus, **they [AA] contribute to** vasoconstriction and thrombosis to **seal the wound**. Without this response we would be in trouble.” The same principle applies to the inflammation response which again is much **needed for survival**. AA is anything but the dark side.

“... The problem is that certain chronic disease conditions such as arthritis and ischemic heart disease, **the damage already done, results in chronic stimulation of this response to injury... This is not the fault of AA or DGLA, but of the original cause of damage**” (Emphasis added.)

Here’s more support for Dr. Crawford’s analysis. The article titled “Pathophysiological and Therapeutic Implications,”²⁴ states that **“AA in the phospholipids of Eskimos [consuming lots of parent omega-6 from natural, unprocessed, meat] is approximately one-third of that in Danes.”**

Dr. Crawford correctly understands that more omega-6 than omega-3 is required!

► Life-Systems Engineering Science Commentary

AA is critical. Don’t let anyone tell you that parent omega-6 causes a “problem” in excess AA production. Arachidonic acid (AA) is a critical biochemical component, and **occurs in virtually every cell we have!** It is the **building block of the most potent anti-aggregatory** (“helps blood thinning”) **agent known** (prostacyclin). This omega-6 derivative **also inhibits platelet adhesion** (a natural “blood thinner). **AA helps SOLVE vascular problems as a response to injury** in a fashion like cholesterol. So once again, just like cholesterol, the “problem solver” is incorrectly blamed as the cause of the problem. There is always a balance between opposing forces. For example, one biological substance increases blood pressure and another one decreases blood pressure. Even though we frequently hear the terms good and bad, there is no “good” or “bad.” There is only complementary function. We must ensure our bodies have enough biochemical substances to ensure both effects can be carried out automatically.

The article, “What is the role of alpha-linolenic acid [parent omega-3] for mammals,” *Lipids* 2002 Dec;37(12):1113-23, reveals that the **major metabolic route of ALA (parent omega-3) in the body is beta-oxidation [burning for energy!]**. ALA accumulates in specific sites in the body of mammals, and **only a small portion of the dietary ALA is converted to DHA**. Once again

²⁴ *British Medical Journal*, (1983) Vol. 39, No. 3, pages 271-276.

we see most of the parent omega-3 is not wanted! Few specific tissues require much omega-3, AND little omega-3 quantities of derivatives are produced. Please be careful of excess omega-3 recommendations and consumption.

The article "Increased alpha-linolenic acid [parent omega-3] intake **increases tissue alpha-linolenic content** and apparent oxidation with little effect on tissue docosahexaenoic acid in the guinea pig," *Lipids* 2000 Apr;35(4):395-400, states, "Linoleic acid (LA) accumulates throughout the body of most mammals, whereas alpha-linolenic acid (ALA) is rarely found in those tissues to the same extent as LA." Once again, we see how more parent omega-6 is used in tissue. **Most importantly, we see an overdose of omega-3 leads to an incorrect increase in cellular omega-3! The excess can't get burned. You shall soon discover how it gets wrongly "shoved" into the cell and the cell will improperly function!** The same type of result occurs in humans.

WARNING: Too much omega-3, omega-6 derivatives, or defective PEOs ruin the cell membrane structure and minimize your level of protection.

WARNING: Heart Attack Victims Have Lowered PEO Levels

"Fatty acid Composition of Serum Lipids Predicts Myocardial Infarction [Heart Attack]," *British Medical Journal*,²⁵ reported that LA (**parent omega-6**) and **most polyunsaturated** fatty acids (PEOs) **including AA and EPA were lower (depleted) in heart attack victims.**

Parent to Derivative Ratios—Surprise! The Conversion is Much Less Than Everyone States.

²⁵ *British Medical Journal*, Oct. 9, 1982, 285:993.

The next piece of shocking information is from "PUFA Newsletter" (www.fatsoflife.com). "Alpha-Linolenic Acid Conversion Revisited," by Norman Salem, et al., states,

"A recent article in the PUFA [Polyunsaturated Fatty Acid] Newsletter indicated that in adult men and women the 'average estimated conversion of alpha-linolenic acid to n-3 LC-PUFA metabolites and docosahexaenoic acid was 17.3 ± 12.8 and 3.6 ± 3.8 percent, respectively (mean + SD).' This is likely to be **an overestimate** of the actual overall conversion rates **for several reasons**. We see even with this excessive estimate of the parent omega-3 derivative conversion that **theoretically no more than 37%** of them are converted to **derivatives**."

The article makes the case that *in reality only about 5% of the parent ALA (omega-3) is converted into derivatives*. **Pawlosky and others calculate that less than a mere 1% goes to derivatives**. The article ends with "The best estimates of alpha-linolenic acid conversion to n-3 LC-PUFA are much smaller than those claimed...."

A masterpiece of research conducted by William E. Lands, et al., titled "Quantitative Effects of Dietary Polyunsaturated Fats [PEOs] on the Composition of Fatty Acids in Rat Tissues," Department of Biological Chemistry, University of Illinois at Chicago, published in the medical journal *Lipids*, Vol. 25, No. 9, 1990, pages, 505-516, make it very clear that **dietary PEOs influence tissue-PEO-structure**:

- "... The tissues **maintained a linear relationship [proportional]** between the amount of 16-carbon polyunsaturated fatty acids **in the diet** and in the **tissue**"
- "...With higher amounts of 1:2n-6 [parent omega-6] in the diet, the rat tissues maintained **progressively higher** levels of 1:2n-6 in triglycerides. The linear trend was similar for plasma, liver, and adipose"
- "...Similarly, the tissue maintained proportionately higher levels of 18:3 [parent omega-3] in the triglyceride fraction with higher influxes of dietary 18:3n-3 [parent omega-3]...."
- "...These consistent linear trends [**the more I eat the higher the cellular content**] appeared to be independent of the amount of other fatty acids in the diets or the proportion of total calories as fat."

- “...Plasma, liver, and red [blood] cells *all tended to maintain n-3/n-6 [parent omega-3/6 ratio] of the diet being fed....*” (Emphasis added.)

Surprisingly, it was known back in 1979 that diet influenced PEO composition of the cell membrane. This finding was published in *Cancer Research* in an article titled “Effect of Modification of Plasma Membrane Fatty Acid Composition of Fluidity and Methotrexate Transport in L1210 Murine Leukemia Cells,” Burns, C. Patrick, et al., *Cancer Research* 39, 1726-1732, May 1979:

- “The plasma **membrane lipid composition** in L1210 murine leukemia cells was **dependent upon the type of fat fed** to the host animal.
- “...The fatty acid **composition of mammalian cell membranes can be modified experimentally**. This can be accomplished in tissue culture by altering the lipid composition of the medium or in the intact animal by changing **the dietary fat [PEO] composition**. These modifications are **associated with changes in the physical and functional properties of the cell membrane....**” (Emphasis added.)

► Life-Systems Engineering Science Commentary

Animal studies are to be viewed with caution. However, in this case, PEOs are metabolized in similar fashion to humans. The results apply, and it was known back in 1979! This finding shows how even cancer cell membranes are modified based on dietary PEO levels. These landmark findings make it clear that **the proper parent omega-6/-3 ratio in the human diet is critical. Over-dosing on too much parent omega-3 will force an excess into the tissue.** Ingestion of more unprocessed parent omega-6 likewise alters, although for the better, the cell membrane’s composition. Therefore, it is easy to correct a damaged parent PEO ratio by supplementation in the ratios this special report suggests.

A New Look at LDL Cholesterol, Clogged Arteries and PEOs

Statin drugs are those used to control cholesterol levels in the body. A 2001 study found, “**Statins and polyunsaturated fatty acids have similar actions....** In view of the similarity of their actions and that statins influence essential fatty acid metabolism, it is suggested that PEOs and their metabolites may serve as secondary messengers of the action of statins....”²⁶

²⁶ “Essential Fatty Acids as Possible Mediators of the Action of Statins,” *Prostaglandins, Leukotrienes and Essential Fatty Acids*, Vol. 65, No. 1, July 2001.

These statements mean that **PEOs naturally accomplish what statin drugs do to decrease cholesterol levels**. While this by itself can help speed blood flow, this is not the most important thing to know about PEOs in relation to cholesterol and clogged arteries.

Arterial Plaques—It's Not the Saturated Fat—It's the Adulterated Parent Omega-6 That Clogs Arteries!

Contrary to what we have heard for decades, it is not the saturated fat you eat that clogs your arteries! How do we know this? A 1994 *Lancet* article analyzed the components of arterial plaques. In investigating an aortic artery clog, **they found that there are over ten different compounds in arterial plaque, but NO saturated fat.**²⁷ The biochemical lipid analysis of a clogged artery was repeated in 2001 and the results were the same: NO saturated fat!²⁸

There *was* some cholesterol in the clog. This is understandable since cholesterol acts as a protective healer for arterial cuts and bruises. So what is the **predominant component of a clog?** You probably guessed it—**the adulterated omega-6** polyunsaturated oils we have spoken about so extensively—those that start out containing good PEOs but are ruined during commercial food processing and sold at the supermarket in thousands of products.

“LDL contains up to 80% lipid [fats and oils], including polyunsaturated fatty acids and cholesterol, mainly esters. **Linoleic acid (LA), one of the most abundant fatty acids in LDL, produces a number of products when subjected to oxidative modification...**”²⁹ (Emphasis added.)

An article in *Human Nutrition: Clinical Nutrition* explains that it is parent omega-6 that makes up most of the fatty acids in LDL and HDL cholesterol:

“Linoleic acid [parent omega-6] comprises about **55 per cent [the majority] of the fatty acids in cholesterol esters of LDL and HDL**, and about **20%** of the free fatty acids in the **phospholipids in each class...**”

“...It must also be remembered that **all tissues need EFA** which must come **from the diet and for most tissues through the plasma**

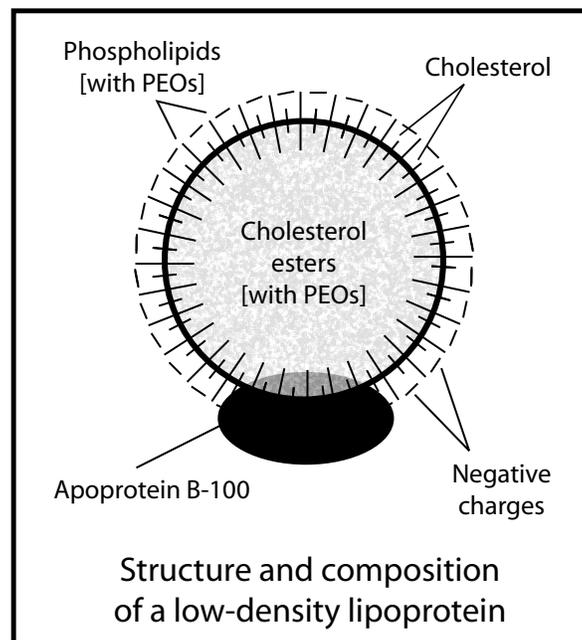
27 “Dietary polyunsaturated fatty acids and compositions of human aortic plaque,” Felton, CV, et al., *Lancet*; 344:1195-1196, 1994.

28 Waddington, E, et al., “Identification and quantification of unique fatty acid and oxidative products in human atherosclerotic plaque using high-performance lipid chromatography,” *Annals of Biochemistry*; 292:2-2, 2001; and Kuhn, H., et al., “Structure elucidation of oxygenated lipids in human atherosclerotic lesions,” et. al., *Eicosanoids*; 5:17-22, 1992.

29 Postprandial Lipid Oxidation and Cardiovascular Disease Risk,” Bowen, Phyllis, et al., *Current Atherosclerosis Reports*; 6:477-484, 2004.

where they are **almost entirely transported in lipoproteins, mainly in their cholesterol esters and phospholipids.**³⁰ (Emphasis added.)

In nature, with the consumption of organic, unprocessed PEOs rather than adulterated oils and trans fats, LDL cholesterol is *supposed* to be made up of significant amounts of properly functioning “parent” omega-6, linoleic acid (LA), and is not supposed to be harmful. It is **the natural transporter of parent omega-6 and parent omega-3 into the cells**. It is thus not critical to lower LDL cholesterol, nor is the absolute LDL number as important, if the diet contains sufficient unadulterated PEOs. Also take note that the body has no natural “cholesterol sensor” in the bloodstream – it would if its levels had to be maintained within exact limits; such as, sodium, calcium, and glucose levels. For example, glucose levels are maintained to an amazingly tight 0.1% in each of us! So Nature implemented biological mechanisms if required. **There is no need for a cholesterol sensor because the absolute number is irrelevant.**



Textbook of Medical Physiology, pg 874

Esterified cholesterol comprises the **majority** of LDL. LDL stands for **Low Density Lipoprotein**. LDL is not simply “cholesterol” although many people, including nutritionists and physicians, think it is. Most important is understanding what the term cholesterol “esters” making up the majority of the LDL structure means. *Harper’s Illustrated Biochemistry* (26th edition) on page 219 answers this important question in their description: “Cholesterol

³⁰ “Essential Fatty Acids in Perspective,” Sinclair, H.M., *Human Nutrition: Clinical Nutrition*, (1984) 38C, pages 245-260.

is present in tissues and in plasma either as free-cholesterol or **in a storage form, combined with a long-chain fatty acid [containing PEOs] as a cholesterol ester. In plasma, BOTH forms are transported in lipoproteins.**" (Emphasis added). And from *Harper's Illustrated Biochemistry*, pg 224, we discover that dietary cholesterol is tied to PEOs, too: "Of the **cholesterol absorbed, 80 - 90% is esterified [with PEOs]** with long-chain fatty acids in the intestinal mucosa." Perhaps for the first time, the cholesterol/PEO connection has now been made crystal clear. Now you understand why I say that cholesterol acts a "poison" transporter when you have defective PEOs in your diet.

PEO-Deficiency = Defective Cholesterol Structure

It was known in 1941 that EFA deficiency caused a defective cholesterol structure and in 1956 that carbohydrates are a culprit, too but the popular press never mentions these facts:

"Cholesterol is normally esterified with unsaturated fatty acid [PEOs]³¹ and when — as in our experiments — these are extremely deficient in the body it is esterified **with much more saturated fatty acids** synthesized in the body **from carbohydrate.**"³² (Emphasis added.)

A Startling Experiment in 1965

An important experiment was performed in 1965, long before the pharmaceutical companies created what I term the "bad cholesterol pharmaceutical annuity." This experiment was performed at the Karolinska Institute in Sweden. A Karolinska Institute committee appoints the laureates for the Nobel Prize in Physiology or Medicine. In their experiment the researchers fed patients different oils and the reported outcome was amazing:

"...[T]here is also a **preferential incorporation of oleic acid** into the cholesterol esters, relative to other fatty acids tested [including parent omega-6].

"It is clear from these results [in humans] that the process of lymph cholesterol ester formation during fat absorption **showed far greater affinity for dietary oleic acid** than for the other fatty acids studied.

31 Kelsey, F.E., Longenecker, H.E., *J. Biol. Chem.*, 1941, Vol. 139, page 727.

32 H.M. Sinclair, "Deficiency of Essential Fatty Acids and Atherosclerosis, Etcetera," *Lancet*, April 7, 1956.

“During fatty acid absorption lymph cholesterol ester formation showed **marked specificity for oleic acid** relative to other fatty acids tested [including parent omega-6].³³

► Life-Systems Engineering Science Commentary

The fact that cholesterol esterification proceeded with oleic acid IN PREFERENCE to parent omega-6 is amazing. You already discovered the **cholesterol structure is SUPPOSED to incorporate functional PEOs, not oleic acid (like found in olive oil)**. The reason it wasn't must be because the parent omega-6 used in the experiment was defective, from the chemical “purification” process.

1990 Confirmation of Defective Cholesterol with PEO-Deficiency

Experiments show that if there is insufficient unprocessed parent omega-6, the cholesterol structure will incorporate oleic acid (non-essential omega-9 like in olive oil) instead.

► Life-Systems Engineering Science Commentary

These experiments conclusively show a 50% oxygenation decrease is obtained with PEO-deficiency. This defect will significantly impact your health. Here's why:

Defective Cholesterol = Lack of Oxygen

If there is insufficient unprocessed parent omega-6, experiment shows that the cholesterol structure will incorporate oleic acid (non-essential omega-9) instead.³⁴ Physical-chemical experiments show that linoleic acid (parent omega-6) **can bind twice as much oxygen** and disassociates at a much higher pressure, much closer to hemoglobin, **than oleic acid does**.³⁵

³³ “Intestinal Absorption and Esterification of C-Labeled Fatty Acids in Man,” *Journal of Clinical Investigation*, Rolf, B., et al., Vol. 44, No. 11, 1965.

³⁴ Burns CP, Spector AA: Effects of Lipids on Cancer Therapy, *Nutrition Reviews* 48, No.6, 233-240, 1990 pages 381-383.

³⁵ Campbell IM, Crozier DN, Caton RB: Abnormal fatty acid composition and impaired oxygen supply in cystic fibrosis patients. *Pediatrics* 57, 480-486, 1976.

Oxygen disassociation curves for **oleic acid compared with linoleic acid, omega-6, show a 50% reduction in oxygen transfer**, given PEO deficiency.³⁶

But, as you have already discovered, huge numbers of molecules of the omega-6-based cooking oils are ruined by commercial food processing. In the body these are incorporated **into** the LDL cholesterol. With the consumption and transport of **defective**, cancer-causing processed oils, LDL cholesterol acts like a “poison delivery system,” bringing deadly transfats and other ruined oils into the cells. It is primarily the oxidized (adulterated) parent omega-6 that clogs the arteries, NOT saturated fat!

This is THE REAL REASON that everyone keeps telling us to lower cholesterol at all costs – yet the medical profession has offered us no insight into the actual situation. So **LDL cholesterol is improperly blamed** for transporting defective EFAs when it has “no choice,” because too few of us have enough properly functioning LA in our diets. The “experts” never make this critical connection and pinpoint the **real** “problem” with LDL.

Defective LDL Becomes a “Poison Delivery” System

LDL **cholesterol** acts like a “**poison delivery system**,” bringing deadly transfats and other ruined oils into the cells. *Cholesterol is improperly blamed*. An appropriate analogy would be the situation of a drunk driver causing an accident – the drunk driver is like the bad EFAs, and the automobile is like the cholesterol. The cancer institutes and pharmaceutical companies’ approach is to try to ban all automobiles (the cholesterol) INSTEAD of applying the **correct solution: eliminating** the drunk driver (**the bad EFAs**).

The Failure of Cholesterol-Lowering Drugs: It’s Not the LDL Itself

Hence the reason for the ineffectiveness of cholesterol-lowering drugs – **they simply can’t eliminate enough of the defective EFAs being transported to work well**. This is why the medical journal article titled “LDL Cholesterol: ‘Bad’ cholesterol or Bad Science,” published in *Journal of American Physicians and Surgeons*, Vol 10, No. 3, Fall 2005, by Anthony Colpo, stated:

“Among elderly Belgians, higher levels of *oxidized* LDL were accompanied by a significantly increased risk of heart attack **regardless of total LDL levels**.

“...However, there was **no association between oxidized LDL concentrations and total LDL levels** [in Japanese patients undergoing surgery to remove plaque].

³⁶ *ibid.*

"No tightly controlled clinical trial has ever conclusively demonstrated that LDL cholesterol reductions can prevent cardiovascular disease or increase longevity." (emphasis added)

Case Closed: 2005 Proof it's NOT the Cholesterol —it's ApoB that is MUCH Better than LDL Cholesterol for Predicting CDH Risk

The article entitled "Nonhigh-density lipoprotein cholesterol and apolipoprotein B in the prediction of coronary heart disease in men," *Circulation* 2005 Nov 29;112(22):3375-83 by Pischon, T, et al., says it all in their conclusions:

1. "When non-HDL-C [including LDL cholesterol] and LDL-C were mutually adjusted, **only non-HDL-C was predictive** of CHD [heart disease].
2. "When non-HDL-C and apoB were mutually adjusted **only apoB was predictive.**" (Emphasis added.)

► Life-Systems Engineering Science Commentary

The first point makes clear that **LDL cholesterol was not very good** in predicting heart disease, consistent with the *Journal of American Physicians and Surgeons*, Vol 10, No. 3, Fall 2005 article above, by Anthony Colpo. There is much more to the story. No. 2 above makes clear that apoB (see diagram on page 32) is the critical measure, which is a substance that **INCLUDES** the all-important PEOs (both good and defective). Editorials in the medical journals abound with contradiction of lipid measurement. Other studies have not found this result, they claim. ApoB costs much more to measure than a standard, easily performed, cholesterol test. You won't likely see a change in protocols because the National Cholesterol Education Program is to use new knowledge to **build onto the existing guidelines, not to show that the old guidelines were wrong, even if they are wrong!** We see once again, the failure of the medical community to admit mistakes and find remedies.

The authors of the following medical journal article understood the PEO-connection in 1982, but few of us heard the news. "Fatty acid Composition of Serum Lipids Predicts Myocardial Infarction [Heart Attack]," *British Medical Journal*, Oct. 9, 1982, 285:993, reported that LA (**parent omega-6**) and **most** polyunsaturated fatty acids (**PEOs**) derivatives including AA and EPA were **lower (depleted) in heart attack victims**. The fatty acid **patterns of the phospholipids** is an **independent risk factor** for heart disease.

► Life-Systems Engineering Science Commentary

This British medical journal article “hits the nail on the head.” Deficiency of PEOs is a major cause of increased heart attack risk.

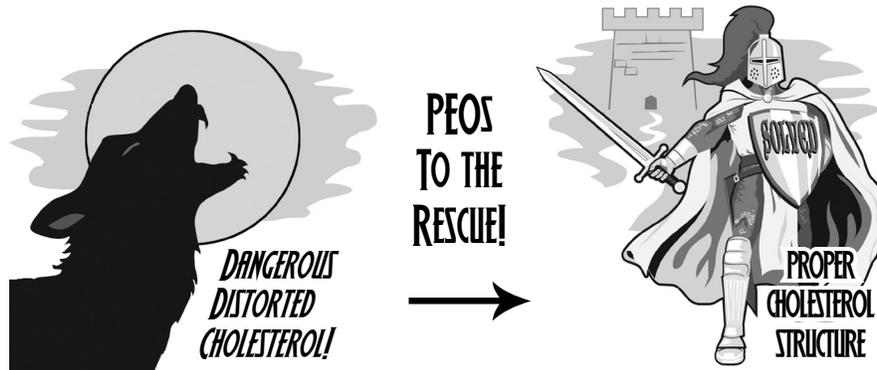
So don't let them scare you into believing that you should therefore minimize parent omega-6 (along with parent omega-3), because of “oxidation” concerns. It is true that fats and oils oxidize – that's partly how they do their job. This is like saying never burn any wood for heat because it's “oxidizing.” Oxidation occurs in the process of producing the energy. In wintry climates you would freeze to death. The proper answer is to keep adding *more* wood to the fire, not less, so that the fire doesn't go out! **So the correct answer here is to take a daily supply of unprocessed, properly functioning PEOs, *not* cut them out.**

Furthermore, these consequences go beyond heart disease, because (1) ruined PEOs in arterial blockages cause decreased blood speed, and even worse, (2) It is clear that **because the analysis of aortic arterial plaque is so high in oxidized and ruined commercial (omega-6) polyunsaturated oils, consuming defective polyunsaturated fats and oils are the most important reason your arteries become clogged.**

Note 1: Many nutrition writers quote various “experts” who claim that the U.S. population is consuming 15, 20, or even 30 times more omega-6 than omega-3 in its diet. Do not accept these numbers – they are way off the mark, not being based on a sound analysis. All these writers and experts are completely ignoring the fact that meats like steak and chicken contain lots of omega-3. This unaccounted for omega-3 in foods decreases their supposedly overbalanced omega-6 ratio dramatically. For example, depending on the specific diet of the animal, steak and hamburger will contain a ratio typically between 2:1 to a high of 10:1 in favor of omega-6. A grain-fed chicken produces eggs that contain a ratio of from 1:1 to as much as 10:1 in favor of omega-6. But you should also know that **fish, shrimp and shellfish** – a primary protein in many people's diets, contains *more omega-3 series* than omega-6 series – usually from 2:1 to a high of 20:1 in **favor of omega-3 series PEOs**. Therefore, unless you are consuming lots of straight omega-6 containing oils “directly from the bottle,” the average American's omega-6 to 3 ratio consumption *can't be above 12:1*. That is why our estimate of 12:1 omega-3 in the diet is scientifically correct as the maximum to base supplementation.

Note 2: The final thing to watch out for in your oil capsule supplements is to make sure that “high oleic” safflower or “high oleic” sunflower oil is *not* used. Although those oils are stable and acceptable for commercial frying, they contain a mere one-sixth the “high linoleic” amount of parent omega-6

in them! Non-essential omega-9 takes their place. Even though one of these supplement's PEO ratio may be close to 1 to 1, the amount of omega-6 in the oil won't be sufficient per capsule. You will do much better to find either "high linoleic" oil (parent omega-6), or a formula containing evening primrose oil (which contains 70 or more percent parent omega-6). Evening primrose oil has not been modified to be high oleic.



More Real-Life Results of the PEO Analysis Based on Physician Reports:

All patient results are used so there is no manipulation of outcomes. *Life-Systems* Engineering Science demands a minimum 80% effectiveness rate and these physician results confirm the effectiveness.

STUDY I: IMPROVEMENT in SURGICAL RESULTS — LESS PAIN, FASTER HEALING, LESS INFLAMMATION, etc.

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"In my practice as a plastic surgeon, I have come to understand that to obtain good post-operative results, even with major operations that comprise a greater trauma to the tissue than do minor ones (most operations I perform are major), the repair flogistic resolution, edema and scar tissue are all key factors to success.

My results have improved as a result of the use of new surgical techniques as well as the use of antibiotics and antiflogistic drugs.

However, I must point out that a new major factor **greatly improved** my patients' surgical **results**: it was the introduction of certain 'Parent Essential Oils' from 15 days prior to surgery to 30 days afterward.

The level of tissue repair is particularly what I look for in my practice. Upon taking this opportunity to conduct a trial of five patients using Brian Peskin's PEO recommendations, I found in all five patients an enormously improved result with better recovery. These results were obtained just through undertaking a simple prescribed medical therapy on these patients using Peskin's PEO-based recommendations.

Unlike fish oil, which causes excessive bleeding, Brian Peskin's Protocol does not cause excessive bleeding. In fact, it makes surgery easier and improves patient recovery.

This improved recovery included:

1. **faster healing**
2. **less inflammation**
3. **less scar tissue and**
4. **less pain to the patient.**

I have concluded that it is necessary to continue this very interesting tissue repair modality in the near future."

Dr. Roncarati Andrea

Study 2: IMPROVEMENT in APPETITE FULFILLMENT and INCREASED ENERGY in THOSE ALREADY on a HIGHER PROTEIN, LOWER CARBOHYDRATE DIET

Study Shows PEOs Eliminate Carbohydrate Cravings, Reduce Appetite and Increase Energy and Alertness

Dr. Stephen Cavallino performed an 8-week study with 10 patients who followed a higher protein/lower carbohydrate diet. The study compared certain physical manifestations, both prior to taking PEOs and during PEO supplementation based on the guidelines in this book.

All patients were initially “carbohydrate addicts.” Four weeks prior to starting PEO supplementation, all patients were instructed in the value of a higher protein/lower carbohydrate diet based on the information in *The Hidden Story of Cancer*. All patients followed this higher protein/lower carbohydrate diet for a minimum of 4 weeks BEFORE PEO supplementation.

Study in Italy for Overweight People with Carbohydrate Addiction

Conducted by Stephen Cavallino, M.D.

- All patients were on a higher protein/lower carbohydrate diet before and after PEO supplement
- Patients were given an PEO formulation based on *The Hidden Story of Cancer* book’s recommendation
- All patients suffered from carbohydrate addiction
- Total patients – 10, consisting of eight women and two men

“All patients agreed to collaborate knowing that many foods were not permitted for the whole 8 weeks (4 weeks without the [PEO] supplements and 4 weeks with them). They agreed not to consume fruit, pasta, pizza, rice, sweets, soda or soft drinks. They all orally took 2 capsules (725 mg ea) twice a day (3 gram total) using Professor Peskin’s* [PEO] recommendations as stated in this book. Patients were asked to rate their responses to the regimen using four criteria, indicated by 1-4 asterisks:

One * = poor/no response;

Two ** = fair response;

Three *** = good response; and

Four **** = excellent response.

“Without the PEOs, all patients (100%) suffered from intense carbohydrate cravings and had little energy. Eighty percent (80%) of patients suffered from constant hunger. This was in spite of the fact all patients consumed a higher protein/lower carbohydrate diet for at least 30 days prior to PEO supplementation. After PEO supplementation began, these results were observed:

- The average patient **felt well** and **more at ease facing the higher protein/ lower carbohydrate diet**.
- **Overall appetite reduced** in all 10 patients; all noted a **GOOD to EXCELLENT** response, with **50% rating an EXCELLENT** response.
- **Carbohydrate cravings were reduced** in all 10 patients; 9 people rated this reduction **EXCELLENT** – huge 100% success.
- **Energy and alertness increased** in all 10 patients: this was an **EXCELLENT** response – huge 100% success.

Weight loss goal was reached in all 10 patients.

“Real-life results were achieved. I am positive about and thankful for Professor Peskin’s assistance in showing scientifically that most carbohydrates are bad in relation to promoting cancer and other diseases, and **that PEOs are essential for good health with the objective to help us all to lose weight without suffering. I was able to obtain excellent results adding the [PEO] supplementation program .”***

Stephen Cavallino, M.D.
October 22, 2005, Ferrara, Italy

► Life-Systems Engineering Science Commentary

To compare the 10 patients’ ratings *with* PEO supplementation to their ratings *without* PEO supplementation, a Wilcoxon signed rank test was carried out comparing the differences. The Wilcoxon signed rank test **found that on all three measures (appetite reduction, carbohydrate craving, and energy and alertness)**, there was a **statistically higher (more positive) response when patients were taking the program’s PEOs** compared to when they were not taking PEOs. This statistical **difference was highly significant** ($S=27.5$, $p=0.002$). All analyses were carried out using SAS software version 9.1 (SAS Institute, Cary, NC, USA).

With PEOs, everyone’s weight-loss goal was accomplished! L.S.E. science demands at least an 80% success rate for protocol effectiveness. Utilizing the miraculous power of PEOs, this level of effectiveness was achieved in **decreasing carbohydrate cravings** along with **decreasing overall appetite. Energy increased in 100% of patients.** PEOs’ capability to increase energy, decrease carbohydrate cravings, and help naturally fulfill the appetite is identifiable within just 30 days.

STUDY 3: INCREASED ENERGY & ENDURANCE in ATHLETES

A Physician's Story – Increased Energy:
Oxygenation Long-Term (4+ hours)

TESTIMONIAL: FLAG FOOTBALL – ITALY – 4 June 2005

“Brian, as you know I play professional ‘Flag Football’ here in Italy and every two weeks we compete in a ‘Bowl’ where many teams from all over Italy compete as well.

“The opening day of our home game ‘Ferrara Bowl,’ I asked for three players to take PEOs as recommended in your program before the first game, and we had at least three more games to play.... [W]ell, all the players did incredibly great because they had no muscle pain, nor any tiredness!!!

“The thing that hit me the most was in our 3rd game we had already played for 4 hrs (with a small break) and an extra 2000 mg of [PEOs] were phenomenal.... [W]e were outstandingly powerful and had much energy.

“Other teams needed me for medical exhaustion and sickness related to excessive lactic acid as well as metabolic acidosis!!!

“THANKS A LOT FOR YOUR HELP AND YOUR SOLID KNOWLEDGE-ABLE INFORMATION.”

DR. STEPHEN CAVALLINO

P.S. We must really get this EFA discovery into sports medicine.”

Real-life results prove the PEO recommendation in this program stops “lactic acid burn” COLD —confirming greatly increased oxygenation of the tissue.

We Require More Parent Omega-6 Than Major Organs Suggest

Though it is true that most major organs have a parent omega-6/-3 ratio of 4/1, suggesting that we are already overloaded with functioning parent omega-6, the problem is that other tissues like adipose tissue and muscle tissue require a much higher ratio. These tissues are much more significant in weight than other organs. This being the case, adipose and muscle tissues may get any parent omega-6 instead of your other organs, making the other organs deficient. It's a risk none of us can afford to take. Therefore, we require much more omega-6 than a 4/1 ratio may suggest.

Fact: Oxygen Deficiency is Systemic! Top Physician Clearly States Breast Cancer is a Systemic (whole body) Problem, Not a Local One

Many physicians mistakenly believe cancer is a localized condition, meaning only the affected tissue is of concern because the genes are ruined making the tissue cancerous. As you will discover in the book, *The Hidden Story of Cancer*, cancer is not and has never been genetic in origin; it can't be. What is correct is that the cancerous tissue is the MOST OXYGEN DEPRIVED TISSUE in that patient. That's why that particular tissue became cancerous.

Dr. Macapintac makes clear you've got much more to worry about than the one diagnosed cancerous area. Many other tissues in the patient are also oxygen deprived, along with the cancerous ones. I'd like to acknowledge Homer Macapintac, M.D., chair and professor of nuclear medicine at The University of Texas M.D. Anderson Cancer Center for stating:³⁷

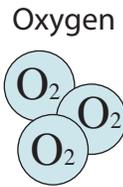
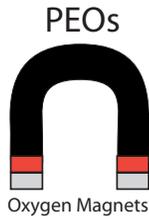
“Breast cancer is *not a local problem*. It is a systemic [whole body] disease.”

Even if this physician doesn't understand exactly what the systemic problem is and may not understand that all cancers stem from the same problem, we do understand. In addition to the cancerous breast tissue, oxygen deprivation still occurs throughout the body to a lesser degree. The specific (breast) tissue

³⁷ “PET/CT Brings New Hope To Patients With Deadly Form of Breast Cancer,” Medical News Today, Nov. 28, 2007.

developed cancer because of a longer period and greater degree of oxygen deprivation in that specific tissue.

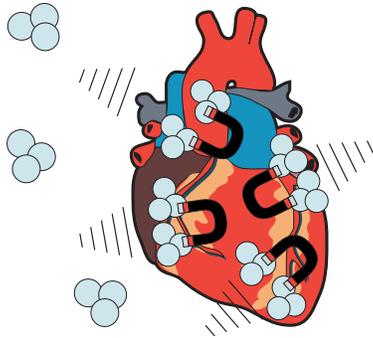
OXYGEN MAGNETS!



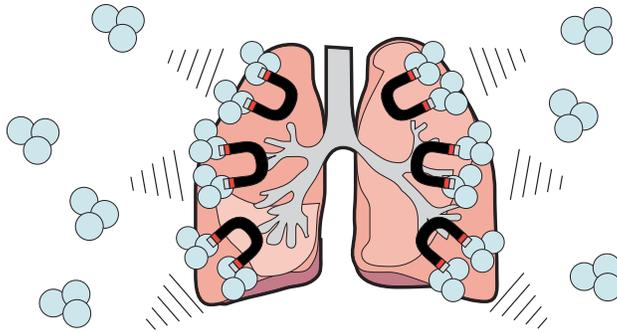
PEOs work like tiny "magnets" drawing oxygen into all cells, tissues, and vital organs.

Reduce oxygen by only 1/3 and a cell turns cancerous forever!

HEART



LUNGS



**Newsflash: JAMA 2006 ADMITS
Omega-3 is NOT a Cancer Preventive**

For decades we have all been convinced that fish oils, specifically, omega-3 fats, are good for us - they are supposed to protect us from heart disease, cancer and cognitive decline. A new comprehensive study seems to indicate that as far as the heart disease and cancer protection is concerned, this may all be a myth. *The Journal of the American Medical Association* (Vol. 295, No. 4, January 25, 2006) reports what I have been saying for years:

“A large body of literature spanning numerous cohorts **from many countries** and with different demographic characteristics **does not provide** evidence to suggest a significant association between omega-3 fatty acids and cancer incidence. **Dietary supplementation with omega-3 fatty acids are unlikely to prevent cancer.**” (emphasis added)

Life-Systems Engineering Science Analysis: For years we have been misled about the supposed anticancer effects of omega-3 fatty acids; in particular, fish oil and flax oil. This reports explained the significant dangers of overdosing on them.

To reach the truth, one had to review the 38 medical journal articles from 1966 to 2005 like this study's authors did; **then discount the majority of the studies because they were statistically incorrect** or improperly done. It is tragic that America and the rest of the world follows recommendations based on the results of improperly performed studies. Medical journals don't independently verify them. Don't expect the popular press to report the truth anytime soon.

Newsflash: *British Medical Journal* 2006 ADMITS
Omega-3 is NOT a Cancer or Heart-Disease Preventive

In the most comprehensive review to date, published in *British Medical Journal* (Hooper, Lee, et al., “Risks and benefits of omega-3 fats for mortality, cardiovascular disease, and cancer: systematic review,” prepublication reference: *BMJ*, doi:10.1136/bmj.38755.366331.2F (published 24 March 2006)), 96 trials, including **44 trials with supplements and 5 trials consisting of mainly ALA** (parent omega-3) from plants with the remainder being fish oil, confirms what we have been saying for years:

- “Neither RCT’s [randomized clinical trials] nor cohort studies [estimated omega-3 consumption and related clinical outcomes] suggested increased risk of cancer with higher intake of omega-3, **but clinically important harm could not be excluded.**”
- “We found **no evidence that omega-3 fats had an effect on the incidence of cancer and there was no inconsistency.**”
- “This **systematic review assessed** the health effects of using omega-3 fats (together or separately) on total mortality, **cardiovascular events, cancer,** and strokes in a **wide variety of participants** and found **no evidence of a clear benefit** of omega-3 fats on health.” (emphasis added)

□ ***Life-Systems Engineering Science Analysis***

This was an exceptionally outstanding analysis of existing studies. **The authors state omega-3s worthless alone in preventing cancer and heart disease in spite of the popular recommendations. Furthermore, the authors warn us of the potential danger of overdosing on omega-3 in the doses being recommended!**

This paper gave you the reason for these studies’ failures; the potential problems with fish oil supplementation and consumption is much more complex than the issue of carcinogenic content of the fish, i.e., mercury toxicity, alone. Current recommendations do not take into account human physiology and biochemistry.

