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| Mark: | Welcome to The Health Edge, translating the science of self-care. I am really delighted and pleased to be with my friend and colleague Dr. John Bagnulo. John, how are you this morning? |
| John: | Doing really well, Mark. Happy March. Good to be with you, brother. |
| Mark: | Happy March. It's great to be together and enjoying what has been a very mild winter here in the Berkshires, and I know down where you are as well. It's a great time of year to be lengthening the days. I'm already beginning to appreciate those longer ... It's a little bit lighter when I go home at night and a little bit lighter when I go in in the morning. There's something uplifting about that. |
| John: | Absolutely. |
| Mark: | I know you've been away recently, John. You were at the Integrative Health Symposium down in New York City. We were chatting a little bit about that offline. It sounded like you had a great weekend. I know you did a talk down there on inflammation. How did all that go? |
| John: | It went really well. I really enjoyed the opportunity to share some of the information that I did with that group. We had a talk really on inflammation that originates from the gut, or from alterations in the microbiome, which you and I have spent a good amount of time talking about in these podcasts, Mark. I think for some of the listeners there was a certain amount of revelation with respect to that. |
|  | I really presented on glyphosates, which for our listeners if they're not familiar with glyphosates, that's the primary ingredient in Roundup. It's the herbicide that is now linked to a wide variety of chronic diseases, and it seems that many of those connections are through some of the damages that occur within the microbiome. Glyphosates are very selectively damaging to families of bacteria, and they favor overgrowth of things like Clostridia which have been linked to autism and a variety of other conditions. |
|  | I presented on that, and then I presented on the influence of, really, the omega-3 and omega-6 fatty acids on the microbiome. I think for some people, they hear essential fatty acids and it sounds as though if they're essential, that more is better. I showed some of the research that I think illustrates how damaging omega-6s, and to some extent omega-3s, can be to that gut barrier. |
|  | It was good. It was a good talk. I enjoyed it and I really enjoyed meeting a lot of the people that I did there. |
| Mark: | Fantastic, John. I'm sure you opened a lot of eyes, as you always do. This topic of essential fats, which is what we're going to be focusing on on this episode of The Health Edge, is really a fascinating one, John. I hear people talk about it often and refer to it often, yet I think there's still a bit of confusion and I think the science is still evolving a bit in terms of ideal ratios and sources. I think it's a really important and timely topic, and one that I'm sure we'll continue to revisit. |
|  | I'm thinking a good place to start, John, is this notion of something that is essential. You point out that essential doesn't always mean that more is better, but essential implies here that our bodies can't manufacture this stuff. Essential fats are essential to life and all aspects of biologic function, yet we rely on external sources to provide that important substrate. We often refer to essential amino acids and proteins, John, and things again that we require external or exogenous sources for, and we've often touched on carbohydrates and emphasize the notion that there are no essential carbohydrates. We have evolved in nature not to have an absolute mandate to be getting these externally, so it does say a little bit about the priority that nature and biology has placed on these essential fats. |
|  | As we'll get into, there's been just an enormous change in our food supply in terms of availability and what's accessible to people. So much of this happens off the radar screen of consciousness, and if you're really not attuned to it, you can find yourself dealing with lots of health issues. |
|  | Looking at these essential fats, John, how would you begin to help people understand the difference between an omega-6 and an omega-3, what the sources are, how metabolically they influence human biology and human health? How would you start to sort of frame that as we move this forward? |
| John: | Sure. As you mentioned, Mark, the human body can produce saturated fats readily; we can produce a very limited amount of monounsaturated fats. When you take a look at it under that light, some in the field of nutrition would say, "Well, if we can manufacture saturated fats and monounsaturated fats ...," and those are considered non-essential, which is really an interesting label because I think that it's very important for the diet to have a considerable amount of both saturated and monounsaturated fat in it. |
|  | These essential fatty acids that we're talking about today, you're absolutely right. We can't manufacture those from non-essential fatty acid substrates. We can't simply take some of the saturated fat in our diet and then desaturate it, put double bonds into it, and elongate it into these 20, 23-carbon long essential fatty acids. We do have to get some of these from our diet. The primary reason we need those in our diet is they allow us to manufacture hormones — specifically eicosanoids — that have a real wide variety of influence on our health: on the ability to generate inflammation, the ability to change the hemodynamics, or the different aspects of blood flow allowing us to produce a clot. |
|  | It typically works like this: Within the omega-6 fatty acid family, you have essential fatty acids within that omega-6 family that are from plants, and those typically fall under what we'd typically call linoleic acid. Linoleic acid again is an omega-6 variety that would come from something like sunflower seed oil, soybean oil. You'd have that in certainly corn oil. Most of your vegetable oils — which of course are not made from vegetables — are very rich in their omega-6 content, but most of that's made up by this linoleic acid. It's 18 carbons long, it has two double bonds, but it's an omega-6 because the double bonds occur after the 6th carbon. |
|  | That fatty acid from those plant sources, Mark, can be elongated, once we've consumed them, into something which we call arachadonic acid. That's a fully-formed, elongated omega-6 fat which then can be directly used to produce these eicosanoids of the Series 2 variety. Typically, with eicosanoids, the Series 2 and 4, the even-numbered eicosanoids, help us generate inflammation, they help form clots. These are very important processes for human survival, so it's not to say that those are bad processes. Those are critical, we just don't want to have them turned up full throttle on a chronic basis because then that can contribute to disease. |
|  | Now, the opposite is true with your omega-3 family of fats. Again, these are essential fatty acids. You have to get some from your diet on a somewhat regular basis, and the omega-3s come in plants in the form of alpha-linolenic acid. Again, it's only 18 carbons long, not like DHA or EPA which we'll talk about in a moment, and they're going to be coming from things like flax, walnuts, purslane. You will get small amounts of these in something like soybean oil. |
|  | This alpha-linolenic acid, if acted upon by an enzyme in the body which we call the delta-6 desaturase enzyme, become elongated and they become more desaturated, so more double bonds are incorporated into that lengthening fatty acid. We use those to produce eicosanoids of the Series 1 and 3 variety, which are anti-inflammatory typically. They thin the blood, they make clots less likely to form. This very delicate balance between these omega-6s and these omega-3s, and the influence that they have on the types of hormones we produce, is critical. You need to have the right viscosity within the blood and the right clotting factors present, and you certainly need to have inflammation to fight an infection, but again, you don't want to have this turned up too much. |
|  | That, in essence, are your omega-6s and omega-3s. I think most of us somewhere along the way in the healthcare field, or as a health professional, learn that there's a really important ratio of 6s to 3s that has been put forth by anthropologists looking at early human diets, and that has been put forth by physiologists looking at what are the levels you actually find in human tissue, within the membrane or the phospholipid bilayer of a particular compartment of our body? There's some variation, Mark, between the omega-6 to omega-3 ratio that we might find in a red blood cell membrane as opposed to a neuron membrane, but typically they're very, very similar. You don't have an enormous variety of these ratios or proportions within human tissue. We've used that, going forward, to make some recommendations about the omega-6 to omega-3 levels that would be, in theory, part of a healthy human diet. |
|  | Just to put one number out there, I think most people agree that it's somewhere around 3:1 or 4:1 omega-6s to omega-3s that we'd like to see in the diet. Again, there's a little bit of controversy around that, but that would be a consensus, I guess, if you asked ... Nine out of ten physiologists, nutritionists, physicians who were aware of the importance of that balance would say it's somewhere around 3:1 or 4:1. That's the ratio that we're looking for in the diet, or maybe in tissue compartmentalization of the body. |
|  | In a nutshell, that's your omega-6s and omega-3s. Omega-6s are now synonymous with inflammation and with an increased risk for forming clots, and omega-3s are unfortunately — and I'm going to say that tongue-in-cheek because as you know, sometimes a little knowledge is a dangerous thing for all of us — omega-3s are now synonymous with anti-inflammatory effects and with blood-thinning properties. People tend to think that if a little of that is good, then more is even better. |
|  | I think that's really where the million-dollar question lies, is how safe is it to start to supplement with some of these essential fatty acids? At what point do you cross that threshold where now you have too many of these very volatile and very susceptible ... Both omega-6s and omega-3s, I think our listeners need to know, are extremely susceptible to oxidation. That's because, Mark, as you know, they have more than one double bond, so they can react with oxygen very quickly. When they're incorporated into the mitochondrial membrane or into our phospholipid bilayer, which is in constant reaction with reactive oxygen species and with things that are capable of driving oxidation, you now have a very volatile fuel close to the match, close to a source of flame per se, and that doesn't bode well for certain conditions and diseases. |
|  | I think we're starting to see ... I think if you take a look at the research by a few investigators which we can dive into in a few moments, but I think we're starting to see increased risk associated with certain levels of omega-6s and omega-3s both, and that's what really makes us ask this question. It certainly looks really good to eat fish a few times a week, and there hasn't really been that much research to question that public health message. If you look at populations or you look at some studies that have been done with fish consumption on a shorter duration type of model, that appears to be very protective. When you start looking at omega-3 supplementation, I think that many of our listeners would be surprised to see that there isn't the efficacy, and there actually may be a risk associated with that. |
| Mark: | Wow, John. That was absolutely beautiful and you touched on so much. A few points of the many points that you touched on, John, I just wanted to sort of reemphasize. The first is that we are making the distinction between saturated fats which, when you look at them structurally, have no double bonds. As we've talked about often, one of the great values of saturated fats is they're stable molecules. Even though they've been chastised by most clinical thinking, these are stable molecules that are much harder to oxidize and should, we believe, be the predominant molecule in these bilayer phospholipid membranes that you refer to, John, as distinct from a polyunsaturated fat, of which both the omega-6 and the omega-3 are polyunsaturates. They've got double bonds, they're longer molecules, oxidize more easily — and I know we'll come back to this. |
|  | You talked about the common sources of the omega-6s. It's mostly these seed oils, these processed seed oils. I love the fact, John, that you emphasize that we think of these as plant-based, but these are processed seed oils. I'm not aware that there's a canola plant. |
| John: | Right. |
| Mark: | People sort of envision ... Canola kind of gets the halo: "That canola plant must be awfully healthy." There is no such thing as a canola plant. These omega-6s, as we'll come back to in a moment, have had an enormous upswing over the last couple of generations, in large part in response to the fact that saturated fats have been so chastised and the conventional wisdom of the last two generations — based on very limited science — is that a polyunsaturate is probably better for you. We now know otherwise. |
|  | Then you look at the omega-3s, John — some of the flax seed, some of the seeds and fish oils being certainly the most common as the sources of those — and what you said that I think was so central to this discussion is that these oils become incorporated into our cell membranes. All 20, 30, 40 trillion cells in our bodies have these bilayers, these very sophisticated structures. Donald Trump would call them our wall of defense, right? This is the great internal wall, and these are active biologic structures that is where all of our receptors are in the surfaces of our cells. Whether insulin is acting, or a hormone is acting, or any other messenger protein is acting is happening at the level of these phospholipid bilayers. So much of the pro-inflammatory ... Which as you point out, John, we need. Arachidonic acid is something that we need, and so much of the anti-inflammatory effects of the omega-3 are things that we need, but the balance has become so tilted. |
|  | The omega-6 fats and the omega-3 fats that are mobilized in those processes live in our cell membranes, so we are looking at the cell membrane as one of the most important aspects of the cell. All aspects of signal ... We call it transduction — how the message attaches to the receptor — and that unleashes a whole cascade of interpretations within the cell. All of that is starting at the level of the cell membrane. |
|  | I just wanted to emphasize that all that we're talking about is incorporated into who we are, and who we are, on a more cellular level, is largely defined by what's happening at that cell membrane. I love the fact that you emphasize that, because I think sometimes people think if I take a fish oil, it gets into my blood, it circulates around, kind of quenches the fire. It's really not quite how this works. These things get incorporated into our cell membranes, and they might be pro-inflammatory, they might be anti-inflammatory, they might oxidize more easily, they might be more resistant to oxidation and reactive oxygen species, but they're also going to influence how effectively we signal and communicate. Insulin may be more resistant depending on the quality of that membrane, or more sensitive. |
|  | It's hard to over-emphasize the importance of these molecules in human health. We often talk about, I know, in the work that we do, John, getting an oil change. Beginning to think about the fact that one of the mandates from a self-care perspective is to redesign the constituency of your cell membranes. For people who have been subsiding on a standard American diet that has placed so much emphasis on these omega-6 polyunsaturates, you basically have built cell membranes that will, by default, tend to be more pro-inflammatory, tend to signal less effectively, tend to be more prone to oxidative stress. |
|  | We can literally construct a new fence around our yard, a new wall around our cell, and though it may take some time — 12 months, 24 months — I think this is so important that people think about. What they eat becomes who they are. The functional and biologic interpretation of that can vary considerably. When you start looking at the brain and mental health and behavioral health and cognitive health, when you start looking at all that we talk about, this is really one of the central aspects of human biology that is so modifiable. We can transform this aspect of who we are by virtue of selecting our fats more consciously and more thoughtfully. |
|  | It's amazing to me when I look at this biology, which can be quite sophisticated. Some of my research as a fellow years ago, John, was looking at these G proteins. We call them G coupling proteins. They sit in these walls, in the membranes, and they're so interesting and complex. If the quality of the membranes they sit in are not optimal, then these signals will not come off in an effective and efficient way. I just want to sort of emphasize that point, John, because this is so much more than calories, and low-fat, high-fat. This is a fundamental aspect of cell biology, cell physiology, that we can augment and modulate by virtue of how we choose. |
|  | We know, right, over the last couple of generations, John, we've gone from an ancestral ratio that, as you point out, people estimate to be between maybe 2:1 and 4:1 to ratios now that for many are probably 20+:1 omega-6 to omega-3. That, along with many other changes that we talk about, from sugar and carbohydrate-dense refined flour-based foods, are clearly highly correlated to fueling this epidemic of chronic complex disease that we all confront. |
| John: | Well said, Mark. It can't be more true with fats than you are what you eat. With protein, if you eat a lot of chicken you don't become more like a chicken, right? If you eat more peanuts you don't become more like that particular plant. With carbohydrates, if you eat predominantly glucose, other than the little bit of glucose that you're going to incorporate into your glycogen stores within your muscle and your liver, you don't necessarily become more like that particular source of carbohydrate. |
|  | But with fats, as you said ... This goes back to early '90s when, at Johns Hopkins, they took a really close look with an electron microscope as to what happens in the red blood cell membranes of people who eat only monounsaturated fat-rich diets. In this case it was olive oil, at Johns Hopkins. They gave men who had diabetes, they gave them only olive oil as the only added fat in their diet. Then after a month, Mark, they took a look at their red blood cell membranes with an electron microscope and they found that in just 30 days, because of those changed they'd made with the sources of fat in their diet, that these men were like 22%-25% more monounsaturated fat at that level. They were literally changing who they were by relying more on olive oil as opposed to a wide variety of fats. |
|  | Now, olive oil, it's a pretty good change. Typically, when we take a look at olive oil, it's much more stable than your polyunsaturated fats or these essential fatty acids that we're talking about. Most people I think in America, if given an option, should take that opportunity and say if I'm going to build my cell membranes, my mitochondrial membranes, out of more monounsaturated fats, that's probably going to be a change in the right direction. Even though it's not saturated, it's still pretty stable, and there's good evidence that diets rich in monounsaturated fats equate to better overall outcomes, whatever diseases we're looking at. |
|  | As you just said, if you start building your phospholipid bilayer for your cell or your mitochondrial membrane, which I think is even more critical, out of these omega-6s and these omega-3s, you are essentially — and this is what you just said — you're making those membranes out of something that's highly flammable. You are asking for trouble because they're going to essentially burn out at some point in life, whether it's going to be an infection or some type of traumatic event, or it's going to be chronic stress, you are literally providing a substrate, a fuel, for which reactive oxygen species can burn and the fire can spread. |
|  | I think that the mentality up until now, Mark — and I really hope people start to question this on a more widespread basis — the mentality now has been, okay, so you're going to have some omega-6s in your diet. Let's say you're going to snack on sunflower seeds and you're going to use some canola oil in your diet. That's okay, just throw more omega-3s at the problem. In essence, if you had, let's say, 15 or 20 grams of omega-6s in your diet from all the polyunsaturated-rich foods you eat, then just make sure you've got, let's say, somewhere between 6 and 10 grams of omega-3s coming in so that you end up with that 2:1 or 3:1 ratio that's your goal. I think we're starting to see that there's a significant limitation in that line of thinking, that if you are simply going to throw more omega-3s at a diet high in omega-6s in an effort to create balance, you're really just throwing fuel on the fire. There's probably no efficacy in that. |
|  | There's two different ways in which those omega-3s are going to work against your health: number one is, as you just mentioned, you're going to incorporate more of a highly flammable — that's the best analogy we can use — of a highly reactive substrate into all your membranes that's just going to give you greater room for problem. The second problem is all of these omega-6s and these omega-3s have significant impairment on the gut wall. |
|  | There's some great research put forth by Sanjay Ghosh. He's really one of the foremost experts on how omega-3s cause problems at the gut level. He's shown that when you add fish oil to a human diet, it's very, very different than when you get those people to eat fish. There is a significant impairment in that human, or in that clinical trial study — and he's done this several times now — there's a significant impairment in that individual or that population's ability to neutralize some of the inflammation that is going to be driven from the gut, those lipopolysaccharides that you and I have talked about. LPS molecules, there's an impairment in a human's ability to neutralize the LPS generated from what we call that gut dysbiosis and how it reacts to polyunsaturated fats. |
|  | Again, he's also shown, as others have, Mark, that we have this lipid raft model, which is basically what you were describing. You've got this certain composition we need within that phospholipid bilayer, in that membrane that makes all of our cells. If we start to incorporate too much DHA into that membrane, then those protein channels that you studied and those protein channels that are critical for things like insulin sensitivity and for the transport communication across that cell, once too much DHA starts to displace some of the sphingomyelin and some of the other lipids like cholesterol, that cell membrane starts to break down in terms of how efficient it is. |
|  | There's a couple different mechanisms at work, but we're really starting to understand that more omega-3s is not better. The real take-home message for optimal health might be really curb your omega-6 consumption, and that will allow you to rely on fish a couple times a week as opposed to trying to throw fish oil — and flax oils, even worse — at an imbalance to try to create balance. It just doesn't work that way. |
| Mark: | That's such a revelation, John, given what I think has been uniform acceptance — without a lot of good evidence — that a lot of exogenous omega-3 by way of supplementation can only be anti-inflammatory and health-promoting. |
|  | So much of the research that I look at that has been done with omega-3s has been done in the cardiovascular literature. There are many studies, as you well know, John, and our listeners may or may not be aware, but whether you're looking at primary prevention — preventing that first heart attack or stroke — or even in the riskier secondary prevention, people that have already had a history of a heart attack or stroke, omega-3 supplementation, usually in studies where they're using doses of 1-2 grams a day, or 1000-2000 milligrams a day, over, for example, a three-year, four-year, five-year period have not demonstrated any benefit. In some instances, have suggested even potential risk. |
|  | There's something counter-intuitive about that when you just look at, off the top, of the potential anti-inflammatory effect of that type of essential fatty acid, yet the point that you just made, John, explains so much of why I think you see those unexpected results. If the ratio, and bringing that ratio into a more ancestral place, is ultimately the goal of self-care, and from what we know of so many studies that have been done by extracting a particular nutrient out of its natural form and then taking it as a supplement, you just do not realize the benefit. Sometimes you realize the risk, as we've seen in vitamin A and vitamin E, that you don't see when you get that substrate from its whole form, in this case fatty fish — salmon and mackerel and herring and anchovies and sardines. |
|  | That point that you made, John, I think, of really looking to achieve this by scaling back dramatically, which is where most people have their greatest and easiest opportunities of these seed-based vegetable oils, then bringing in, as we'll talk about — we'll bring this home — much more quality saturated fat, and obtain your omega-3s from those marine sources as opposed to supplementation, you're probably providing a better substrate to best address this ratio issue that people are struggling with. |
|  | It's fascinating how things evolve, John, because I can remember ... We talk about this all the time, this is such a humbling journey. I used to take two large tablespoons of fish oil every day. I did it for years. I'm not sure that it ever made much of a difference, but I felt that I was helping myself. I no longer do that. I haven't done that in a few years now, as I've begun to reexamine some of the science around this. |
| John: | Me too, Mark. There was a time in my practice when I recommended, as you just mentioned, two grams of combined DHA and EPA, whether that was from fish oil, or for those that I could get to consume a liquid it would be something like a cod liver oil, which of course has D and A and things like that in it. Now I'm at a point, Mark, and it's a lot like the evolution I've had with vitamin D, where if I look back ten years ago, I had a whole different mindset. I didn't really appreciate, I think, some of what was missing from the research that was being touted as so beneficial and looking so optimistic for these supplements. |
|  | I think now, being able to step back and to look at the work of, for one, an author named Brasky who has really put together some great meta-analysis looking at what's really going on with omega-3 supplementation, having a chance to step back and look at these, I'd really probably be challenged, Mark, to find a situation where I didn't ask people to cut back on their poultry consumption or their use of, as you just mentioned, things like canola oil or snacking on these granola mixes which are full of sunflower seeds. That would always now be my first line or my first approach, would be to cut back on those things before I would in any way recommend a fish oil supplement. |
|  | Again, it's an essential fatty acid, so I know there's evidence that we need this on a regular basis and I think you could make a strong argument that for a pregnant woman who would not eat any type of oily fish, and maybe has had over the course of her life a very, very low intake of fish, that that may be a situation where supplementing with omega-3s could still have some benefit and it could produce a more favorable outcome in terms of that child's cognitive development at age five or seven. If you look at some of that research, it is compelling when you take a look at child cognitive development. |
|  | I'm not saying that there aren't situations where maybe it isn't warranted or that I wouldn't recommend fish oil, but if I were to sit down with someone, Mark, and they tell me that they have poultry several times a week — and I'm picking on chicken and turkey because for our listeners who aren't aware of this, those are animals that you cannot raise without feeding them a significant quantity of grain. There isn't a commercial poultry operation in the world, there isn't one that exists, where those birds are not getting more than two-thirds of their calories from grain and seeds. Now, by default, that produces a meat product which is loaded with omega-6 fats. If you're eating chicken or turkey a few times a week because you've heard that white meat is where it's at, and that's where cardiovascular health lies, you're eating an omega-6 rich food several times a week and that's going to start to tip things in favor of omega-6s to omega-3s. |
|  | Again, the approach up until now has been, well, throw fish oil at that problem and now you're going to get both omega-6s and omega-3s at higher levels than you probably need, and it's going to create this problem that we're describing. I now would recommend that people really take a look at their omega-6 intake, Mark, and do everything they can to curb their consumption of the omega-6 rich nuts and seeds. Limit those to maybe once or twice a week, and get poultry down to once a week. Eat oily fish, as you just mentioned, so you get the whole food complex, where you have the omega-3s bound to particular proteins that probably — and I say probably because there's some work going on in this area — probably changed the way that those fats are metabolized and the way that they influence the microbiome. |
|  | I'm at a point now, as you mentioned, it is really humbling to look back at what I recommended ten years ago and then what I did in my own personal life. I just wouldn't recommend taking omega-3 supplements now, without knowing all the details about a person's life and about their dietary history. |
| Mark: | Great, John. I think what you had mentioned prior about the microbiome, and this whole new frontier where we're going to continue to gain more insight into the mechanisms whereby these molecules at that level may be disrupting health in ways that, again, one might not predict from a simple notion that something that might be anti-inflammatory is good, something that isn't is bad. Our biologic translation is one where we know at many levels at the microbiome, these things have interesting interactions that I think we're just beginning to get our heads around, John. |
|  | As we bring this home, John, if you're sitting with someone and they've been eating a standard American diet, and you're opening their eyes in terms of consuming much more fat and reducing their poor quality carbohydrate, what is sort of the Fat 101? You've touched on a lot of this, John, but we've talked about these essential fats, but the saturated fats continue to be an important point of emphasis here in addition to better ratios of quality 6 and 3. How do you educate and guide those folks you work with? |
| John: | You know, Mark, I really ask people to think more about foods like coconut — which is of course almost entirely saturated fat — grass-fed butter, macadamia nuts, as great staples to have in their diet, and then to have monounsaturated fats very liberally, whether that's from avocados, olive oil, almonds. There's just six foods right there that I think people should look at as staples, and to keep the other polyunsaturated fat-rich nuts and seeds like sunflower seeds and walnuts and pecans ... And of course stay away from the polyunsaturated fat-rich oils like we've talked about, the canolas and the sunflower and those vegetable oil blends, which really have no role in a healthy diet. I don't think there's really any room at all for those in a healthy diet. If that becomes your default mode, that you go saturated and monounsaturated for nine out of your ten choices, I think it's going to lead people down the right road. |
|  | When it comes to supplementation, I wouldn't really recommend that people get into omega-3 supplementation until they really identify themselves as someone who just never eats fish. Again, I want people to look closely at supplements, Mark, as I know you do, because there's really a wide variety of products out there that are now selling omega-3, 6, and 9s. They're actually increasing your total polyunsaturated fat intake when there probably is no need to supplement, in most cases, with omega-6s, yet there's like twenty different brands of omega-3-6-9 supplements you'd find in a place like Whole Foods or a GNC. People end up taking even more polyunsaturated fats because there's this misconception that, well, it's better for me to take these 3s and 6s together in some kind of blend, and that's certainly not the case. |
|  | I guess that would be just some direction, Mark, in a few words. |
| Mark: | That's great direction, John, and it's such a shift from, I know, how many people think about what a healthy fat is and what a potentially dangerous fat is. We've essentially turned that paradigm on its head. I still find in the work that I do, John, in population health work, whether I'm working with healthcare professionals or just your average person struggling to get through the day, it's a mind-bending proposition to suggest that vegetable oils are ... As you put, you're a molecule away from the matchstick. I do think that this issue of the oil change, and really redesigning our constituency at this level, should be one of the major priorities of self-care and the project of health promotion. |
|  | One last thing, John - |
| John: | Yeah, one thing, Mark, before we do close this out, for our listeners who might say to themselves, "Hey, I've done everything I can to try to add more omega-3s and I'm not sure what's going on within my own cell membrane," they might want to know about the Quest — and there's other labs that do this, right? |
| Mark: | I was just about to bring that up, John. You read my mind. |
| John: | It would be great for you to shed some light on that for our listeners. |
| Mark: | Yeah, this question of measuring the ratio of omega-6 to omega-3 I think is very relevant today, though most clinicians that ... Typical allopathic, western-trained docs are not going to understand that, certainly aren't going to ever order it or recommend it, and people often tell me when they request it their doctors just kind of shake their heads, as is so often the case when someone attempts to be a more effective steward of self. |
|  | One does often have to take the bull by the horns here, whether it's finding a provider that understands this, but there are a lot of good labs. I use Quest Labs a lot, and there are more ... If a person is having trouble with their provider getting that blood test ordered — and insurance will pay for this. These are not exotic tests. They actually look at the membrane, usually red blood cell membrane ratios of these. And there are self-directed labs now where a person online can get a kit and have their blood drawn and sort of work outside the purview of maybe having to have a physician order that. I think direct to consumer testing is going up dramatically. I know Barry Sears and his Zone work emphasizes heavily testing around the omega-6 and 3 ratio, and he works with a specific lab. |
|  | I do think testing has a role, John, and this is one of those things that you can follow and track in response to changes in your diet. I'm a real proponent of testing, but Quest Labs is what I use most commonly. |
| John: | Yeah, that's great, Mark. There's a high level of accuracy with this particular test, just so our listeners, when they present this to their healthcare provider, their physician, that they understand this. This has been well-studied over the last 20, 25 years. Really, it does reflect what people eat. As we mentioned, you are what you eat when it comes to fats, not with other macronutrients. It doesn't take very long for that to start to be reflected in our tissues. |
| Mark: | Definitely. We appreciate everyone listening in to The Health Edge. Check out our website, www.thehealthedgepodcast.com. We continuously upload reference articles, and are glad to bring references if anyone has a particular question that they want to email us around, John. We're now on YouTube, and people can access these conversations on YouTube. We have show notes that are available on the website. We do tend to dive deep and we understand that, so it can help for people to go back and look at something that has been transcribed as they try to put this into context and better understanding. |
|  | This is a labor of love, and a lot of fun, John. Always great to see your face and to hear your voice and to learn from you. It's always awesome, John. Thank you so much. |
| John: | Likewise, buddy. thank you. |
| Mark: | And we appreciate people [inaudible 00:43:07] be well and stay well. |