THE MODEL HEALTH SHOW

EPISODE 565

Get Better Skin, A Healthier Brain, & Smarter Metabolism

With Guest Dr. Cate Shanahan

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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. Humans are oily individuals. I'm not talking about the Wizard of Oz and the Tin Man looking for that oil to keep everything lubricated, humans are naturally producing and drawing in oils from our environment, specifically through our food, and also utilizing oils for many of our functions, specifically for instances that we can have a cognitive association to, would be like the movement of our joint. This would be the health of our skin.

But some things that people don't tend to think about is the oiliness of the human brain. The human brain, if we look at the "dry weight" of the human brain, it's anything but dry. It's actually primarily fat. The human brain itself is actually the consistency of soft butter. It's a very fat dominant, fat loving organ. We're going to talk about that a little bit today.

But most importantly, I want people to think about our cardiovascular system. Heart disease is the number one cause of death in the United States, and it's been that way for many years. And it's been on the rise, of course, specifically in recent decades, whereas this was much more of a rare occurrence with our ancestors, generations prior to now, and the rates have just been skyrocketing, as you very well know.

One of the things that isn't often talked about, because we think it of course, is diet-related, which definitely plays a huge part. Research published in the Journal of the American Medical Association, this was published in 2018, determined that poor diet is the number one risk factor for cardiovascular disease and many other chronic conditions that people are suffering with, but specifically, we're talking about heart health.

But what does that actually mean? We think about maybe sugar, we think about maybe fat, but what type of fat? Because we tend to put these things in very black or white boxes. When we talk about sugar, is this a naturally occurring sugar from a fruit, say, something like that? Or something that's not very refined, like a honey? Or something that's highly refined, like say a packaged C&H sugar out there on the store shelves?

There's some differentiation that needs to take place, because humans have been consuming sugar and consuming fats since the very beginning of our evolution, and to just vilify these things without context is part of the problem. Because there's specific types of fat that are well noted to be problematic.

A recent report that was published in the BMJ Open Heart found that vegetable oils can be a major culprit behind organ failure, cardiac arrest, and sudden death. Vegetable oils. That sounds remarkably healthy. A vegetable oil? Now, if you pull back a little bit and you don't have any concept of these issues, because I know a lot of folks that listen to the show, we've talked about some of these highly refined oils on past shows and bringing on some of the leading experts in the field, but if you don't have any context of this, like my family did not, as I was growing up, vegetable oils sound healthy.

If you put the name "vegetable" on it, it's denoting that this is a healthier option. So how in the world is this causing damage to the human heart? Well, the human body itself is able to integrate with the materials that it's given, and also if things that are provided to the human body are not effectively processed, the body finds creative ways to store these things, and what it does ultimately, we're putting highly refined, low-quality oils into our bodies.

There's going to be a diversion of energy. Number one, there's going to be damage to our mitochondria to be able to support our processes of health, whether it's our immune system, whether it's our cardiovascular system, but also there's going to be a rapid increase in inflammation, and we know that inflammation is really the primary driver for looking at cardiovascular issues. We tend to put in these small boxes of, "It's the cholesterol, it's fat." It's actually inflammation.

Also, when we think about blood pressure, for example, when it comes to cardiovascular issues, but what about blood sugar? What about blood sugar? It's all happened in the same blood, the pressure and the sugar, but also what kind of fats are getting delivered throughout our blood? All of these things matter.

But inflammation is the culprit that can really create some damage, and we've done a master class specifically dedicated to understanding inflammation, so we'll put that for you in the show notes. But today we're going to focus on these highly refined, unusual fats that have only recently made their way into the human diet, and only recently, even more recently, been used in a wide array of foods, and specifically being something that's really hard to even avoid in our culture today, and we're bringing on the foremost expert in the subject matter, so I'm really, really excited about this.

Now, before we get to our special guest, just thinking about growing up and my mother making that switch over to using "vegetable oil" to fry up potatoes, for example, thinking it's a healthier option. At the same time, I was also having my Kool-Aid. It's one of the things that I grew up having on a regular basis.

I was the Kool-Aid chemist in the house, combined flavors. I've always been a flavor guy, so I would combine the black cherry with the fruit punch, I'd try to come up... But here's the thing. The amount of sugar, we're talking about a cup, cup and a half in a pitcher, a cup and a half of sugar in a pitcher of Kool-Aid that I'm sipping on.

And then of course, they come out with the Kool-Aid Jammers and things like that just to make that access to these sweetened beverages with zero nutrition. It's not coming along with an array of vitamins and minerals and phytonutrients or anything like that. It's bringing in an incredibly abnormal amount of highly refining sugar into the body.

But that thread is still there for many people are utilizing these things, because for me, I wasn't necessarily a big soda drinker, I loved fruit punch and juice and things like that. But this is what I love today, is that we have the ability to upgrade those things, experiences that people are acclimated towards, but providing much higher quality ingredients.

And so today, one of the things that my family uses and my youngest son, who's 10 years old, he'll go over and grab this himself, is a red juice formula that utilizes things like Acai. Acai has an ORAC value, if we're talking about antioxidant capacity, of 103,000. This means that it has more antioxidants, 10 times more antioxidants than just about any other fruits that you'll see in a conventional grocery store. 10 times more.

But here's the thing that really sets it apart, that we have peer reviewed evidence on, the Journal of Agriculture and Food Chemistry found that Acai actually does directly raise participant's antioxidant levels. This demonstrates that it is effectively absorbed from our gut, we have an association with it. We know that it's in the food, but we also know that we pick it up and utilize it.

Also in this formula, so we got Acai in the formula, we've got blueberry in the formula. Researchers at the University of Michigan published data finding that blueberry intake can potentially affect genes related to fat burning. Also in this formula, beets. How often are you getting access to be to beets?

A study published in the Journal of Applied Physiology showed that drinking beet juice boosts stamina up to 16% during exercise, and they found that the participants experienced less muscle damage and less fatigue after exercise. So, these are just three of the ingredients in the Organifi Red Juice formula. No crazy processed sugars, nothing like that. Just super food concentrates. And all organic.

Kids love it, so it's kid tested, mother and father approved. Definitely pop over and check it out. It's organifi.com/model. That's O-R-G-A-N-I-F-I dot com/model. And you get 20% off, 20% off

their Red Juice formula. Their amazing Green Juice formula, and every other thing that they carry, exclusive. So, pop over there, check 'em out. Organifi.com/model. Now let's get to the Apple Podcast review of the week.

ITUNES REVIEW: Another five-star review titled, "Thank you" by EMA Dave. "Shawn, I appreciate your calming voice and down-to-earth approach to some very complex subjects. Your consistent references to peer-reviewed studies help me feel comfortable that facts and logic have been scrutinized and validated. After each episode, I sit up straighter and look to a brighter future, knowing a little more about what makes my mind and body tick and how I can make it operate with greater strength and efficiency. Best to you and your family."

SHAWN STEVENSON: That's powerful. We can all look forward to a brighter future. That's one of our missions today. When there's so much turbulence happening in the world, what do we want the world to look like? What do we want our societies health to look like, our families, our work life, the way that we interact with each other? Let's start to get a crystal-clear vision moving forward, because the human mind is incredibly powerful in bringing those things to fruition.

Of course, we're dealing with some problems, not to ignore those things, but where are we going, where are we going to be headed? The clearer that we can get on this, the more swiftly and gracefully I believe we can bring it into reality. So again, thank you so much for leaving that review over on Apple Podcast, and without further ado, let's get to our special guest and topic of the day.

Our guest today is Dr. Cate Shanahan, and she is truly one of the leading authorities on nutrition and human metabolism. A board-certified family physician for over 20 years, and also a New York Times bestselling author of, The Fatburn Fix, and Deep Nutrition and Food Rules. Her expertise is fixing the underlying problems that cause metabolic damage and inflammation.

You've definitely heard about some of the people whose lives have been impacted by Dr. Cate's work working with the Lakers for many years. Kobe Bryant was on her protocol, really helping him to recover from an injury that would have taken a significant amount of time to recover from. Not just that, but also coming back and playing at a high-level after the injury, and really taking hold of Dr. Cate's advice.

And so, she's had a big impact on sports performance and everyday performance, everyday health for so many people, and we're going to welcome back, jumping into this conversation with the amazing Dr. Cate Shanahan. Dr Cate Shanahan, one of my favorite people in this space. Welcome back to the show.

DR. CATE SHANAHAN: Thank you so much for inviting me back. It's always a pleasure to speak with you.

SHAWN STEVENSON: Aww. Well listen, the first thing I want to do is for folks who might not be aware of this subject matter, can you give us a brief summation about what vegetable oil actually is? It sounds super healthy, it's got "vegetable" in the title, but let's talk about what it actually is.

DR. CATE SHANAHAN: Vegetable oil is the defining feature of junk food. When you talk about why is the Western diet unhealthy? It's because of the fact that it's totally filled up with tons of vegetable oils. And so just to specify, vegetable oil is not coming from peas and carrots. It's coming from seeds actually, so some people call it "seed oil", and there's eight of them that I recommend everyone just get out of their diet as much as possible, as soon as possible.

So, there's corn, canola, cotton seed, soy, sunflower, safflower, rice, bran, and grape seed. So, there's a lot of 'em, right? There's, I've called them the "hateful eight" since there's eight of 'em, just to help remind people at least that there's a lot of them. There's eight, you want to memorize these things, that seems like a big job. But they're in everything that's bad for us.

So, if you look at... You just go to your cupboard and just look at anything that's a packaged ingredient, a packaged good, it's going to have one of these oils in them. You won't have to look too long before you find one. The worst offenders are the things that we think are health foods, like salad dressing and well, mayonnaise.

People use a lot of mayonnaise. It's actually the number one condiment, although no one really thinks it's healthy. But it's in baby formula, it's in stuff that's labeled "organic", because you can be organic and still include organic canola oil. They make it organic. All that means is that they didn't saturate the plant with Roundup and pesticides while they were growing it, but it doesn't mean that it's... The end product is healthy, right?

I mean, you know that sugar, of course, can be organic sugar. So doesn't mean it's healthy, just 'cause it says "organic. So, these things are everywhere, and doctors don't really know a thing about them. So, when you're talking to your doctor about your diet, they'll never ask you how much seed oil are you getting, or vegetable oil.

They'll never ask you about how much of that are you eating, what are you cooking your stuff in. They're never going to ask that, just 'cause we don't learn how toxic these things are. I had to learn all on my own.

SHAWN STEVENSON: Of course, and you've been a pioneer in getting this message out. So, when you say the word "toxic", why are these... Again, they're labeled as healthy as a vegetable oil, why is this considered toxic to the human body?

DR. CATE SHANAHAN: Because of the fact that it actually contains real toxins. So, this is the sick thing about it, there's about... Well, let's see. Where do the toxins come from? I guess maybe that's what we should start talking about. Where does it come from? Is it something that gets sprayed on them, is it added? And the thing to know is that it's the seeds themselves have this kind of oil in them, that when you process it or heat too much, it deteriorates into toxins.

That's an important point, and I want to break that down a little bit, 'cause I said a lot there. The seeds themselves have this oil in them that's high in something called "polyunsaturated fat", which is like the opposite of saturated fat, and it's... Yes, it is the very fat that doctors will tell you, and your cardiologist will tell you, and Harvard will tell you is the healthy kind of fat, but it's not at all healthy when we consume it the way we do in the amounts that we do.

So, you can only handle, our body can only handle a little bit of it. So, when you eat seeds, like I mentioned sunflower and corn and soy, when you the seeds, it doesn't have the toxic properties in it because it's only during the heating and the pressuring and the refining, and then the re-heating again, that it deteriorates into toxins.

When you run these things through a factory to extract the oil from the seed, it's an extremely chemically intensive process, and fun fact, the first time they made oil out of cotton seed was about 100 and some years ago, and they didn't know what the health effects were, they didn't know if it was safe to eat, so they feed it to cows and some of the cows died. So, there was a lot of work that they had to do in terms of the refining to get it so that it wasn't immediately toxic.

So that's, I'm just mentioning that to give you a sense of the fact that it's an extremely highly processed product, you can't just squeeze the oil out with heat and pressure, you got to then go through about 40 to 100, depending on what country you're in. Other processing steps, each one involving a big machine in a massive factory, to be able to make that crude oil that you extracted clear again and edible.

When you first extract it, it's like this foul smelling brownish inedible oil that looks very much like used motor oil and is probably about as healthy. I mean, literally. I'm sure you can take used motor oil and run it through the same steps and have something edible-ish coming out the other end. And so that's where the toxins come from is from the processing.

Oh, but wait, that's not where all the toxins come from, because when you've used that oil again in a deep fryer and a shallow frying pan, or just really put any heat on it, the same kinds of reactions occur in this dangerous polyunsaturated fatty acid that's in these oils, and they break down again into the same kinds of toxins. And when I say "toxins" I mean you know how cigarette smoke has toxins, it's got something called "acrolein" in it?

Literally the same molecule you have in seed oils. Acrolein. I was just listening to a professor give a lecture about, "How much is in this? Is it relevant?" In one serving of large fries, that's been deep fried, you have the equivalent amount of acrolein as you would get from smoking 20 to 25 cigarettes. Smoke the whole pack. One serving. And that is just one of the types of toxins that are in seed oil.

So, when I say these things are toxic, I'm not kidding. I don't mean like just a slight amount of something like, "Oh, you don't want to live on it." Well, first of all, we are living on it because take a look, it's in your fridge, it's in your cupboard. Secondly, it has toxins in higher quantities than anything else we can consume, even cigarettes. Isn't that just mind-boggling?

To me it's like how is it that doctors can't hear this and they can't understand how important that this could be to their patient's health? So that's why I've been sort of on this campaign for a while now, over 15 years. Almost 20 years. I'm getting up there.

SHAWN STEVENSON: Yeah, and you know what, it's so crazy because first and foremost, this has never been a part of the human diet through our evolution. This is a new invention, first and foremost. And as a matter of fact, in that processing... This is one of the biggest things for me. Literally smoking gun.

And just to pivot on what you mentioned about the cigarette's comparison, this study, this was published in the journal, Inhalation Toxicology, and it noted that simply inhaling the smell of these seed oils while cooking can potentially damage your DNA.

DR. CATE SHANAHAN: Oh totally, yes.

SHAWN STEVENSON: When I read this, I was just like, "What? How? How is that even a thing?"

DR. CATE SHANAHAN: Yeah, what happens is you breathe it in, so they're called "volatiles", anything that you smell is, before you eat it, if you're smelling fried food, that fried smell that can permeate your kitchen, that is molecules that have come directly out of the frying pan. And people... They've done studies on folks who work in these restaurant chains where they're frying this stuff all the time, Taco Bell, McDonald's and they found that they have a higher rate of lung cancer because of this. There's no other...

They've done all the cross-checking and statistical work to make sure it's not this other factor. It's because of this. These things cause lung cancer in non-smokers and young people. And that's just getting started, because then when you eat them it's a whole other ball game. But let me tell you one thing about that stuff that you smell.

Some people think it smells really good, some people think it smells gross, but if you're a restaurant worker it will cake on your uniform and it's so volatile, this kind of lacquer-ish cake, it has actually set laundromats on fire. So, they had to... Yeah. You put it... Because when you launder it, it doesn't come out in the wash, so you put it in the dryer, and it heats up too much.

If someone's not there, and this happened when nobody was watching, it started a fire in the dryer and then started fire in the laundromat. They had to shut it down.

SHAWN STEVENSON: Holy smokes.

DR. CATE SHANAHAN: This is for real. For real toxic. It is insane that the American Heart Association is actually telling people this is the stuff we want to eat more of.

SHAWN STEVENSON: Alright, there's two things...

DR. CATE SHANAHAN: It's labelled heart healthy.

SHAWN STEVENSON: Right, ironically. So, there's two things. One, you mentioned this comparison, which would be, again, if it was extracting from the seed itself, we're going to get something more of the consistency of what might be like a gasoline, for example. How do we get from that product to what we see is this kind of uniform color where it might even look similar to an olive oil, or what's going on there to make it into this? What would the smell be like without adding deodorizers? What are they doing to make it this product that we end up seeing?

DR. CATE SHANAHAN: Oh yeah, well it ain't easy, let me tell you. Because I belong to a chat group of the oil scientists who do this for a living, and I can tell you there is an army of them all around the world working diligently to try to make it so that the oil is as least toxic as possible, and it makes sure that it comes out edible every time. And it's not guaranteed. You can just make one mistake in the many processing steps.

And so, what happens is when you first squeeze the seed, it's going to be a little different depending on whether it's like a cotton seed or soy or corn or canola, but it all looks a lot like used motor oil, like it's a brown, black color. Very thick. Very, very thick, because there's

polymers and glumpiness in it. And the texture would be irregular too, wouldn't be smooth and silky nice. It would be like lumpy and weird.

And the smell, I've never actually smelled it myself, but I've been told that... Well, there's a step called "deodorizing", so what do you think it smells like? In fact, it's not just a single step, there is entire factories devoted to the process of deodorizing. And then there's bleaching, which takes the color out, and that's a whole other... You can have an entire factory devoted to that.

One of the fun... Oh, here's another fun little fact. During this step called "degumming", where you get out like those glumpy polymers that might have the consistency of mucus or something like that, that's called "degumming". And what comes off is a black substance, looks exactly for all the world like diarrhea.

SHAWN STEVENSON: Eww.

DR. CATE SHANAHAN: Yeah. But here, it gets better. They use that. You've ever heard of soy lecithin?

SHAWN STEVENSON: Mm-hmm.

DR. CATE SHANAHAN: They lighten the color of that black stuff, and they dehydrate it and it becomes like yellow powder, fairly innocent looking yellow powder. But it started out as identical to kind of like a bloody diarrhea 'cause you don't really have... Normally you have black in your poop.

SHAWN STEVENSON: Sheesh, Dr. Cate.

DR. CATE SHANAHAN: Sorry, yeah.

SHAWN STEVENSON: No, this is like... We need this visual, and even when you mentioned the deodorizing and you're like, what do you think the comparison if it's deodorized? So basically, it smells like *ss in there before they're treating it with chemicals.

DR. CATE SHANAHAN: Yeah. I should just say that next time. I'll just quote you. "Smells like *ss."

SHAWN STEVENSON: "According to Shawn Stevenson."

DR. CATE SHANAHAN: Right.

SHAWN STEVENSON: Now, you mentioned this label, of course, that it is heart healthy, and I want to get to the heart in just a moment, but let's take things upstairs because I don't think folks talk about this enough. Because the body, the human body is incredibly resilient, remarkable in taking whatever you give it and finding a way to utilize it.

And so, these low quality oils essentially are getting integrated into our tissues, are causing metabolic disruption, but we don't talk enough about the brain, what's happening when these oils are getting into our body, what effect they might be having on the human brain. Can we talk a little bit about that?

DR. CATE SHANAHAN: Absolutely. We know that some of the decomposition products, so the toxins are really decomposed polyunsaturated fatty acids, so the acrolein that I mentioned is also in cigarettes, there's acrylamides and aldehydes, these toxins. The body is trying to protect us from this stuff. So, they actually don't come from, like they can't go across the blood-brain barrier. They may not even get absorbed from the gut. Some studies say they do, some state, say that they don't.

So, our body is trying to protect us from all these horrible, horrible toxins, but the very same chemical reactions that occur in the deep fryer where you form new toxins, can occur in your bodily tissues when it's overly flooded with this kind of toxic oil called "polyunsaturated fats".

I guess I shouldn't call polyunsaturated fats toxic, but they're like a precursor to toxin because they will break down into toxin when they react with oxygen. So, it's kind of like an explosion, just biological explosion, that takes a molecule that is okay, it could have been okay, but when we over-consume it, it just becomes toxic because the dose makes the poison. And when you have too much of something, even something good for you, then it can have bad effects.

It turns out that these polyunsaturated fatty acids, they build up in our body fat more than any place else. And so, here's the thing, and here's how it affects our brain. I am answering your question. So, because our body fat is an organ of storage, when we eat extra, more than the body can put to use right away, it'll go into our body fat, whatever it is.

Not always in the form of that, like when we eat extra sugar, we don't store little crystals in our body fat, we actually convert that into a kind of fatty acid to store, either saturated or monounsaturated fat. So, we can convert some things into safe fats to store in our body fat, so that later when we want to use our body fat for energy, if we've gone a while between meals and we could be... We could eat 'cause it's mealtime, but we can't eat 'cause we're busy, we can just smoothly go into burning our body fat.

We have to have a lot of this good fat in there, the monounsaturated and the saturated fats that your body loves to burn those. But it hates to burn the polyunsaturated fatty acids because they are explosive on contact with oxygen and you have to use oxygen to get energy from the stuff. So, when you've eaten, like the average person that eats at the average Western standard American diet, gets 80% of their fat calories from the seed oils.

So, from corn and soy and canola. Because 80% of our fat calories are coming from these oils that never existed in nature before. It's not coming from like bacon fat and butter and ice cream. Most of it is coming from seed oils now because it's so cheap and it's just replaced healthier fats in most of the food supply.

So anyway, so we're eating tons of this stuff and they're loaded with this unstable kind of polyunsaturated fat, and that will get into our body fat, our body fat can't change it. It can't... Like I mentioned that our body chemically changes sugar into fat. We cannot... I call polyunsaturated fatty acids "PUFAs" just 'cause it's easier to say. Stands for polyunsaturated fatty acid. PUFA.

When we eat PUFA, our body can't un-PUFA-fy it and make it safe for storage, so we have to store this dangerous fat in our body fat. And so that means that we have right now, we have, the average American has about six times more polyunsaturated fatty acids stored in their body fat then it can handle, because we think it can store about maybe maximum of 5% of all the fatty acids in all your body fat coming from polyunsaturates.

It should be mostly monounsaturated and mostly saturated. I'm sorry about all these chemical terms, but there's only... They're on nutrition labels, so hopefully people have heard them before a little bit.

SHAWN STEVENSON: Dr. Cate, you can nerd out with us, we are versed. Keep it coming.

DR. CATE SHANAHAN: Oh great. Oh good. Good work. Thank you, Shawn. Yeah, so our body is designed to be able to store maybe up to 5% polyunsaturated fatty acid, and right now the average person walking around has probably 30%, especially if they're overweight and they've been eating like a standard American diet.

That means that when our body fat, when we want to burn our body fat between meals, we're going to be releasing a lot of this unstable polyunsaturated fatty acid, and that is how bad things happen to our brain. Because when we release this unstable polyunsaturated fatty acid into our blood stream, there's oxygen in there, it will be able to interact in a way that just basically blows it up, and you get this kind of toxin producing reactions called "chain reactions". "Free radical reactions", that's another term for 'em.

They basically destroy whatever they're close to and form toxins. And so, when that happens a lot, even still, the brain is very good at protecting you from this stuff, but what it does though is it depletes your entire body of its ability to control the process of oxidation. So, here's another chemical term, but oxidation is what ages us.

People take antioxidants, that resveratrol in wine is supposed to be such a great antioxidant, and there's antioxidants in blueberries and antioxidants in fruit. That's to prove that the spontaneous combustion, really, of little, tiny parts of our body. Because oxygen will oxidize our tissues and burn us from the inside out. But this is, also it's the aging process.

When we age, our tissues have become oxidized and our connective tissue, especially our joints, when they start to feel stiff, that's because they've been all oxidized and they are stiffer. Physically, we don't have the same elasticity in our skin, we don't have the same elasticity in our cartilage and our ligaments.

So, oxidation ages us and when we've been eating so much polyunsaturated fatty acid, it depletes our body's capacity to control oxidation reactions, so it depletes us of our antioxidants. Even... That's how it can affect our brain, because our brain needs more antioxidants than any other part of our body, because it's full of health, it's full of polyunsaturated fatty acids. That's why we need some in our diet.

So, the brain is built out of polyunsaturated fatty acids and because we have so much, too much in our diet, and it's just more of them where you're ever designed to handle. The oxygen reactions get out of control, deplete our antioxidants, and that leaves our brain cells open to oxidation.

You look up the cause of any of the brain disorders that you don't want, like Parkinson's, Alzheimer's, dementia, and multiple sclerosis, even things like schizophrenia, anxiety disorders, even autism, and you're going to see that a driver, a cause of this disease is oxidation that gets out of control and damages different parts of the brain or different parts of the cell.

But it all comes back to oxidation, and exactly what is being oxidized determines what disease you get. But without the seed oils, none of this stuff would be being oxidized, so you wouldn't really, you wouldn't be getting any of the disease. And that's what my message is, that's what I'm saying, is you take away seed oils, you take away 80%, 90%, maybe even more, of all of these horrible chronic degenerative brain diseases. And it's not just limited to the brain, but a lot... We have so many chronic diseases now, and they're all related to oxidation and seed oils.

SHAWN STEVENSON: Yeah. So, if we consolidate this, essentially, this is speeding up the aging process, and we're going to have different susceptibility depending on the person. I think I saw maybe is a week ago, you shared a tweet out, and by the way, people should be following you on Twitter, looking at a connection with PUFAs and brain inflammation.

It reminded me of this paper that I actually talked about this in my latest book, in Eat Smarter, and it was from the annals of the New York Academy of Sciences, and the researchers found that there's this double-edged sword, they call it a "double-edged sword of nutritional diseases" with hypothalamic inflammation leading to excessive accumulation of body fat, and that accumulation of body fat, which is what you're talking about from interacting with these seed oils, leading to more brain inflammation, hypothalamic inflammation.

And that part of your brain, really considered a master gland, is largely controlling so much of what's happening downstream with your metabolism. So, it's just like you get into this vicious circle of body fat accumulation, brain inflammation, and brain inflammation driving more body fat accumulation, and wondering why it's so difficult for people to lose weight in our society, trying all these various diets.

We're not looking at what's the underlying thing. You could be doing a calorie-restricted diet, but it's full of these really terrible oils that are really altering in a negative way the way that your cells are functioning.

DR. CATE SHANAHAN: Absolutely, yes, totally. That's a really good point. Because we think about just the fat itself and the amount of fat that we have as being problematic, but it's what's in the fat. There was a time where people who were even... Who are overweight and even obese, they didn't get Type 2 diabetes, they didn't have a higher risk of heart attacks? There was a time where obesity was not a risk factor for dying early. And it wasn't that long ago either.

I remember debates when I first got out of medical school about obesity, they were just beginning to find a link to heart attacks, and that's because if you look at the graph, I have this graph on my website, but I also talk about it in The Fatburn Fix, my book about all this and how polyunsaturated fatty acids affect your body fat and your life.

If you look at the graph of our rise of consumption of seed oils over the past 100 years, where we start at the turn of the last century, around 1 to 2 pounds a day because they were... I'm sorry. 1 to 2 pounds per person per year of seed oils, they weren't really in the food supply, and now it's close to 80 pounds per person per year. So, 80 times as much.

You look at the graph of how that consumption went up, it's exactly parallel to the graph of the prevalence of all of our other major diseases, whether it's Alzheimer's or heart attacks or diabetes or obesity, this is the cause. And so, I'm not saying you should be overweight, just don't eat seed oils, but I am saying that...

Actually, here's what I'm saying, and that this is really, I think an important thing for people to hear, and this is how I would like to change the conversation actually about obesity. Because I think people who are overweight and obese, who've been eating seed oils because they didn't know they were unhealthy, they have organ failure, they have a disease of the largest organ in their body, their body fat.

Because when you have all that PUFA in your body fat, your body does not want to use it for energy, right? What is the job of your body fat? To provide energy to your entire body between meals. That is the job of your body fat. And so, what I'm saying, and you can quote me on this, is that obesity now is organ failure, it is failure of the adipose tissue.

Why does that matter? Well, when you look at somebody, if you're a thin person and you look at somebody who's overweight or obese, and you're like judging them, "Why don't they have self-control?" That's a lot like judging somebody on their way to a dialysis clinic for having kidney failure. But it's actually the situation for that obese person is worse, because at least somebody with kidney failure gets a proper diagnosis, have kidney failure, and there's a treatment for it.

But right now, nobody but me and my Fatburn Fix book is telling folks who have this problem of obesity, because of eating seed oils, that they have organ failure, they have a real metabolic problem. It's not, will power, it is that their body fat has failed them, and the reason that they can't easily lose weight, stay on a diet, stick with most diets, is because they feel bad physically when their body fat is the only fuel available to burn for energy.

And what does that do? It makes you hungry. What kind of hungry? Hangry. So, if you are wondering, if this is happening to you, if you've got too much of this PUFA in your body fat, you can tell. And here's how. If you get hangry, if you get irritable or grouchy when you haven't been able to eat, when it's past your lunch time or when you've just been out and about all day and you forgot to eat and you start to feel like your brain is not functioning right, you start to get anxious, you can even get headaches.

That's a sign that you have too much PUFA in your body fat and you're on the verge, if you haven't already gained weight, you're on the verge of having adipose failure. And that will open you up to weight gain, diabetes, and everything associated with this thing that they call, they've called it "diabesity".

I'm sure you've talked about that term before, where obesity now... Obesity now is a deadly disease. It didn't used to be. That's what I'm saying. Before seed oils, you take away seed oils, you could be overweight, it's not good for your joints, it's not good for your skin, you have skin folds and stuff can grow. It's kind of maybe gross, but it's true.

But you take away the polyunsaturated fatty acids and obesity is only a problem because of the mechanics of it, the fact that your joints are bearing heavy loads and maybe you can't bend over, but it's not a deadly disease. We made it deadly by infusing all of our food with these toxic seed oils and vegetable oils. AKA vegetable oils.

SHAWN STEVENSON: Got a quick break coming up, we'll be right back. Few people know that regularly drinking coffee has been shown to help prevent cognitive decline and reduce the risk of developing Alzheimer's and Parkinson's disease. This attribute, referenced in the journal Practical Neurology, is yet another reason why intelligent coffee consumption makes the list of best neuro-nutritious beverages.

Another study featured in the journal, Psychopharmacology, uncovered that drinking coffee has some remarkable benefits on mental performance. The researchers found that intelligent coffee intake leads to improvements in alertness, improved reaction times, and enhanced performance on cognitive vigilance task and task that involves deep concentration.

Now, why am I stressing intelligent coffee intake? This means acknowledging the true U-shaped curve of benefits and not going ham on caffeine. The data clearly shows that some coffee, a cup or two a day and the accompanied caffeine is a great adjunct for improved mental performance. But going too far starts to lead to diminishing returns, so we want to make sure that we're getting an optimal intake of coffee, and again, not going overboard.

But also, coffee is best when it's not coming along with pesticides, herbicides, rodenticides, fungicides. These chemical elements are clinically proven to destroy our microbiome terrain, so destroying the very microbiome that helps to regulate our metabolism, regulate our immune system. The list goes on and on.

Obviously, you want to make sure that those things are not coming along with a high-quality coffee they we're trying to get these benefits from. And also, what if we can up-level the longevity and neurological benefits of the coffee by combining it with another clinically proven nutrient source?

Well, that's what I do every day when I have the organic coffee combined with the dual extracted medicinal mushrooms from Four Sigmatic. If we're talking about optimal cognitive

performance and the health of our brain, the protection of our brain, there are a few nutrient sources like lion's mane medicinal mushroom that pack these kind of benefits.

Researchers at the University of Malaya found that lion's mane has neuroprotective effects, literally being able to help to defend the brain against even traumatic brain injuries. It just makes the brain more healthy and robust. So again, this combination of medicinal mushrooms plus organic high-quality coffee is a match made in nutrient heaven.

Go to for foursigmatic.com/model. That's F-O-U-R S-I-G-M-A-T-I-C.com/model, you get 10% off their incredible mushroom elixirs, mushroom hot cocoas and mushroom coffees. Again, that's for foursigmatic.com/model, and now back to the show.

So, I want to talk about what's handling trying to process these seed oils in our body, because certain organs are going to try to step up and do something with it. One of those being our liver. So, our liver is of obviously responsible for drug metabolism, supplements. We're taking all this stuff, our diet, the liver is like front line, "I got this, guys," taking the beating for everybody else trying to handle stuff.

So, I'm want to ask you about a connection here with liver function, because I know liver function has a big role to play with our overall metabolism. So, let's talk a little bit about that.

DR. CATE SHANAHAN: Yeah, so the seed oils are toxic to the... Their toxicity begins at the point of entry into your body, which is your digestive system, and then from your mouth, your esophagus, your stomach, and your entire intestinal tract. But from there, your intestinal tract, the first stop is your liver.

And exactly for the reason you said that the job of the liver is to really step up and detoxify as much as it possibly can. This is an interesting fact about that, humans actually, we have a bigger liver for our size than other animals because we cook. Cooking generates toxins, but we can handle a certain amount.

But when we have so much seed oil, it generates more toxins that are more toxic, that are worse, and it just dumps on the liver, and you can get fatty liver and you can get this thing called "non-alcoholic fatty liver disease", and even liver fibrosis. One way that you learn about this is during a routine physical where your doctor does your annual blood tests, and he looks at something called your liver function enzymes and they're elevated.

If you're overweight or you've been eating a lot of seed oils, even if you're not overweight and they're elevated, and it's not due to alcohol, you didn't have a party on the night before, then

it's due to this non-alcoholic fatty liver disease, and that right there is a sign of how toxic these things are.

Because your liver was designed to handle toxins. We have a big... Humans have a big liver because we expose ourselves to more toxins than any other animal because we're the only creatures that cook. So even our relatively giant liver that's designed to detoxify stuff can't handle it, and it just goes from. The ones that the liver can't handle it, then that's when things can really go haywire.

But it has to do with how long you've been eating how much of this stuff. If you're just like 10 years old or something like that, and your mom cooked for you, did not use the oils, you didn't do a lot of process food, not a lot of fast food, you're probably fine. But then when you go to college and nobody's cooking for you anymore and you go out to eat with your friends, 'cause why not? It's fun, it's Friday night. You will be eating these seed oils.

And so, your life will change because you will no longer feel as healthy, because you are no longer as healthy, you are eating toxins on a daily basis. Yes, it definitely affects your liver. It affects every part of your body, it's just insane. One of the... My most recent tweet actually was about, "Okay, well, what benefits do you get in the first month after cutting out these oils?" So, somebody that I follow on twitter, the real oil respecter... That's a great name. Put out this tweet about, "Okay, tell me your success stories. It's Friday, I want to hear some good news."

And she got flooded with people that were describing stuff, and I reviewed it and I did my own tweet, and I said, "It looks like in the first month, you get the following benefits. You get massive improvement in your digestive system. If you're somebody who suffers from bloating, that comes from direct toxicity of the oils, those acroleins and weird other chemicals I was talking about earlier, that are known carcinogens, some of them."

They also cause ulcers and gastritis and all sort of colitis and inflammation and bloating in the gut and just tons of discomfort, and then they go to the liver, and of course if your liver's inflamed too, then you can't handle food either. So, it's, if you have bloating, it could be either your liver or it could be your gut, who knows, but either way, you take away seed oils out and people like within just one month, will say, "Now I can eat all kinds of foods that I thought I had in tolerances to, which is amazing." And people will say their skin clears up, that was another big one.

And another huge one was brain fog. They would not have to eat in order to be able to concentrate at work. This is just the tip of the iceberg of the benefits that you will have when you get off of seed oils. That's why I've been saying that these are... This isn't just like the latest

toxin of the month, the latest bad food of the month, this is what's been poisoning us for the last 100 years in gradually increasing proportion.

SHAWN STEVENSON: Wow. This is something really jumped out, all those things are wonderful, but something really jumped out is when you mentioned improvement in skin health, and it's so obvious because our skin is just like an oil machine as well, and it's also going to be an outlet for our body to remove toxins from our system, it's really the biggest eliminatory organ in a sense. And so, let's talk about that a little bit more with these vegetable oils having an impact on our skin quality.

DR. CATE SHANAHAN: Yeah, absolutely. So fat is stored in this, in our body fat, and our body fat is located directly under our skin. So, you go down maybe like an eighth of an inch and you start getting to body fat. That's actually body fat under there. It's called "subcutaneous". And so that's where all the extra PUFA goes.

And so, when you have been eating a normal standard American diet and you've got all that PUFA in there, well, for one thing, if you're super pale like me, you're going to... You go out in the sun for 20 minutes; you're going to burn. Sunburn, that's one of the great things that us pale faces, we want to get our hands on in the summer, and it's a challenge because you burn when you're on PUFAs, right?

So, one of the great things that people notice that I didn't mention is they tan instead of burning. So that right there is huge. And you still got to use on suntan lotion and all that kind of stuff, but you won't burn as easily. Another super common problem with skin is eczema. Dry flaky skin, that's itchy a lot of the time.

It can have an embarrassing kind of patches, especially if you get it on your neck, your chest, your face, your arms. A lot of people are embarrassed by it. Doctors will give you all kinds of creams for it, they'll tell you to hydrate your skin, but you just get off seed oils and you don't need any of that. It clears up.

Some people it clears up completely, and it starts to clear up really quick within a month. But some people might need to take a little bit longer. It all depends on your metabolism and how you metabolize things and where you're effectively able to detoxify first. But it's going to get better. So those are just two skin conditions. Did you have one that you wanted, that you are curious about particularly?

SHAWN STEVENSON: This really jumped out when you mentioned sun burns, just even thinking about that, the oil construct that our body is made of. The sun is essentially frying those low-quality oils in a sense, and just basically cooking you with these very volatile oils. This

is one of the things that I've heard repeated through our conversation, is just how unstable these oils are, just prone to oxidation.

Again, if we look at the rate of skin-related issues from the sun, via sun burns, skin cancer, all these things, those things have had a steady trajectory in recent years as well. Humans literally evolved being out in the sun. That's just how we're... We wouldn't have life here on the planet without this big flaming ball of awesomeness.

But we've been programmed to fear the sun and we can't go out without whatever, some kind of protective measure, but what I want people to get is that our skin protection from the sun, and a healthy relationship with the sun is built from the inside out. But we just think about it, "I'm going to lather up with this," whatever, which again, could possibly putting more toxic chemicals into your system, by the way, and carcinogens.

There's been several of these conventional sunscreens that have known carcinogens in them as well. That again, the sun is just going to cook. We're trading one thing for five other problems. And so, if we can, again, start to be more intentional about the oils that we're making our body out of, our skin out of, we'll have much more resilience and a healthier relationship with the sun.

Because without the sun, for example, we're not going to naturally produce Vitamin D. Which, a supplement, cool, that's great, but that's down the line of what we're evolved to have. And just being able to have that healthy sun exposure, not have volatile oils just sitting there underneath our skin, as you mentioned that subcutaneous level, so having a really good relationship with the sun, being able to really think about what we're making our skin out of.

And I want to ask you about this, advanced glycation end products. I thought about that when we were looking at, okay, so what is making up our skin in these interactions and the volatility of... What's even happening in our blood, for example. Can you talk a little bit about that? Because I think, what if we get sugar, because you said we've got this parallel of low-quality oil consumption and our increases in chronic diseases, which are multiple epidemics in our world.

But also, our consumption of sugar has jumped right along there. They're playing a game of double dutch and seeing the health of our citizens decline. What if we get low quality oils and we sprinkle in some low-quality sugar as well?

DR. CATE SHANAHAN: Yeah, so sugar is also potentially toxic to ourselves when the concentration gets above the normal level in our bloodstream. We're designed to... The dose makes the poison. It applies to everything, even oxygen, even water, right? But it applies to sugar too, so we need a little bit of sugar 'cause some of the cells in our body, like our red blood

cells, they can't get energy without sugar in the bloodstream. That's one of the reasons why we have some sugar in our bloodstream all the time.

But we have a tiny amount. We're designed to have somewhere around a teaspoon of sugar in a gallon and a half of our whole blood supply. If you're like the average size male of normal weight, you have a gallon and a half a blood and all the sugar dissolved in your bloodstream amounts to a teaspoon, 4 grams.

So, if you have much more than that, if you let's say you have... That would give you a blood sugar, a normal blood sugar level, which is between 80 and 100. Let's say you have a blood sugar level of 200 because you have diabetes. That accelerates this process of aging and glycation because sugar is literally sticky and it will stick to the proteins in your skin, and will stiffen it and wrinkle it, so you will lose that elasticity.

Same thing in your joints, in your arteries and many, many other tissues. That advanced glycation end products are a very important part of the aging process that a healthy cell will be able to handle and slow down. We've got specialized enzymes for detecting advanced glycation end products location and products that develop in certain areas of our body like the surface of our cells, and these specialized enzymes, they detect that this area is damaged with advanced glycation end product, and they start fixing it.

So that's how. It's like we've evolved with this process, just kind of like antioxidants and oxidation, we have evolved with free radicals and damage to our PUFAs from oxygen, but only a certain amount, and the same applies to sugar. Here's how seed oils make sugar more toxic, 'cause you said it's like the perfect one-two punch.

Seed oils, they make your body want more sugar in the bloodstream all the time, because it has to do with how your brain gets energy. When your body fat is failed, because you have too much PUFA, then all of your cells will start wanting sugar all at the same time. After the food from your last meal has left the bloodstream and there's nothing in there anymore, all that's left is your normal amount of blood sugar, but it's a tiny bit.

And so, after a while, your brain is really smart and it gets smart and says, "Hey, I know. I'm just going to make that liver put more sugar in the bloodstream all the time." This is what I talk about The Fatburn Fix, this is how I think we all get Type 2 diabetes. So other people have their other theories that it's all about sugar and carbs and wearing out the system.

I don't think that makes any sense. I think seed oils actually cause Type 2 diabetes too, and they make you less tolerant of sugar. Sugar is really not that toxic compared to seed oils, because...

Actually, I was on a summit yesterday, just yesterday a summit aired called The Future of Fat, and there was a question posed, "What worse, sugar or seed oils?"

There were two of us panelists, we both agreed hands down it's seed oils worse that sugar. Because that when we eat too much sugar, it can be fattening, and if we don't have diabetes yet, we don't have a blood sugar spike for very long, and we will get some of those advanced glycation end products, like if you eat like a, sit down to a big bowl of M&Ms like I used to do.

I used to literally eat a pound, those pound bags of peanut M&Ms. I so love that stuff. I would go on a 10-mile run and sit down in my bean bag chair, and just go chow, chow, chow, chow, chow, while reading Mad Magazine.

SHAWN STEVENSON: Holy moly. That right there is a visual.

DR. CATE SHANAHAN: So yeah, so that would probably have spiked my blood sugar quite a bit, and it was... That's aging process. That's, you age yourself when you do that. But for the most part, after that little spike, what happened was my body was healthy enough at that time to be able to take the extra sugar and convert it into that saturated fat, the right kind of fat to store in the body fat. Saturated monounsaturated, that our cells love to use as fuel.

And so, we basically, that's almost you could look at that process of building fat as a detoxification of all the sugar in your diet. You convert it into healthy monounsaturated and saturated fat and store it off in your body fat. That's like a detoxification process, so sugar can't be that toxic for very long.

But then when you develop diabetes because of seed oils, then it's even worse for you because your body is now thinking that a normal blood sugar is twice as high as what really normal is. And so even though it's not a whole lot more physical sugar in your bloodstream, you might have instead of one teaspoon, you might have two.

The concentration of sugar, 'cause sugar can be quite toxic if we have too much, dose makes the poison, that can start to kill some your cells quicker and stick to your joints through that process of developing advanced glycation end products. A lot of people have told me that they notice once they cut down on sugar and seed oils, then when they kind of go on a binge and have a little bit of both, but especially if they have sugar, the next day, they feel it in their fingers.

I don't think you might notice this if you're really young, but I think once you get to a certain age and you've got enough of this stiffness already in your connective tissues in your small joints, that just a little bit more can kind of really feel bad. So, tons of people have told me that

they feel it in their joints, and that's feeling literally the glycation of the protein in their connective tissue, in their joints from too much sugar.

SHAWN STEVENSON: Wow. When I even think about PUFA, I've never said this out loud, but I always think about puffy, liked puffed up. And I think about Puff Daddy. You know how the brain is, goes on a journey. So, then I think about the Hypnotize video. Never mind.

But anyways, PUFAs, if we connect that to the puffiness, whether it's our joints, whether it's our tissues, being a driver of inflammation, period. So, we've got... And this is why I love having these conversations with you, because it's just adding more legs to this very important foundational tenet, and just stacking conditions for our belief system around it, and we can become more aware in our own lives, because especially if you're cooking your own food, you have much more control over this.

But also thinking about when we're going out to eat and all these different things, and if we could make a cultural shift so we don't have to be neurotic out here and just worrying about what kind of oils are getting used. I know that again, Whole Foods, their hot bar. For years, I've been saying this, they're using canola oil like it's all good. Organic canola oil.

And because of the marketing around it, now of course the science is really, really becoming overwhelming on how detrimental these low-quality oils are, but here's the thing, it could be more expensive. That's one of the reasons that it's been driven into our culture so heavily, is that they're cheap. But they're treating us like we're cheap.

DR. CATE SHANAHAN: Yeah.

SHAWN STEVENSON: So, let's talk a little bit about what we can do instead. Because humans, we're going to interact with oils, it's a big part of foods in general, but also with cooking and the like. So, let's dive in and talk about what we can use as alternatives.

DR. CATE SHANAHAN: So, the easiest alternatives are the familiar, just butter. If you ever make bacon, save the grease. Just frying eggs up in bacon grease is delicious. Coconut oil is another one, if you like the flavor of coconut. I personally don't use it 'cause I don't know, we don't cook to a lot of stuff that tastes good when it's cooked in coconut oil, but it's a really good one.

It's very stable, it doesn't oxidize easily. Olive oil, if I didn't mention that already. Avocado oil is another one. And peanut oil. Peanut oil is a very traditional oil. The way that I made my good fats and bad list, which is on my website, just go to drcate.com, and then just type in a search list of good fats and bad.

The way that I made that is I looked at what is a traditional oil, what do people traditionally use? And then we want to try and get an oil that was made in a traditional manner as possible, so that in other words, it's not refined. We didn't have factory refining until 100 years ago. Peanuts, I believe they were called "ground nuts", and they came from Africa.

So that whole continent there was basically one of the most common oils was peanut oil. And some people say that peanuts are proinflammatory, and that's just not... There's no chemistry behind that. Peanuts do have a certain amount, they have a slightly higher polyunsaturated fatty acid content than like olives and avocado, but because these peanuts were bred for so many thousands of years to be oily, they yield the oil easily, and you don't need a lot of high heat and harsh processing.

So that it just, you squeeze it with mechanical pressure, and when you get peanut oil that's good quality, that's unrefined, it will taste like peanuts and I think it's delicious, and it will be healthy. It will still have all the vitamin E and vitamin A and minerals and all kinds of good stuff that nature puts in there to protect the polyunsaturated fatty acids from oxidizing while in the seed.

So, some of the, ironically, some of the best sources of antioxidant vitamins like vitamin E, vitamin E specifically protects the PUFAs in our body fat and our cell membranes and in our lipoproteins, the cholesterol carrying particles in our blood, vitamin E is very important for that.

And ironically, some of the greatest sources of vitamin E are the seeds that they make seed oil from, but it's totally destroyed in the processing, so you don't have it anymore. So, you can eat the seeds, you can totally the seeds, but you don't want to have them, you don't want to have 'em cooked to death because that will oxidize oil. They're better for you when they're raw or lightly cooked or this thing called "sprouted". I think I've gotten off-topic. What would...

SHAWN STEVENSON: No, this is good.

DR. CATE SHANAHAN: Oh, what's good to eat.

SHAWN STEVENSON: Yeah. The one that most surprised me was the peanut oil, of course, because it just seems like where does that lie in this? And also, what automatically comes up after working with so many people over the years too is peanut allergies, and some of the best data that we have now, because this wasn't a thing before as well, it's just like skyrocketed to the degree that some people are so susceptible to these peanut allergies, you can get deathly sick just being exposed to them.

And the question is, what happened? Why is this... What's going on? There's two things that's really been disclosed in the data. One is our tragic state of our microbiome being one of the culprit's underneath all of this, and also clearly, and this just from talking with you and studying your work, are interaction with these PUFAs.

Making us having essentially, and this is something that you mentioned too, folks having more hyper-reactive experiences, being exposed to different foods that they think they have allergies to, but they're really, their body is just dealing with a lot of toxicity from these PUFAs.

DR. CATE SHANAHAN: Right, and don't forget that the PUFAs are toxic to the microbiome. One of the big reasons that we have a messed-up microbiome is because we're killing the good bugs with all those toxins that we send down there. You have to breed weird organisms that can survive on that stuff. That's what happens. We've got weird bugs in our gut, and it's not just from antibiotics, it's from, you know, sugar doesn't help either, but a lot of it is from these seed oils.

But then the seed oils are double whammy because they also promote inflammation, and that inflammation makes your immune system really challenged. Because when you have a peanut allergy... So, there's food intolerances and food allergies, and the allergies tend to be more serious because that's where you can get that reaction called "anaphylaxis", where your throat swells up and you can stop breathing, or if you don't get an epinephrine shot in time. That's an allergy, not an intolerance.

That comes from your immune system getting involved, because your immune system is confused and it thinks the peanut protein is a really serious pathogen, so it's like launching an all-out full scale panic button, hits the panic button in your body, that's what anaphylactic reaction is. Plus, it's something that it goes out of control, because it should be just located in the area where you contact the peanuts, but...

So, your immune system is confused, that the peanut, which is a friend, is actually a very dangerous toxin, and because you are depleted of antioxidants because of so much PUFA that we've all been eating, you can't control the reaction properly once it gets started. So, it should just be localized, right? That would make sense. How does it get all over the body?

Well, because you've got too many of the proinflammatory things going, you don't have enough antioxidants to keep the chemical irritation localized and under control to just where it's contacting you, whether it's your lips or your guts or anywhere. So, seed oils do this. That's the reason we have this rash of... Oh, I guess that's a bad word to use.

The reason we have such a plethora, so many people with bad allergies and peanut allergies and food intolerances is seed oils. And I haven't mentioned anything just about malnutrition or nutrient efficiency, that's a big part of it too, because seed oils have no nutrition. So that 5, 6, 7, 800 calories a day that we're getting from seed oils, nothing nourishing in there, and we need nutrition for our body to work right too.

And so that's a whole other issue that we have going on in the Western diet, but definitely seed oils are contributing to that. But don't forget that just having a healthy... Getting enough protein and getting all the vitamins and minerals, that's really key too. It's not just enough just to cut out the seed oils, you got to know what to do instead.

And so that's why, getting back to your question of what oils, what fats are good? If you did tallow and lard and old fashioned, what people used to do in the old days. You can see a lot of really cool things that people do on TikTok. I follow this one lady, and she's like this 90-year-old that cooks up in a wok, starting with the stream. She doesn't have plumbing, so she uses a stream.

It's just the coolest thing ever. What did people used to do? But there's a lot of fat going in there, a lot of, I think it's lard, pork fat she pours into the woks.

SHAWN STEVENSON: So, I think a good question, just to summarize this, is just asking ourselves what have humans been utilizing the longest? So, this goes back to ghee and butter and coconut oil, and animal fats. Olive oil is another one, and that's the last one I want to ask you about in closing, because even with these higher quality oils that humans have been using for thousands of years, everyone that I just said, thousands of years.

Versus a couple of decades, a few decades now with these highly refined seed oils that require this massive industrial process just to make them palatable. Not to take away the toxicity necessarily, but just so we can use them to make food to the texture or the mouth field or the shelf stability, whatever manipulation is taking place.

But with olive oil, there's going to be qualities here, good, better, best. We want to make sure that we're sourcing our stuff the right way, because would it be a good idea to get an olive oil out there that's in a clear plastic bottle on the store shelf?

DR. CATE SHANAHAN: Definitely not, because that's a sign that the sun, just like it can burn us, it can burn oil in a bottle. And so, a manufacturer that cares about the protecting its oil is going to use a dark bottle. Those are more expensive than the clear plastic bottles. So, it's just a sign of manufacturer that doesn't care, and there probably is a lot of other stuff they didn't

do right either that is going to affect you, and it won't taste as good, and it won't be anywhere near as good for you.

SHAWN STEVENSON: Yeah. So, let's think about that piece. And also, because if we're talking about an olive oil for example, this is a fruit, by the way, same with an avocado, and the oils are more, they're much more graceful in letting go of their thickness, of their oiliness. And there's going to be a different ratio, they're not...

They don't have as many saturated fats that are more stable than say a coconut oil, for example. Or even butter that people can sit out on their counter, for example. Which that's a big debate too, do you sit the butter out in a butter dish, or do you keep it in the fridge? You know, people could... Maybe everybody can, if they're watching this on YouTube, let me know what way do you go with your butter? Do you leave it on the counter? Do you have a butter dish? Or do you keep it in the fridge?

And so, this has been wonderful, just starting to, again, add more legs under our understanding of this massive issue in our nutritional concerns, but also in our healthcare epidemics. Here in the United States, if you look at the results, we're not doing well. We're really the sickest nation in the history of documented human civilization with largely preventable, chronic lifestyle-related diseases.

And we just simply need to ask, what is in our food supply that wasn't here previously? Because I'll tell you, a lot of the folks that are working to lose weight, to shift their body fat ratio to get healthier, they're doing stuff. They're watching what they eat, they're exercising, they're trying to stack conditions in their favor, but they don't realize oftentimes there's this kryptonite in their food that is causing so much metabolic disruption.

That's why I'm so grateful for your work and all the resources that you share. So can you let everybody know again about your book, your latest book, and of course, you have one of the most epic treatises as well that you came out with first, Deep Nutrition. But mention your latest book, where people can pick it up, and also where they can follow you on social media...

DR. CATE SHANAHAN: Yeah, definitely. So, my website is drcate.com. D-R C-A-T-E.com. And from there you can find my socials, but I'm on Twitter Dr. Cate Shanahan, I always have to think about that one. D-R C-A-T-E Shanahan, that's a long one. And then I'm also on Facebook under Dr. Cate Shanahan.

My latest book is The Fatburn Fix, and that book, I take folks through the process of how seed oils have damaged their metabolism and how you really need to follow... You're trapped kind of like in a vicious cycle, because I said you've got too much PUFA in your body fat, your body

doesn't want burn body fat. How are you going to lose weight when your body doesn't want to burn body fat? So, you get exposed to all that PUFA.

I take you out of that vicious cycle in that book, and you can get a taste of it from my website, if you go to my website, drcate.com, and just type in the book Fatburn Fix. You'll have access, if you subscribe, actually even easier if you just subscribe, you'll get access to a quiz that I call the "fatburn factor", which tells you how well you're burning your body fat and whether or not you're really so deeply trapped in that vicious cycle that you really need to focus first on getting more energizing meals, getting more energy between meals, before you're ready to do something like an intermittent fast.

Or just jump right into a keto diet or something like that. You need to do, there's some other steps and that'll help you lose weight without feeling terrible.

SHAWN STEVENSON: So awesome. Well again, I love talking with you and I can't wait 'til the next conversation. And again, I just thank you so much because you've been pressing forward with this message and now so many people are picking up on this, and it's because of you and a couple of other folks have just been pioneering this and creating such great resources, so I just really appreciate you so much.

DR. CATE SHANAHAN: Well, thank you for having me on, Shawn. It's always a pleasure to speak with you.

SHAWN STEVENSON: Awesome. Well, everybody, Dr. Cate Shanahan. Thank you so much for tuning into the show today. I hope you got a lot of value out of this. This is the time to upgrade our oils. Looking at our bodies like a highly sophisticated automobile. For example, the oils that we put in matter. Getting those oils exchanged can extend the life of the car.

So of course, this isn't the movie Cars, we're not Transformers. But just to give that analogy, this has been a part of the human diet for thousands of years, oils are going to be coming through naturally in various foods and also being extracted for various reasons. Not just nutritive, but also medicinal aspects of oils as well, and that's a whole other subject that we'll definitely touch on in the future.

But for now, make sure to follow the work of Dr. Cate Shanahan, she's really leading the charge in the subject matter, and you're going to see much more coming down the pike as the years roll on here, with shifting away from these oils and it becoming something that is commonly accepted.

I appreciate you so much for tuning into the show today, if you got a lot of value out of this, please share this out with your friends and family, send it directly from the podcast app you're listening on. Of course, you could tag me on social media and tag Dr. Cate as well and share what you thought about this episode. I appreciate you so much for tuning in. We've got some epic shows coming your way very soon. Take care, have an amazing day, and I'll talk with you soon.

And for more after the show, make sure to head over to themodelhealthshow.com. That's where you can find all of the show notes, you could find transcriptions, videos for each episode. And if you got a comment, you can leave me a comment there as well. And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome, and I appreciate that so much. Take care. I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.