



EPISODE 420

The Fatburn Fix & Our Growing Susceptibility To Viral Infections

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. This episode here I am so pumped about, this is one of my favorite physicians, one of my favorite scientists. And she's got a new project that's really helping to shed some light on a very, very misunderstood topic, and it's the topic of body fat, alright? It's this thing that we tend to see as a very cosmetic target. It's a very cosmetic issue for hundreds of millions of people right now, but in truth, our body fat is a major player in so many different dynamic ways as far as our health, as far as our ability to fight infections, viral infections even. And I think that this is going to be incredibly enlightening and something that you're going to walk away with having a better understanding of this incredible tissue that we're all carrying around, and what's led to the surplus that we're carrying around, for many of us. And also some more intelligent ways that we can address this, and not just for cosmetic issues, but to truly get our society healthier.

And I hope that you've been employing different strategies to get yourself healthier right now, and also your loved ones. It's more important than ever to reach out, make sure that our friends and family are doing some of the basic necessities of just getting some fresh air, going out and walk, move their bodies, engaging in some stress management practices. And we've done episodes dedicated to all of these things. And also making sure that they're getting in some high-quality foods as well, it's super important right now.

But we just recently went on our first outing since the quarantine began, our first outing to a restaurant with our friends' next door, our next-door neighbors. So our families both went. And it was very... I felt like I was visiting another planet. I definitely felt a little bit like that scene in Back to the Future, when Michael J Fox goes back to the past, and he's got a hazmat suit on and he winds up in a barn. And these folks happened upon him in his hazmat suit with his DeLorean. And the son has this comic book which is like... The cover of the comic book shows what the future looks like... Or these alien invaders look like. So just to get into the restaurant you walk through the, what they call a lobby. It's about five feet of lobby, and you have to wear a mask to go through the five feet. But then there are people already there sitting at tables, they're socially distanced, of course, one table apart, but they've got...

They don't have masks on because you can't eat with a mask on. Yet, until maybe we get permanent masks installed on our faces and little openings. But the science there just wasn't really accurate, that five feet. But then once you go past the five feet you take your mask off and you can eat your... Whatever you're there for. But it was a very strange experience because the waitress had on the hazmat suit. She had on the face shield, she had on the mask. At that point, I was just like, "Why be here? There's so much that goes into it, and it's so abnormal. We should just go ahead and make dinner ourselves, have a family get-together, or something like that. It's just an added stressor, it's so much uncertainty."

And all the tables had to be labeled, that this table has been sanitized, and we've hit it with a flamethrower. All these different stuff, just to feel comfortable going outside. And it was like that this was like a... There's a strip mall, and everybody is just in a very dystopian situation, and this is the situation that we're facing right now. There's a very infectious virus that we're dealing with as a society. And at its core, we really want to look at, and this is what we've been dedicated to, how do we get our citizens healthier so that we're not as susceptible to this virus and the many viruses that are to come? Because this is right now... This is just the first of many that we're going to be faced with as humanity.

And the thing that is overlooked and that I've really been working to up-level the conversation is, as a species what are the things that make us more susceptible to viral infections? What are the things that we can do to help to improve our bodies' response? Because in truth, we've had such a relationship with viruses throughout human evolution that we are... In fact, the human genome is 8%... Over 8% endogenous viruses that our genome is made of. We've had such an interaction with viruses, we are made of viruses. On that level, talking about our human genome, what our genes are made of, the human genes... Or the things that make us human, we're part virus.

An even more tangible aspect, 'cause I think that's really a hard pill for us to swallow as a society right now, that we are viruses ourselves, but this is something that we can test and track now. We have some affirmation to the fact that we all are carrying upwards of 300 trillion virus particles in and on our bodies all the time. We're like a playground for viruses, and many of them are pathogenic, many of them symbiotic. But this whole equation really plays into how healthy are we when we interact with other people's virus load? How healthy are we... Or what can happen to damage our health and our immune system health that even the pathogenic viruses that we're carrying right now can become opportunistic and take advantage of our system and make us sick?

It's a very complex, beautiful thing, and that's an important thing to remember, is that this thing is dynamic and we understand so little. Your favorite health expert and virologist you might listen to, this is a time where you might not have Bell Biv DeVoe on your wall or Katie Perry on your wall, you might have a virologist as your sexy guy. I've been seeing people do posts like, "This particular doctor or physician or virologist, this is my hero," and got them on their t-shirt like it's New Kids On The Block. The conversation has changed, but even our most well-educated virologist knows less than 1% about all the viruses that there are. There's so much that we don't know.

And the basic, fundamental things that we do know, as far as that's concerned, we're not looking at it in the context of a healthy human organism, we're looking at in the context of sickness. That's the lens through which conventional medicine looks at infectious diseases and chronic illnesses, is through the lens of sick people and not through the lens of what creates health? What does a healthy, sovereign human body look like? How does it run? What does it do when it's exposed to a virus? And that's the first thing that we did in the very first episode that I dedicated to talking about this pandemic. I did a virology 101 master class for everybody and talked about how viruses function, and also how our immune system works in response to viruses. And if you happen to miss that episode, I'll put it in for you in the show notes. It is mandatory. And so many people have been sending wonderful messages like, "This is what needs to be heard by every single person." Because it brings about a certain level of intelligence and education, but also a certain level of empowerment in a world that is very, very scary for so many of us.

And it's just there's so much to the story that we're not talking about, and we shouldn't be in a debate on who is right and who's wrong, we should be in a discussion of how do we create a world, an environment that supports the health of every single human being on the planet? And that's just where I'm at and I hope you feel that way as well.

But we can do it, we can move this conversation forward by walking and talking and being the example, having the conversation, sharing the data, and also maintaining a sense of awareness that there's so much more to learn and to discover, and maintaining that sense of openness and curiosity. Even my friends have been texting me pictures as they've been going out. One of my friends sent me a... Literally, he took a picture at his favorite restaurant, and there's a little bottle of hand sanitizer that comes with his menu. And the hand sanitizer... Let me tell you what it says on the hand sanitizer bottle. It's a picture of a nurse reaching out and shaking somebody's hand and it says, "Maybe you touched your genitals, hand sanitizer." What? And then he messaged me. He was like, "It's true. Well, I mean they're yours. You know what I mean? So at some point,



you're going to... " Never mind. But it's just... It's a very different world right now, and that's a good thing. Because all of our questions and concerns, things that have been hiding under the surface, like what we're going to talk about today, get to be revealed. They get to be exposed and brought to the surface so that we can actually deal with them. And that's why I'm so pumped about this. And on that note, we're going to be talking about fat today, we're going to be talking about dietary fats.

One of the most studied dietary fats right now is medium-chain triglycerides, and for good reason. Medium-chain triglycerides are in a rare category of nutrients that are able to cross the blood-brain barrier and actually feed your brain cells, actually deliver nutrition and power to your brain that's running everything about you. And not only that, medium-chain triglycerides also stimulate the body to produce ketones as well, which is this kind of cleaner-burning fuel that your brain can use and several other cellular functions in your body as well. And if you look at some data coming out by researchers, and this was published in the Annals of the New York Academy of Sciences, they were looking at whether or not MCTs could have an impact on improving the condition of patients with Alzheimer's. And this is largely regarded as a condition that simply cannot be improved. It can be managed, we can delay the inevitable decline, but there's not much evidence that we can improve the condition. And what they discovered was that the consumption of medium-chain triglycerides, or MCTs, directly led to improved cognitive function in mild to moderate forms of Alzheimer's disease and cognitive impairment.

They actually saw improvement in cognitive function. That's not a word that's used when we're talking about Alzheimer's, and dementia, and cognitive decline. We don't see improvement. We see a management of symptoms. We see, "Let's find a way to slow this thing down," but not an improvement. This should be front-page news, this should be something that is very remarkable that we should take note of and start to have a broader conversation about because I don't think a lot of us realize that Alzheimer's disease is just skyrocketing, and this isn't a condition where... We tend to think of it as somebody just losing their memories, but this is a very, very... Oh man, it's a difficult situation to watch, as a family member begins to degrade, and to the degree that... With Alzheimer's, you don't just forget names, you can forget how to swallow your food. And it's inching its way up into the top 10 causes of death in our country today. But we can do something about it, we know there's tons of evidence, we've done multiple shows on this, and had some of the world's top experts on to talk about delaying and helping to prevent Alzheimer's. But what about when it takes hold? What are some of the things that we can do to help?

MCTs are going to continue to play out in the equation as something that's very beneficial. And as I mentioned, it's also been found to cross the blood-brain barrier and be utilized by brain cells. And this is just a great fuel, brain fuel to have on hand, and also a fuel for our metabolism because as you're going to learn today, your body's going to be made out of the fats that you consume. You also want to be cognizant of where you're getting your oils from. So even when we're talking about MCT oils, we don't want to get it from some random company X that might be getting it from an unethical source, or even cutting their oils and adding different things that shouldn't really be in there. And I'm a big fan of enjoying the process of having my nutrition and getting joy out of it as well. So there's a general MCT oil, but also emulsified MCT oil that I have just about every single day. I definitely had it today, from Onnit. Alright, it's onnit.com/model. And Onnit is the number one source for delicious, emulsified MCT oils.

Again, I have this on a daily basis. Sometimes I'll do the classic, clear MCT oil but the emulsified MCT oil easily blends into hot teas, hot coffees and beverages, and things like that, can add it to smoothies, got delicious flavor as well. And I think everybody should have some of this in their cabinet, and it just is incredible brain food and is incredible fuel for your metabolism. It's onnit.com/model, that's O-N-N-I-T.com/model, you get 10% off all of their incredible MCT oils and everything that they carry there, their awesome supplements and fitness equipment as well. So pop over there check them out. And now, let's get to the Apple podcast review of the week.

iTunes Review:

Another five-star review titled, "Thank You For Your Service" by iwontstop. "I appreciate the caliber of the show tremendously. Big thanks to Shawn for holding space in a world of misinformation and bad intentions, I appreciate this podcast greatly for bringing many subjects to the light so that I along with millions can experience the paradigm-shifting, consciousness-expanding knowledge that will lead us down the path to our higher selves mentally and physically. This is the ONLY podcast I can listen to with full intent and not get bored. Much love.

Shawn Stevenson:

Wow, that's such a powerful review. Thank you. Thank you. Thank you so much, and I love you know the name on the review, I Won't Stop. I really feel that, that's where I'm at right now. I won't stop, can't stop, won't stop. And thank you, really, truly, truly, that really hit my soul today. And everybody, if you get to do so, please pop over to Apple podcasts and leave a review for the show, it really, really does mean a lot to help to get the information out there to help to impact the lives of more people. And on that note, let's get to our special guest and topic of the day. Our guest today is Dr. Cate Shanahan, and she's a Board-Certified family physician. And after getting her Bachelors of Science

in Biology from Rutgers University, she trained in biochemistry and genetics at Cornell University's Graduate School before attending Robert Wood Johnson Medical School. And she practiced in Hawaii for a decade, and really studied her patients and studied their culinary habits.

And this is where she really began to learn and see some huge discernments in our conventional diet and traditional foods. She applied her learning and experiences in all of these different scientific fields to write her best-selling book, *Deep Nutrition*, which is definitely a classic. And she also went on to help to create the pro nutrition program for the Los Angeles Lakers, which then was utilized by several other NBA teams and other professional sports as well. And Dr. Cate Shanahan is just a real superhero in the space of health experts and physicians. She's somebody who's a real go-to as far as the data that she puts out and reviews and prepares for the rest of the public to be able to consume, and it makes some sense of all of the new studies that are being done, and just really staying on top of the data. And that's why I just have a ton of respect for her. And I'm just grateful to have her back on the show to talk about her new project. So let's jump into this conversation with Dr. Cate Shanahan.

One of the cool things that I know you were doing, and you really created a cultural shift in the world of professional sports, specifically basketball, and you know this, great information like yours gets out there and it trickles down, and people don't know often where it comes from, but you're one of the OGs in this space. And you were working with the Lakers, and I believe... Was this when Metta World Peace, aka Ron Artest was with the Lakers?

Dr. Cate Shanahan: Yeah, a bunch of seasons.

Shawn Stevenson: Yeah, And so we were just talking about some of the health disparities and different ethnic communities, and I was telling you just about access, me growing up, that I just didn't have access, I didn't know what the difference was, I didn't know what healthy food meant. I thought baloney was the same as a grass-fed steak, I didn't know the difference or a salad. So you were telling me a story about his mother, and he was wanting to get some help for his mom.

Dr. Cate Shanahan: Yeah, he was really worried about her 'cause she was 150 pounds overweight at the time, and he said, "Dr. Cate, do you think you can help her?" And I said, "Of course." So we get on the phone, and she's addicted to soda, Southern family, right? So many folks just love the sweet drinks in the South. And so we talk about that, and she was like, "Well it's an activity for me, almost." So we talked about what else could she do. And I asked



her, "Did you ever do sports in high school? Was there anything..." She's like, "No, not really, but well, there were some team sports stuff," but nothing she could pick up now. And I said, "Well, what about..." "Okay, could you get a trainer?" 'Cause it seemed to me that she was just such a social person. Her son is extraordinarily social and loves all the talking to people about just anything. So she did. And the next time I talked to him, which was a couple of months later, he says, "Oh yes, she got a trainer and lost 100 pounds." It was incredible, the power of just making exercise fun, really, for her.

Shawn Stevenson: Exactly. That's the great thing about a good coach and physician, is finding that leverage point, you know what I mean? For her, she's a social butterfly, much like her son, which I would never suspect. That's a joke, guys. You should just google Metta World Peace and look up one of his interviews. But just being able to leverage that. And also understanding that exercise doesn't have to be relegated to this little box that we put it into. It's just like you go to the gym and beat yourself up till you're on the ground. That's what you see with marketing, but exercise is movement, anything... You can actually... You said this earlier. You said that exercise is just... Finding something that you enjoy doing is the best form of exercise.

Dr. Cate Shanahan: Exactly. People ask me, "Well, what's the best exercise?" And I know it means they don't like anything. So what's the best? I just want to know the best one so I don't waste my time doing anything else. And I got my answer from an ad I saw in Hawaii that shows this little middle-aged lady coming out of a little shack in Hawaii with a surfboard in front, wearing a scuba outfit... Not a scuba outfit, but a snorkeling outfit on her head, and she's got an inner tube, and she skips over to the mailbox, takes out the mail, and then walks back. And they say, "Exercise, just do it." Or just like, "The best exercise is the exercise you will do." That's the bottom line. They said, "You got to start somewhere..." Yeah, I forgot the tagline... I just said it a minute ago. But yeah, you got to start somewhere. And that's so true. You won't start it if you hate it, even if you do start it, you won't do it for long. So it's got to be fun. And guess what? When you're a fat-burner, it is fun, it's a lot more fun. In fact, you won't even realize... Once you get into this transition and your metabolism is healthy, you can... You crave it, your body craves it.

Shawn Stevenson: Yeah. I just got to share this, you blew my mind so many times in this book, in just bringing such obvious things that are just under the surface, just bubble up to the degree of like, "Exercise is a matter of energy, our willingness, our diet is a matter of energy." And body fat has such a huge role in this whole equation. So I would love to start there and talk about that and help paint a picture for everybody. Because basically, you shared that the number one determinant of our health is our body fat, and that's not something that we hear. We just think of body fat as something we want to get rid

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of. It's an aesthetic thing. So can you talk about that, why do you say that? And also, can you tell us what is our freaking body fat actually made of?

Dr. Cate Shanahan: Right. Okay, great. So our body fat runs our metabolism. Our metabolism is the ability of our cells to generate the energy that they need. And our body fat is in charge of that. So when we talk about "my metabolism needs to speed up or slow down," that actually doesn't really happen at all. When your metabolism is healthy, it's not that it's faster, and the thought... And it doesn't actually slow down. What really happens is that the systems in your body that convert body fat into cellular energy are healthy versus unhealthy. So if they're healthy, they produce abundant energy extremely efficiently, and it changes the way you feel, it changes your life on a minute-to-minute basis. And when it's unhealthy when your body fat is unhealthy, your metabolism is unhealthy and it's inefficient and it cannot convert your body fat itself into cellular energy to run every organ in your body.

Dr. Cate Shanahan: And so what has to happen is your body system starts to rely more on an alternative fuel because when your body fat's not doing its job, it's not convertible into energy, then your body needs this backup fuel, and that is sugar. And when I went to school, I had the schizophrenic education around sugar and fat, it didn't quite add up. They were saying, "Well, your cells really need sugar, sugar's the best fuel for athletes, for example, your brain runs on sugar... PS, body fat." "Okay, well why do we have it? Why do we have it? "Well, we store extra calories." Yeah, okay. But not really, we have it because it's supposed to fuel our cells. And that realization, which came much later, after medical school, was revolutionary for me. I was like, "No, wait a second, I've been overlooking the fact that this stuff that everybody wants to burn off, it's actually supposed to... That's what it's supposed to be doing. It's not supposed to be "you follow a special diet to burn your body fat." That's supposed to be, that's the way nature designed it, to be the number one thing.

Dr. Cate Shanahan: And so what is it? It's made out of fat, it's fat. What is fat? So fat is a great efficient storage form of energy. So we can just talk just really short, like chemistry. It's basically just a bunch of carbons that are easily burned by your cells. So like when you fuel up your car gasoline, believe it or not, octane is a kind of fat, it's a fatty acid, right? So there's different fatty acids, and for the purposes of this show, the main thing is there are stable fatty acids and unstable ones. And the seed oils and the things that I say are unhealthy are unstable and they destabilize in our body fat making it inflammatory. And because of that destabilization process, it also means that our cells can't generate energy efficiently from it. So that means if we've been eating seed oils, our body fat is not capable of producing energy the way it's supposed to, and that's what forces our

cells to look for that alternative fuel in the form of sugar.

But it doesn't... That's not what they're designed to run on, and there are so many reasons that sugar is an inferior fuel. But that's not what doctors learn, and it's not what dieticians learn and for athletes, it's definitely not what the sports dieticians learn, 'cause sports nutrition is almost the... I hate to say it, but the best word really is corrupted, the science is corrupted by Gatorade and people who want to sell their sports supplement products to give you that boost... Supposed boost of energy in the form of sugar. But it doesn't work that way. And all of that is... I just said a whole bunch of stuff that really should explode a lot of myths, but it's best to... I have to... So that's why I wrote the book, is to break it down, and to break down each one of these things one at a time, 'cause each one is something that people grow up hearing.

Shawn Stevenson: Which you did incredibly well, by the way. And one of the biggest takeaways right there is the fact that we're not looking for a faster or slower metabolism, we're looking for an efficient metabolism, and that's really the hallmark of health, is that efficiency in our metabolism. Our body fat is... It's an organ in and of itself, and what I would want to touch on and make sure that we don't overlook is that historically, as we evolved, we'll just say even in the last 10,000-20,000 years, not even that long ago, the content of our body fat is very different from the content of our body fat today, that makes it so inefficient. So you mentioned seed oils which are... These are fats, so our fat is going to be, I guess, a mirror of the fats that we're consuming. Is that a good analogy?

Dr. Cate Shanahan: Absolutely.

Shawn Stevenson: So what's different about our body fat today?

Dr. Cate Shanahan: What's different is that for the past 70 years, we have been unknowingly eating more and more oils that come from seeds instead of oils that come from animals, which is what people had evolved, basically, eating. So normally, the fats that we got just came from stuff that we would... Animals we would raise or hunt, whole foods, occasionally there would be seeds. If we lived in a tropical climate, there would be the avocados and the fatty fruits, but for the most part, it was whole foods and animals. And now for the past 70 years, we've been having more and more highly refined seed oils. And just the chemical nature of them is just radically different. And that's where you get into the saturated versus unsaturated. And the whole reason we're doing this, we've made this swap of the saturated fats... I'm sorry, the polyunsaturated fats that are less stable and that promote inflammation, it came from this idea that saturated fat is bad because it clogs our arteries, which was a wrong-headed idea, and it didn't come for good reason.

It came from a need for the American Heart Association to get funding from Proctor and Gamble that sold cottonseed oil.

So it came from a lie, in other words, and this is like the... I like to say that nutrition science has been in the fake news business pretty much longer than anybody else because this started in the 1940s. And ever since, it's been more and more that we've produced these seed oils and we've been eating more and more of them ever since.

Shawn Stevenson: That's bananas.

Dr. Cate Shanahan: And at the same time as this has been happening, they've been telling us we need to eat less saturated fat, which we have been. And they've been telling us we need to eat more polyunsaturated fat, which we have been, as we've been getting sicker. So it's as if the people that are giving this message, they're just stuck, they're just stuck on the message. They can't do anything but repeat the message even though all the evidence about our health and what we've been eating suggests a powerful correlation between the more of these things we eat, the sicker we get. But they're ignoring it and they just keep spreading the lies.

Shawn Stevenson: That's bananas. I'm really sick of things getting politicized. Food should be food, but it's often a political football, and underneath everything... The nutrition program at my college was like, I think it was General Mills had some funding involvement, so why would they not promote directly through that medium for us to recommend? 'cause that's what we were taught, seven to 11 servings of grains, healthy whole grains each day. And I love the fact that you brought up, through our evolution, we simply... Even the ability to get the amount of oil out of corn, out of a soybean, the massive mechanical innovation that has to take place to do that, we simply didn't have that in our diet versus olive oil, potentially, but also animal fats as primarily were people getting their fats, through our evolution. And so this is a new human experiment, basically, that we're under. And it's turning out... If you look at the direct causality that you're highlighting in the book, it's not just a correlation, it's a causation. So can you talk about... So is there a percentage increase in our fat makeup, in our body fat makeup that's happened?

Dr. Cate Shanahan: Yes, so what you can do to find out what's in your body fat is... It's really simple. You stick a needle in it and you suck out a little bit of fat and then you send it to a lab and analyze it. And they did that about 100 years ago, and they found that the portion of fats that are in this unstable category called polyunsaturated, or I'll just call them PUFAs, was somewhere between 2% and 4%. And throughout the century, when they checked in



again, it kept on increasing, and now it's somewhere between 15% and 30% in the average person, and it's going to depend on your diet. Yeah, 15% to 30%. So that's 10 times what people used to have, and it's changing the nature of our body fat, and it's like... Think of any recipe for making anything. If you put 10 times of one ingredient in there, what this recipe calls for, it's a radically different thing in the end than what you are trying to make.

And that's what's happened to our body fat, it's radically different now. It's supposed to be our friend, it's supposed to help regulate our body composition. It's supposed to be a complete system that takes care of itself, run between our body fat and this communication line between our body fat... Our body fat creates hormones, and it sends them to our brain, and the brain receives the hormones in the appetite center, and the appetite regulation center says, "Oh gosh, there's so much energy here. Let's give this person some adrenaline." So it shoots a message sent down this nerve that goes from your brain to your gut and your heart, and a whole bunch of other organs that regulate how much energy you feel, just how energetic you feel.

It's called the sympathetic nervous system. And so your body fat talks to your sympathetic nervous system, and the more healthy fat that you have, the more your sympathetic, which is your get-up-and-go nervous system is activated. So you're supposed to feel like a ball of energy, but instead, when people have overeaten for a couple of days, they feel horrible, right? How do you feel after you go on a trip and you just eat out the whole time or go on a cruise and you just eat the deep-fried or whatever, people come back and they tell me, "Oh my God, I just... I felt terrible, and I know it's 'cause of what I ate." But they don't know specifically that it's these oils, these polyunsaturated fatty acids that did not use to be part of the food chain. So they don't have to be, and you can get them out of your diet and out of your body fat and that's when your life will change.

Shawn Stevenson: That just blew my mind. So we went from around 1900 to about... It was about 2% of our body fat makeup was these PUFAs, to today, it could be upwards of 30% of our body fat is made of PUFAs. And you just gave such a great analogy of it being like a recipe when you add that much of one ingredient, it becomes a totally different thing, it's a different recipe. We become a totally different thing, we're not even the same humans that we were before, we're something else, and that is just alarming to me.

Dr. Cate Shanahan: And guess what we are. We are people who don't want to move, right? That's why we're getting overweight, it's not that we're inherently lazy, this is a metabolic problem, right? People who are overweight are shamed on a daily basis, and they feel responsible



for their weight because they know like, "Oh, I just don't feel like I have to get up and go." I just... There must be something wrong with me. But it's not you inherently, it's not your genetics, it's your metabolism, and it boils down to what is that percentage of PUFA in your body fat. And you don't actually need to know exactly, you don't have to go get a biopsy. You possibly could if you had a surgeon and a lab. But in the book, *The Fatburn Fix*, I talk about a couple of blood tests that give you some kind of an idea, and so how you can gauge it. And bottom line is you can just ask yourself, "Well, how many of these seed oils have I been eating? Do I eat a lot of fast foods? Do I eat a lot of convenience foods, do I do a lot of snack foods? Because those are the three biggest places were, I call them "the hateful eight seed oils," where they're going to get into your body.

Shawn Stevenson: The Hateful Eight. It sounds like a Quentin Tarantino movie. Is that it? Is that a movie?

Yeah. Oh my gosh, you know what? I was just thinking about how being that our body fat is an organ, and you mentioned this, how it communicates with our brain, and this creates this cascade of communication throughout our entire bodies. And the fact that we can take this organ and we can just haphazardly grow this organ to these crazy amounts that we carry in our bodies. And I know that, obviously, hormones are a big player in this, they're going to increase our amount of estrogen that we're carrying around in our bodies. This doesn't just affect our appearance, it affects what's happening with our heart, with our reproductive system, with our digestion, it affects everything about us. And this brings up for me when I'm thinking about having all of this excess on our frames now as a society, and I just shared this recently on an episode, because it's startling. I went and looked at this recent CIA report, it's just like... Well, first of all, what do they care about body fat? But there's a recent CIA report that disclosed that America is the fattest nation, with over 40 million people, we are the fattest nation on the planet. And we're getting close to 200 million people in our country that are either overweight or obese. It's 200 million. We can't even understand how... Like that number like that.

And so we're talking about this epidemic, a pandemic, really, but here in this country of excess body fat and it being made of a specific thing that's excessively dangerous, because of what I want to ask you about next, a big part of this is inflammation. And that word can sound very, "Ooh, inflammation is coming to get you." It can sound a little hokey, but this is a real biological phenomenon that's always happening all the time, but in excess can be increasingly dangerous. So let's talk about, what is inflammation, and how does this affect and play into this equation with our body fat?



Dr. Cate Shanahan: So our bodies suffer from inflammation when we are injured or when we have an infection. And so if you sprain your ankle and it swells up, that's an example of inflammation. You get punched in the face and you get a big swollen black eye, that's because of inflammation. And your body's actually doing it on purpose, even though it hurts, your body is doing it on purpose because there's injury, there's destruction, and your body senses this, and it comes to the area that's been injured and starts breaking it down because just like any good home improvement project if you got something that is not working right, it's broken, you got to remove it, you got to take it out, so you got to make it actually worse almost before you can rebuild it back from scratch up again. So that's what inflammation is for, and it's supposed to occur only when there's an injury or an infection or some other good reason.

But what happens when your body fat is loaded with these seed oils is that the inflammation is triggered for no good reason. Like if you're... A lot of people have psoriasis or eczema on their skin, that's because the fat right underneath her skin, which is where most of our body fat is stored, is inflammatory. And for no good reason, it's just damaging the cells, and it turns red or it makes certain skin cells divide and divide and divide. And that's what psoriasis is. And it's super thick. So that's one example of an inflammatory condition that comes directly from the fat beneath your skin. And then...

Shawn Stevenson: Which is, those numbers have just skyrocketed in recent decades as well.

Dr. Cate Shanahan: Yes. And this can occur even if you're... So you bring up a good point. Is it all about the weight? No, actually. It's a cause of the weight because of what I said about how it makes us tired. And in *The Fatburn Fix*, I talk about how it also makes us hungry, controls our appetite. It makes us crave sugar. But even if you're a normal weight, if your body fat is still this 30%, 20%-30%, way too much of these unstable, pro-inflammatory fats, your body fat is prone to inflammation, and you can have these diseases, even with a normal amount of body fat. And this, I believe, is the number one cause of some serious conditions, autoimmune diseases like Celiac disease, like lupus, and cancers.

And it's why actually I was on the Bill Maher Show recently, talking about the most important thing people can do to protect themselves from the coronavirus is to get these seed oils out of their body because when... Like I said, inflammation is for fighting off infections. So if we have an infection, a viral infection all throughout our body, we're going to have inflammation all throughout our body. So far so good, right? You cannot fight a... That's a good thing. In a normal world, it would be good. It would help us fight the infection. And we feel sick, we feel like we have a fever, we don't want to move, but



it goes out of control when we have all these inflammatory fats in our body fat. They incite the... It's like throwing fuel on a fire, and they make the inflammation out of control. And so that's why when people are dying from the coronavirus... The young people are dying from the coronavirus, it's not actually the coronavirus causing the deaths and the serious cases. It's the body's own inflammation out of control, that can't be reigned back in because of the diet.

Shawn Stevenson: Yeah.

Dr. Cate Shanahan: The frustrating part of this is that we've been told to eat more of these polyunsaturated fats by Harvard, by Tufts. We've been told to eat these things. And so in my opinion, it's wildly, wildly irresponsible of the medical leadership, the people who are running these institutions of metabolic health, to be saying, "Eat more of this stuff." It's wildly irresponsible. They've got to know that it's not a good idea, and I think it's business. You could call it politics. If you don't want to talk politics, then okay, let's talk business. It's good business for the canola oil industry and the soy oil industry. And that's why we're hearing what we're hearing about food. Food is one of, possibly the most, it's the biggest business really in the country, I think, but maybe tied with health right now or poor health, but...

Shawn Stevenson: But food is the biggest component of our health, as far as something we proactively engage with as well. And I've just got to share this because what I'm really hearing... You just really spoke to me, because this is not... It's not being talked about anywhere, and I'm just like, I'm so shocked. And I went through a nice, little clip thereof being very disappointed in our medical professionals and also these "health experts" who talk about natural medicine, functional medicine, integrated medicine. Where are they? They're not talking... All of a sudden, food doesn't apply here when one of the things you're really sharing is that COVID-19 really came along and it's taking advantage of our severely deranged metabolism. And folks that are already sick, severely damaged metabolism, but on top of that, this pre-inflamed condition where we're looking at inflammation, it's not just about healing, it's also... It's an immune response. And so we're walking around with this chronic low-grade to moderate-grade inflammation all the time. And we're being set up, we're already set up for when we're exposed to, whether it's COVID-19, COVID-20, whether it's MERS, whether it's influenza, whatever the case might be, we're already pre-subjected to abnormal responses to viruses which we've evolved with, having exposure to various novel, novel is a scary word as well, new viruses. Our immune system itself evolved from viruses.

In fact, they're based on viruses also facing off against other viruses and us getting



better. It's a natural, normal process, but now we're hypersensitive to these things. And we're not talking about what is our immune system actually made of? It's made of the damn food that we eat. Your immune cells are made of what you eat. Your body fat, which is carrying all of this stuff and this inflammation, and managing your metabolism and having a huge influence on your immune system. We're making it out of garbage stuff that we did not evolve eating. We're a different creature. That's why this virus is taking advantage of us, and that's what I'm really hearing.

Dr. Cate Shanahan: Right. We have no chance of fighting off this virus as efficiently as we would if we just didn't have these seed oils in our body, and we had a full-on healthy, traditional diet, right? So I did a Twitter post the other day about the soy oil consumption per country, soy oil consumption per country, the countries with the most soy oil, and the countries with the worst COVID. And it was just a very blunt tool, of a way to look at this association. But it was pretty tight correlations. Like in South America, Brazil consumes the most soy oil. In South America, Brazil has the most coronavirus, so stuff like that pops up. And then what you do... And this is interesting because, at the beginning of this thing, I remember they were talking about why is it that African-Americans seem to have such a worse time with coronavirus? And they did all these scary statistics in Chicago, I think, the folks who were hospitalized were 70% African-American, and of the whole rate of infection, there was something... Or the population, I mean, it wasn't... They're still a minority, I think.

Anyway, they were the minority, so it was double, right? It was double the hospitalization rates and double the deaths, and everything was double. Everywhere they look at it, it's doubly worse to be African-American. And so they were talking about, "Oh, well, gosh, maybe it's their genetics." But what's going on in actual Africa, where there is so little coronavirus that there was... There were no cases for the first few months. And now I just looked at it, as of June 30th, the case rates... There's all these different shades, so zero is white and the lightest state of pink is what most of Africa is, and then a super dark pink is what one country is. But so Africa, most of the countries in Africa have a case rate of something like 0.3 per 1,000 people, so way less than a percent. And then in this country, it's like 10 times as much, right?

And of course, it's more concentrated in the African-American population in this country. And then I looked at what are the oils that these folks are eating, and how much seed oil, how much soy oil, 'cause that's the most easy... You can find them... It's the most commonly consumed and you can find the statistics the most easy on soy oil. So I looked into soy oil. And there's so little soy oil in Kenya... I looked only at five countries, I just picked five at random. So Kenya, like none, it doesn't even make the list



of the top 70, I have it written down here. Sudan and Chad, none, no, it didn't make the list, so maybe there's none. But Tanzania and Ethiopia had some, so between the two, it was 4 and 32.

If you look at the consumption of corn... I'm sorry, soy and canola in this country, it's somewhere close to 13,000. And these numbers are in thousands of metric tons. So you got to put a bunch of zeros after these numbers. But per capita, the consumption in the United States of these oils is about 39 pounds per year, and in the worst... Highest consuming country in Africa that I looked up was Ethiopia, and that was 0.27 pounds per year. So we're comparing 39 pounds per year to 0.27. And coronavirus cases are less than 1/10th... This is the deaths... I'm sorry, this is the deaths. So it's not just the cases, it's the deaths. So there's nothing inherent about the genetics, it's the diet.

Shawn Stevenson: Yeah, yeah. Oh my gosh. And shout out to Kenya, first of all, my wife's home country. Sasa, everyone. Habari. But if you just go... These things, unfortunately, they seem very complex but it's very simple things to do if we're asking the right questions. That's one of the things I really love about you, is that you ask these questions and you find well thought out, rational answers to them. These things just make sense. What are our bodies actually made of? What's mounting the response? What's causing our hypersensitivity? And then if you look at what's happening here, which I'm very passionate about as well, is seeing this increased mortality rate, specifically in the African-American community, which is, I grew up not knowing, not having any idea that the food that I was eating made a difference. I didn't even make a connection that this food versus this food is any better. And obviously, processed food is one of the most accessible things.

When I lived in Ferguson, prior to... When I was in college and when I was living in Ferguson, Missouri, if I go outside of my apartment complex, there's Lee's Chicken... I'm just talking about literally within a two-block radius. Lee's Chicken, Papa John's, Chinese, three Chinese food places, Domino's, there's a Popeye's, there's a little mom-and-pop's fish place, there is a Jack in the Box, Krispy Kremes, another Chinese restaurant. I'm just going through it in my mind. Three liquor stores, a few check-cashing places. Let's see, what else? And I'm missing something here. Oh, Burger King. Did I say Jack in the Box? Jack in the Box needs to get said twice, alright? My God. But shout-out to the 2-for-\$0.99 tacos, oh my god. But it's just literally all of this processed food around me. Whole Foods? No. Health food store? Absolutely not. You got to be kidding me.

Dr. Cate Shanahan: So they call that a food desert, right?

Shawn Stevenson: Yes, there you go. Yeah.

Dr. Cate Shanahan: But the food... What's in the food desert? What is the rain in the food desert? That is vegetable oil, because all those places, they could not function if we took away vegetable oil. And you go into... If there were a mini-mart... I didn't hear you say a mini-mart or stop and go, but if there were one, most of the food in that store is going to be made with one of the vegetable oils. So it's just the food desert, the food that... It's like they don't care, and I know that they don't. I don't know if I shared this story with you, but when I was in Napa... My husband and I used to live in Napa, California. And we wrote a little article for the local paper called The Stock Report. And one time we wrote an article about the canola blob, because we were so upset about having to sit down and pay for a meal, 100 bucks, and there was literally nothing on the menu that didn't have canola oil. And so we wrote this, and we said, "This stuff is really... It's disappointing that in Napa Valley, restaurants are still cooking with this stuff because it's dirt cheap. Why not just use a better quality oil and stop poisoning us?" And so a couple of days later, I got a urgent fax in my office from the president of the CIA. And in Napa, CIA is Culinary Institute of America, right?

Shawn Stevenson: Okay.

Dr. Cate Shanahan: So I don't have to worry about looking out the windows and for the snipers, but not yet, anyway. But so he was saying I was unnecessarily scaring people, 'cause canola oil's very healthy. And so we had a little phone call, I talked to him and he said, "Why don't you come over and we can break bread and see if we can come to understanding of our differences?" 'Cause he was in charge of the CIA, and he used to run Disney. So he has a lot of knowledge about chemistry. He's going to be schooling me about chemistry, right? Thank you. 'Cause my background is in biochemistry, I went to Cornell to study it. And so we sat down, and one of the things that I will never forget is he started our lunch with a flight of olive oil, and how he was describing all the different... It's an olive oil tasting, right? So super fancy, elite. And so we had all these different olive oils. And he said, "Well, what we do is we put nitrogen gas in the top of the bottle so this thing doesn't oxidize." And I said, "Wow, you are so knowledgeable, you are more knowledgeable about chemistry than I had thought. But okay, so if it applies to olive oil, why doesn't it apply to canola again? 'Cause that can oxidize, too, and it can oxidize even more quickly than olive oil."

And I saw his gears turning for a half a beat, and then without batting an eyelash, he says, "We don't have enough olive oil to feed the masses, right? So it's..." So I was like, "I wish I had that on tape because you just said it's okay to lie to people, because we don't

have... 'Cause you think we don't have enough of the good stuff to feed people, so we got to lie to them." I mean, there you go, that's the problem. And these are the same people who are the leadership of places like Harvard, he came from Disney, he could have just as easily gone to Harvard because it's all about business, it's not about education. He didn't go from Disney to the Culinary Institute because he was a good chef. He went because he was good at business. So the people that run these businesses are... They're the same people, and they think the same way, and the reason Harvard and Tufts and Yale, they come out and they say, "We got to have more polyunsaturated oils, more seed oils," they call them or plant oils now. They give them all different names, just so they confuse us as much as possible, that's part of what they're doing.

It's not for your health, folks. So if you want to look to an authority, if they are also a big business, you should look away, because they're looking out for their business, they're not looking out for you're whatever it is, your health or the tastiest meal. These folks at the Culinary Institute of America paying \$60,000 each to learn how to cook? Well, they're not learning traditional cooking anymore, they're learning how to make fast restaurant food that looks good and that they can charge more for 'cause it piles up nicely on a plate. So it's the business, the business. So we have to, if we want to be healthy, we have to forget about the authority figure and try to tap into our own common sense, and if you've got somebody in your family who loves cooking, who grew up cooking... What we talk about in our book, *Deep Nutrition*, is that chefs were the original nutritionists, and people who love to feed other people have their hearts in the right place, and they're going to be... You talked about asking the right questions. People who love to cook and feed people, they tend to ask the right questions, because when it comes to, say, a cut of meat, they're going to be like, "Okay, well, I want to get the best cut of meat for my family, 'cause I want it to taste good, and I want it to nourish them."

So what that meant a 100 years ago was, "What did this animal eat? Where did it grow up? Where did the animal grow up?" Those kinds of questions, what the fancy words for is, "What is the source? What's the source? Was it a grass-fed farm or was it a industrial farm?" They, the business people, they do not want us having these conversations, they do not want us asking these questions, because once we start looking, we don't want to buy their products.

Shawn Stevenson: Yeah, so powerful, so powerful. And it's so funny, you actually had a direct conversation and experience like that to see that this wasn't about health, this was a business choice. And I just mentioned this recently, I did an episode dedicated to why America was hit



so hard by the coronavirus. And just looking at very simple things that anybody can look into is that the United States has delivered billions of dollars in government subsidies for these monocrop, wheat and corn and soy, used for things like high-fructose corn syrup, used for creating these "vegetable oils and seed oils," and there was a study that found that... They looked directly at the people that are eating the most of these government subsidized foods, and seeing over 30% increase... Maybe it was 40% in obesity tied directly to it. I think it was 37%. But I will put that episode for you guys in the show notes. So there's been studies done to look at, "What's the connection between this action and this action?" And I forgot one in my Food Desert Neighborhood, McDonald's, there was a couple of McDonald's. And they were cooking, of course, in some kind of monstrosity vegetable oil, but in other countries, it might be a tallow, or something like that. I think it even used to be beef tallow. But the game has changed, it's mutated, and if you could actually...

Dr. Cate Shanahan: It's mutated...

Shawn Stevenson: I want to talk about... Ninja Turtles... I want to talk about specifically a certain type of vegetable oil in a process, and most importantly, I want to talk about, "What are some solutions?" The Fatburn Fix. How can we change the construct of our fat cells? And we're going to do that right after this quick break, so sit tight, we'll be right back.

Growing up, if I thought about chocolate, I think about Three Musketeers, I think about a Kit Kat Butterfinger, right? I had all these ideas, hot chocolate, chocolate ice cream, chocolate cake, those are the things that would conjure up in my mind when I thought about chocolate. Little did I know that chocolate itself, the original root of chocolate, which comes from something that's botanically a seed, these cacao seeds, was one of the most healthy foods in the world. Listen to this, this was from a randomized double-blind, placebo-controlled trial that's published in the American Journal of Clinical Nutrition, found that polyphenol-rich cacao, or cocoa, without the sugar, has remarkable prebiotic effects on the human body. So what the study found was that folks who are consuming this sugar-free cacao flavanol drink for four weeks significantly increased their ratio of probiotics, or friendly bacteria, bifidobacteria, for example, while significantly decreasing their class of firmicutes, which is associated with fat gain. So there are certain types of bacteria that are associated with gaining fat in these firmicutes.

So the saying in health right now is that if you want to be firm and cute, you got to reduce the firmicutes, alright? I didn't make that up, somebody else did, alright? But the bottom line is, "Wow, it has a really powerful, remarkable impact on what's happening

with your microbiome." The study also found that it was able to reduce levels of systemic inflammation measured by something called C-reactive protein. And if that weren't enough, cacao also has these compounds that have a really powerful influence on our mood, like anandamide, which is known... That translates to mean bliss chemical. Serotonin, tryptophan, these precursors that help your body to produce things like melatonin, right? That helps you to sleep better. It goes on and on and on, but the quality matters a lot. And when you get real chocolate into something that is even more health-giving, you've got something really special.

And that's what they have with the new Chocolate Organifi Gold drink. So they've got the chocolate along with their incredible delicious turmeric formula. And as you know, turmeric has very powerful anti-inflammatory properties, and it also has been clinically proven to have antiangiogenesis properties. So this means that turmeric literally has the ability to cut off the blood supply to cancer cells, alright? And we all produce cancer cells every day, but a properly functioning immune system and being able to regulate this angiogenesis, which we need, but we need at certain levels, is incredibly important. And food can help to regulate that. So, I'm a huge fan of Organifi, and now they've got the new Chocolate Gold. So pop over there and check it out. Just released, just delicious. Organifi.com/model. You get 20% off that and everything else they carry. Alright, so head over there and check them out, organifi.com/model. That's O-R-G-A-N-I-F-I.com/model for 20% off. Now, back the show.

Alright, we are back and we're talking with Dr. Dr. Cate Shanahan. So your book, did it hit The New York Times?

Dr. Cate Shanahan: It did.

Shawn Stevenson: Yeah?

Dr. Cate Shanahan: Yeah, I was so thrilled. I was like, "Wow, okay, that made my year."

Shawn Stevenson: Yes, congratulations. It is such an epic book and it's well-deserved, and I'm just so grateful for you putting the time and energy. I know what it takes to create something like this, and this is just remarkable. But one of the things you also talked about in the book is that our body fat actually controls our temperament, right? Our body fat controls are temperament. We talked about the get-up-and-go gusto energy to be able to work out, just to even have the energy to make our own meals, but also there's some kind of psychological components to it that this can affect. Can you talk about that a little bit?

Dr. Cate Shanahan: So what happens when your body fat is unhealthy, because of the seed oils, is that... I mentioned your cells use more sugar. And what that does to our appetite is so important to understand. It's like everybody knows sugar is not healthy, right? And they talk about, "Well, I'd love to get off sugar, but I'm addicted to it." And sugar is... We talk about sugar as being addicting. But there's two kinds of addiction. And I want everyone to understand the two different kinds. So the one kind is the kind that we've heard about more, the sweetness, gives you this like, "Oh my God." You roll your eyes back, like, "This is the best experience ever, just give me more, I want to sit here and just eat M&Ms until the whole bag is gone." That was me.

And then there's this other kind of addiction which has to do with brain energy, and the fact that your brain depends on sugar for energy when your body fat can't give it the energy it needs, right? So that's a metabolic addiction. And the hedonistic or the enjoyment addiction, they call it hedonistic addiction, pleasure. That, you have no hope of getting over that while you have a metabolic addiction, while your brain needs to grow, or it thinks it does, right? Your brain is smart and it learns to associate the relief of energy deficits with sweetness or carbohydrates, starchy food. So that's where these cravings come from, that are truly... You would have to be like a Mr. World Atlas of willpower to resist a metabolically-driven sugar craving for long enough to actually lose weight. You could do it for a day, two days, maybe a 21-day challenge, But if you're still metabolically addicted, it's going to come back, it's not going to go away the way they promise. And that's because your brain doesn't know that there's energy in your body fat. It can't read the signals.

The inflammation is getting in the way of the signals or hormones that your body fat's trying to send to your brain. They're not being received. And so your brain is like, "I just got to have me some more sugar, I got to have more sugar." And so the part that that translates to, how does that make you feel? Well, there's this word that didn't exist when I was growing up, hangry. But everybody talks about it now like, "I'm hangry, I got to get me a snack or something." Well, that's a sign of a metabolic problem. That is a result of this obesity epidemic. That term. And we laugh it off because we don't understand how serious it is. But if you're hangry, if you can't concentrate because it's an hour past your lunchtime, or if you are irritable, or you don't want to talk to somebody because, "Oh my God, it's that person, and I just... I can't do this without a snack." Right?

That's not you. That's your brain needing more energy, that's your brain having a dysfunction because it needs more energy. And when your brain doesn't get the energy



that it needs for six seconds, the cells start to die. They start to seriously dysfunction and they can't transmit the electricity. So if you've ever had a moment where you were having trouble concentrating at work, or you get somewhere and you feel overwhelmed by the experience, and you feel like, "Oh my God, maybe it's anxiety. Maybe I have an anxiety disorder." My guess is those occur, because this is what my patients tell me when I tease it out when you're on the hungry side. When you're late for lunch, or you didn't have as big of a breakfast as usual or something, your brain is not getting energy. You can't process this information, this complex information, and that makes you anxious when that happens, that...

What is the most anxiety-provoking situation? It's a new day at work or something like that, right? Because there's new people, there's new tasks. That is naturally anxiety-promoting, it's normal to be anxious. And the reason we have that stress feeling is because there's so much to learn, and we don't understand, we can't make sense of so many things. But that happens to you every couple of hours if your metabolism is damaged enough where you can't get your energy from your body fat and you just, you can't keep your blood sugar levels high either. That happens when you're on the path to diabetes, and we call it pre-diabetes. There's another word for it, insulin resistance. Or if you do have type 2 diabetes, I'm only talking about type 2, not type 1 here, it's worse, right? So people who are type 2 diabetic have gotten into their diabetes not because they lack willpower, but because their brain keeps telling them, "I need more energy." And you got to obey it. Your brain is in charge of you. So if there's food there and your brain is saying, "I'm sorry, I can't function." You're going to go and get the food, even if it's not healthy and you know it.

Shawn Stevenson: And this is a really great summation, what you talked about in the book is that... And it's so simple, that our bodies and our brains should be capable of missing a meal and not freaking out and going into red alert. We carry energy, that's what body fat is for, its purpose is to carry energy. But most of us are not able to tap into it because our fat cells are literally so gummed up with these abnormal fats. And if you could, could you actually share with us... Obviously, I mentioned, this is a major mechanical process that simply just wasn't around thousands of years ago. How do we get a seed oil? How do you get a canola? How do you get a rapeseed oil? How do you get corn to be able to create oil or any of these crazy... What we call these vegetable oils, but they're not freaking kale oil, how are they made?

Dr. Cate Shanahan: In a factory. So nature does not make bad fats, so if you're eating a whole food or anything that looks like food that has flavor, it's not a bad fat. But if it has... If it's in a bottle and it's clear, you don't know what it tastes like, it has no odor, it probably came



from a factory. And what they do in a factory, it's at least 40 steps, 40 different types of machines. And the first thing that they do is they pour a whole bunch of the seed into a giant container, and usually they heat it, they put pressure in there, and they get some a solvent like hexane, which is in gasoline as well, and they try to dissolve out the lipid, the fat, from the seed. So they separate the fat from the protein and the starch and all the other stuff. And that creates a big, ugly sludgy, disgusting, foamy, waxy mess. But what I just said is multiple different machines, so they pump the oil in one direction, and then the solid parts, they're not done with that. There's still something that they're going to do with this disgusting pile, it's just... It looks like poop. It just plops over the edge of stuff and it sits there in a ugly heap.

They use that for animal feed, or they might use it to make carpet backing, or they use it for industrial purposes, but they do feed it to animals. And so then they've got this foamy, waxy crude oil, and it has to be refined, and that's where the... That's where a lot of damage occurs because these are very unstable fats, they've already been put through one process that strips out... That separation I just described, it destroys any vitamins that were in the seed. So Vitamin E, which is a highly fat-soluble vitamin that we need, and the seeds need to keep those PUFAs stable, it destroys the Vitamin E. It takes out a lot of minerals. So it's not just that these oils are unstable, they've also been just stripped of nutrition. And then they have to be refined, bleached, and deodorized, and so that's where a lot more of the damage to the PUFAs occurs.

And you actually get toxins that are sitting in the bottle by the time it leaves the factory because the unstable fats have broken down and they degrade into unnatural molecules that don't exist in nature, and our bodies can't use, and they have very toxic effects. But what does it look like? So just to paint a picture, we're talking about a huge warehouse with giant steel containers and lots of piping, and this is the same technology, if you've ever driven by a motor oil refinery, where they make gasoline, there is usually a stinky smell. It's the same technology. They're refining the oil. They're fractionating out the different components of stuff that were in the seed.

Shawn Stevenson: That doesn't sound good at all. This does not sound normal. This is not normal people. And it's in everything. It is so crazy. I remember even in the context when I was talking about the food desert that I grew up in or that I lived around much of my life. Even when we go to Whole Foods right now, as of this recording, and... Well, they don't have this right now because as of this recording, the hot bars are not... They're not out there, because the hot bars are the scary thing. But even at the hot bars, if you look at the ingredients, 99% of the hot meals that Whole Foods has, it's canola oil, is in the ingredients. It's just like... It's been so imbued into the culture that this is healthy



because it's given this name, "vegetable oil or seed oil," "seeds are good." But when you understand what it's actually made of, what it takes to create something like that, and the fact that it's in so many different things that we consume, and the fact that your fat cells are going to eat basically the fats that you give it, we start to paint a much clearer picture of why we're so unhealthy right now, why we're so susceptible to disease, why we're so much more susceptible to contagion and viral infection.

And I'm just so grateful for this communication and you doing this work to make it all make sense for us. So if we can, in closing, I want to talk a little bit about, "What can we do? What are some solutions?" Because I would imagine getting those low-quality fats out of our body isn't necessarily something that is going to be a graceful process, necessarily. Can you just give us some insight on what we can do to help to shift that ratio in our bodies?

Dr. Cate Shanahan: Yeah. The day that you start eating them and you start getting healthier fats in your body, you're going to notice more energy, and you start solving the problem that day. The day that you decide that you're going to start looking for how these things have been getting into your body, that day is a day that you start healing. And you will experience benefits in the first days or weeks and months, and it will be a continual ongoing thing that... It may take a full year and a half before you really get to the point where you're like, "Wow, this is what I've been missing." People notice they tell me they have more energy starting right away, but you get to another level... I used to be that person where after a hard day at work, I would come home and my head would be full of like, "Oh, my God," other people's problems and trying to figure things out and not say the wrong thing at the wrong time and make them hate their doctor, and... I never wanted to hear a "my doctor told me..." I never wanted to hear that. And I couldn't. So Luke would be like, "How was your day?" And I'd be like, "I don't want to talk about it. Let's just watch Batman or whatever. Just feed me dinner. Help." And I didn't have the mental energy to process my day and share it.

Shawn Stevenson: Yeah.

Dr. Cate Shanahan: So I was less of a wife really. I know I'm probably still not the best wife, I haven't gotten the Best Wife Award yet or the Best Wife Cup from... Trump one, "You are the best wife ever." But I haven't got that yet. But I can come home from a full day and I can tell a story, just a little simple thing like that. I couldn't do that. And I thought it was me. I thought I was just one of those people that I couldn't tell stories sometimes, or I thought I was a lesser person, really. And it wasn't truly me, it was just, I didn't have the energy. And so that's what energy can do for you, is... My husband just... Oh, well look at



this.

Shawn Stevenson: Oh, that's awesome, she got the award. Oh, guys, I hope you're watching on YouTube. He just delivered The Best Wife Ever award in that moment. And the Grammy goes to... Oh, that's so awesome. Shout-out to Luke.

Dr. Cate Shanahan: I'd like to thank my husband.

Shawn Stevenson: So beautiful.

Dr. Cate Shanahan: But yeah, so this is like, "What's waiting for you?" Is you don't know? But maybe all those things that you've wanted are out there for you, and you just want to... That day that you decide, "I'm going to start looking, I'm going to memorize The Hateful Eight, I'm going to start looking for them, and I'm going to go to Dr. Cate's website and find her shopping list of better products and start trying them," that's the day... That's all you need to do, you just start. You don't have to do it all at once. I didn't do it all at once, and I'm supposedly the expert. I did it one thing at a time. We just started eating... We just said, "Okay, no margarine, and just butter," and, "Yeah, let's get the full-fat dairy," and, "Let's eat more eggs," and, "I sure love sausage." We just went with the low-hanging fruit, the stuff we loved. And when you do it that way, it's going to feel really easy.

Shawn Stevenson: I love it. So simple and applicable right now, more than ever. Just something that we can all literally put our hands-on and put in our bodies, is swapping out our fats. And you've got so much more information, obviously, in your new book, New York Times best-selling book, "The Fatburn Fix." Can you let everybody know where they can pick up your book and where they can connect with you online.

Dr. Cate Shanahan: So yeah, connecting online at drcate.com, so it's [drcate](http://drcate.com), and there's no dot after dr for doctor. But drcate.com. And I have information about my different books, why you might want to pick one over the other, and where you can buy them because there's been difficulty keeping it stocked at Amazon. But, for the most part, it's pretty much any bookseller online. And you could get it even in audiobook. If you're a podcast listener, you probably love listening to books. Get the audiobook and learn while you drive and while you burn.

Shawn Stevenson: Yeah. Awesome. Dr. Cate, you're one of my favorite people in this space, you just... The amount of intention and energy that goes into something like this is not overlooked. I truly, truly admire and appreciate it because it's of exceptional quality right now. There are wonderful physicians out there, doing wonderful work. It's a whole other realm to



be able to look at the evidence, stay on top of the data coming out, it is like... It's a full-time job in and of itself, and I definitely admire you for that, because you're keeping people educated as to what's going on in real-time and putting the pieces together. And that's what we have in The Fatburn Fix. And again, just thank you so much for coming on and sharing your wisdom with us.

Dr. Cate Shanahan: It's such a pleasure to talk to you, Shawn, 'cause you just break it down into such fun and interesting pieces that really... I know your audience must love you because you touch me when you're talking to me, so I'm sure you touch them.

Shawn Stevenson: That means so much coming from you. Thank you, thank you again, for hanging out with us today.

Dr. Cate Shanahan: Thank you.

Shawn Stevenson: Everybody, thank you so much for tuning in to this episode. I hope you got a lot of value out of this. Man, again, just make sure to pick up The Fatburn Fix, it's a really poignant, important, timely book for what's going on in the world. And the side effect is that we can get our bodies a little bit healthier, we can obviously, the term is she knows this, there's going to be some pizzazz in there with fat burn because it's one of those words, it's one of those keywords that we look for, but she's talking about really fixing our body fat. It's a whole different dynamic and angle to this equation. And it's fascinating, and it's unfortunate that this hasn't really been talked about until now. But the good news is, we're alive for it, and we are here for it. Right now, we have access to it.

There was a time when getting information, you had to be in some secret society or something to get the information. Now, you just literally go to your phone and you can get the data. You can order the book. You have access. There's nothing holding you back from transforming your knowledge base and transforming your life. And a simple takeaway from today is to start swapping our fats. I think there's a show, it's called Wife Swap or something like that? People are swapping wives, swapping families? Swap your fats, so much easier. Why don't we have a fat swap show? And just see how our health could transform. So that's what it really starts with, is understanding like, it's a major component of what our bodies are made of, and I really don't think there's anything more important than that. Our bodies again, I'm going to continue to say this, we're made of the air we breathe, the water we drink and the food that we eat. That's what you see in the mirror, and that's what this entire conversation about our immune system and what we're facing right now, as far as infectious diseases.

There's so many more to come. In truth, we know about less than 1% of all the viruses that there are right now in the world, and the viruses we do know about, we barely know anything about them, okay? Human health and our world is so dynamic and so... Oh my goodness, it's constantly evolving that we're never going to know. And that's the beauty in it. And it's embracing that not-knowing that keeps us curious and asking questions and listening to conversations like this with an open heart and open mind so that we can actually paint a well-meaning picture and carry that with us to create the life and the health that we truly desire and deserve.

I appreciate you again so much for tuning in today. If you got a lot of value out of this, make sure to share this out with your friends and family on social media. Definitely tag me, I'm @shawnmodel, and just let me know what you thought about the episode and just keep sharing the information. I see you guys out there, and it means so much. We're really working to up-level the conversation and bring it back to a place of rationality, which, unfortunately, it's far and between right now, of what we're seeing in major media. And even online, with some of our favorite health experts of... They've abandoned ship. It's like a pirate story to them, they're Pirates of the Caribbean. When it really boils down to it, we need them most. But I'm here for it, I'm ready, I'm strong and I'm willing. But I'm strong because of you. You help to really keep me energized and keep me juiced because this is why we're alive right now. We are alive right now at this moment in history to up-level humanity. And that's what it's really about.

So again, thank you so much for hanging out with me. I'll talk with you real soon, got some epic, epic episodes coming your way. Take care, have an amazing day. 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 can 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 this show is awesome, and I appreciate that so much. And take care, I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.