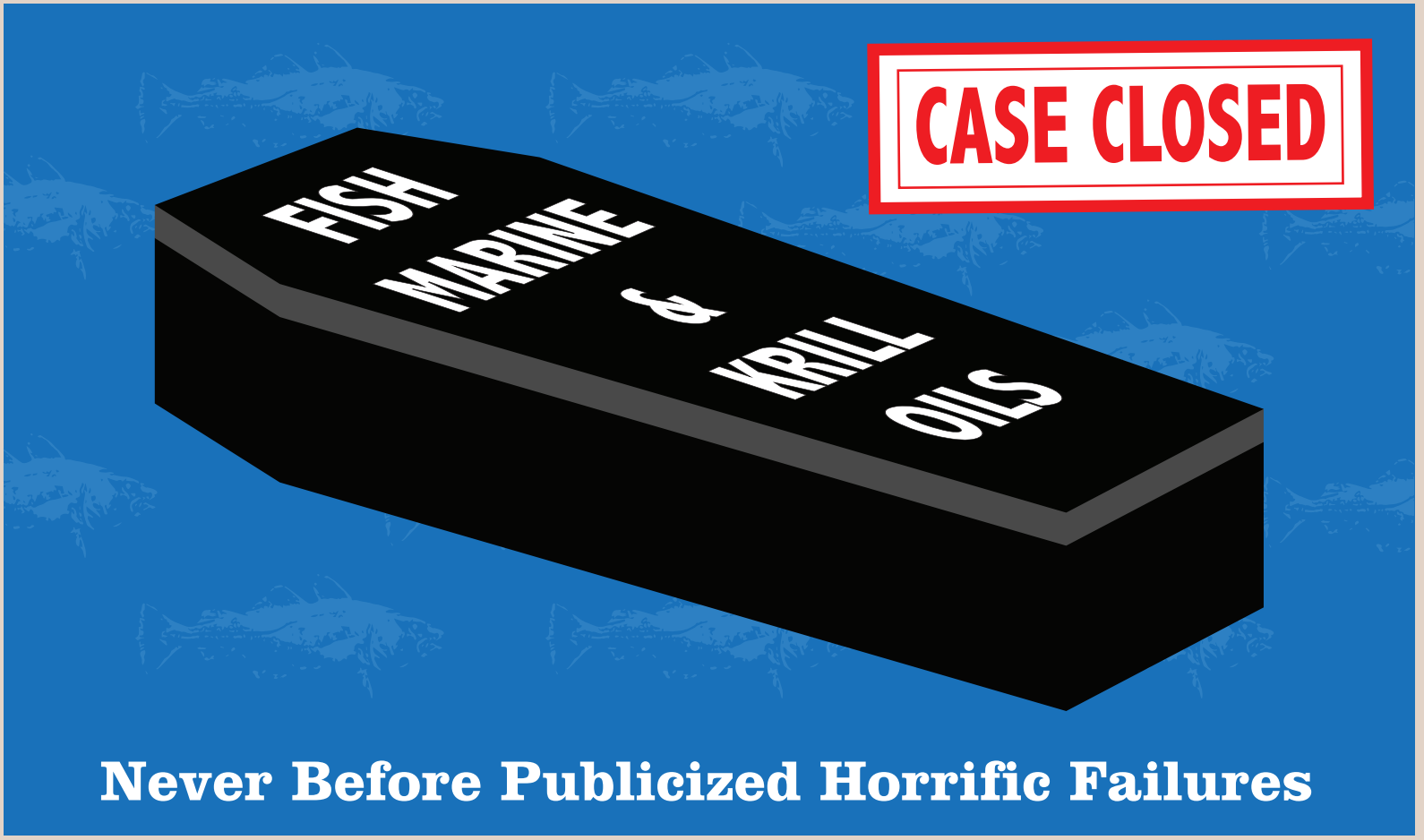
Prof. Brian Peskin, BSEE, M.I.T.*

The Most Compelling Case Against Fish / Krill / Marine Oils

*Brian Peskin earned his Bachelor of Science degree in Electrical Engineering from the Massachusetts Institute of Technology (M.I.T.). He 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 Brian's discoveries: "…**His nutritional discoveries and practical applications through *Life-Systems* Engineering are unprecedented**." Brian founded the field of *Life-Systems* Engineering Science. This field is defined as The New Science of Maximizing Desired Results by Working Cooperatively with the Natural Processes of Living Systems.



Excerpts from a Recent Presentation by Professor Peskin on the harm that Fish Oil has wrought on an unsuspecting public—not merely failing, but causing serious harm. Causing / Increasing: Cardiovascular Disease, Cancer, and Diabetes. These horrific results are under-publicized—physicians never see them. Peskin documents repeated Fish Oil / Marine oil Failures. Fortunately, Prof. Peskin does not only act as the "coroner" documenting the Fish Oil devastation, he then provides a simple, updated science-based solution.

Scientific Studies and Trials have shown that Fish Oil / Krill Oil / Marine Oil's EPA / DHA in the supraphysiologic doses typically prescribed is potentially harmful to humans. The following excerpts from presentations by Professor Peskin address Heart Disease, Skin Cancer, and Diabetes.

Fish Oil CAUSES Blood Clotting in Patients with Existing Heart Disease (Atherosclerosis)

(Published in America's most prestigious Medical Journal, *New England Journal of Medicine*)

There is a defined metabolic pathway Fish Oil / Krill / Marine oil suppresses…

- 1986: Fish Oil makes existing heart disease WORSE.[1]
- **"...In patients with atherosclerosis, prostacyclin biosynthesis fell by a mean [average] of 42% during the fish-oil period."**
- Fish oil suppresses PGI_2 synthesis.
- Prostacyclin (PGI_2) is the body's natural blood thinner and keeps platelets apart. The last thing a CVD patient needs is a reduction in this critical substance. CVD patients require more, NOT less PGI_2. Decreased PGI_2 significantly increases the risk and severity of a heart attack.

[1] 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.

Fish / Krill / Marine Oils Ruin the Mitochondria Energy Producers Causing Congestive Heart Failure[2,3]

- "**(18:2) CL_4 [Parent omega-6] rescues [fixes the damage] the major remodeling in the cardiolipin lipidome induced by long-term intake of DHA.**

- "…[I]t is **not the loss of linoleic acid alone** that drives the impairment in enzyme function since the Western diet alone did not impair enzyme activities. Instead, **it was the replacement of linoleic acid with DHA that promoted the reduction in activities**."

Note: Cardiolipin is in the inner membrane of the energy-producing mitochondria. The last thing anyone desires is this negative effect, especially athletes!

"Contrary to fish oil causing great harm to your cardiovascular system, plant-based essential EFAs COME TO THE RESCUE…."

Cod Liver Oil (A Type of Fish Oil) CAUSES Skin Cancer

Cod Liver Oil Significantly Increases Risk of Melanoma[4] (skin cancer)

"A significant risk was found in women who used cod liver oil supplement. [W]e found a strong increased risk for the women using cod liver oil, a

[2] "Mitochondrial dysfunction in heart failure and its therapeutic implications," Front. Cardiovasc. Med., 23 August 2022 Sec. Cardiovascular Therapeutics.
[3] Sullivan, E. Madison, et al., "Docosahexaenoic acid lowers cardiac mitochondrial enzyme activity by replacing linoleic acid in the phospholipidome" *Journal of Biological Chemistry*, **2018**, 293: 466-2018 Jan 12;293(2):466-483.
[4] Veirorod, MB, et al., "Diet and Risk of Cutaneous Malignant Melanoma: A Prospective Study of 50,757 Norwegian Men and Woman," Int, J. Cancer; 71,900-604 (1997).

supplement rich in omega-3 fatty acids (EPA and DHA)." [There was approximately a 3xs greater incidence of melanoma (the most dangerous type of skin cancer) in the cod liver oil users.]

"The increase is considered to be real and not due to chance.

"Mean time of follow-up was 12.4 years…." [Note: Sufficient time for an excellent analysis.]

"The strengths of the study are the high number of participants selected in an unbiased manner, the high participation and response rate, the prospective design with dietary data collected prior to the onset of cancer, and a complete follow-up with regard to the incidence of cancer, deaths, and emigration. The complete follow-up is secured by the procedure established by the Cancer Registry, ensuring that all physicians, hospital departments, and histopathology laboratories in Norway are obliged to report malignant diseases to the Registry: as many as 98% of the cases were histologically [microscopic tissue analysis] verified." [Note: This guarantees superb tracking and confirmation of cancer cases.]

Why these tragic outcomes?
Because the daily incorporation of EPA / DHA into the human brain is minuscule (*See* page 4) compared with dosages often prescribed by healthcare professionals.

Fish Oil CAUSES Elevated Blood Glucose and Blunts the Insulin Response

WARNING: Fish Oil is AWFUL for Diabetics! [Diabetes is America's #1 health epidemic][5]

- **1988, 1989, 2003**: Fish Oil **raises blood sugar levels and blunts insulin response.**

- **"…[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…

- "Another **important finding** of our investigation was that **consumption of a fish oil-enriched diet worsens glycemic tolerance**."

- "It is concluded that **fish oil reduced Rd [rate of glucose disappearance] glucose by 26% by reducing glucose metabolic clearance rate [INSULIN RESISTANCE] …" "[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." [**Insulin was only 60% effective**.]

[Note: Marine oil proponents often complain about higher dosages being required in the studies. Six (6) grams per day is a "high dose," along with the horrific results.]

[5] Stacpoole, P, Alig, A., Ammon, L., and Crockett, E., "Dose-Response Effects of Dietary Marine Oil on Carbohydrate and Lipid Metabolism in Normal Subjects and Patients With Hypertriglyceridemia," *Metabolism*, Vol. 38, No 10 (October), 1989, pages 946-986; "Adverse Metabolic Effect of Omega-3 Fatty Acids in Non-Insulin Dependent Diabetes Mellitus," Gluaber, H. et al., *Annals of Internal Medicine*, 1988; 108:663-668; "Fish-oil supplementation reduces stimulation of plasma glucose fluxes during exercise in untrained males," *British Medical Journal of Nutrition* (2003), 90, 777-786.

(Minuscule) Daily Incorporation of DHA in the Human Brain

NIH researchers determined the daily amount of DHA utilized in human brain tissue to be *a mere 3.8 mg ± 1.7 mg*/day [0.4 mg/day – 7.2 mg/day for 99% of the world's patients; 2 standard deviations].[6]

COMPARE this amount with the doses of fish oil recommended and prescribed [often 1,000mg - 4,000mg]. At 60% EPA / DHA, the average 1,000 mg marine oil capsule contains 600 mg EPA / DHA. [Note: EPA and DHA are interconvertible, going back and forth as the body needs; they must be counted together.]

About Cochrane

Many of you are familiar with The Cochrane Institute. A recent Cochrane Report calls into question bedrock beliefs about the wonders of Fish Oil. The full report, with analysis by Prof. Peskin in red, is provided.

Cochrane is a global independent network of researchers, professionals, patients, carers, and people interested in health. Cochrane produces reviews that study all of the best available evidence generated through research and make it easier to inform decisions about health. These are called systematic reviews. Cochrane is a not-for-profit organization with collaborators from more than 130 countries working together to produce credible, accessible health information that is free from commercial sponsorship and other conflicts of interest. Our work is recognized as representing an international gold standard for high-quality, trusted information.

[6] J. C. Umhau, W. Zhou, R. E. Carson, S. I. Rapoport, A. Polozova, J. Demar, et al., "Imaging Incorporation of Circulating Docosahexaenoic Acid [DHA] into the Human Brain Using Positron Emission Tomography," *Journal of Lipid Research,* Vol. 50, No. 7, **2009**, pp. 1259–1268.

Cochrane

Trusted evidence.
Informed decisions.
Better health.

Cochrane is the world's leading reviewer of clinical trials and effectiveness.

New Cochrane health evidence challenges belief that omega 3 supplements reduce risk of heart disease, stroke or death

(http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD003177.pub3/full)

New Evidence shows there is little or no effect of omega 3 supplements on our risk of experiencing heart disease, stroke, or death from any cause.

Omega 3 is a type of fat. Small amounts of omega 3 fats are essential for good health, and they can be found in the food that we eat. The main types of omega 3 fatty acids are; alphalinolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). ALA is normally found in fats from plant foods, such as nuts and seeds (walnuts and rapeseed are rich sources). EPA and DHA, collectively called long chain omega 3 fats, are naturally found in fatty fish, such as salmon and fish oils including cod liver oil.

Increased consumption of omega 3 fats is widely promoted globally because of a **common belief** that that it will protect against heart disease. There is more than one possible mechanism for how they might help prevent heart disease, including reducing blood pressure or reducing cholesterol. Omega 3 fats are readily available as over-the-counter supplements and they are widely bought and used.

A new Cochrane systematic review, published today in the Cochrane Library, combines the results of **seventy-nine randomized trials involving 112,059 people**. These studies assessed effects of consuming additional omega 3 fat, compared to usual or lower omega 3, on diseases of the heart and circulation. **Twenty-five studies were assessed as highly trustworthy because they were well-designed and conducted**.

The studies recruited men and women, some healthy and others with existing illnesses from North America, Europe, Australia and Asia. Participants were randomly assigned to increase their omega 3 fats or to maintain their usual intake of fat for at least a year. Most studies investigated the impact of giving a long-chain omega 3 supplement in a capsule form and compared it to a dummy pill. Only a few assessed whole fish intake. Most ALA trials added omega 3 fats to foods such as margarine and gave these enriched foods, or naturally ALA-rich foods such as walnuts, to people in the intervention groups, and usual (non-enriched) foods to other participants.

The Cochrane researchers **found that increasing long-chain omega 3 provides little if any benefit on most outcomes that they looked at.**

They found high certainty evidence that long-chain omega 3 fats had little or no meaningful effect on the risk of death from any cause. The risk of death from any cause was 8.8% in people who had increased their intake of omega 3 fats, compared with 9% in people in the control groups.

They also found that taking more long-chain omega 3 fats (including EPA and DHA), primarily through supplements probably makes little or no difference to risk of cardiovascular events, coronary heart deaths, coronary heart disease events, stroke or heart irregularities. Long-chain omega 3 fats probably did reduce some blood fats, triglycerides and HDL cholesterol. Reducing triglycerides is likely to be protective of heart diseases, but reducing HDL has the opposite effect. The researchers collected information on harms from the studies, but information on bleeding and blood clots was very limited.

The systematic review suggests that eating more ALA through food or supplements probably has little or no effect on cardiovascular deaths or deaths from any cause. However, eating more ALA probably reduces the risk of heart irregularities from 3.3 to 2.6%. The review team found that reductions in cardiovascular events with ALA were so small that about 1000 people would need to increase consumption of ALA for one of them to benefit. Similar results were found for cardiovascular death. They did not find enough data from the studies to be able to measure the risk of bleeding or blood clots from using ALA. Increasing long-chain omega 3 or ALA probably does not affect body weight or fatness.

Cochrane lead author, Dr. Lee Hooper from the University of East Anglia, UK said: **“We can be confident in the findings of this review which go against the popular belief that long-chain omega 3 supplements protect the heart. This large systematic review included information from many thousands of people over long periods. Despite all this information, we don’t see protective effects."**

The review provides exceedingly strong evidence that taking long-chain omega 3 (fish oil, EPA or DHA) supplements does not benefit heart health or reduce our risk of stroke or death from any cause. The most trustworthy studies consistently showed little or no effect of long-chain omega 3 fats on cardiovascular health. While oily fish is often "considered" a healthy food, remember that fish / marine oil RAISES resting blood glucose levels and BLUNTS the insulin response. Diabetic patients suffer 2xs - 4xs more cardiovascular disease than non-diabetics.

.About Cochrane

Cochrane is a global independent network of researchers, professionals, patients, carers and people interested in health.

Cochrane produces reviews which study all of the best available evidence generated through research and make it easier to inform decisions about health. These are called systematic reviews.

Cochrane is a not-for profit organization with collaborators from more than 130 countries working together to produce credible, accessible health information that is free from commercial sponsorship and other conflicts of interest. Our work is recognized as representing an international gold standard for high quality, trusted information.

Follow us on twitter @cochranecollab (https://twitter.com/cochranecollab?lang=en)

Wednesday, July 18, 2018

The obvious solution to this well-documented crisis is to transition from Fish Oil to the Next Evolution in EFA Science — Parent Essential Oils (PEOs)

EFA = **E**ssential **F**atty **A**cid = **P**arent **E**ssential **O**il [PEO]
"EFA" is often used INCORRECTLY

- Unprocessed / fully functional Parent omega-6 (LA) – essential
- Unprocessed / fully functional Parent omega-3 (ALA) – essential
- DHA from fish oil is NOT an EFA – NOT essential – the body makes AS NEEDED via the delta-6 desaturase metabolic pathway (D6D)
- EPA from fish oil is NOT an EFA – NOT essential – body makes AS NEEDED via the delta-6 desaturase metabolic pathway (D6D)

Using PEOs daily benefits:

- A better cardiovascular system for improved heart health[1]
- Faster healing of any injury[2,3]
- Improved blood sugar levels = Reduced Cravings — especially reducing cravings for sweets
- Naturally sustained energy throughout the day from increased cellular oxygenation[2]
- Anti-aging / Extended lifespan[3]

---

[1] Anton SD, et al., "Differential effects of adulterated versus unadulterated forms of linoleic acid on cardiovascular health," *J Integr Med*, 2013; 11(1): 2–10.
[2] Campbell, IM, et al., "Abnormal fatty acid composition and impaired oxygen supply…, *Pediatrics*, 57:480-486, 1976; Halbleib, K., et al., "Activation of the Unfolded Protein Response by Lipid Bilayer Stress," *Molecular Cell*, Vol. 67, Issue 4, pp 673-684.e8, August 17, 2017.
[3] O'Rourke, Eyleen, J., et al., *Genes & Development* (2013). February 7, 2013, http:// genesdev.cshlp.org/content/27/4/429.

- Athletes and sports enthusiasts gaining increased endurance, less pain, and faster recuperation[3]

- Better, deeper sleep

100 TRILLION Cells Required PEOs LA & ALA…

Half of every cell's membrane is lipid—containing 25% - 33% PEOs.[4] All the problems identified with Fish / Krill / Marine Oil do not exist when supplementing with PEOs because the body needs daily PEO supplementation it can't produce — they MUST come from food —NOT derivatives like EPA and DHA that the body easily makes "as needed."[5] Incorporating a daily PEO supplementation regimen is essential for good health.

The Fish Oil Experiment conducted over the last 30+ years has yielded valuable information. We now know Fish / Krill / Marine Oil is not the Solution. However, the science-based Solution is now easily within our grasp. It is the truly Essential Fatty Acids in the form of unadulterated / fully functional Parent Omega-6, Linoleic Acid (LA), and Parent Omega-3, Alpha Linoleic Acid (ALA).

CASE CLOSED

[4] Alberts, B., et al., **Molecular Biology of the Cell** (3rd edition), Garland Science,1994, p 428; Murray, Robert K, et al., ***Harper's Illustrated Biochemistry*** (26th edition), McGraw-Hill, New York, 2003: p 97; Guyton, Arthur C & Hall, John E, ***Textbook of Medical Physiology*** (9th ed.), W.B. Saunders Co. 1996: 16, pp 861–862.

[5] "Flaxseed oil and fish-oil capsule consumption alters human red blood cell n–3 fatty acid composition: a multiple-dosing trial comparing 2 sources of n–3 fatty acid," *American Journal of Clinical Nutrition*, Vol. 88, No. 3, pp 801-809, September **2008**; Hussein, Nahed, et al., "Long-chain conversion of linoleic acid and alpha-linolenic acid in response to marked changes in their dietary intake in men," *Journal of Lipid Research*, Volume 46, **2005**, pp 269-280.