THE TUESDAY MINUTE

IT'S TIME TO FEEL GOOD AGAIN

THIS WEEK'S TOPIC

The Pros & Cons of Seed Oils

"The average American is getting at least 10-15 times the amount of an oxidizing, processed substance, more than they have received for thousands of years."

Reducing seed oils is the is the latest nutrition fad, so I thought it would be good to review some pros and cons. As a reminder, much of the oils we ingest move into cellular membranes, mitochondrial membranes, even cellular organelle membranes. Membranes signal the internal parts of our cells to repair, regenerate, and heal. If our cells are not repairing, the result is continued and sustained inflammation. Inflammation is really the inability to repair. I've heard multiple researchers share that the cell membrane is more important than the nucleus of the cell. Cells can live for a time without a nucleus, but they can't live without cell membranes. If cells can't repair, they perform at suboptimal levels. And isn't that what aging and chronic disease looks like? As systemic inflammation levels increase... pain, healing time, fatigue, brain fog, and GI disturbances all increase.

As you are probably aware, historically, the ratio of omega 6 (linoleic acid) to omega 3 (alpha linolenic acid) is between 1:1 and 4:1, depending on who you are reading. But now, most Americans have a ratio of omega 6:3 oils of 15:1, and people with chronic disease, often measure 25:1, some even higher. Knowing this ratio exists, many clinicians have turned to just increasing omega 3 in the form of fish oil. And that's important. But reducing processed, denatured linoleic acid that is so pervasive in our culture is beginning to emerge as a concurrent strategy.

Think about it… the average American is getting at least 10-15 times the amount of an oxidizing, processed substance, more than they have received for thousands of years. Now, add that to the unknowing toxins we ingest from our environment, and we can see why inflammation is rampant. Oils in nature or in our tissues are in balance. When that balance is disturbed, problems arise.

So, to be clear, we need linoleic acid, but we don't need it in the ultra-processed volume that we are consuming today. You can see a chart to the right showing that fats break down into 3 main categories: saturated, monounsaturated, and polyunsaturated. You can also see that each fat has an individual ratio. Flax seed oil contains 9% saturated fat, 14% omega 6, 53% omega 3, and 18%

omega 9. Also, note that the oils used in processed foods like corn, soy, sunflower, and cotton seed oil are extremely high in omega 6 oils.

Saturated fats do not contain double bonds. Monounsaturated fats have one double bond and are missing one pair of hydrogen atoms. Polyunsaturated fats have 2 double bonds and are missing more than one pair of hydrogen atoms. Here's a concept that I never really understood. Even healthy monounsaturated and polyunsaturated fats are more prone to oxidation, which create free radicals. Consider how fats are processed, heated, hydrogenated, or chemicalized to preserve them, and we can see why the free radical damage is greater. Now, let's take that fat and take it out of physiologic balance, and we amplify the liability for it to sabotage one's health.

This chart shows linoleic acid, with the help of an enzyme delta-6-desaturase, converts to Gamma linolenic acid, which then converts to dihomo-gamma-linolenic acid, which when in balance converts to PG1, an anti-inflammatory prostaglandin. PG1, some reports call it PGE1, possesses both anti-inflammatory and anti-proliferative properties. PG1 could also induce growth inhibition and differentiation of cancer cells. That's the good side of linoleic acid. However, note that delta-5-desaturase reroutes the beneficial dihomo-gamma-linolenic acid to arachidonic acid, which has strong pro-inflammatory properties. It reroutes the healthy anti-inflammatory process into the highly inflammatory process when the pathway is overloaded with linoleic acid. Delta-5-desaturase is turned on or turned up with excess sugar. Delta-5-desaturase also blocks the conversion of alpha-linolenic acid from plant sources to EPA and ultimately to DHA, which are both anti-inflammatory. However, healthy fish oils have so many benefits because they bypass the delta-5-desaturase enzyme and provide multiple protective benefits beyond its anti-inflammatory nature.

We discussed earlier that fats move to membranes, and the disproportionate ratio of fats will cause membranes to function at a lower capacity. As you know, mitochondria contain inner and outer membranes. Mitochondria naturally create free radicals as they create and store energy as ATP. As we've discussed, excess seed oils cause further damage to membranes and internal organelles. These amazing energy producers can't manufacture, store, and transport ATP properly. Less energy means less cellular repair, which translates into fatigue, inflammation, mood changes, brain fog, digestive issues, leaky gut, immune impairment, etc. We always think of mitochondria as energy producing organelles, but another key function is the ability to signal apoptosis to destroy dysfunctional cells.

Here's the problem: almost all processed foods contain high levels of seed oils. That means chips, sauces, mayonnaise, salad dressings, and anything fried will involve seed oils, unless you make them yourself at home. And of course, most restaurants are using cheaper omega 6 fats to cut costs. This is one reason why the NutriClear Plus program is so effective. It creates a 2-week break from processed foods and allows the body to reset.

Obviously, this is a much bigger subject to cover in our short time together. My friend and colleague, Dr. Joe Mercola, has a more amplified presentation you can see to the right.

Thanks for taking time to be with me today, I'll look forward to being with you again next Tuesday.