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THE MEMBRANE STABILIZING DIET

by Ed and Patricia Kane, PK Protocol

Our life blood is in the sources of fatty acids we ingest to nourish our bodies. The media circus makes it difficult to separate the factoidal wheat from the chaff.

The internet would have us believe that fish oil is the answer to all of life's aches, pains and decrepitudes, and that omega-6 (n-6) fatty acids, especially the linoleic acid that is common to seed oils, is the scourge of our well-being.

Nothing could be further from the truth.

The quality of our life is riveted in the lipids we ingest as they pivotal
in the health of the cell membrane and as we have come to understand ...
the membrane is everything in optimizing our state of health.

Here Are the Facts in a Nutshell:

All essential fatty acids are just that – essential.

Removing an essential fatty acid from the diet will likely lead to serious medical conditions. The omega-6 fats in the food supply include linoleic, gamma-linolenic and arachidonic acids. Although health enthusiasts now agree that pasture-raised butter and free-range eggs are healthy, they draw the line at seed oils, labeling linoleic acid as especially detrimental to health.

However, these purveyors of misinformation have no qualms about pushing the consumption of nuts, which are heavy in monounsaturated fats and shallow in the polyunsaturated omega-6s. The judgment that n-6 fats are unhealthy arose from their capacity to drive inflammation by converting to arachidonic acid (AA), a physiological process actually lacking in efficiency and reliable outcome.

Nonetheless, indisputable is that linoleic acid (LA) is a primary essential fatty acid vital to the mitochondria. Do you see the problem? No one checked the medical facts. Linoleic acid is crucial to health. To settle the dispute, not one medical paper, not even from the most respected lipid researchers, has found LA to be a threat to health at all.

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So What Is Bad for the Body?

Toxic fatty acids from heated, overheated and continuously-heated oils are harmful.

The greater is their unsaturation, the greater is their toxicity.

While there is no doubt that trans-fats are vile, toxic fatty acids are worse. What they exact upon the brain and body is frightening.

Have you ever noticed a health food store chains with prepared food cook in canola oil? They actually fry chicken in canola oil! Canola is a genetically-modified, polyunsaturated oil that creates dangerous aldehydes when heated to cooking temperatures. These formaldehyde cousins eventually embed themselves into our lipid membranes, causing inflammatory responses and a menagerie of diverse problems.

Is olive oil any better? A monounsaturated omega-9, it contains oleic acid, a fatty acid whose health benefits are heralded, but whose associated polyphenols display more salubrity by modulating the oxidation of blood lipids, this according to a 2011 report by the European Food Safety Authority.

A monumental concern, made public recently, is that olive oil is being diluted as much as 70% with sunflower, canola, walnut and other polyunsaturated fatty acids (PUFAs).

These relatively tasteless adulterants contribute to aldehyde toxicity when heated. Even at two dollars an ounce, first-cold-pressed extra virgin olive oil may be a contaminated fraud. At its finest, (extra virgin) olive oil serves better as an enhancement than as a cooking oil, unless its temperature is carefully monitored, lest its phenolic promises be compromised.

It is prudent to avoid cooking with any monounsaturated (avocado, olive) and especially with polyunsaturated oils (grape seed, sesame, canola, safflower, sunflower, corn) due to their PUFA content. It is advisable to cook at moderate temperatures, using coconut oil, animal fats, or butter/ghee. Get back to basics; guess what our grandmothers used?

To our disappointment, a majority of polyunsaturated fats have become hybridized without our knowledge, leaving us with altered products that fail to deliver the health benefits we once enjoyed. What is now high-oleic sunflower or safflower oil is not the same healthful fat we used to know. To compound matters, the food supply has become a nationwide, uncontrolled experiment in culinary and dietary manipulation, offering the spoils to the victorious industry and the spoiled results to the victims.

Salad dressings, mayonnaises and assorted fat-related condiments have suffered a similar fate. If people are destroyed for lack of knowledge, it is doubly so in the realm of fatty acids. To render false information is lying, but to hide information is also a lie. In this regard, we have been deprived of

knowing the details of omega-6 pathways, having been told only that omega-6s present with inflammatory compounds as end-products.

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First, let's be aware that pre-formed AA, provided by meat and its fat, and by butter and cream leads to the essential series 2 prostaglandins. Albeit pro-inflammatory, these prostaglandins are the lead eicosanoids in the body and are crucial to maintenance of our health. For example, without them there would be no healing of a cut, since white blood cells and platelets would not be beckoned to the scene.

Linoleic acid, the mother n-6 fatty acid, is the premier support of cardiolipin and the mitochondria. LA is converted by enzyme activity to gamma-linolenic acid (GLA), dihomo-gamma linolenic acid (DGLA) and eventually to the anti-inflammatory series 1 prostaglandins.

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The second tidbit to which we need attend is the potentially virulent, toxic and inflammatory character of oils exposed to elevated temperatures. The problem does not come from linoleic acid or any other n-6 fat! We have seen microscope images of cell membranes that have been assaulted and battered by these debased and corrupted lipid entities, particularly in the membranes of individuals suffering autoimmune and neurological diseases, where aberrant, renegade lipids have become attached to their DNA, effectively altering gene expression from epigenetic insult.

Removal of aldehyde-ridden supermarket oils from the diet is mandatory if optimal health is our goal. Though not top heavy with PUFAs, olive oil is likewise categorized.

-3-

Third in the list we find that essential fatty acids (EFAs) appear in echelons of physiological activity. The lower-echelon fats include linoleic acid (from sunflower seeds, high-linoleic safflower oil and high-linoleic acid sunflower oil) along the n-6 branch, and alpha-linolenic acid (from flaxseed oil, chia seeds and walnuts) along the n-3 branch. The higher-order fatty acids include arachidonic acid (from cream, egg yolks, cheeses and meat) along the n-6 branch, and EPA / DHA (from marine sources) along the n-3 branch.

-4-

The fourth item of interest tells us that monounsaturated fatty acids (MUFAs) and saturated fatty acids (SFAs) are not essential, meaning that the body can make them from the diet. These fats offer us only calories and gustatory satiety; they are not bioactive lipids. Avocados, olive oil and tree nuts provide MUFAs, while coconut oil and coconut butter, cocoa butter, meat fats, and dairy butter give us SFAs.

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Alterations to the food supply explain the fifth entry. Where sunflower, safflower and soybean oils once were high in linoleic acid, they now are high in oleic acid, ostensibly making them candidates for the

sauté pan, a place where they will still be denigrated and debased, yet a bad thing, although at a slower rate.

The damage done to an oil that has been heated and reheated in a fast-food restaurant or local diner is mind-boggling. It's little wonder that these oils are reclaimed to be used as biofuels in diesel engines. Using them in salad dressing or atop steamed vegetables is one thing, but cooking with them is quite another.

No matter the molecular nature, a heated MUFA / PUFA oil is ultimately toxic.

-6-

Sixth in our hit parade is the contraindication of marine oils in the treatment of **childhood seizure disorders**, where administration of such has only exacerbated the condition. Here, the DHA fraction impinges upon the NMDA receptors and stimulates excitation, while the EPA moiety suppresses beta hydroxybutyrate, the primary ketone.

Aggravating the matter is that most commercial fish oils are processed using elevated temperatures for extraction, leading to aldehyde formation and degradation of the fatty acids. Thus, damaged fish oils are toxic. On the other hand, wild fish, the ultimate source of marine oils, are not. Salmon, anchovies, sardines and caviar are preferred.

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To realize that coconut oil, olive oil, and avocado oil, among a few others, are not essential fatty acids makes number seven in our list. Coconut oil and MCT oil produce ketones quickly, not needing bile to be digested and absorbed. Since coconut does not contain EFAs or MUFAs, it may be used for cooking.

-8-

Number eight is worthy of fanfare and flourish. Oils that carry very-long-chain fatty acids are a considerable challenge to the liver and the brain. Because of their size, they dangle outside the mitochondrial membrane, so need peroxisomes to be metabolized, to be burned or beta oxidized. Mustard oil, canola oil, peanut oil and peanut butter are sources.

-9-

Knowing the ninth entry introduces us to the bioactive oils that display EFAs and phospholipids crucial to optimal health. In this camp we find Specific-Ratio 3 or SR-3 oil as a prime source of a balanced 4:1 omega-6 / omega-3 ratio, featuring organic, cold-pressed, non-GMO safflower and flaxseed oils as the mother fatty acids. Related bioactive oils are high-linoleic safflower oil, raw organic seeds (sunflower, hemp, pumpkin, chia) and seed creams (soak overnight, blend), Canadian evening primrose oil, wild cold-water fish (especially caviar, anchovies, sardines), free-range eggs (the yolks).

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Most Important to Avoid to Regain and Stabilize Health:

• All fried food including French fries unless cooked at home in coconut oil
• Fast foods, almost all contain heated, toxic oil• Commercial foods organic or not, almost all contain heated, toxic oil
• Hydrogenated vegetable oil, margarine, processed oils• Canola oil -often in processed foods / dressing, contains very long chain fatty acids
• Peanut butter, peanuts, peanut oil, contains very long chain fatty acids
• Mustard - contains very long chain fatty acids
• Commercial mayonnaise or salad dressing, use homemade with high linoleic safflower instead
• Most olive oil, limited availability of the pure oil, difficult to tell which one is pure
• Commercial oils, high-oleic hybrid oils, including those labeled organic

Lipids, Oils and Fats You May Include in the Diet, but Don't Contain Bioactive Lipids:

• Organic coconut oil, useful in cooking
• Olive oil, caution – limited availability of the pure oil, does not contain bioactive lipids

Lipids, Oils and Fats that Contain EFAs to Include to Optimize Health:

• Concentrated phospholipids as PC and PE from
• 4:1 omega-6 to omega-3 oil, SR-3, as Balance oil
• High Linoleic, organic, cold pressed Safflower oil (this is imported)
• Nutiva® Organic Hempseed oil
• Evening primrose oil, pure cold pressed (not sourced from China)
• Wild caught, cold water fish
• Caviar, Anchovies, Sardines from clean waters, not farmed
• Free range, organic egg yolks
• Raw, organic seeds-hemp, chia, sunflower, pumpkin, fenugreek, sesame
• Homemade kefir (cow, goat, sheep, camel)
• Limited amounts of grass-fed, free-range sources of dairy (cow, goat, sheep, camel) butter, ghee, cream