OIL: THE ULTRA-PROCESSED FOOD

John Clark, MD NorthernLightsHealthEducation.com

"As long as I stay on my program with no processed oils, my blood sugars remain within the normal range," Herb confided as he pushed ahead of me on the mountain trail, his pace difficult to match.

In his early seventies, as a result of diabetes, Herb had experienced significant health deterioration in both mental and physical well-being. His condition was accompanied by uncontrolled rising blood sugars, irritability, heightened anxiety, and critical disposition. At one point, this emotional strain increased to the point of seeking legal counsel to dissolve his marriage, describing his wife as "troublesome". During this period, He and his wife came to live with us for a while.

The most important feature (the central component) of the natural program and nutritional intervention we instituted was the elimination of all processed oils from his diet. All meals were prepared accordingly, including granola without processed oil for him, oil-free baked bread, oil-free sautéed vegetables, and dressings made without oil. This dietary modification was associated with a marked stabilization of his blood glucose levels.

With his blood sugar levels now normal, notable improvements were observed, not only in his metabolic markers, but also in his behavioral and emotional state. As his condition stabilized, his interpersonal outlook softened, and he ultimately reconsidered his earlier decision regarding his marriage, choosing instead to maintain his relationship. It is perhaps worth spelling out that the irritability, anxiety and critical disposition disappeared.

I am a physician specializing in lifestyle medicine, a discipline focused on addressing the root causes of disease through evidence-based modifications in daily behaviors. The primary objective of this field is to support the patients in achieving and maintaining optimal health practices, thereby preventing the onset and progression of chronic illness.

Over the course of several years, dedicated to research and patient education, I have focused extensively on the management and reversal of lifestyle related conditions including diabetes. Throughout this work, I have observed and have in many cases clinically confirmed the significant and often underappreciated impact of processed oils on physical and mental health. These findings have led me to reconsider their role in the diet and to recognize their potential contribution to impaired health outcomes.

Staggering Statistics in oil consumption

Between 2013 and 2020, the global consumption of vegetable oil rose markedly, increasing from 170 to 210 metric tons.[1] This upward trajectory reflects a broader, long-term shift in dietary patterns. In the United States, Soybean oil (commonly referred to as vegetable oil) is the most consumed oil, accounting for approximately 57% of the total vegetable oil consumed. Over the course of the twentieth century, its consumption increased dramatically, 1000 times![2], from 1909 to 1999, Similar patterns of expansion have been observed with other commonly used oils, Palm oil, canola oil, and sunflower oil[4].

These data underscore a profound transformation in the modern diet characterized by a substantial increase in the intake of extracted and processed fats.

Real Life Daily Fat Requirements

A critical question arises: How much oil or fat does one actually need in their diet to maintain optimal health? From a physiological standpoint, only small quantities of essential dietary fat called linoleic acid must be present in the diet to maintain health. Linoleic acid is called an essential fatty acid. It is classified as essential because the body by itself cannot produce it and must therefore obtain it from dietary sources.

Current evidence indicates that an intake of linoleic acid at levels from 1 to 2% of total daily dietary caloric consumption is sufficient to prevent deficiency. For the average adult, this corresponds to 3 to 6 g/day.[5]

Of note, such requirements can be readily met through whole, minimally processed foods. For example, to satisfy this requirement, all one would need to eat is one avocado, which contains 4.6 grams of linoleic acid in its most natural and

healthiest form.[6] Similarly, one ounce of sunflower seeds contains approximately 9.7 grams, while Pecans and Brazil nuts provide approximately 6.4 grams and 5.8 grams per ounce respectively.

Taken together, these points show a clear gap between what the body actually needs and what people typically consume. Our requirements for essential fatty acids are relatively small and can be met easily through unprocessed, whole foods. Yet modern eating habits lean heavily toward large amounts of refined and processed oils. This mismatch raises important questions about how these oils might contribute to the onset and progression of long-term metabolic conditions.

Oils From Natural Whole Foods VS Refined Oils

A common and practical question arises in nutrition is why should dietary fats be obtained from whole food sources such as avocados, nuts and seeds rather than from refined sources like those used in fried foods such as French fries? French fries are prepared with refined vegetable oils that are frequently marketed as healthier and as better alternatives to saturated fats, but are they? Yet this comparison overlooks important differences in how fats are delivered, digested and metabolized within the body.

When fats are extracted and refined, they lose the natural structure in which they were originally packaged. As a result, these refined oils are absorbed more quickly and earlier in the small intestine, than fats from natural whole foods, leading to a more immediate rise in circulating blood lipids (fats), such as cholesterol and triglycerides. Repeated exposure to such postprandial lipid surges has been associated with the development of atherosclerosis, Cardiovascular disease, and metabolic disorders.

In contrast, fats consumed in their natural, unrefined form within whole plants foods such as avocados, natural nuts, or whole seeds are digested more gradually in the small intestine and are absorbed much more slowly with no dangerous rise in the body's cholesterol[7] leading to a more moderated post-meal lipid response and a reduced likelihood of adverse lipid effects.

The distinction between refined and whole food fat sources is further illustrated in dietary intervention studies. The typical dietary pattern of civilized and industrialized countries, commonly referred to as the "Western diet", is characterized by a high fat intake, much of it obtained from saturated or processed sources. The "Western diet" consists of 40% fat, two thirds of which is saturated fat.[8] Researchers have examined the effects of substituting different types of dietary fats within this context. In controlled comparisons, individuals assigned to diets enriched with whole nuts such as walnuts and almonds showed greater reduction in serum cholesterol levels than those consuming equivalent amounts of fat from refined oils, including olive oil, and when the substitutions were made, walnuts and almonds were more effective at lowering cholesterol than olive oil.[9] Thus, naturally occurring fats help keep a person healthier.

Additional evidence supports this perspective. In another study, replacing cheese, a source of saturated fat and oxidized cholesterol, with vegetable fat lowered total cholesterol by 10%, but replacing it with whole nuts lowered total cholesterol by nearly twice that much.[10] Eating whole plant foods is the most effective and natural way of lowering cholesterol.

Collectively, these findings indicate that whole plant foods provide a more physiologically favorable source of dietary fat than refined oils. Beyond simply lowering cholesterol, they support a broader metabolic profile associated with a reduced risk of chronic disease. Accordingly emphasizing whole food fat sources represents a more effective and evidence-based strategy for improving cardiovascular health than reliance on extracted and processed oils.

A Personal Transition Away from The Grease Slick

My awakening and shift away from processed fats came as I studied trans-fats and their physiological effects. It was then that I discovered these compounds were present in many of the foods I had routinely consumed since childhood. Margarine, a staple at our family table was rarely absent. The token tub of "Shedd's Spread" was a staple. But what was it made up of? It contained ingredients such as liquid soybean oil, partially hydrogenated soybean oil, and hydrogenated cottonseed oil.

The presence of "Hydrogenated" ingredients was particularly alarming. Nothing is ever totally, completely 100% hydrogenated, and what is left in the wake of this hydrogenation process is "trans-", or twisted fats that cause the body much suffering associated with adverse cardiovascular and metabolic outcomes. Recognizing this, I made the decision to eliminate such products from my diet. However, this was not an immediate or effortless transition. Like many people, I had developed a strong preference for the taste and texture of these foods, I loved my grease and figured out I could not,

and would not, do without it. I therefore sought a palatable alternative to preserve the taste and texture I had come to expect.

To my delight, several commercially available alternatives marketed as healthier options came to my rescue, e.g. “Smart Balance”. This soon made its way to my table. But as I spread it on my bread, I still questioned how it was that it was not hydrogenated yet it was buttery. A closer examination at its ingredients list revealed that it was still composed largely of refined oils, typically blends of palm, soybean, canola, and olive oils, to achieve their consistency. It was the tropical saturated fat that was responsible for its thickness. While not hydrogenated, they remained highly processed and calorically dense, raising concerns about their overall health impact.

While reading a book called, “Counsels On Diets And Foods” I came across this advice, “Grains and fruits prepared free from grease, and in as natural a condition as possible, should be the food for the tables of all who claim to be preparing for translation to heaven.”[11] Looking at both Shedd’s Spread and Smart Balance I questioned, they look like grease, they feel like grease, they taste like grease, so aren’t they just grease? If it looks like a duck, walks like a duck, and quacks like a duck, well, maybe it’s a duck!

Further exploration to find a healthier alternative to satisfy my grease appetite led me through a series of similar products. This time my quest led me to the product, Squeeze Parkay. It promised better health, but a quick look at the ingredients brought pause due to the presence of hydrogenated cottonseed oil and out went another minimally touched bottle of fat. Even in plant-based alternatives such as certain mayonnaise substitutes, Vegenaise, they are just fat curdled in vinegar, another health hazard (see our article on vinegar) despite its mighty fine greasy taste.

This progression prompted a broader reconsideration of what constitutes a truly healthful fat source. Rather than continuing to rely on extracted and processed oils, I turned my attention to whole food alternatives, more natural bread spreads. Nut and seed butters, such as almond butter, and homemade butter alternatives provided a more physiologically appropriate source of dietary fat and micronutrients absent in refined products.

Oxygen: The Breath of Life

Beyond their metabolic effects, processed oils may also place an additional strain on respiratory health challenging the lungs by their influence on oxygen delivery and utilization within the body. Their effect is to lower blood oxygen levels[12] and increase inflammation.[13] Additionally, it also takes more oxygen to digest fats than to digest complex carbohydrates.[14] Oils are especially hazardous when used in frying because frying increases inflammatory mediators called histamines in the food[15] that trigger allergic reactions and can lead to respiratory problems such as asthma.

Emerging evidence also points to the effects of oil-rich food intake on the brain, with potential implications for cognitive performance including memory, concentration and executive function. The oxygen in the brain needs to be fairly high, about 95%. Upon eating a high-fat meal, the oxygen in the brain falls below 70% within six hours, and it does not return to normal for three whole days![16] That is a surprisingly a long time. It suggests that consuming a high fat meal shortly before an important task may affect performance more than we realize. But in everyday life, people rarely eat just one such meal. Often, similar meals follow day after day, leaving little opportunity for the body to fully recover. The takeaway is worth considering, for when this pattern fully becomes routine, optimal mental clarity may remain just out of reach.

Under the influence of vegetable oils, the red blood cells start sticking to one another to the point that they form long chains, which increases blood thickness, reduces tissue oxygenation, and increases blood pressure.[17] Heated vegetable oils become oxidized, which, in turn, leads to elevations in blood pressure,[18] because the inflamed blood vessels can no longer relax.[19,20]

Omegas

Bottled vegetable oils tend to come in two varieties, omega-3 and omega-6. Both are essential; however, their physiological effects differ significantly. Omega-6 vegetable oils, which are abundant in many refined vegetable oils, are particularly prone to cause rouleaux or blood thickening. High consumption of vegetable omega-6 fatty acids promotes blood clotting, clumping, thickening, and blood vessel spasm.

In contrast, Omega-3 fatty acids are anti-inflammatory and blood thinning. In Western diets, there is a deficiency of omega-3 fatty acids and an overabundance of omega-6 fatty acids; the ratio of omega-6 to omega-3 fatty acids in the Western diet is approximately 30 to 1 whereas a strictly plant based diet gives a healthy ratio of 2:1.[21] An increase ratio of pro-inflammatory omega-6 to anti-inflammatory omega-3 increases cognitive impairment (brain fog),[22,23,24,25] Alzheimer’s disease and multiple other dementias.[26,27]

Mood effects of an oil rich diet are psychologically damaging. Higher levels of omega-6 and lower levels of omega-3 pose a significant risk for depression.[28] Thus the mood changes that challenged the diabetic individual we told about at the beginning of this article.

Gallstones, Oil and Refined Carbohydrates

Higher intakes of omega-6 vegetable oils triple the likelihood of getting gallstones; and double that risk again if the fat is eaten in combination with sugar.[29] Think twice before eating that doughnut.

Oils Stirs Up Inflammation

Vegetable oil provokes inflammatory responses in fat tissues that result in a higher risk for autoimmune disease and allergic reactions.[30,31] For example high vegetable oil intake increases the risk of ulcerative colitis by up to 150%.[32] Heated vegetable oil, like corn oil, causes significant increases in liver inflammation and has toxic effects on its genes.[33] Consumption of oils oxidized by cooking are detrimental to critical brain functions including cognitive abilities. Heated oils significantly decrease memory and motor coordination skills, while they increase anxiety.[34]

Do you love the smell of frying food? It might seem comforting but it is worth thinking twice about. Lung cancer risk increases with frequency and duration of exposure to heated cooking oil fumes.[35]

Frying creates a dangerous chemical called acrylamide.[36] Fried, starchy foods are the most prominent sources of acrylamide, which is: neurotoxic, genotoxic, hepatotoxic, nephrotoxic,[37] carcinogenic, has harmful reproductive effects,[38,39] and causes peripheral neuropathy. If that all seems a bit too technical, here is the simple truth, just realize that when you put a French fry into your mouth you are getting a large dose of poisonous heated oil byproducts.

Another toxic substance formed in oils while frying is advanced glycation end products (AGEs), which increase the risk for: diabetes mellitus and its complications, atherosclerosis, cardiovascular diseases, rheumatoid arthritis, Alzheimer's disease, aging, cataracts, and cancer.[41]

Dietary fats are generally categorized into three subsets: saturated, monounsaturated, and polyunsaturated. A saturated fat has zero double bonds in its carbon chain, whereas monounsaturated fat has one double-bond, and polyunsaturated fats have more than one double-bond.[42]

Oils rich in polyunsaturated fatty acids are more unstable and significantly increase oxidative inflammation and free radical damage.[43]

This especially occurs in the skin and joints. A low-fat diet has been shown to reduce skin spots such as actinic keratoses (old persons precancerous skin spots) by as much as 70%.[44]

"The salads are prepared with oil and vinegar, fermentation takes place in the stomach, and the food does not digest, but decays or putrefies; as a consequence, the blood is not nourished, but becomes filled with impurities, and liver and kidney difficulties appear."[45]

Fried foods significantly increased the risk of inflammation and anemia.[46]

"Food prepared with condiments and spices inflames the stomach, corrupts the blood and paves the way to stronger stimulants. It induces nervous debility, impatience and lack of self-control. Tobacco and the wine-cup follow."[47]

High fat diets increase prostate inflammation and enlargement: 20% for vegetable fats/oils, 27% for polyunsaturated fat, 31% for total fat, 32% for fish oils (EPA, DHA).[48,49,50] Butter, margarine and cooking oils are all instigators of inflammation and also contribute to an enlarged prostate.[51]

Cooking damages vegetable oils. Vegetable oils, when heated, such as olive,[52] soybean and canola oil, cause cell damage by the major oxidation product, hydroxynonenal. Hydroxynonenal increases Alzheimer's disease, type 2 diabetes, fatty liver disease, and heart disease.[53]

Have you heard that coconut oil was the be-all and end-all superfood for Alzheimer's? Think again. Science does not bear out that Alzheimer's is truly helped by coconut oil.[54] All in all, if it is your goal to lower the oxidative stress and inflammation in your body, coconut oil will not be your helper.[55] In studies done on mice, when fed high-fat diets of: lard (a source of long-chain saturated fatty acid), coconut oil (a source of medium-chain saturated fatty acid), soybean oil (a source of omega-6 polyunsaturated fatty acid), olive oil (a source of monounsaturated fatty acid), 8% hydrogenated soybean oil (a source of trans fatty acids) and flax oil (a source of omega-3 polyunsaturated fatty acids), only the anti-inflammatory high omega-3 flax oil did not cause a deterioration in cognitive ability.[56] Coconut oil has a negative effect on the immune system and body inflammation much like any other saturated fat, such as lard, beef tallow, butter or shortening. **Coconut oil** inflames arthritis, intensifying morning joint stiffness and increasing Joint Pain.[57] Coconut oil, with all its saturated fat, can send your cholesterol skyrocketing.[58]

Incidentally, coconut oil is about 82% saturated fat, whereas lard is only 39% saturated fat. That should give pause for reflection.

The risk of Parkinson's disease increases by 20% for each serving of vegetable oil per day, 50% for each serving of olive oil, and 125% for each serving of mayonnaise.[59] Combining vinegar and oil is inflammatory and detrimental to health.

But what about simply baking with oils, such as adding a little bottled oil to a bread recipe? I was fascinated to serendipitously discover a set of articles on bread baking, which, when compared showed that adding oil to bread increased its oxidative stress by 10 times![60],[61] That's right, ten times higher oxidative stress in bread which has been baked with one of its ingredients being bottled oil. We are talking here about the same oxidative stress that increases the risk of cardiovascular disease[62],[63], rheumatoid arthritis[64], and psychological disorders[65]. Yes, psychological disorders. So, if your oil-loving friends seem a little bit dysfunctional, just cut them some slack and chalk it up to dietary choices.

Oil and Your Organs

Fried foods are detrimental to many of the organs of your body. Fried foods cause significant damage to the liver and kidneys leading to kidney failure, liver degeneration and increased dangerous visceral fat accumulation around these organs.[66,67,68] This is especially true of canola oil. High canola oil intake increases visceral fat, which increases the risk for complications of diabetes, heart disease and kidney failure.[69]

Is vegetable oil good for the heart? High vegetable oil consumption increases the risk of death due to heart disease and the risk of dying from all other causes.[70] In fact, vegetable fat is no better than lard for the heart. Compared with lard/other animal fats, in one study, vegetable oils more than double the risk of coronary heart disease.[71]

Dietary oils impact digestion in a negative way. First of all, they slow down the whole process,[72] which in turn increases the likelihood of reflux.[73,74,75] The stomach is reticent to release fatty foods to the intestines, retaining fatty foods longer than their low-fat counterparts;[76,77,78] this slowed emptying of the stomach also increases the likelihood of reflux.

Does addition of free oil, that is, bottle vegetable oil, to baked goods create a problem for digesting the starches? The results of cooking starches with oil is that the starches become oil coated or saturated and resistant to digestion.[79] Oil digestion occurs in the small intestine, facilitated by bile or fat based enzymes whereas starch digestion starts in the mouth, facilitated by water-based enzymes, and continues in the stomach via water based acid, if the starch is oil coated, the water-based enzymes cannot get at it to digest it, reducing the nutritional benefit you get from these necessary ingredients.[80,81] The undigested oil coated starch moves down into the small intestine, there the oil is removed, but the small intestine is not adept at carbohydrate metabolism, thus the carbohydrate nutrition is not efficiently used by the body.

Toxins—Integral To Processed Free Oils

Really, the finding that sent me researching oils was the finding of the presence of toxic 3-MCPD (3-monochloropropane-1,2-diol esters) in many bottled vegetable oils. This toxin is carcinogenic and genotoxic, and causes male infertility and renal damage. This toxin is often created during the oil manufacturing process, so it can come in the bottle you buy from the store. It is also made when you cook with bottled oils. Levels are increased by; frying, the amount of heat the oil is subjected to, the amount of time it is heated, and the salt content in the food being cooked. [82,83,84]

Trans-fats are exceptionally inflammatory and health-damaging. They are formed when unsaturated fats are heated or partially hydrogenated. Even roasting nuts, which are naturally high-fat food, results in increases in trans-fatty acids.[85] Common foods high in trans-fatty acids include: cakes, cookies, crackers, pies, breads, animal products, margarine, fried potatoes, potato chips, corn chips, popcorn, household shortening, breakfast cereal and candy, just to name a few.[86]

Oil and Disease

Having trouble getting pregnant? Female fertility declines with increased vegetable oil intake. Consumption of vegetable oils as a large percentage of total fat intake reduces fertility in women aged 18-34 years.[87]

Vegetable oils suppress the immune system. Natural killer cells are a part of your immune system protecting you from dangerous microbes, viruses and tumor cells. Dietary oils inhibit natural killer cell activity, which can decrease their ability to destroy invaders.[88]

Cooking oils are seen to play an exacerbating role in "long COVID".[89] "Long COVID" is a condition where the patient who has had COVID or perhaps even its vaccine continues to suffer poor health symptoms as a result.

What about the connection between vegetable oils and cancer? Vegetable oil consumption quadruples your risk of breast[90] and stomach cancer,[91] increases the risk of colon, pancreatic[92] and rectal cancer,[93] causes premature sexual maturation, which in turn increases long-term breast cancer risk.[94,95]

Obesity

It should not surprise you to find research linking increased dietary fat consumption to obesity. Vegetable oil is a fat that can make you obese. Obesity caused by eating a high fat diet is associated with nerve injury in the weight control center of the brain. This results in a loss of self-control over the number of calories you eat. The taste of fat increases the amount of food eaten.[96] Sugar and fat work by weakening food satisfaction signals to the brain and by activating hunger signals.[97,98]

But what about all the benefits touted by the low-carb gurus? Look out, fatty liver disease is increased by consumption of low-carb diets consisting of protein of animal origin, high total fat, and less consumption of complex carbohydrates and dietary fiber.[99] Incidentally, colorectal cancer risk increases fourfold with consumption of high-fat, high-protein, low-carbohydrate diets.[100]

As with any other cause of excessive weight gain, oil in the diet increases insulin resistance and the risk of elevated hemoglobin A1c levels, a marker for diabetes.[101] When fat cells are too full, as they are in obese people, they become less responsive to insulin. The fatigued pancreas eventually loses its ability to produce enough insulin for the body's needs and blood sugar levels rise even higher. Each fat cell has insulin receptors. When these receptors are stimulated by insulin, they facilitate the passage of sugar into the cell. Think of insulin receptors as door knobs and insulin as the doorkeeper who opens the doors. The way the cells regulate how much sugar they take in is by increasing or decreasing the number of insulin receptors (door knobs) available for insulin to activate (open the door to sugar). For example, a normal cell puts some of its insulin receptors (door knobs) out into the bloodstream where insulin can activate them (open sugar doors). Sugar then moves out of the bloodstream into the cells lowering the blood sugar. Overfed fat cells pull all of their insulin receptors into the cell (leaving no doors to open). As a consequence, the sugar accumulates in the bloodstream, increasing blood sugar to dangerous levels. When the diabetic starts to exercise, the cells get hungry and start putting more receptors into the bloodstream thus making way for more sugar to enter the cells, lowering the blood sugar. Incidentally, oil has more than twice as many calories per gram than does sugar. When the cells fill up with calories, they become insulin resistant and blood sugars soar.[102,103] while either fat or sugar can overload your cells with calories, fat will cause this unwanted condition twice as rapidly as sugar.

Diabetes

People on a low-fat diet, (10-15% of calories), where the fat comes from naturally occurring fats in unprocessed vegetable foods, have a relatively low risk of getting diabetes. On the other hand, people eating 46% of their calories as fat have a 40% higher risk of diabetes. Certain fats are especially dangerous. Just 3% of calories coming from trans-fat will raise the risk of diabetes by 44%, and 270 mg of cholesterol, little more than that found in one egg, will increase the risk by 60%. If the majority of fat in the diet, (36% of calories), comes from saturated fat (usually animal sources) the risk of diabetes goes up by 64%.[104] Animal studies have shown that increasing the fat intake to 65% of calories increases the incidence of diabetes by 350%.[105] Fat makes an unwelcome difference!

Some of the healthiest fats come from natural plant sources. Five servings of nuts a week (raw or dry roasted) have been shown to decrease the incidence of diabetes by 30%.[106] The unhealthy fats tend to come from fast foods that are high in fat and low in nutrition. Two or more fast food meals per week will not only increase obesity but also can double the risk of diabetes.[107]

Thyroid

The excessive calories offered by a diet enriched with bottled cooking oils offers no advantage to the thyroid. Vegetable oil, when it enters the bloodstream, significantly decreases thyroid hormone production, thus leading to hypothyroidism.[108]

Contaminants

When looking at oil, one needs to ask, what was the condition of the raw product from which this refined concentrated food was made? In many cases the raw product can be contaminated with molds and their mycotoxins. Aflatoxin from mold contaminates many oil seeds like corn and peanuts, and appears in their oils.[109,110]

Other contaminants include heavy metals. Studies of common vegetable oils revealed that many have higher than acceptable levels of

carcinogenic (cancer-causing) compounds of lead, arsenic, and cadmium. The resultant risk of cancer for both adults and children is often higher than the acceptable range.[111]

Hexane (similar to gasoline) is a solvent commonly used to extract cooking oils from their raw sources. Classified as a "processing aid", it does not appear on the label. Traces of hexane remain in the final products. Hexane is neurotoxic to humans.[112]

Some toxic contaminants, such as cerium oxide (CeO2) nanoparticles, are being intentionally added to vegetable oils as a preservative. Such rare earth oxide nanoparticles are cytotoxic and can induce lung injury.[113,114]

Another such contaminant is bromide. Brominated vegetable oils are a big cause of thyroid disorders such as hypothyroidism.[115]

It is getting rarer and rarer to find processed oils in any other container than those made of plastic. But isn't plastic just another product made from oil? So, what happens if I store my oil in something made out of oil? As you might expect, things don't stay stable as they seem, they integrate, and you get plastic in your oil. These bottles have plasticizers and perfluoroalkyl substances to keep the plastic bottles from shattering. Some of these plasticizers are carcinogens, neurotoxicants, and endocrine disruptors and you may be eating them in your food.[116]

Not All Changes Are for The Better

What about genetically modified (GMO) vegetable oil? GMO vegetable oils harm the body in several different ways, including: liver and kidney damage, and breast, ovarian, kidney and skin cancer.[117]

Common GMO oils include soybean, corn, canola, and cottonseed.[118]

What is the REAL shelf-life of your oil?

Once oils are removed from their natural state, pressed out of nuts and seeds and separated from their protective shells and coatings, they loose much of he stability nature provided. In this exposed form, deprived of the original protection designed by God, they quickly become hazardous to health. For example, grape seed oil lasts only 3.2 months, when its "best used before" date is projected to be 6 months. Almond oil's actual shelf life, before which it becomes oxidized (or goes rancid), is 11 months shorter than its "best used before" date—meaning it does not last as long as they project. Avocado oil goes off 6 months before its "best used before" date. Walnut oil lasts only about half a month under normal conditions, but is often given a "best used before" date ranging out to 12 months.[119] When was the last time you paused and checked the "best use before" date on your bottled oils?

When should you throw the crackers out?

A friend of mine once shared a small but telling moment. His wife came home from the supermarket with a box of their favorite crackers just as he had begun learning more about the concerns and hazards surrounding processed oils, especially those used in snack foods. What followed next, was a debate on whether they should finish eating the last box just for good measure and move on, or just toss it out now and be done with it?

On one hand, tossing it out meant the free radicals would be out of the house and gone with the next trash run. On the other, eating it raised a different question, what happens after it is in the body? Only half of it will be gone in 600 days. In fact, the fatty acid content in body fat reflects the fat eaten over the last 2 to 3 years.[120] Needless to say, the crackers made their way uneaten to the rubbish bin. It's a small decision, perhaps, but one that reflects a much larger question about what we choose to keep, and what we choose to let go.

God and Oil

It is interesting to note that even in ancient times, guidance about dietary fat was given careful attention. God himself has something to say about fat? Upon departing Egypt in the Exodus, the children of Israel were in need of practical instruction in many areas of life, including what they should eat. God instructed Moses to educate them on dietary fats, "Speak unto the children of Israel, saying, Ye shall eat no manner of fat..."[121] Then He proceeded to list fats readily available in their day. I wonder what He would list today. These instructions were not unessential for they reflected an intentional effort to shape habits that would support their well-being as a people.

J.H. Kellogg, when asked, "Are nut oils, cottonseed oil, and similar preparation of vegetable oils wholesome?" answered, "No. The chief objection to the use of oil, lard, tallow, butter and other forms of 'grease' is that they present the fat in an artificially concentrated form, in which it does not harmonize with the other elements of food while undergoing digestion in the stomach."[122] So,

the word “grease”, in Kellogg’s day, was used to describe vegetable oil.

“I saw that we should pray as Solomon did—'Feed me with food convenient for me’ (Prov. 30:8)--and as we make the prayer, act it out. Get food that is plain and that is essential to health, free from grease. Such food will be convenient for us. ”[123] “You should keep grease out of your food. It defiles any preparation of food you may make. Eat largely of fruits and vegetables.”[124]

Olive Oil

“But, what about olive oil?” some may be asking. It is true that olive oil has better antioxidants than other oils. Olive oil contains tocopherols and other antioxidant compounds that help make blood cholesterol more resistant to oxidation.[125]

So, what is the best olive oil, and where can it be found? There is a conspiracy surrounding olive oil (and other oils) inspiring such article titles as, “The Olive Oil Scam: If 80% is fake, why do you keep buying it?” as appeared in Forbes,[126] and books such as, “Extra Virginity: The Sublime and Scandalous World of Olive Oil” by Tom Mueller. Apparently, the names under which olive oils is sold, such as extra virgin cold pressed, can mean a product that is not 100% pure olive oil.

And what defines a high-quality olive oil really? The nutritional facts printed on the label give us a glimpse, though they reveal only part of a much richer picture. A 15 ml serving of olive oil has 14 g of fat, 2 of which are saturated, and it has no carbohydrates, fiber, protein or vitamins. How does this compare to a typical junk food, such as a Baby Ruth candy bar? Surprisingly, the Baby Ruth candy bar has one-fourth the fat per gram of the product. It also offers a small amount of fiber, along with carbohydrates and even a few vitamins. By that measure, the Baby Ruth’s nutritional facts stack up healthier than that of olive oil. But does that really mean olive oil should be considered a junk food?

It also matters in what form we choose to consume olive oil. Some of the best practical advice I have come across is this: “The oil, as eaten in the olive, is far preferable to animal oil or fat. It serves as a laxative. Its use will be found beneficial to consumptives, and it is healing to an inflamed, irritated stomach.”[127] “As eaten in the olive” would indicate eating a whole olive, not just oil extracted from it.

Making Healthy Substitutions

So, what can you use to replace oil when cooking? In baked goods, in many cases, you can just skip the oil. Oil is often included to maintain moistness; this moistness can also be preserved with fruit or vegetable purees such as applesauce, pumpkin, zucchini, pineapple, dates, or carrots. One can also use nut or seed butters as alternatives. Another helpful technique is to add 2 tablespoons of soy flour per 1 cup of baking flour to add natural fat.

In frying/sautéing, one optimal substitution is to sauté in water. Air frying or baking are also options to consider.

When trying to substitute for spreads, one can experiment to see how their palate responds. Nut or seed butters are an easy option while avocado or mashed olives make a good, healthy bread spread. You will find a variety of recipes and ideas on our website to help you get started… (https://northernlightshealtheducation.com/pages/Recipes.html), such as “Love Your Heart Butter” or “Corn Butter”. I will include them at the end of this document.

Vegetable Oil Summary

- Oil is a highly refined product lacking in essential nutrients and fiber.
- Oil increases the risk of numerous modern lifestyle diseases, including obesity, while supplying no redeeming beneficial nutrients.
- Residual toxic chemicals left over from processing, contamination and cooking make oil hazardous to your health.
- It is better to get your essential fats from their natural sources where God has them combined with phytonutrients, enzymes, vitamins, minerals, fiber, antioxidants and enticing flavors.
- Focus on making whole foods your source of nutrients and avoid modern lifestyle diseases associated with refined/processed food use.

LOVE YOUR HEART BUTTER

1 cup cooked cornmeal mush (1 cup boiling water & 1/3 cup corn meal, cooked)
1/4 cup water
1/2 cup cashews
3/4 tsp. salt
1/3 cup coconut milk

Directions: Cook cornmeal mush on the stove until thick. First, blend cashews and water together in a blender until VERY smooth. If needed, add coconut milk to keep the blending going. Then blend all ingredients together until very smooth and creamy.

CORN BUTTER

"I figured out a faster and probably healthier way to make corn butter. (Most people out there will not go to the trouble of cooking the cornmeal.)"- Deb.

1-15 oz. can corn, drained (or use frozen)
1/4 can coconut milk
1/2 tsp. salt

Directions: Blend well using a spatula to clean edges. My family loves it!

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