THE MODEL HEALTH SHOW

EPISODE 450

Use These Foods To Improve Your Memory, Enhance Your Focus, & Reverse Brain Aging

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Shawn Stevenson: Welcome to The Model Health Show. This is fitness and nutrition expert, Shawn Stevenson, and I'm so grateful for you tuning in with me today. This is a very special episode. Today, we're going to be talking about specific foods and nutrients that are clinically proven to improve your memory, increase your ability to focus, and even protect your brain against accelerated aging, and so much more. And all of this is coming from my brand new book, Eat Smarter, which is available today. It is officially released. And I'm so excited and so grateful for this. And this has been something I've been working towards for many years and making sure that we get educated about how our bodies actually work and the connection that food has. And so the first section of the book is really dedicated to the metabolism side and taking people behind the scenes to teach them how their metabolism actually works to specific nutrients and foods involved in creating the hormones and neurotransmitters that control your metabolism, the endocrine organs that control your metabolism, that control what calories do in your body, and that is game-changing in and of itself. But take it to section two, where we talk about how food controls your cognitive performance. And we're not just talking about preventing degradation and diseases related to the brain, we're talking about how can we make your brain work better? And that's what we're focusing on today.

Theoretical physicist, Dr. Michio Kaku says, "The human brain is 'the most complicated object in the known universe.'" The most complicated object in the known universe. Inordinately complex and powerful beyond measure. The human brain is the most valuable entity on planet Earth. And the cool thing is, you have one. You have one. Now, we've been told, we've heard the stories, "You're only using 10% of your brain. You're only using 20% of the brain." That is from the realm of personal development because truly there's not like recesses of your brain that is just off, just hiding out in the corner, not doing anything. Our entire brain, we have whole-brain functioning. Now, this brings to the point of like, what is it though? The truth is, we don't know how to use our brains very well. So that capacity to use 95% more of our potential is there, absolutely. But just please understand, your brain is not some separatist organism, that it's just

some things operating in a vacuum, it's all working together for our good, but we've never been given an owner's manual on how all this stuff works, and it starts with food. What you eat creates your brain cells, what you eat creates your neurons, your dendrites, the axon terminals, the grey matter, the white matter, the myelin sheaths, all of that is made from what you eat.

Now, here's the thing. Everything you eat does not directly go to your brain. Even though your brain, now I really want you to get this, it's only about 2% of your body's mass, but it consumes about 25% to 30% of the calories you consume. You have a hungry, hungry, ravenous brain. What you eat directly, your brain is getting first dibs. So what you put in their matters. But there are specific neuro-nutrition, there are specific nutrients that are able to get into your brain and to feed those brain cells, and that's what we're going to be talking about. Because being that this is the most complex, powerful entity in the known universe, you have one, now here's the thing, and this is the poetry, the dynamic nature of life, even life's little wink, life's little sense of humor. That the most powerful dynamic organ in the known universe, the human brain that we all have, incredibly powerful, ironically is also, is as delicate as my feelings after watching that scene in Lion King where Mufasa gets taken away from Simba, like, ugh, it breaks me down. Okay, my feelings are delicate, the human brain is delicate. Alright. Simba's like, "No, dad, no." The human brain is that delicate.

Now, here's the thing, that also nature doesn't come to the party without gifts. Because this delicate organ does have protection, and it is the only organ that is fully encased in protective bone, right? We got that cranium, right? We got that cranium, we got that bone head. And we have this protection from external intrusions or external offenses. Now, here's the thing. Because of the nature of what we're able to put into our bodies, humans have tried to eat everything throughout our evolution, we also have to have protection internally for our brain as well, and we have a very highly sophisticated internal security system, guarding your brain, it's called the blood-brain barrier. The blood-brain barrier. Now, this is a very thin sheath of cells, but it is remarkably intelligent, and it's allowing only specific nutrients to pass through and get exclusive access into the VIP section of your body. That's what your brain really is.

And so, what are those foods? This is neuro-nutrition. And these are the things we're talking about today that can truly take your incredible brain, the most complex, powerful entity in the known universe, and turn it up a notch, turn it

up 10 notches, 10,000, put into hyper-speed. We have this concept in our culture like the limitless pill like there's something you could do to activate more of your brain's potential. These principles are so powerful, so profound, but unfortunately, most folks have not been given this very simple owner's manual on how all this stuff works. And today we're going to go from the very bare-bone basics to the things that add-in that extra level of performance that most folks don't know about. Alright, so we're going to start at the very foundation of what creates the human brain and the brain's performance. Your brain, you've probably heard this before, but we're going to take this to another level today.

Your brain is mostly made of water. It's upwards of about 80% water. Your brain is actually the consistency of soft butter. You know when you leave the butter sitting out? Some folks just do that. They leave the butter sitting out on the table. They got the glass thing over the butter. Some people are appalled by that. You don't keep the butter out, you keep the butter in the fridge. But the consistency of the human brain is the same as soft butter. Now, that being said, your brain is upwards of 80% water.

Here's why this matters. Your brain cells themselves... When I talked about food making up your body, water supersedes everything, and you want to think of water in the nutritional context because we tend to put food and water. We tend to separate these, but most food is abundant in water, just in nature. Water is the looked-over macronutrient. We have five major macronutrients, not three. Fats, proteins, carbohydrates, alcohol is another macronutrient, we talk about that in Eat Smarter too, it's going to trip you out. Water, the most powerful of all the macronutrients because it makes up the most of your body and your body's performance. A recent study cited in Medicine & Science in Sports & Exercise that I highlight in Eat Smarter found that just a 2% drop in your body's baseline hydration level can lead to impairment in mental tasks requiring your attention, motor coordination, and executive functions.

So this is the prefrontal cortex determining your ability to problem-solve. They mentioned things like map recognition goes down, so just finding your way around. I know we've got the GPS now, but do you remember when you just used to have to find something? Our ability to do that plummets. Grammatical reasoning, proofreading, mental math, all of those things, just a 2% drop in our optimal hydration rate causes these side effects. Tell me again what kind of pill you're looking for to make your brain work better. It starts with water. It's foundational because all of your neurons, your dendrites and axon terminals,

the things that I mentioned earlier, these are all operating in a water medium. It's how everything is communicating and being moved throughout your brain, is based on a water superhighway.

Now, here's something really cool. This is going to take this from the foundational level up a notch. It's not just water, in and of itself. Your brain, the blood-brain barrier has superhighways, express pathways for water to get to your brain, 'cause it's that important. So when you're hydrating, when you're drinking that water... Hopefully, you're getting a little thirsty right now. When you're guzzling that water, just know like, "Oh man, this is definitely going right to my brain." Because that hungry, hungry brain of yours is very, very dedicated to ensuring that it's getting the water that it needs. Now, here's the thing, and I've been talking about this for many years.

Now, nationwide, worldwide, the public at large gets access to this information. That's the virility of a book and the ability to get into people's hands that, in other circumstances, wouldn't get access to this information. It's very, very powerful and special. But when I was in school, even in my traditional university classes, I was taught the importance of H2O. We were taught water is H2O. But the truth is H2O does not exist anywhere in nature. It doesn't exist anywhere in nature. I know you're like, "What is he talking about?"

Water is known as the universal solvent. You will not find H2O by itself anywhere in nature. It's always integrated with other things, namely minerals. So it's H2O with other things dissolved into it. Constantly, that's what's happening in nature. Do we want to drink pure H2O? No, absolutely not. Humans have never drank pure H2O. It's always H2O with other things integrated into it.

And so we do have systems of cleaning our water, of course, that we want to be mindful of, to eliminate pathogens and potential chemicals and things like that, so we could do reverse osmosis or whatever the case might be. There's many different ways to go about finding clean water sources, but we have to be mindful that water needs structure. Your water and your brain need the number one thing that should be coming along with your water, which is electrolytes, for example, sodium. Not only does this electrolyte help to maintain proper water balance... So number one, it helps to maintain the water balance in your brain. You need sodium for this purpose. These electrolytes are... And even listen to word, electrolyte, right? We lighten it up. Electrolytes.

These are minerals that carry an electric charge. What kind of currency is your brain running on? These electrical currencies. The human brain is critically dependent upon electrolytes to send electric signals throughout all the cells in your brain. This is how important electrolytes are. It's not just about... We know about it from the commercials. You got the sweat, you need to get the electrolytes. Your brain, primarily, is going to be looking for these electrolytes to keep the lights on.

So in mentioning sodium... And this is one of the cool studies that's highlighted in Eat Smarter. Researchers at McGill University found that sodium literally functions as an on/off switch in the brain for specific neurotransmitters that support optimal function and protect the brain against numerous diseases. This is how important these electrolytes are. It's like an on/off switch for your brain to actually do processes and protect itself.

In our culture, sodium and salt are synonymous because salt is our greatest source, in our diets, of sodium, but they're two different things, sodium chloride. So we want to be aware of that little distinction, but we do want to be aware that salt, historically, and we actually dive into that in-depth in Eat Smarter, it's been one of the most valuable things in human evolution, is sources of salt. But the salt that most of us get in our diets is from processed foods. That is a heavily refined, just denatured, processed toxicant, added fillers, and preservatives. Not that kind of salt. We're talking about real salt from nature. There's so many different types of high-quality salt, but this might be something you might want to add to your water to provide it some structure and also to provide those electrolytes for your brain.

Also, of course, natural foods are abundant, they're absolutely abundant in electrolytes, particularly fruits and vegetables. So this is just one electrolyte, but I cannot, not tell you this, you've got to know this one today, because there is another massively overlooked and underestimated electrolyte that affects so many different parts of our performance and our biology overall, and specifically today, you're going to know how important it is for the function and performance of your brain. A fascinating new study published in the journal, Neuron, found that magnesium is able to restore critical brain plasticity and improve cognitive performance. This electrolyte is able to literally restore brain plasticity, and brain plasticity is the ability of your brain to adapt and to change. This was a thing that was believed to not be possible for many years, that the

brain... You got what you got. You got what you got and it's just degradation from there on out.

However, today we know that we can improve the brain, we can grow new brain cells in certain parts of the brain, and your brain can evolve and change and grow and adapt. Magnesium is critical in this performance. And here's another one, a double-blind placebo-controlled study published in the Journal of Alzheimer's disease, found that improving magnesium levels in adult test subjects, these were folks at risk in their elderly years, so around between 50 and 70, could potentially reverse brain aging by over nine years. Improving their magnesium levels could reverse brain aging by over nine years. This is something you just don't hear about, even with Alzheimer's it's just largely considered to be... There's nothing you can do about it. You can try to slow, slow it down. We're starting to finally understand there are things we can do to help to reverse and protect the brain, but also reverse the degradation. Magnesium is critical in this.

It's another powerful electrolyte, but magnesium isn't really highlighting throughout it's modern relationship to metabolism, cognitive performance, our emotional intelligence, it's an important anti-stress buffer, but it's responsible for over 650 biochemical processes that we're aware of. Just a couple of years ago, it was 350 that we knew about. We can confirm now 650, that means it's 650 things your body cannot do or do properly without adequate levels of magnesium. Guess what the number one mineral deficiency is in our country? Magnesium. About 60% of the population is chronically deficient in this powerful anti-stress, brain-fortifying mineral. We have to change it. We have people that are walking around with brains that are just not working right, and wondering why we can't get along, and we can't ask questions, and we can have high-level evolved intelligent conversations, we have to get our brains healthier, so we can make this stuff happen. It's not that it's impossible if our brain health isn't well, it just makes it harder. What if we make it easier to have connection? This is one of those things.

So this is just a snippet of what's in Eat Smarter, make sure to get your copy today. It means so much to me, but I know that this is coming right now at this time in human history because we need a shift. We have to take control of our health, the health of our families, and our communities. And now we have the resources to do it, alright? So please make sure to get your copy today. If you already got a copy, if you already pre-ordered one, get another one. Go to the

bookstore, go to your local bookstore, get yourself another copy of Eat Smarter. Order another copy, get a copy for a friend, family member, all of that helps to energize and let these entities know that this is what we want. We want books like this, we want information like this, we demand it. So please know that when you get a copy of the book, it's not just something that's going to add so much value to your life, but it's voting with your dollar and showing the market what the market should be providing to the public. So it really does mean a lot.

So it's the foundation. We're just scratching the surface, alright? Water is the most important macronutrient for your brain, coupled with these electrolytes. So now we're going to move on to the next level, and now we're going to talk about the other constituents that make up the human brain and what we need to bring in dietarily. And in looking at the brain being around 80% of water, what else is it made of? And that next factor, those micronutrients, is fat, alright? This is the one that's in the popular culture that's talked about a lot in the world of health and nutrition. Your brain is mostly made of fat, it's actually water predominantly, but that ratio of fat is also incredibly important. If we're talking about the dry weight of the brain, if you want to look at it like that, your brain is about 11% fat, followed closely by about 8% proteins, 3% minerals, and a little sprinkling of the carbs and other compounds, because the carbohydrate or sugar molecules that are floating around in the body, your brain uses that stuff very quickly, alright? So there's not a lot just kind of hanging out in the human brain, but about 11% fat, 8% proteins, alright, these amino acids are very important as well, but let's focus on fat, alright, you got that fat head, alright?

This was a universal diss, alright, being called fat head, "Hey fat head?" It wasn't cool, but now you're going to know, fat head is actually... It's pretty dope, it's pretty sexy. Alright, now, this is the thing. When we think about the brain mostly being fat, it's not that the fats that you eat dietarily directly end up in your brain. We have to get clear on this, okay? Eating fat does not make you fat directly, and also eating fat does not directly feed your fat brain, alright? These are two different things biochemically, fat in food and fat in your brain and on your tissues, and this leads us to the conversation about the different types of fat in the human body, alright? In the first section focused on metabolism in Eat Smarter, we talk about storage fats. We talk about storage fats. So these are fats that actually store energy that we evolve to have, that are critical to our survival, right? These storage fats, this is the white adipose tissue, this is the subcutaneous fat, the visceral fat, and the intramuscular fat. These are storage fats.

Your brain does not have storage fats, this is something totally different. These are structural fats. The human brain is structural fats, not storage fats. It's an evolutionary development, because in times of famine, if your brain was made of storage fats, theoretically speaking, your body would start to eat your brain, your brain would eat itself, and like built-in zombie food basically, if you were experiencing a time when you didn't have food. So this is why the brain itself is not made of storage fats, it's made of structural fats. And so in creating that structure, a lot of the structural fats are actually developed and infused into our brains when we're babies and we when we're little babies, alright, specifically saturated fat, critical to brain development. Alright? The brain is sopping up saturated fats like a biscuit. When you're a baby, mother's milk is upwards of 50% saturated fat. Did nature make a mistake? Saturated fat's been vilified and vindicated, and vilified and vindicated, and then even now, recently you came out again, saturated fats, it's going to kill you.

It's a big difference between saturated fats found in processed foods and also saturated fats found in nature, right off the bat that differentiation is typically not made when you hear these studies about how bad saturated fat is. But just look at the number one primary human food, mother's milk, breast milk, being upwards of 50%. It could be 30%, 40% upwards of 50% saturated fat, and it's primarily going to feed the developing human brain, the most complex, powerful entity in the known universe. Now, here's the rub. Those receptors or those channels to allow saturated fat into the human brain through the blood-brain barrier, when you are an infant and then moving into early childhood, they're open, but as time goes on, those receptors and the accessibility in the human brain to absorb saturated fats into the brain itself goes down until when you reach adulthood, they're all but shut off. But saturated fat is so important that the human brain will make it itself. Your brain as an adult, if it needs to, it'll make saturated fat itself. Crazy. Crazy.

However, dietarily speaking, much of the saturated fat we might consume in our diet as an adult does not go to your brain, okay? So I just wanted to share that little tidbit there and understand that, again, the fat in foods does not directly translate to the fat on our bodies, storage fat, or structural fats. But there are specific fats that do contribute to the performance and rebuilding your structural fats in your brain. And let's talk about what those are. Research published in the American Journal of Clinical Nutrition discovered that increasing dietary levels of DHA, the essential omega-3 fat DHA, was able to

improve both memory and reaction time in healthy test subjects. DHA is such a critical part of memory formation that you can literally forget about making memories without it. You need DHA, it is so important as a structural fat and also in enabling and supporting communication between your brain cells. DHA is essential.

Now, this gets in the conversation about this Omega-3 category of essential fats, there's so many different types. Omega-6s are also essential fatty acids and we need them, but our diets are now so skewed in the amounts of omega-3s we're getting versus omega-6. And so we go into that in the relevance with metabolism, but also in relevance with the brain health today in the average American diet, which historically we'd have around 3:1 omega 6 to omega-3 ratio. Omega-6s are more noted to be the pro-inflammatory omega fatty acids, which we need them. We need them for certain processes, but being that they're pro-inflammatory they can cause some major problems and also major problems with inflammation in our brain, which we'll get to in a moment. But the omega-3s are the anti-inflammatory category, and we need them as well, to help to maintain that balance.

And so, being that this is the case, we have to put a greater emphasis today more than ever, and everybody listening from this day forward, put an emphasis on getting DHA and EPA into your bodies. Your brain needs it. It craves it. It's one of the most important nutrients that we're simply not getting enough of, and most of us have no idea. This particular nutrient directly improves your memory. We have study after study after study, I've put it in Eat Smarter, demonstrating how DHA and EPA specifically helps to improve your memory. It's clinically proven, study after study. Now, here's the other side of the conversation.

These are so important for the structural integrity of the brain... Again, we're talking about structural fats and structural integrity. These are so important for the structural integrity of the brain that a study published in the Journal of Neurology using MRIs revealed that people consuming the lowest amount of EPA and DHA in their diets had accelerated brain shrinkage. Their brains were literally shrinking. This isn't the kind of shrinking when it's cold outside, this isn't that kind of shrinkage. This isn't like, "Oh, the water." You get in the cold water and you get some shrinkage. This is more of like the permanent kind, okay? "Don't touch me, it's the shrinkage, it's cold." No, this is like, "Oh, my brain could be messed up for the rest of my life and cause degradation in my cognitive

performance." We have to protect our brains and provide these essential nutrients, so EPA and DHA. They stated in the study that people who ate the least amount of DHA, which was less than four grams in this study, showed the highest rates of brain shrinkage, while those who ate six grams or more had the healthiest shrink-proofed brains.

That barometer, that baseline is just about a teaspoon, a little more than a teaspoon a day protected against accelerated brain aging and shrinkage. Nobody likes shrinkage. You want to be at your full glory alright.

Now, where are we going to get these from? Where are we getting our DHA and EPA? For most folks, it's attributed to fish and fish oil, but Eat Smarter is really a unifier. It's a unifier of all diet frameworks, so regardless of what diet framework you might have been subscribing to, whether it's vegan, whether it's Paleo, whether it's keto, whether it's pescatarian, whatever the case might be, it is addressing the most powerful principles and nutrients across the board, regardless of your diet framework, it's a unifier. Nobody's excluded, alright? And also we're looking at what are the specific things in all of those diets that could damage your brain that are common in those various diets that can damage our your brain and lead to accelerated brain aging, but also accelerated development of body fat, regardless of what diet you're on, so these are the things, again, it's a great unifier. So being that most folks attribute DHA, EPA, Omega-3s to fatty fish, which are, these are... If you look at the data, these are great sources including wild-caught salmon, herring, sardines, mackerel. But in our conversation that we've had with Dr. Lisa Mosconi, neuroscientist, she shared that, for example, one of the food sources that supersedes fish is caviar and salmon roe.

So the salmon roe, the salmon eggs are upwards of three times more DHA per gram than the fish itself. It's packed. It's insane how much DHA and EPA you'll find in caviar and Salmon roe, and when she told me about caviar, I'll just be real, I was just... Immediately, I had my pinky up like, "Oh, really?" Lifestyles of the Rich and Famous is what came up for me, Robin Leach. I don't know if people... If you're a little younger, you might not know, I don't know, but it was Lifestyles of the Rich and Famous, I think it would come on like...

For me, I think, I guess I saw the replay, but Saturday night, Friday night, it was like at least Friday night. And late Friday night, 'cause I would go to bed, I had to go to bed with my little brother and sister just so they go to bed because my

mom didn't want to show that there was some kind of... Like I was her favorite. Clearly, she didn't want to show that, so she'd be like, " Go to bed with your little brother and sister, and then when they go to sleep, you can come back, you can watch TV, hang out." Alright, so I would do that Friday nights. They'd go to bed, we'll just say 9 o'clock. Can I tell you how hurt I was when I would accidentally fall asleep, 'cause I'm just waiting for them to go to sleep, and then sometimes I would open my eyes and it's Saturday and I'd be pissed I missed all that good hanging, all that good TV and the snacks that would come along with it, 'cause my stepdad would come in, gets off of work around 11:00. He comes in he bringing Pizza.

All kinds of just adventures, but anyways on the nights when I was successful in staying awake and watching TV, Lifestyles of the Rich and Famous, they'd take you and show you the lavish life. Then we had MTV Cribs kind of transmuted into the more recent evolution to that show, but it would be Lifestyles of the Rich and Famous, Twilight Zone, oh come on, freaky stuff right there, and Nightmare on Elm Street the series. What was my mother letting me do, I was like eight, seven, eight watching Freddy Kruger, freaking me out? I was addicted to getting freaked out, alright? And then eventually it'd be like Friday night videos too because we didn't have that cable, that's a super-luxury, but Friday nights, you get to get... See the videos, Friday night videos, so it was a whole vibe. It was a whole vibe.

But being that this is the case of... In our minds psychologically, we'll hear certain foods and just be like, "Oh, that's not for me," or like oh that's this, that's that. Let's just bring break this down to, number one, the connection with humanity throughout our history and our evolution, humans have been eating what we lay, we call this food caviar, salmon roe, the fish eggs for centuries, long, long, long, long time. But also then you might be like, "I'm not feeling that I'm just... Regardless of if humans been eating it that, I'm not really feeling it," that's great because we have other options, there's always... There's so many different ways, creative ways, but we also still...

I want to encourage people, and this was just a strong tenet throughout Eat Smarter, is to look to food first. We want to do our best to get our sources of, right now we're talking about DHA and EPA, from foods that folks have been eating for centuries for thousands of years, because our genes have a connection, our DNA is connected to these foods. And so with that said, as we make the pivot from the fish sources for folks who were taking a vegan and

vegetarian protocol, we have to look at where you lie on the spectrum and get this bit of information because automatically... And this is what I believed 10 years ago when I was working in my clinical practice, you can get your omega-3s from plant sources. But I didn't really realize it, I took it at face value that omega-3s were created equal. There are so many different types of... Essentially, all the nutrients that we've discovered, there are different types, there's different types of magnesium, there's different types of vitamin C, there's different types of Omega-3s, DHA and EPA are two types of omega-3 fatty acids. The plant version is ALA, ALA and it is nowhere near as remotely qualified or even enabled to get into the human brain and to nourish the brain like we've been talking about, it's just not the same. It doesn't work that way.

But DHA and EPA are so essential for the human brain, your body will convert some of the ALA you consume through plant sources into DHA, but it doesn't do it very well. About 80% of the ALA plant sourced Omega-3s you consume get lost in the conversion process, so you need to know that this isn't something you just "Oh, I'll just get this plant source and I'm going to be okay." I'm telling you, your brain is so dependent on DHA and EPA for proper functioning, this is not something to play with. You got to figure out a way to get high-quality DHA and EPA specifically for your brain. So how do we do that on this protocol of vegan vegetarian, then we move to from the category of fish and fish oil, which we'll talk about in a minute... As a matter fact, let's just hit that really quickly, because this is what most folks think about fish and fish oil.

A randomized placebo-controlled study cited in Nutrition Journal found that test subjects taking just three grams of fish oil per day for five weeks significantly improved cognitive performance compared to folks taking a placebo, directly. We got the data, 99% of the evidence on omega-3s and where to get the DHA and EPA, fish oil is what's tested. The next here, which we now have more and more evidence coming out, and this might be something that lies in the spectrum if you're doing a vegetarian approach, krill oil, right? Krill oil, K-R-I-L-L, krill oil.

Really rich in astaxanthin, this powerful antioxidant, so many cool things with that. We have some evidence showing that this can be a source to help to feed our brain, so that might... And what is krill? It's a super-duper duper duper microscopic organism, microscopic shrimp. But when you hear shrimp, then you might think, "No, I'm not going to kill a super-duper microscopic baby shrimp, alright? 'Cause I'm vegetarian." This is like... I think you'll you'd probably be...

There's probably more organisms in the air that you are accidentally... When you swallow, then what you're getting when you're doing the krill oil, alright? So it's like, it's very super microscopic shrimp, but even still that might, for your ethics, might not lie in a place that you're comfortable with and that's okay.

But I just want you to know fish oil has the evidence, we know it works. Krill oil has some evidence, we're starting to understand that it works. The other source, if we're going to do the full plant source would be algae and algae oil, and there's not a lot of clinical evidence in its efficacy for directly feeding the brain, not yet, but we do know that the DHA exists, that it's there, that's measurable. So I'm a fan, I'm a fan. Of course, for me, I'd want to see more evidence so I can just make a very definitive guidance for folks who are doing a plant-based protocol, but please, if that's where we're at, get an algae oil. Please, please do that. Take care of that incredible brain of yours. You need DHA, you need EPA.

In addition, what about the food source itself? Let's circle back. Food source, food source alert, let's circle back. Does eating fish actually translate over into improved cognitive performance? I got you. In the data, two to three servings of fish per week appear to be ideal, but this is noted in a study conducted by researchers at Rush University Medical Center, found that adults who eat at least one seafood meal per week do in fact perform better on cognitive skills test than people who eat less than one seafood meal per week, just one... Smarter.

Foods are literally building what your brain is made of. Eating smarter can make you smarter, but there's so many... There's a spectrum that we go through, and as we're going to talk about more plant-based options today as well, but we have to feed our brain, it's controlling everything about us. In addition to that, other sources, dense sources of EPA and DHA, specifically grass-fed beef, pastured egg yolks, and as we mentioned, most popular for folks in that domain is going to be fatty fish, but then we've got krill oil, we've got algae oil, and we can get some conversion from plant-based sources, and they're great, and they also have other benefits like chia seeds and flax seeds, but to get the amount of DHA and EPA your body needs from chia seeds and flax seeds, that conversion, you might as well strap on a beer bong and just walk around, just have chia seeds funneled into your gullet every moment to be able to meet the amounts of DHA and EPA you need. And also chia seeds, they got that fiber, you know they create increase that gel... So with your beer bong, you're not going to be

walking around, you might as well get a portable Johnny on the spot and put some pedals on it, 'cause you have to sit on the toilet all day, basically is what I'm trying to say, alright?

It might not be the most viable option to get your DHA and EPA you need, definitely look towards algae oil as the plant source, krill oil, then we have all of our whole food-based options as well. So these again, we're just leveling up right now, we're leveling up, we're talking about the things that can actually cross the blood-brain barrier, this specific omega-3s to make you smarter, to nourish your brain, to improve the structural integrity of your brain cells, and improve signal transduction and the ability of your brain cells to communicate with each other, this is not a joke. You need these things. Alright?

And we're going to take it another level now, we're going to talk about another structural fat that's essential for the performance of your brain. This next category of fats are present throughout your entire body, but much more so inside of your brain, another type of invaluable structural fats are phospholipids, and they help to give all of your brain cells shape, strength, and elasticity. Phospholipids are made almost entirely out of omega-3s, and this echoes again how important omega-3s are dietarily, but you can also derive phospholipids directly from certain foods.

One of the most interesting things about phospholipids are their contribution to cellular communication. Not only are they involved in signal transduction, again, enabling your brain cells to communicate with each other, a powerful feature of phospholipids are their ability to potentially support mental performance under stress. Ooh, we can use this right now, we can use this. A recent double-blind placebo-controlled trial found that the consumption of phospholipids help to enhance attention and improve reaction time when test subjects were placed under stress.

I would love to be able to focus and have attention under stress. I would love that. The study participants also reported reductions in anxiety and heightened sense of mental energy. We could use that too. Phospholipids. Phospholipids. Where are we going to get these phospholipids? Alright, food sources: Fish, crab, salmon roe, krill. But also plant sources: Soybeans, oats, milk and sunflower seeds are all good sources. But a repeated theme is how remarkable and nutrient dense you'll find in the data eggs to be, specifically the egg yolk is packed with 10,000 milligrams of phospholipids per 100 grams of product. It's

just kind of the champion with these phospholipids, and again, helping your brain to perform, not just perform, but to perform better under stress. It's really, really remarkable.

So phospholipids are incredibly important, but these are things that are not talked about in conventional conversations, nor where do we get them from. We're just looking for them to take a supplement for this supplement. It's in food, but are we allowing ourselves and giving ourselves access to these foods? So the structural integrity of our brain cells, giving ourselves shape, strength and elasticity, phospholipids. Now, the phospholipids category can actually be broken down further into sub-categories that I go through, and I go through all four of them in Eat Smarter, but one of them that I want to share with you right now is a phosphatidylserine, alright? Phosphatidylserine.

A study highlighted in the journal, Lipids in Health and Disease, investigated the influence that phosphatidylserine could have on short-term memory function. So this was specifically like name, face acquisition, remembering phone numbers. Remember when we used to remember phone numbers? We've outsourced that part of our memory to our phones, but to increase this part of our memory in test subjects, so they were looking at phosphatidylserine use in this capacity in test subjects who specifically had reported cognitive decline, they had the onset of potential disease related to cognitive decline, and here's what happened. After just three weeks of increased phosphatidylserine, they observed a substantial improvement in their short-term memory; their ability to remember these things that we come across, our explicit memory, declarative memory. This was in comparison to the control group. Patients with improved levels of phosphatidylserine reported to have "Rolled back the clock of their cognitive age by several years." We can make our brains work better. No matter what level we're at, we can get better.

What are some sources, some direct food sources of phosphatidylserine? This includes mackerel, tuna, organ meat, so like chicken liver, chicken heart, turkey, beef, greens, beans, potatoes, turkey, beef, white beans, and soy lecithin. Now again, there's a spectrum, I'm just providing some, but these are abundant in many different types of whole foods. I'm just sharing some of the most dense sources, alright? And we go into so much more in Eat Smarter. Get your copy today pauses. Get your copy, order a copy, express ship, get that copy to you into your hands, into your heart, so much value. This is just a small slice of what's in Eat Smarter.

And now we're going to look at... There's other different dimensions, of course, of the fats that provide nutrition to the brain, and we'll dive into one more. Now, as we noted earlier, the saturated fat gates, the toll booth that allows saturated fats into the brain as we mature, they essentially shut down. Those toll booths get closed off, but there is a category of saturated fats that express lane... You got the express pass to get through into the brain because it's so important. And this is the category of medium-chain triglycerides or MCT. Researchers at Yale University published data reporting that MCTs can readily cross the blood-brain barrier and directly be utilized by your brain cells. Another remarkable study, this was published in the Annals of the New York Academy of Sciences, sought to find out if MCTs could have an impact on improving the conditions of patients with Alzheimer's disease. Alzheimer's disease, again, it's considered once the onset happens, all you can do is try to slow it down, you can't get improvement.

Listen to this. You have to understand, first and foremost, that there is an insulin resistance taking place in the brain. This is largely associated with the cognitive decline, because your brain uses glucose and there's insulin receptors, insulin activity, to nourish the brain cells, but when there's such an abundance of sugar coming into our system, it creates insulin resistance in our brains. And researchers are now calling Alzheimer's disease type 3 diabetes. The scientists in the study discovered that MCTs are quickly metabolized by the liver promoting the production of ketones, and these ketones are then able to easily cross the blood-brain barrier and provide an alternative fuel source to the glucose-impaired brain cells of Alzheimer's patients.

The scientists found that the consumption of MCTs directly led to improved cognitive function in mild to moderate forms of Alzheimer's disease and cognitive impairment. This is so important. A lot of folks do not realize how quickly Alzheimer's is rising in the top 10, top five causes of disease for our citizens today. It's right there hovering in the top five, and we might wonder how is Alzheimer's... We can maybe understand a heart attack, we can maybe understand cancer, how is Alzheimer's disease so devastating? How do people die from it? It's not just a loss of cognitive performance and remembering names and places and things like that, this is essentially forgetting how to swallow, forgetting how to walk.

It's a devastating condition, it's a devastating disease and it's skyrocketing. And

we need to check ourselves and ask... Just really look at what's happening and ask why. Why? Why now? Why is this happening? Why is it so rampant? Something changed, something happened. And I'm telling you today, a big part of it is the change in our food system, and we can fix this. Again, MCTs are able to directly cross the blood-brain barrier and nourish brain cells, but they also have a kind of alternative route, they take the back alleyway. Alright? They have a shortcut. They got the Waze app to nourishing your brain as well by working with your liver to produce ketones that thereby provide that alternative fuel source to fuel your brain that way as well.

Now, whole food sources, abundant sources of MCTs are going to be found in things like coconut oil and dairy products, specifically cow's milk, goat's milk. If we're looking at caprylic acid, it even derives its name, meaning female goat, alright? If we're looking at that particular name and actually where it came from. And other sources as well, alright, so even if you're just like, "I can't do it with the milk, with the diary," alright, there's other sources. But there's also concentrated sources of MCTs, but you just want to make sure that they're derived from real food sources, like a coconut oil-derived concentration of MCTs, alright? So many cool things, of course, that can easily be added to tea and coffee and smoothies and salads and things like that, but MCTs are another one of those foods that can directly nourish that fat brain of yours.

And now I want to shift gears a little bit and dive into another subject matter, because it's not just about improving our cognitive performance, but it's also hitting the breaks on the things that are accelerating the decline of our cognitive performance. And there is nothing that is more offensive to our brains than this next category that we're going to talk about. So I want you to really understand your brain absolutely runs on glucose primarily. It's like a primary fuel source. The ketones can be used as an alternative fuel. It's wonderful, it shouldn't even be called an alternative fuel. It's another fuel that it can be used, it's just... But glucose is required for so many processes, and being that your brain is so adamant in getting that glucose like you have... When I talked about the express pass, the multi-lane toll booth for allowing certain types of fats to get into the brain to provide structural fats and also to fuel processes in the brain. If you want to multiply that times 100, how many gates or toll booths there are for sugar getting into your brain, it's just... It's astronomical because researchers at Harvard University affirm that the human brain will gladly confiscate half of the sugar energy you put into your body. It's only 2% of your mass, but it will gladly confiscate half of the sugar energy you put into your

body.

So growing up, like I did, and you put that big gulp, you put 100 grams of sugar into your body, your brain is inherently going to sop up... I want you to get this. When we're talking about all these different foods and issues with sugar and processed foods in our culture, your brain is really getting the brunt of it. Your brain is really dealing with that sugar infusion, more so than anything, and it's causing damage because once all that sugar is flooding your brain, it creates this insulin resistance in our brain. This, again, is tied to our degradation of what's happening with issues like dementia and Alzheimer's skyrocketing in our culture. It's not out of nowhere. And the research has said that these things don't just "happen," there's been a shift in what we eat, and we need to be adamant about getting the right information in and doing something about it.

Now, sugar has always been a part of human evolution, but we would find natural sources of sugar. We're really drawn to it. You're in the jungle or on the planes, or whatever the case might be, and you come across a beehive. Alright, before Beyonce, there was a different beehive, alright? You come across a beehive with some honey, oh man, come on now. Come on. And the naturally occurring sweetness of various fruits, and sugarcane and things like that, but now we've concentrated it. We're taking that sugarcane, we're going to extract all the sugar out, and you just eat the sugar. It's abnormal, but we've come to accept it as normal. And for me like, listen, I feel part of the reason I'm so good at this is because I was so messed up, alright? This is real. When I was a kid, one of the highlights of my day, if I can get a $1 or even a $1 food stamp, and go to the corner store and get some penny candy, alright? One penny, one-piece, 10 cents, 10 pieces. If you got a $1, you getting 100 pieces in a little brown paper bag.

This store clerk was so patient, I'm shook. They, saint, saintly patience, because I'm like, "Let me get five of those fishes, the sweetest fishes. Let me get 10 of those tootsie fruity rolls." Oh, when the sour ones came, I was there. Alright? Frontline, I was there. When the sour snacks came, come on now. And then you consume so much sugar, you basically... You're blacked out. You don't even know you're blacked out. You're playing video games and you're just like... You don't even know what's happening. Alright? And I did this all the... It was, just everybody that I knew did this. We were striving to get that 100, that 100 bag. Alright? Man. And we just accepted this, and this is in addition to the honey buns, this is in addition to the powdered donuts, this is in addition to the chips

and the soda and the cake and the juices. Oh my goodness, I loved... They were in a barrel, these little barrel juices, that's what we called them, barrel juices. Had a little foil top, alright, you just puncture it, get your guzzle on. My favorite was the blue. Alright? That's messed up. When your food source, it doesn't have a name of a fruit, it has the name of a color. Alright? It's not the blueberry, just give me the blue. It's not strawberry, let me get the red. Are you kidding me? It's not the apple, let me get the green. 0% juice. Sugar. Half of that, your brain is gladly confiscating, flooding your brain with this sugar.

So again, it takes a shift in our perspective, a shift in our culture, and so what we did instead of addressing the rampant consumption of sugar, then food manufacturers are like, "Oh, I got you. I got you. Let's make it diet. Let's have a chemically-derived synthetic version of sweetness and let's see what that do." A recent study highlighted in Eat Smarter conducted by researchers at Boston University School of Medicine, published in the peer-reviewed journal, Stroke, discovered a surprising link between drinking diet soda and debilitating health issues. The study found the people who drink diet soda daily are almost three times more likely to have a stroke and develop dementia. Now just to be clear, this is correlation, not causation. Alright? More studies need to be done, but this should make the red flags go up, and they actually did a really good job, the researchers did, at differentiating, because they adjusted for several other factors like age, sex, even education for analysis of dementia, caloric intake, diet quality, physical activity, smoking. They accounted for all these things, drinking diet soda stood out, three times more likely to have a stroke or develop dementia.

Something's wrong here. We're still looking through the lens of fake process, craziness, and accepting it as normal. Does this mean we can't have a soda? You can have a soda, but if this is a regular part of what you're putting into your body, you are damaging your brain, the most powerful, complex, dynamic entity in the known universe. We got to do better. You got one. You've got one of them, you got to take care of it, and it will take care of you. So of course, we get into the conversation about what about natural alternatives to sweeteners, does that have an impact on the body? We dive into all of that in Eat Smarter. So much goodness there, so much insight, and a lot of fun.

And I want to share with you guys a couple of specific foods to help to nourish that brain of yours to target. And the first one I'm going to share with you is another, what's in this category, what we call "healthy fats." But we've been

looking at this in the data, for this food I'm about to share, more so in prevention of cognitive decline, but it can actually make your brain work better. There, again, are only a few, like a few dozen foods that can easily cross their way through the blood-brain barrier, and this is internal security system that the brain has. And this is very important, I want you to listen closely. Not only do we want to provide the key nutrients that can cross the blood-brain barrier, the brain's security system, and nourish our brain, we also want to be supportive of the brain's security system itself. We want to be supportive of the blood-brain barrier itself because damage to the blood-brain barrier through things like neuroinflammation, inflammation in the brain, exposure to toxins, and nutritional deficiencies, the blood-brain barrier can become dysfunctional over time, not allowing the right things in to even feed your brain in the first place, and also not being good at keeping the wrong things out. And a damaged blood-brain barrier can further exacerbate poor mental performance and cognitive decline.

Groundbreaking new research published in ACS Chemical Neuroscience asserts that oleocanthal-rich extra virgin olive oil, EVO, EVO is able to restore the function of the blood-brain barrier. Oh, it's extra virgin olive oil. Alright? Listen, in addition, research cited in the Scientific World Journal reaffirms olive oil's ability to reduce blood-brain barrier hyper permeability, but another interesting thing is that sufficient intake of monounsaturated fatty acids found in extra virgin olive oil is found to help prevent age-related deletion of mitochondrial DNA in the brain. What? It's protecting mitochondrial DNA in your brain. Unbelievable, unbelievable.

Again, these are well known to be energy power plants in our bodies. It is creating the energy that we experience for your brain to fuel itself and to do all these cool processes. And this was cited in Frontiers in Cellular Neuroscience. And researchers at the Rush Institute for Healthy Aging found that people who consumed at least 24 grams of these fats per day had an 80% reduced risk of Alzheimer's compared to those who consumed 15 grams or less. It only takes two tablespoons of extra virgin olive oil to hit your daily dose of these high-quality brain-protective monounsaturated fats. It's good stuff. So this is something that directly improves the performance of your brain by protecting the blood-brain barrier.

Alright, really, really cool stuff. So this is just one, this is leaning into the importance of high-quality fats, but the right types of fats, and I want to share

just a couple more critical brain-supportive foods for you that's highlighted in Eat Smarter.

This one is incredibly interesting because it's a different category. We tend to put this in the category of plants, but it's not in the plant kingdom, it's its own kingdom, and this is the category of mushrooms. A six-year study found that the inclusion of culinary mushrooms can improve your memory and reduce the risk of age-related cognitive impairment by upwards of 50%. Mushrooms like golden, oyster, white button, and shiitake, were all noted to be beneficial in this particular study. And many of these mushrooms are an excellent source of nutrients like potassium, copper, and B vitamins that are known to be supportive of our cognitive performance. Two to four servings of mushrooms per week is a great place to target to get some of these results and to help to improve the function of your cognitive performance but also to reduce the effects of memory decline, alright? Shout out to the mushrooms, alright?

And one more I'm going to share with you, and there's an entire list of these clinically proven cognitive performance-enhancing foods. This one is really remarkable, and it's highlighted in a study that found that this particular nutrient is able to waltz its way across the blood-brain barrier and increase the activity of the neurotransmitter GABA, which helps reduce anxiety and makes you feel more centered and relaxed, and this compound is the L-Theanine that's found in green tea. A study that was published in the Peer-reviewed Journal, Brain Topography, found that L-Theanine intake, specifically from green tea, is able to increase the frequency of alpha brain waves, indicating reduced stress, enhanced focus, and increasing creativity. So cool, that's the thing about the human brain, infinitely complex and infinitely creative. There are solutions to all of our problems. If we can just tap ourselves into the things that actually make our brains work better, we can transform not just our bodies, but our lives and the lives of our communities, and we need this right now. So I really hope you enjoyed this episode. And please, I want to implore you, if you got any value out of The Model Health Show, this is my ask for you today, get your copy of Eat Smarter, and if you've already got your copy, get a copy for somebody you care about.

This movement is important, be a part of it. It means everything, I've put my life into this book, my heart, and soul, and it's transformative. But it's also an adventure and something so fun, so engaging, so rewarding that I truly believe everybody should have access to. This is the education that I didn't get in my

traditional university setting that set me back and that I dedicated my life to finding out how food really does control everything about us, and this conversation goes from what we're putting into our bodies, but also it ends up being a reflection of what we put out ourselves into the world and bringing ourselves together because, in this section of the book, we also look at how food and nutrients or lack thereof, affect our ability to have compassion and a perspective take and even our proclivity towards aggression and violence when we're not getting the proper nourishment.

We need to get our citizens healthier so we can have healthier conversations. I appreciate you so much. Run, don't walk, get your copy of Eat Smarter today. This is the official launch day, it means everything. This is a part of something very, very special, and a shift in momentum for ourselves as humanity. We have to take it upon ourselves to get our communities healthier, and it starts with us. So I appreciate you immensely. Again, run, don't walk, get your copy today from your favorite retailer. Go to Barnes & Noble, Amazon, your favorite independent retailer, get a copy today. Support bookstores, support your own health and fitness and support the movement. I appreciate you so much. We've got some epic, absolutely mind-blowing shows coming your way very soon. Take care. Have an amazing day, and I'll talk with you soon.

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