Smart Life Forum

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NEXT MEETING: Thursday, March 17, 2011, at 7pm

Brian Peskin, BSc

on

The Real Science behind Essential Fatty Acids, Cancer, and Heart Disease

Short Presentation: Beverly Rubik, Ph.D. presents "This is your blood on processed foods"

Live blood analysis, which examines the blood at high power under a dark-field microscope, offers a glimpse into the biological terrain or "soil" of the body, considered to be at the root of one's health. Photographs and short videos of blood magnified 10,000 times will be shown and explained. Key factors and their indications will be discussed: clotting factors, red blood cell stickiness and clumping, and white blood cell movement. In particular, the blood of those eating an organic conventional diet with some processed foods will be compared to the blood of those eating the traditional diet of 100+ years ago.

Beverly Rubik earned her Ph.D. in biophysics in 1979 at the University of California at Berkeley. She is internationally renowned for her pioneering research in frontier science and medicine, especially in energy medicine. She has published over 100 papers and 2 books. Dr. Rubik presently serves on the editorial boards of Journal of Alternative & Complementary Medicine and Integrative Medicine Insights. She is founder and president of Institute for Frontier Science, a nonprofit laboratory in Oakland, CA; core professor, doctoral programs, Interdisciplinary Studies at Union Institute & University in Cincinnati, OH: adjunct professor, Integrative Health Studies, California Inst of Integral Studies, San Francisco, CA; and occasionally teaches at Saybrook University in the College of Mind-Body Medicine, also in San Francisco. She maintains a small holistic health practice in Emeryville, California.

Foundation for Mind Being Research (http://FMBR.org) upcoming meetings:

March 25: **Dr. Peter A. Sturrock**, Emeritus Prof., Applied Physics, Stanford Univ.: "The world of science and science of the world". April 22: **Jean Millay, PhD**: "A 5th Fundamental Force in the Universe".

Presentation Location:

Cubberley Community Ctr. Room H1 4000 Middlefield Rd. Palo Alto, California

For those who cannot attend we will have live streaming at http://SmartLifeForum.org/live

In This Issue

Short Presentation information page 1

Meet Brian Peskin, main speaker pages 2-4

Main Presentation:

Brian Peskin BSc: "The Real Science behind Essential Fatty Acids, Cancer, and Heart disease"

..... pages 4-10

Meet Brian Peskin BSc

(for more information, visit <u>BrianPeskin.com</u>)

Brian Peskin is the Chief Research Scientist of the Cambridge International Institute for Medical Science in Houston, TX. Brian Peskin is a worldleading physiologic Essential Fatty Acid ("EFA") specialist. Peskin earned his B.S.E.E. degree (electrical engineering) at Massachusetts Institute of Technology (M.I.T.) in 1979. In 1995 he founded the field of Life-Systems Engineering Science — a new science of maximizing desired results by working cooperatively with the natural processes of living systems.



Peskin was appointed Adjunct Professor of Clinical Pharmacy in the Department of Pharmacy Practice at Texas Southern University, College of Pharmacy and Health Sciences (1998-1999). The former President of the University, Dr. James Douglass, (President—1998) stated: "We are honored to have Professor Peskin as a member of the faculty. His nutritional discoveries and practical applications through Life-Systems Engineering are unprecedented."

Introduction: Science, not Opinion

"Science, not opinion — Studies <u>Aren't</u> Science" has become Prof. Peskin's trademark. Utilizing engineering principles allows Prof. Peskin to distinguish between direct cause/effect relationships as opposed to mere "associations" or correlation. He began research in nutrition in 1993 at The Houston Academy of Medicine — Texas Medical Center Library. This science-based medical research has led to his being recognized as a world-leading pioneer in transforming existing Nobel Prize-winning research into practical solutions for quantum nutrition and optimal health; in particular, in the field of essential fatty acids (EFAs). While advancing the scientific understanding of the role of EFAs in the body's metabolic pathways, he has concurrently developed a means for alleviating cancer's prime cause, as postulated by Nobel Prize-winner Otto Warburg, M.D.,

Future Speakers:

April 21:
"Hypothyroidism
Type 2",
by Mark Starr MD

May 19: "Energy Solutions", by Richard Gordon

About Smart Life Forum

Smart Life Forum, Inc. is a 501(c)(3) California nonprofit corporation whose primary mission is to provide credible health education to the public with an emphasis on optimal wellness, antiaging medicine, and longevity.

Annual memberships in Smart Life Forum, Inc. and charitable donations are tax deductible to the extent allowed by law. For information on how to join or make a donation, please visit our website:

www.smartlifeforum.org.

For questions, please contact Mike Korek at (650) 941-3058.

Ph.D., — proven by American medical researchers in the 1950s — culminating in an amazing fundamental cancer / heart disease connection, whereby the same physiologic-based solution solves both conditions concurrently. This information will lead to a new understanding of how to treat and prevent both cancer and heart disease.

The basis for Peskin's current work, relying strictly on stateof-the-art science — in particular, physiology — can be found in his book, The Hidden Story of Cancer. A small number of seminal medical journal articles — both general and peer-reviewed concentrating exclusively on cancer and cardiovascular disease include: "EFAs, Oxygenation, and Cancer Prevention: A New Solution," Townsend Letter For Physicians, August / September 2007, pages 81-91; "Vytorin Failure Explained – A New View of LDL," with David Sim, MD, Townsend Letter for Physicians, June 2008, pages 101-112; "Breakthrough in Clinical Cardiology: In-Office assessment with Pulse Wave Velocity (PWV) and Digital Pulse Analysis (DPA)," with Robert Jay Rowen, MD, Townsend Letter for Physicians, May 2010, pages 80-86; "The Failure of Vytorin and Statins to Improve Cardiovascular Health: Bad Cholesterol or Bad Theory?," with David Sim, M.D. and Marissa J. Carter, Ph.D., Journal of American Physicians and Surgeons, Volume 13, Number 3, Fall 2008, pages 82-87; "Chronic cellular hypoxia as the prime cause of cancer: What is the de-oxygenating role of adulterated and improper ratios of polyunsaturated fatty acids when incorporated into cell membranes?," with Marissa J. Carter, PhD, Medical Hypotheses (2008) 70, 298-304; and "Warning: Fish oil contains no true EFAs. Physicians may be unknowingly prescribing the wrong substance to patients causing great harm—PEOs solve this problem," Explore! Volume 19, Number 6, 2010, pages 35-43.

Physiology First

Uniquely, his research has concentrated on EFAs with the prime focus on physiology followed by biochemistry. Most researchers in the field focus solely on biochemistry with little or no physiology follow-up. This oversight has caused dire consequences. Therefore, he was compelled to coin a new phrase termed Parent Essential Oils (PEOs®) because the term "Essential Fatty Acid" is being misused so frequently; i.e., calling longer chain derivatives like EPA and DHA, essential fatty acids, improperly.

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Clinical physicians throughout the world have validated Prof. Peskin's PEO recommendations. In the most exciting development to date, Peskin's theoretical conclusions were recently validated in a physiological experiment by precise instrumentation capable of measuring arterial compliance. This experiment (I.O.W.A.) provided the first conclusive clinical proof that plant-based PEOs clearly surpassed derivative-based (DHA/EPA) fish and marine-based oils that the vast majority of physicians prescribe and patients use on a daily basis. With unprecedented extremely low NNTs ("Number Needed to Treat") less than 3, there is solid, irrefutable clinical validation of Prof. Peskin's theoretical discoveries. The NNT is the number of patients who need to be treated to prevent one additional bad outcome (i.e. the number of patients that need to be treated over some period of time, for one patient to benefit, compared with a control in a clinical trial. NNT of 1 is perfect – everyone treated responds and benefits. NNT of 100 is considered marginal, only one in 100 patients benefits, and other patients may experience negative side effects. Peskin Pharmaceuticals has filed a patent application on the medicament that embodies this development.

MAIN PRESENTATION

The Real Science behind Essential Fatty Acids, Cancer, and Heart Disease -- An Analysis of the Science behind both the Failure of Fish Oil, and the Success of Plant Based Oils (PEOs) using Photoplethysmography (IOWA Experiment)

By Brian Peskin, BSc

What is a Parent Essential Oil (PEO) and what are Peskin Protocol PEOs?

There are only two essential fatty acids, LA (parent omega-6) and ALA (parent omega-3). They MUST come from food. To work properly, they MUST NOT be heated, and must be chemically *un*processed, organically raised, and processed to guarantee full physiologic functionality. Fast food restaurants, commercial supermarket foods, baked goods, frozen foods, and even fine restaurants use *adulterated*, *non-functional* EFAs that can no longer be termed a fully functional parent essential oil.

All other EFA series polyunsaturated fatty acids (PUFA) excluding ALA and LA are correctly termed EFA "derivatives;" they are not EFAs. This includes the most common derivatives such as AA, DHA, EPA, etc. Most physicians and patients do not understand that EFA derivatives are made in the body, from the parent EFAs, on an "as needed" basis in extremely limited quantities. Consumption of derivatives from food is therefore not necessary, yet fish oil PUFA consists entirely of DHA and EPA in excessive pharmacological OVERDOSES, higher than the body would ever produce on its own, thereby overdosing the patient and often causing significant damage (such as raised blood sugar levels and a blunted insulin response contributing to, and accelerating chronic diabetes) instead of health. (This will be detailed in the presentation.)

PEOs® - "Parent Essential Oils" - A New Approach

Few, if any, physicians ask to see the "normal standard" physiologic DHA/EPA amounts in tissue and plasma compared to the parent PEO amounts in tissue and plasma. When they discover the truth of how very little DHA and EPA there should naturally be in relation to how much they've been administering from marine-based sources, physicians are shocked and dismayed that they may have been (unknowingly) harming their patients, and wish to correct their recommendations. Peskin Protocol PEOs® are a (patent-pending) unique plant-based proprietary formulation and must be obtained organically from mixtures of seed oils to compose a precise parent omega-6/-3 ratio.

How and why do PEOs work when omega-3 derivative fish oil doesn't work?

In well-controlled experiments (not mere "studies"), fish oil fails to prevent or reverse cardiovascular disease and cancer. Why does fish oil fail? Fish oil contains supra-physiologic amounts of both DHA and EPA. Physiology is the prime science utilized to determine the correct tissue and plasma amounts of parent omega-6, parent omega-3, and their derivatives. Once these values are known, biochemistry may then be utilized. Fortunately, these physiologic values have already been determined, making it immediately obvious why fish oil can't possibly work as claimed, because, aside from the brain and nervous system —just 3% of total bodyweight — the body has little use for DHA/EPA. The prime issue that everyone overlooks is that the body can easily support the brain and nervous system with adequate parent PEOs without the risk of overdosing on EPA/DHA. There is a maximum of <2% natural conversion of ALA to DHA and less than a mere 0.3% into EPA. Most physicians are surprised to learn that that even babies adequately convert PEOs into derivatives. Furthermore, unlike dogma based on poor experiments decades earlier (that did not include residence times), there are no impairments in the general population regarding delta-6 and delta-5 desaturase inefficiency as we have been told; physicians have been drastically misled, leading to supra-physiologic overdosing of their patients. Therefore, parent oils are much more significant than derivatives, and no one until now has focused on them. The tables below exemplify key tissue and plasma physiology clearly detailing the significance of parent omega-6.

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 (body fat)	15-35	22	1		
Muscles	50	6.5	1		

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

When calculated, there is an 11:1 parent omega-6/-3 ratio in tissue. With all the focus on omega-3 fatty acids today, it is significant to note that even the free fatty acids in human plasma ordinarily are composed of about 15% LA (linoleic acid, parent omega-6) and just 1% of ALA (alpha linolenic acid, parent omega-3), a 15:1 ratio with just 2% maximum DHA (docosahexaenoic acid) levels. Cholesterol esters and plasma phospholipids have ratios of 100:1 in favor of parent omega-6. Physicians need to understand these important and critical facts before prescribing fish oil supplementation.

Percentages of Linoleic Acid (LA) & Alpha Linolenic Acid (ALA) in Plasma and Classes of Lipids					
Fatty Acid	Plasma % (Unesterified)	Plasma % Triglycerides	Plasma % Phospholipids	Plasma % Cholesterol Esters	
LA (parent omega-6)	17	19.5	23	50	
ALA (parent omega-3)	2	1.1	0.2	0.5	
Parent omega-6: Parent omega-3 Ratio	8.5:1	17.5:1	115:1	100:1	

Amounts of EPA/DHA in Fish Oil

Many well-known brands of fish oil contain PUFA (Poly-unsaturated fatty acids) in the range of 300 mg of EPA and 200 mg of DHA, with insignificant amounts of other omega-3 derivatives. Recommendations are often at least 2 capsules each day for a total of approximately 600 mg EPA and 400 mg DHA daily. In contrast, three grams of PEOs in the proper physiologic ratio of 1:1-2.5:1(LA:ALA) per day is the general prophylactic dosage. Therefore the amount of parent omega-3 (ALA) is approximately 1,000 mg. Given that 2% maximum of this would be converted into the omega-3 derivative DHA, that would mean the body would naturally convert only 20 mg to DHA. Contrast this to the fish oil dosage of 400 mg, i.e., a DHA pharmacologic overdose by a factor of 20! EPA overdose is even worse, as only 0.26% of ALA is normally converted. Of the 1,000 mg of ALA in Peskin Protocol PEOs[®], just 2.6 mg is converted, whereas the fish oil supplement provides 600 mg or an astronomical 200-fold pharmacological overdose of EPA! Krill oil has less of the overdose amounts (approximately 130 mg EPA and 70 mg DHA per capsule) but it is still quite a pharmacological overdose, higher than the body would or could produce on its own. Recommending these pharmacological overdoses without compensating PEOs or omega-6 based derivatives is even worse, because of the gross disparity between the omega-6 and omega-3 series derivatives. As the world's leading medical journals make crystal clear, when "the dots are connected," fish oil is not beneficial and can be quite harmful to most patients, and the IOWA experiment proves its consistent failure to increase arterial compliance.

A New Approach: Photoplethysmography (PTG) / Digital Pulse Analysis (DPA) — A Significant Measure of the Cardiovascular System

Photoplethysmography (PTG) is a noninvasive method to measure arterial compliance (flexibility). Computerized processing of this waveform by digital pulse analysis (DPA) affords clinicians a superb

diagnostic tool. *Output is instrument-based with a direct reading; no interpretation needed* — *similar to the output of a weight*—*measuring scale.* "Hardening of the arteries" is a prime cause of heart disease. Therefore, reversing or eliminating hardening of the arteries leads to significantly decreased patient risk of heart disease. The device is simple. The patient's finger is positioned in a plastic clip. A soft laser light is emitted into the fingernail, much like an oxygen analysis with the common pulse oximeter. The waveform it reads is a <u>highly accurate</u> measure of the elasticity (or stiffness) of both the large (aorta) and small arteries of the cardiovascular system. Arterial rigidity is a direct reflection of arterial damage and arteriosclerosis. Computer software analysis allows precise computation of the speed and volumes of the blood along with the associated waveforms over time. Mathematically, second derivatives (a tool of calculus) of the PTG waveforms are then often taken to produce another waveform termed an accelerated plethysmograph (APG). This output is then compared with outputs of known population values so it is easy to provide a "biological age" of the arteries based on already scanned populations of different ages to determine patient cardiovascular "biological age."

A Direct Physiologic Measure — Surrogates Not Needed

Today's state of the art science allows a direct physiologic measurement to show treatment effectiveness. Unlike relying on mere outdated "surrogates" (i.e. LDL-cholesterol measurement or other "associated" markers) that often do not directly correlate with the physiologic item of interest — supplementation with PEOs resulted in <u>substantial improvement in a direct physiologic measure</u>, arterial flexibility — **i.e.**, a younger physiologic cardiovascular profile.

Relative Risk = Absolute Deception: Why "Studies" are misleading: The Reason for so Many Study Reversals

Unlike most medical researchers, who merely rely on "studies" often publishing results contrary to established physiology and biochemistry, that are later reversed, Peskin follows the science, and experiments are utilized to confirm the theoretical predictions; not run contrary to them as in fish oil supplementation. *In over 15 years he has never had a recommendation reversed.* There are simply too many tragic patient outcomes when humans are given fish oil; and most are predictable based on physiology, if anyone would care to look.

Finance Masquerades as Science....The Ultimate Tragedy

To compound the problem, finance often masquerades as science. Nutritional companies and pharmaceutical companies often mislead both physicians and their patients while chasing profits. Instead of measuring the outcome directly, such as fewer heart attacks or less cancer, "surrogates" (a substitute measure assumed to be associated — violating the requirement of a clear cause/effect relationship) are used. Without being overly cynical, this is done because the latest "wonder" drug has an effect on the surrogate and little or no beneficial effect on the problem at hand. Consequently, the drug company—led studies focus on their drug's ability to alter the surrogate. For example, cholesterol-lowering drugs are studied instead of actual decreased heart attacks; because, while drug companies have done a wonderful job of discovering cholesterol-lowering drugs, this has unfortunately not translated into fewer heart attacks. So simple LDL-cholesterol lowering is sadly used as the "endpoint" measure of success. Also, "relative risk" and "odds ratios" instead of "absolute risk" is typically used, again misleading physicians. The Stanford Prevention Research Center's newly appointed director, John Ioannidis, MD, DSc, wrote an incredible paper about why most research findings are FALSE, and they continue to fuel fish oil mania.

Physicians Misled: NNT (Number Needed to Treat) is key, not "endpoint" or "relative risk" statistics

The number needed to treat (NNT) is an epidemiological measure used in assessing the effectiveness of a health-care intervention. The NNT is the number of patients who need to be treated to prevent one additional bad outcome (i.e. the number of patients that need to be treated for one to benefit compared with a control in a clinical trial). It is defined as the inverse of the absolute risk reduction. The ideal NNT is 1, where everyone improves with treatment and no one improves with control. The higher the NNT, the less effective is the treatment.

Many physicians are misled because they have no idea the pharmaceutical companies are allowed to "massage" statistics. Pharmaceutical companies shockingly, yet legally, get to remove the sample size. Again, when is one patient event *in a million* (drug) *compared to* two patient events *in a million* (placebo) equal to 50% *improvement* instead of the statistically correct 1 in 1,000,000 or 0.0001%? Answer: with the fanciful "pharmaceutical endpoint method," also termed "relative risk," as Professor of Medicine Stanton Glatz so aptly put in his book. (Glantz SA. *Primer of Biostatistics. 5th ed.* New York, NY: McGraw-Hill, 2002, 149-156.) This deception will be covered in detail in the presentation.

IOWA Experiment:

I.O.W.A. (Investigating Oils With Respect to Arterial Flexibility) found significant differences in biological age compared to physical age.

Significant differences (p=0.0001) with an experimental error of the mean +- 5 years. Subjects' cardiovascular biological age (average of) **11.1 years lower** than their actual physical age.

PEOs versus fish oil

The effects of the PEOs were evaluated in subjects who ceased fish oil supplementation, replacing it with a daily dosage of 2,900 mg PEO formulation and <u>no changes to regular diet</u>. The effects of the PEO formulation were measured in 15 subjects: seven (7) male subjects and eight (8) female subjects aged 46-74, with a *mean age of 60-years-old*, utilizing the formulation an average duration of 3.5 months. Vascular assessment was made via Photoplethysmography measuring arterial flexibility.

Overall Improvement

Thirteen (13) of the fifteen (15) subjects improved with the PEOs for an 87% effectiveness rating and an NNT of 15 / 13 = 1.2. Improvement was 11.1 years as measured by standard population samples.

On average, the PEO formulation quickly improved the cardiovascular system's arterial flexibility by over 11 years (younger) in the subjects. Thirteen (13) subjects improved; one (1) subject remained the same, one (1) subject worsened by 1 year. Results were highly statistically significant (p=0.0001) — 99.99% accuracy.

Persons with "high cholesterol"

Of the seven (7) subjects previously diagnosed with high cholesterol levels, replacing fish oil supplements with the PEO formulation instead, six (6) subjects improved their cardiovascular biological ages. This

translates to an NNT of 7 / 6 = 1.2 for improvement in cardiovascular system compliance in subjects with high cholesterol manifestations of heart disease.

Person with both diabetes and "high cholesterol"

One (1) subject having both diabetes and high cholesterol diagnosis also improved.

Comparison to Statins

As a comparative example, statins, as reported by the pharmaceutical industry, have NNTs > 80 in preventing a cardiovascular event.

This means a minimum of 80 patients would need to be treated to see a single (1) positive outcome.

In contrast, the PEOs improve a <u>much more direct physiologic measure</u>, i.e., arterial flexibility, in a profound way resulting in a **remarkable 1.2 NNT**.

Statin user improvements

Two patients are taking statins and both subjects improved their biological age by twenty years for an **NNT = 1 in those patients taking statins**. NNTs of less than 50 are considered excellent. Even with the small number of subjects in this sub-group taken into account, the results of this trial are exceptional and not due to chance.

These results clearly show that the PEO formulation is superior to fish oil supplements in preventing and reversing cardiovascular disease. In fact, as this experiment definitely shows, fish oil WORSENS arterial compliance because the improvement is greater with fish oil taken than nothing!

Statistics (Highly Significant) — 99.99% Accuracy

Analysis by Alex Kiss, Ph.D. (statistics) — August 20, 2010

Mean of BIO_AGE_W_FO variable	Mean of BIO_AGE_PEO variable	
Analysis Variable: BIO_AGE_W_FO	Analysis Variable: BIO_AGE_PEO	
Mean Std Dev	Mean Std Dev	
49.20 11.33	38.07 8.12	

Paired t-test run: mean change (FO - PEO) was found to be 11.1 (sd=8.4). This was statistically significant (p=0.0001)

Analysis Variable: diff

 Mean
 Std Dev
 t value
 Pr > |t|

 11.113
 8.37
 5.15
 0.0001

Suggested Reading Prior to Attending Presentation:

Primer of the science: http://brianpeskin.com/BP.com/about/PeskinPrimer.pdf

Explore! Fish Oil Failure article:

http://brianpeskin.com/BP.com/publications/Dec.2010-Explore19-6.pdf

Stanford Prevention Research Center: http://prevention.stanford.edu

Other articles on cancer and cardiovascular disease written by Prof. Peskin include:

- 1. "EFAs, Oxygenation, and Cancer Prevention: A New Solution," *Townsend Letter For Physicians*, August / September 2007, pages 81-91.
- 2. "Vytorin Failure Explained A New View of LDL," with David Sim, MD, *Townsend Letter for Physicians*, June 2008, pages 101-112.
- 3. "Breakthrough in Clinical Cardiology: In-Office assessment with Pulse Wave Velocity (PWV) and Digital Pulse Analysis (DPA)," with Robert Jay Rowen, MD, Townsend Letter for Physicians, May 2010, pages 80-86.
- 4. "The Failure of Vytorin and Statins to Improve Cardiovascular Health: Bad Cholesterol or Bad Theory?," with David Sim, M.D. and Marissa J. Carter, Ph.D., *Journal of American Physicians and Surgeons*, Volume 13, Number 3, Fall 2008, pages 82-87.
- 5. "Chronic cellular hypoxia as the prime cause of cancer: What is the de-oxygenating role of adulterated and improper ratios of polyunsaturated fatty acids when incorporated into cell membranes?," with Marissa J. Carter, PhD, *Medical Hypotheses* (2008) 70, 298–304.
- 6. "Warning: Fish oil contains no true EFAs—Physicians may be unknowingly prescribing the wrong substance to patients causing great harm—PEOs solve this problem," Explore! Volume 19, Number 6, 2010, pages 35-43.