



**EPISODE 799**

# **Why Body Fat, Inflammation, & Disease is Skyrocketing Because of Vegetable Oil**

**With Guest Dr. Cate Shanahan**

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**SHAWN STEVENSON:** There's a specific thing in our food supply that's changing human body fat. It's contributing to higher rates of obesity and chronic diseases. And on this episode, you're going to hear from the world's foremost expert in this subject matter. You'll learn the fascinating science on this subject. Plus, what you can do to protect yourself and improve the health and fitness of your family. On this episode, we have the amazing Dr. Cate Shanahan. Cate Shanahan MD is a Cornell trained physician scientist whose work has inspired entire movements that have changed our popular food culture. She's a New York Times bestselling author and has worked directly with the Los Angeles Lakers creating the pro nutrition program that has impacted some of their most world renowned superstar players, which you're a little bit later. And this is actually, her work has been emulated by countless championship teams all around the world. So buckle up and let's dive into this conversation with the one and only Dr. Cate Shanahan.

All right, I've got one of my favorite people in the world of health and wellness, Dr. Cate Shanahan, and you've got an incredible new project that I got my hands on early. Of course, Dark Calories. This book is an absolute game changer and you dropped so many different nuggets in this book. I can't wait to dive into this, but one of them is just really kicking the book off. If you share just how much of this newly invented substance is in the average person's diet today. Let's talk a little bit about that.

**DR. CATE SHANAHAN:** Yeah, most people have no idea that 30 percent of their average daily calories are coming from this collection of vegetable oils that I call the hateful eight wheels. And, 30 percent of their calories, you can also look at it as 80 percent of their fat calories. So like most of the fat that you ingest is not natural fat. It's Factory derived oils, and these oils are not meant, they're not really fit for human consumption and they are the worst thing in the food supply. And that's why I wanted to write an entire book called "dirt calories", focusing on just how many different ways they're messing us up and yeah. And the whole book is, this is a new book I've written about other ways they're messing up in other books. So it's just a very huge Pandora's box that the medical community knows nothing about. So I'm opening it to expose it to the world.

**SHAWN STEVENSON:** Yeah, and the way that you lay this out, this is a huge, huge part of these multiple health epidemics that we're now experiencing. We're going to unpack why that is, but this is really the definitive guide. On this subject matter because I know that there are a lot of so called nutrition experts and we know about the funding issues and things like that are saying, Hey, you know what?

All this stuff about vegetable oils. It's not justified in the data. You know, it's fear mongering. Well, as a matter of fact, and this is one of the other statistics that you share with us is that, you know, we have.. In our culture today, the majority of our diet, the average American, is now ultra processed foods. So these are newly invented foods in general. According to the BMJ, 60 percent of the average American adult's diet is ultra processed food. For kids, according to JAMA, it's 67.5 percent of our children's diet today is ultra processed food. And you share that 80 percent of these foods that have ingredient labels on them, have some form of vegetable oil, again, a newly invented substance. And I love you, can.. Let's talk a little bit about how vegetable oil is made compared to some of the oils that have been used for thousands of years.

**DR. CATE SHANAHAN:** So vegetable oil is radically different than anything else humans have ever consumed in history, because once you extract the oil from the vegetable oils, the hateful eight, it is so inedible. It stinks. If you were to get some fumes up in your nose your nose would burn. It would burn your eyes. They would start tearing. And if you were, like, forced at gunpoint, maybe to drink, to take a swig of the crude vegetable oil, like soy oil or corn oil, it would burn your mouth. It would burn your esophagus, and it would burn your stomach, and probably you would just like regurgitate it immediately because your stomach would recognize it as something that should not be there. And, you know, hopefully it would expel it from your body. That's the crude oil.

And then it does, it gets refined, extensively refined in factories requiring like many, many complex steps and chemical reactions. And the names of steps are degumming, de waxing, deodorizing, bleaching, washing often, is necessary to remove some solvents that are often removed. And so there's nothing else in our food supply that like the raw material of it is so toxic that it would, it's considered inedible, that it requires basically extensive cleanup. The equivalent kind of factory set up to what you see for crude motor oil, like crude petroleum oil. It's very similar processes that make it in the end, something that is at least edible, but it is not safe for human consumption.

It's only been grandfathered in because it was first released into the food supply over 100 years ago. And you have to realize that at that point in time, there were zero food safety standards. At that point in time, in the early 1900s, people could sell milk that was laced with borax because borax, you know, the toxin bleaching agent, would lighten it up because if all, if milk had gotten a little bit rotten or some weird like poop from the cows was in there, it would lighten up the color. So it look better. So that was allowed back in the day. And, and since these oils were invented so long ago, they just thought grandfather in. Nobody required any sort of safety testing. And so that's kind of a key difference. There's nothing else in our food supply. That is a main ingredient that you can say that about.

**SHAWN STEVENSON:** Wow. What's so crazy is that you said crude oil, right? And so when we think of a term like that, we think about the oil industry. And, it's actually very similar in how these oils are getting produced. And you share in the book, and this is really important. You know that the vegetable oil, like the seeds themselves, which can you talk a little bit about that distinction about "vegetable oil and seed oil", but you share that vegetable oil, it's not necessarily the seeds that are toxic themselves, but the process of oxidation that happens, creating these seed oils that are incredibly toxic for humans.

**DR. CATE SHANAHAN:** Yeah. So there's some of these processes are important to understand, some of this sounds like jargon, but it has actually crucially important to understand. And the key piece of jargon is the word you already said oxidation. And so the first thing you brought up was, okay, what's the difference between vegetable oil and these oils that I'm talking about? Like, how did, how does a person y'all So vegetable oil is an industry term. It's an umbrella term for any oil. That's not from an animal. It was originally created also in the late 1800s to distinguish the oils that were, that didn't come from whale oil. From these newer oils that were being manufactured, like cottonseed oil. That was really the main one, cottonseed oil, back in the day. So, there was a little bit of palm oil. There was also coconut oil back in the day, but it was the term vegetable oil is an umbrella from that you can't use to determine whether or not something is healthy because it includes healthy oils like olive and like coconut.

And it includes what I call the hateful eight, which are toxic. So I'll just real quickly list them off before I talk about how they got onto the list. So there's three C's: corn, canola, cotton seed. Three S's: soy, sunflower, safflower, and then two more, rice bran and grapeseed oil. So there's eight of them. Now if you live in, or if you live outside of North America, you don't know what canola oil is. They don't call it that there. They call it rapeseed oil. They're the same thing. And when you look on the, if you see the words vegetable oil though, on the ingredients list. That's a key that you need to read what comes next because very often it is a member of the hateful eight, but it's not totally synonymous with hate.

So how did these guys make the list? How did the hateful eight seed oils become, you know, graduate to the level of the worst thing that what Dr. Cate says is the worst thing in the food supply. Well, it has to deal with our chemistry. And they're uniquely unsuitable for processing. Yet we have to, we process them to create them. That's why we create this nasty crude oil. And they're uniquely unsuitable partly because of their fatty acid chemical composition. They're full of polyunsaturated fatty acids, which just are very volatile compared to the more traditional fat, fatty acids that people used to eat, like the saturated fatty acids and the monounsaturated fatty acids that are, that foods like butter and olive oil and coconut and the traditional healthy fats are rich in those types of fatty acids.

So the seed oils are really high in these polyunsaturates and they oxidize and that's when all heck breaks loose in the whole creation of these oils in our food supply. Because polyunsaturates plus oxygen, they react together and that breaks down the polyunsaturates and develops into toxins. That doesn't happen when you just hold, you know, have a piece of corn, you know, corn on the cob that you want to eat. There's nothing like that going on. And the same you can see about the sunflower seeds and soybeans, cotton seed oil. We don't eat. Don't worry about that one. Grapes, grapeseed oil. We also don't, you know, we don't need grape seeds, but you know, so the ones that we would eat, they're fine in the form of whole foods.

That's a really important question because a lot of people do worry. Well, gosh, if these seeds, if soy has so many polysaturates, doesn't that mean it's going to be bad for me? And the answer is no, because nature takes care of its own polyunsaturates. It's got a whole boatload of protective chemicals that we call antioxidants. And that's how it's not at all harmful when we eat soybeans in terms of oxidation and toxicity.

**SHAWN STEVENSON:** And we're going to put up an image from your book that demonstrates how these polyunsaturated bonds are getting oxidized, right? So demonstrating these double bonds. So poly means many, so it has a lot of these double bonds that are easily oxidized. And if you could, can you talk a little bit about it? Because I think when people think about an oil being healthy to cook with, you know, the term smoke point comes up. Can you talk about smoke point and why that's probably not as good a measurement tool as you might think it is.

**DR. CATE SHANAHAN:** Smoke point is absolutely worthless in terms of health. I believe that actually smoke point is just a term used by the edible oil industry to sell their oils to restaurants. Because a busy restaurant wants to be able to do everything fast. And that means high temperature and that usually means a deep fryer. So if you're setting your deep fryer at 400 or above, you do need an oil that has a high smoke point. But for everyone else in the world, we do not for every other cooking application, whatever you're doing, you do not need a high smoke point oil, period. And what, let's talk about how do you make an oil into a high smoke point oil? Because I think that'll really bring a lot of clarity. You can actually raise the smoke point of an oil or a fat by refining it. And refining it strips away the things that will make it smoke.

It strips away the free fatty acids. It strips away proteins. Refining also makes it less nutritious because it strips away many of the vitamins and all of the minerals. And, all of the hatefully oils refined, like a refined oil, is not a better quality oil.

A refined oil is an oil that the crude oil, you know, is.. Well, the hateful eight, we're talking about the hateful eight, the crude oil is inedible, remember? So you have to refine the hateful eight for them to become edible. Now, what about olive oil? Olive oil, you don't have to refine it for it to be edible. In fact, The best everyone knows the best olive oil is the virgin olive oil. What does virgin mean? It means unrefined. So if you get refined olive oil, it's a lower quality, it's cheaper. And what, how does that, it's a smoke point of refined olive oil compare to the smoke point of unrefined olive oil. Well, it's higher. So, unrefined olive oil has a small point between, you know, 350 and around 400, depending on exactly which olive oil you're talking about. It's always a range, you know, which brand.

It depends on variables that will vary with the nature of the olives, frankly, right? So it's not for anyone to say, Oh, this oil has a small point of exactly this. That is inaccurate. They're only talking about one specific brand or one specific test. So the smoke point of virgin olive oil unrefined is somewhere between 350 and 400. The smoke point of refined olive oil is higher. It's somewhere between 380 and 450. So the smoke point of what's the smoke point of canola oil? You know, canola oil is one of these oils that they sell as high smoke point oil. Well, it's lower than refined olive oil. So there's just lies and lies about this concept of smoke point.

That's so one of them is the fact that it's a set number, like we just talked about. And the other one is the idea that it's making your, you know, to use a low smoke point oil is going to make your oil somehow deteriorate while you're cooking. So I want to talk about that too. Like people worry that if they don't use a high smoke point oil, there's something going to happen chemically with their food. That's going to be, you know, make it taste bad or make it bad for you. And that is absolutely not true. Because what's going to happen is you stir your food, right? We never eat food that has been cooked to an internal temperature of 350 degrees. We very rarely do. We certainly don't do that with most, with any meats and most vegetables because they would be incinerated at that temperature.

So we don't need that temperature. We don't need to have our food get up to 350 degrees. So we don't even need that high temperature. for most of our cooking applications. So again, it's just a false idea. And what happens that we, that has nothing to do with smoke, like the reason these vegetable oils that he played are toxic has nothing to do with their smoke point. It has to do with the fact that the polyunsaturates deteriorate invisibly as they react with oxygen, and that can occur at much lower temperatures. It's nothing to do with the smoke point. So the smoke point's really, truly only relevant if you're, you know, in a busy restaurant, you want to set that deep fryer at 400 or higher and forget about it for days.

**SHAWN STEVENSON:** So the smoke point is smoke and mirrors.

**DR. CATE SHANAHAN:** I love it.

**SHAWN STEVENSON:** All right. All right. We're going to have some, some corny jokes here on this episode because I'm with my friend, Dr. K Shanahan, and you've got some Easter egg little jokes in the book, by the way. Like we shared before we got started, there's a little Ghostbusters reference in there, but you know, when I think about the smoke point, for example. I think about the experience of cooking and the smells and also how, like you mentioned, Back in the day, adding borax to milk, like, we could smell the milk and to know if it's gone, quote, gone bad, or just so many different things in nature.

Our sense of smell is, like, humans have a very highly sophisticated sense of smell, and that's really the major factor in our wide palate. Like, our ability to sense so many different flavor sensations as well is because of our very immaculate sense of smell. Now, we, when we hear something like that, we might compare ourselves to another species. Like, you know, we can't, we can't smell the, you know, the, the guy at the airport with the bag of cocaine, you know, we're not, we're not dogs. Their noses are specialized for different things. Our noses are specialized for sensing food quality. All right. Now we have a sense of smell that can really help to warn us about potential toxins in our food. But in the book you shared, unfortunately, we can't count on our sense of smell when it comes to vegetable oils. Why is that?

**DR. CATE SHANAHAN:** We can't count on our sense of smell when it comes to vegetable oils, mainly because these toxins that develop in vegetable oils are not present in nature. So we just never eat, and had a need to evolve. The ability to detect them, you know, the vast, vast majority of the toxins are not present in food that the way that we used to cook it, right? We used to cook, throw food into a fire. We did not have this high heat. We did not use these. So we were never exposed to these kinds of chemicals before, and that's long and short of it.

Why we don't really smell things like cocaine or, you know, we don't even smell granulated sugar? Our sense of smell is about biology. So our sense of smell guides us to nutritious foods. And another thing it does is warn us about hazards in the environment. But back in the day, most of the hazards in the environment were infectious diseases. So, we would catch something from somebody. So our sense of smell is attuned to be disgusted by the certain smells that indicate somebody's got a festering wound with a bacteria that could be highly dangerous or highly contagious, or that they're just infected with something, right?

Is these festering wounds leave, are some of the most vile and repulsive smells, and that is like the main sort of toxin that our noses are really good, really good and attuned for detecting. But these chemicals that didn't exist before they're new. So our noses do not know



what to do with them. They don't recognize them. It's a whole new thing. I don't know if even dogs can smell them, but, you know, that would be an interesting study to do.

**SHAWN STEVENSON:** Shout out to Scooby Doo. All right. Where are you? We got a quick break coming up. We'll be right back.

What if you could quickly have a 10 percent improvement in your cognitive function? Things like your memory, things like your reaction time. Well, a recent study published in the Journal of Physiology found some remarkable results on improving brain activity and cognitive function. This was a randomized, double blind, placebo controlled crossover study, and it found a near 10 percent improvement in cognitive function very quickly after utilizing a specific form of ketones. Now, where can you find these remarkable ketones? There's only one source of ketones that stands head and shoulders above the rest. And that's ketone IQ. Go to [ketone.com/model](https://ketone.com/model) right now to check out the science and to receive 30 percent off your first order. First order, take advantage of this opportunity and trial ketone IQ for yourself.

And if you don't notice the difference, you can get a full refund with their 60 day money back guarantee. They stand behind it. So you have nothing to lose and better mental energy to gain. Go to [ketone.com/model](https://ketone.com/model). And now back to the show.

**SHAWN STEVENSON:** All right, now Here's where this gets really interesting, but also alarming. And I cited this in one of my previous books. And also you have so many different references in this book. You're really, this is, I want people to understand this. You are the most researched and you are the leading authority on planet Earth in this subject matter. Period, end of story. You've got just over the years just like and you got all the studies out there for us on different posts, you know, just sharing all these references and going and doing this hard work to find this data because what you shared and I actually shared this with a friend of mine after reading your book. A lot of this data isn't in accessible peer review journals, you know, that the average person is just looking up, you know, but this data has been there for a very, very long time.

But one of the studies that I referenced, and I also of course referenced you and you even supported me in, in the creation of this book and Eat Smarter sharing a blurb for the book. And I appreciate that. Your endorsement means so much but I shared a study that was published in the journal inhalation toxicology. So it's a journal dedicated to inhalation potential hazards for humans and the researchers found that even smelling vegetable oil during the process of cooking can damage human DNA. Just smelling it, right? And the thing is, we're often completely unaware that this is taking place. You know, and this throws me back to my time being a teenager working at McDonald's as my first job and just all that



grease in the air. And just like we have no idea that inhaling this stuff is changing what's happening with our biology.

**DR. CATE SHANAHAN:** Yeah, there's been a few studies now that have shown that when you work, people work over a deep fryer or even people who cook a lot in their home kitchens over a frying pan when they're using these vegetable oils, they're inhaling volatile chemicals. Volatile just means that they, they, come out of the pan in the form of gas. We can't see them. And our nose cannot detect most of them. And continual exposure to those is causing lung cancer and non-smoking people. And it's such a problem that the industry is, you know, looking into ways to mitigate that. And of course the easiest way to mitigate that would be to stop using these vegetable oils, but you know, the doctors associations that are guiding what the regulatory agencies believe.

The doctor's organizations are saying that you can't use the more stable saturated fats. So it's a battle of the, you know, what is the restaurant industry, what they can do is limited by what the health authorities let them do. And because the health authorities have this belief that these oils are the healthy types of fats. That's where we're at a serious loggerheads here. We've got even people within the vegetable oil industry that I spoke to that I interviewed for this book saying that, yeah, we would love to switch out the deep fryers. We'd love to get rid of the vegetable oil, especially in the deep fryers, because it is less stable and we cannot make this oil safer than we already have. Like we just can't control all of those oxidation reactions. We cannot stop the toxins from forming. And they've said, like I spoke to one, who I say in the book, his name is Dr. Decker. He said that it's not up to the edible oil industry, what they do.

That's where I learned that the problem is not the restaurant industry. It's not the vegetable oil industry. The problem is the medical associations that have this belief that polyunsaturated fatty acids are the healthy kind and that saturated fatty acids are not. And so the, these folks who the medical industry now is controlling so much of what is available in our food supply. They're controlling what we grow, not just in this country, but globally. So the medical industry has reshaped our food supply with this one belief that polyunsaturated fats are the healthy kind. And that's a chemical term that they're talking about and they're relying on and they don't know about the truth about oxidation. And so that's why I think it's really important for people to understand just a few of these technical terms so they can go through life understanding the truth about the vast majority of what's out there in our food supply. And I think that's absolutely important for our health.

**SHAWN STEVENSON:** Yeah. And in the book, you share some wonderful visual illustrations.

And again, thanks to you, we'll be able to share some of these on the video version of this episode. But just seeing this direct correlation with, as our consumption of these vegetable oils has increased and seeing widespread increases in a variety of chronic illnesses in particular, you know, heart disease and obesity. And in the book you share that all chronic diseases share the same root cause, which is oxidative stress. And there's a direct quote from the book. You say that "vegetable oil, being both toxic and nutritionally poor, is oxidative stress in a bottle". All right, talk about this oxidative stress connection, the vegetable oil connection, and our epidemics of chronic disease.

**DR. CATE SHANAHAN:** Yeah, so oxidative stress, that's one of those words that's abstract, it sounds like jargon. What, how can you possibly understand it? Well, it's the main thing that you need to know. The only thing that you need to know, it's really quite simple. Actually, it's a form of chemical chaos. And, if you've heard of radiation and you know, radiation is bad. Well, radiation is bad because it's high energy particles and they can penetrate our bodies and they can wreak havoc within ourselves at that molecular level. Radiation is a high energy particle that just, when it hits our, the molecules in our cell, it explodes them and radiation causes oxidative stress.

Smoking causes oxidative stress. So a lot of these things that we know that are bad for us cause oxidative stress. Lack of exercise can cause oxidative stress. Lack of sleep can cause oxidative stress and oxidative stress is a state that is incompatible with normal function of a cell. So you have to. Let's think about what is a cell. A cell is like a little balloon of chemicals, and the outer layer of the cell, like a balloon, is flexible. It's called the membrane. It's made out of chemicals. And inside the cell, different from a balloon, there's so much activity going on. It's like a little city in there.

And all of it is run by chemicals. The chemicals build little roads inside the cell and then they break down the roads and those roads. What are they for? They're to transport things here and there inside the cell just like roads that we built and just like our own cities. The cell has its little center of the rules, right? Which are all running run by the nucleus where our DNA and our genes are. And that's kind of like the brains of the operation. So cells are bags of chemicals that are, must contain the right chemicals and must not contain the wrong ones because when they contain the wrong ones, one really bad thing happens.

That's oxidative stress. That is what kills us, ultimately. And in Dark Calories, I tell the story of the man that discovered that. The man that discovered how oxidative stress kills us, his name was Danham Harman, and he was a chemist, and he was just fascinated with, like, why do we die?

This was in the 1950s and nobody had any clue. No one could answer that. So he went to medical school to answer it. And after he graduated from medical school, he learned all kinds of cool stuff about the cell. So he realized that, well, gosh, death must begin inside the cell because if all of your cells are healthy, then by definition, your whole body must be healthy.

So death begins in the cell. He decided that was his first big breakthrough revelation, but he wasn't done. He wasn't done making big breakthrough revelations for the field of medicine. He was like a theoretical biologist, you know, how there's theoretical physicists like Stephen Hawking that discover how, you know, they put the thoughts on a blackboard and try to figure out how very complex things happen. And then the experimental physicists test their ideas. Well, so this Denham Harman, his next big theory was the biggest breakthrough of all. And that was what kills ourselves is free radicals. And what are free radicals come from? Oxidative stress. And what do they cause? Oxidative stress. So it's like a forest fire that shoots embers up in the air and those embers can spread the fire.

It's a very quick and very dangerous process, very destructive, just like a wildfire. So oxidative stress is like this wildfire being released inside yourselves. And that is the root cause. We now know oxidative stress is the root cause of every single disease. When Denham Harman first published his breakthrough paper about the root cause of death back in the 1950s, we didn't really, you know, actually at first everybody rejected the idea because it was a brand new idea and that's just how science is. Everybody attacks it and tries to poke holes in it, but they couldn't. So it withstood, you know, some serious attacks. And, then it was finally accepted, and then pathologists, who look for the pathologists, or the types of doctors, that are, that look for the root cause of diseases like Alzheimer's, like heart attacks.

So pathologists started looking for signs of oxidative stress once this theory got out and they found it everywhere. They found it in every disease. They found that every disease, what, no matter what. Whether it's in your brain, in your heart, in your kidneys, in your skin, in your reproductive organs, in your muscles themselves, every disease of every organ and tissue type. They found signs of oxidative stress in there. So that's why I can say with assuredness that any chemical, anything in our diet that promotes oxidative stress is terribly harmful for us. And even though medical science hasn't quite made that connection or is a long way from making that connection, that is the answer. That is the answer to all these mysterious diseases that everyone, you know. If anyone has been unlucky enough to be diagnosed with a chronic disease. It's coming from oxidative stress.

**SHAWN STEVENSON:** Yeah, and what, we should be asking, what is subjecting us to more oxidative stress and looking at the very ingredients that make up our cells. And I love how you talk about in the book that we do, we need some polyunsaturated fats, right?

Some of these PUFAs, right? We need some of these in our diet. They help to build our tissues, but the sheer amount that's in our diet now that's making up our tissues the last few decades is changing us as a species. The ingredients that make up the average human has changed. And this was highlighted in the Elgin project that you shared in the book. Can you talk a little bit about that?

**DR. CATE SHANAHAN:** Yeah. So the Elgin project, I think, you know, I don't even know how to pronounce it. It could be Elgin.

**SHAWN STEVENSON:** I knew a guy named Elgin in high school. So I went with that.

**DR. CATE SHANAHAN:** That was a project that was carried out in the 1950s where folks were trying to determine our requirement of vitamin E. They did a lot of really important basic studies like this many, many decades ago, how much vitamin E do we need in the diet? And so folks back then, they did know that the corn oil and soy oil that was at that point in time being released in the food supply was more likely to oxidize and it might impact our need for antioxidants. And vitamin E is one of the most important antioxidants because it protects, it sits in our cell membranes and it protects those fragile polyunsaturated fatty acids from oxygen attack from free radicals as it sits in our cell membranes.

So every single one of our cell membranes needs to just be loaded with vitamin E. And so this was not, so they did a study and they compared a diet that was high in corn oil with a diet that was high and that was low in corn oil and high in more traditional fats like lard and even had some margarine stuff in there.

Not particularly healthy, but it's at least those trans fats and margin are not so easily oxidized as the fatty acids and vegetable oil. So they tested their vitamin E that they follow these folks for a long time because these sorts of studies cannot be done in a few weeks. It's a major flaw with the vast majority, the research in this area. Now, back in the day, the scientists were more knowledgeable about basic stuff like oxygen, and oxygen reactions. We lost some of that knowledge and medicine, but so they studied these two different groups of people for several years and they found that after about three, four years, the given the same amount of vitamin E in the diets, right?

Their diets were, they made sure that they have the same amount of vitamin E in the diets. The people on the corn oil, their vitamin E levels suddenly started to drop. And they concluded that what happened was just all those polyunsaturated fatty acids eventually just depleted the ability of the body to keep the polyunsaturated fatty acids safe. Oxidative stress took over and depleted the vitamin E. And that's a very, very important concept. There was so

much that came out of that, that study, that series of studies actually that medical science ignores. So we don't know that in order to do a study to see what are the health effects of soy oil versus butter or lard or traditional fats.

Doctors today do not know that you have to do your study for at least three, four years. And actually the, at the conclusion of one of the studies, they found an increased rate of cancer developing starting beginning at the five year. So they said that you really need to do it for at least five years if you want to start to see some of these more like complex effects, right? Cancer is a lot more complex than your vitamin E level. But that information is lost to on medical science today. And not one single study that I've seen that debunks the idea that seed oils are unhealthy goes on long enough to do that. That's been done in the past 20 years.

**SHAWN STEVENSON:** So we're seeing this phenomenon take place. We know that antioxidants, which have been all the rage for the last, we'll say 20 years. People have really known about the benefits of antioxidants, at least superficially. But whether it's dietarily, taken in antioxidants or the ones that we produce within our own bodies, our ability, to utilize, to store, produce, to utilize antioxidants, goes down precipitously to stop oxidation when we're consuming these vegetable oils over long periods of time. So again, please hear this. Your body's ability to utilize antioxidants to reduce oxidation. We'll just call it premature aging and death. Your body's ability to utilize antioxidants goes down dramatically when consuming vegetable oils. And also, you note how the actual constitution, the actual makeup of human fat cells changed significantly over I think it was a couple of decades time span and what is making up the human fat cell. Talk a little bit about that.

**DR. CATE SHANAHAN:** Yeah, so, you know vegetable oil is not just oxidation in a bottle since vegetable oil since oxidation brings about accelerated aging. You can really look at vegetable oil is you know accelerated aging and decrepitude in a bottle. It is shortening our lifespans. It's shortening our life potential. And we're seeing that actually in the statistics, we're seeing that, you know, the generation born in the year 2000 has a significantly shorter average life expectancy than their parents by six years now. So, you know, it's, it's quite a tragedy that's unfolding before this.

And, it is happening, because of what, what you touched on there was that our body chemistry is changing, right. For such a profound thing to happen that our life expectancy has been shortened. We're actually finding that people's growth expectancy is also shortened by something like, you know, two to three inches. We are profoundly changing the chemistry of the human body. And one, so one way of vegetable oil does that is by the oxidative stress that it promotes.

But a whole other thing that it does to us. There's a whole other thing that it does. It reformulates our body fat. The fact is sits under our skin is not supposed to have so much polyunsaturated fat. But yes, it's in it. It's supposed to be maybe around like less than 5 percent of it should be polyunsaturates. And these days, adipose biopsies are showing it's as high as 30%. And in infants fed on formula that's made out of soy or corn oil, it's as high as 40%, which is through, you know, this is an astronomical change. in our body fat.

What does that mean? Like, what does it, what does that really mean? Well, the, what I've concluded, you know, this has taken me a while to figure this out, Shawn, right? I've been talking about vegetable oils actually in my, since my first book, which came out in 2009. But it took me a while to realize that what vegetable oils do by building up in our body fat this way is they, they are essentially creating by fat that we can build.

But we can't burn it off. Not easily. Not without endangering ourselves. And I think this is why we're seeing that rapid weight loss, that people who, you know, do rapid weight loss, they regain it really quickly. Because they're not, first of all, they're not improving their health, they're not improving their metabolic health. But what they're doing is they're forcing their body to burn fat that the body's cells really cannot burn without suffering damage. And this is why we find that people who yo yo dieted, meaning they've lost a whole bunch of weight. No matter how many times, you know, they've gone on a diet, they keep regaining it back.

Well, people who've done that a bunch of times are far more metabolically damaged and far less healthy than people who, you know, up the same weight, who never lost it like that. And it comes down to the damage that we do to our bodies when we force ourselves to burn off this inflammatory polyunsaturated fat that is reformulated by vegetable oil.

**SHAWN STEVENSON:** This is a revolutionary insight. You know, obviously, obesity is one of the kind of hallmark epidemics of our time right now. And, you know, being in this field for so long, you know, there's this unfortunate belief that, you know, people are, they're just too lazy. They don't, they don't want to do stuff. They don't, they don't want to work hard, whatever the case might be. And I was even taught this in different ways in my university setting. But I have not met one person who doesn't want to be healthy. You know, they might have stories about why they can't have that. But if they had a choice, they would be healthy. They would have the body and health and fitness that they want. But what's really happening is we're being poisoned. You know, we're, we're poisoning ourselves as a species and building our bodies out of these newly invented chemicals that are very similar.

Like the PUFAs, as you noted. In the book that are in these vegetable oils are very similar to that. The chemistry is identical to that which makes up our cells, in particular our cell

membranes. And so that integration and the inherent volatility of these things and if we're "burning fat" and breaking this stuff down. We're just flooding our body with all these toxins and guess what's going to happen, right? Our liver is going to revolt. Our thyroid is going to revolt. You know, our entire endocrine system, our brain is going to revolt. Our cardiovascular, our bodies..

**DR. CATE SHANAHAN:** You can just go through the list.

**SHAWN STEVENSON:** You can just go through the list. Our bodies are making adaptations to being poisoned. And one of the things that you shared in the book, and this was a result of 46 studies, and this was between 1959 and 2008, 46 studies. And this was all conducted in this meta analysis, and the researcher was looking at, and this was very hard for them to put together to find, to sift through and find this data. But biopsy results showed that the portion of polyunsaturated fatty acids in human body fat gradually increased from just 9.1 percent of all fatty acids to 21.5 percent during roughly 50 years. That was just in 50 years. As you know, they could be up to 30%. So we're looking at a situation where more than doubling of the tissues that make up our bodies, our body fat is made of this new substance. And it's, again, it's changing the the ingredients that make us up and this leads to my next question in this important topic because thankfully this is being talked about in The health space and conventional medicine in a major way right now inflammation, right?

This seemed kind of this it seemed very superficial at one point, you know, it's this ooh It's inflammation. But it's.. Because if we didn't see something that was inflamed, like superficially, like from an injury or something of that nature, you know, maybe even an infection, so seeing symptoms, we would neglect to understand that inflammation can happen chronically, systemically, in all these different parts of our bodies. And this is a root of a lot of disease, so can you talk about specifically how oxidative stress triggers inflammation.

**DR. CATE SHANAHAN:** Yeah. So oxidative stress triggers inflammation because it's generally an warning sign to the cell of trauma or infection, right? So when we, uh, when we like cut ourselves or if we there's back invasive bacteria, those injuries, those insults trigger oxidation of the polyunsaturated fatty acids in our cell membranes. Those polyunsaturated fatty acids that sit in our cell membranes.

That are supposed to be there. They're there like as, for a variety of reasons. And one of 'em is to be like nature's tripwire that, oops, there's an invader, or, oops, there's something, you know, dangerous happening here. We gotta release the inflammatory crew to make the blood clots so we don't bleed to death. To bring up the white blood cells so that they can fight the infection.



All of that, all of that reaction is designed. To stop you from bleeding to death and stop you from dying of an infection. Those are the, or even it's like the other thing in nature that people used to have to deal with was envenomations, like from snake bites and stuff like that. It hugely triggers the inflammatory response. And the oxidation of the polyunsaturates is the very tripwire. So once we've been eating vegetable oils, and we've depleted our body of the antioxidants that we need to control those reactions. So that we can shut down inflammation, then we're subject to more and more inflammation, right? We just can't shut it down easily.

So this is why, for example, maybe a real simple to understand, um, if you are more prone to inflammation. If you've been eating a lot of seed oils, you've depleted your antioxidants. If you sprain your ankle, it's going to swell up like a balloon and it's going to stay swollen a lot longer. Then if you are able to control inflammation in your body, if you can, if you have more antioxidants, you haven't been eating seed oils. Seen with, if you get a, like a flu or a cold, you're much more likely to have a very severe stuffy nose. You might get a sinus infection. There's so much inflammation in your sinuses. It might just take forever to go away. It might be weeks. You might be back in the doctor's office every few weeks, getting different antibiotics, different antibiotics.

Those things don't shut down the inflammatory response. They just help kill some of the bacteria that might be contributing to it a little bit. But the main contributing factor is oxidative stress that makes the inflammation that has gotten triggered impossible, very, very difficult to control. And so if that happens in the lungs, people get asthma attacks. And this was why I was on Bill Maher during COVID. Because if you have a more severe systemic viral infection, you can get such severe inflammation in your lungs that they fill up with fluid and you suffocate and die. And that's what was happening to people during COVID. And, you know, medical science couldn't really explain why seemingly young, healthy people were experiencing these very severe pneumonias, these near death experiences and some unfortunately did die.

And of course, obesity was a risk factor and hypertension was a risk factor. Obesity and hypertension are biomarkers for you. Your body is suffering from too much oxidative stress and you're prone to these extreme inflammatory reactions. And that is the root cause of so many conditions. that medical science doesn't have a good explanation for. We have to reach, we have to treat like repeatedly with drugs. Whether, you know, some, some of the more common are the rheumatoid problems, right? People get rheumatoid arthritis, they get lupus, those are inflammatory. Problems and we have to treat those with steroid drugs, or other drugs, that suppress the inflammatory response that suppress our immune system. Why?

Because we have so much oxidation in our body that we can't shut off the immune system when we need to. And the immune system starts going and making big mistakes. When you have something like celiac disease or thyroiditis. Your immune system is attacking your gut, or your thyroid, because your immune system is so confused by all this oxidative stress. It's like smoke and fog, you know, clouding its ability to sense what's going on in the environment that the white blood cells in your immune system start attacking your own body tissues. That's what autoimmune disease is.

**SHAWN STEVENSON:** It's time to get your metabolic oil changed. There's a specific oil that's been found to positively alter your metabolism. Researchers at Yale University published data reporting that medium chain triglycerides, MCTs, can readily cross the blood brain barrier and be utilized by our brain cells. So this translates to more energy, but also MCTs are absorbed more easily by other cells of our bodies as well. Medium chain triglycerides are smaller so they can permeate our cell membranes and don't require the use of special enzymes in order for our bodies to utilize them.

The result is more efficient energy. They're also supportive of a healthy gut environment, especially since they have the capacity to combat harmful bacteria, viruses, fungi, and parasites. MCTs are metabolic and cognitive win-win, but the quality matters. Make sure that you're sourcing your MCT oil from the best place. I've been utilizing the MCT oil from Onnit for many, many years. It's exclusively coconut based, so there's no other nefarious oils that are involved in getting these MCTs. I highly recommend you checking them out. You can add it to your teas, to your smoothies. Your hot chocolates, coffee, and some folks even utilize it for salad dressings, but make sure to utilize these MCTs for better cognitive function and metabolic health. Go to [onnit.com/model](https://onnit.com/model). That's [ONNIT.com/model](https://ONNIT.com/model) for 10 percent off their incredible MCT oil and you get 10 percent off store wide. So make sure to check them out. Go to [onnit.com/model](https://onnit.com/model) for 10 percent off. And now back to the show.

I hope everybody's seeing this madam Webb connection to vegetable oils with so many different issues. And I'm so glad that you brought this up as well, because when we hear the facts, you know, the statistics about the number one risk factor for poor outcomes from issues like COVID. Right. And we'll put a study up for everybody to see. This was an analysis that included hundreds of thousands of patients from hundreds of U. S. hospitals. Obesity was the number one risk factor for poor outcomes, for hospitalization, for death. But nobody's asking or answering the question, why? What is it about this excess body fat? Unfortunately, this gets into a place where we might swing to another perspective of this being a superficial issue. I don't know, so it's like, it's being obese, it's your fault.

It's not about that. It's about understanding our own bodies and our own biochemistry and how we might be subject to poor outcomes, not just from COVID, but from, you know, all manner of chronic diseases as well and different infectious diseases.

And it really has to do with what's making up our cells, what's making up those fat cells, creating more oxidation where we don't have a reaction, we have an overreaction, right? So we're just talking about the health and safety of our own bodies and being able to be in a state where we feel empowered and more resilient, right? And so you're answering that question for us.

**DR. CATE SHANAHAN:** You know, one thing I want to bring up while we're on the topic of body image and all this is that, the idea that if we have a normal weight that we're metabolically healthy. And no one's paying attention to what is our body fat chemically made of. And what I'm seeing and what I've discovered is that people who are normal weight are not metabolically healthy. And you know, I first learned this when I was working with the Lakers. I mean, I kind of sensed it before, but it would become so starkly obvious because the Lakers, their body composition, their body fat is like 8%, 10%.

And I was looking at their lab results and I was seeing that these guys are pre diabetic that you know, and nobody had told them this. They had severe insulin resistance. They had inflamed livers. And, one of them, that I was working with, had complications of diabetes that was undiagnosed and he didn't even have true diabetes. He only had prediabetes, but he was getting nerve damage, the kind of nerve damage that diabetics get. And fortunately, you know, it was all reversible. In fact, it reversed very quickly. Once we got the vegetable oils out of his diet and tuned up the rest of his diet. Got him on some much more nutritious food. Nutritious food that you need when you're battling these oils in your body fat are foods that will help you fight oxidation.

They're going to help your body rebuild its antioxidant enzymes and its own natural arsenal of oxidation fighting chemicals and compounds. your body naturally will make. You don't need to go out of your way to eat, you know, blueberries or goji berries or any, you know, unusual berry. It's just really a balanced diet that's going to enable your body to create the kind of antioxidants that protect you from all of these horrible, bad health outcomes. And it doesn't matter your weight. Like if your weight is high, why is that higher risk? Well, because you have. It does turn out that, you know, you've been down this vicious cycle for longer, right?

I said we could build inflammatory vegetables, make you build body fats that you can't burn. And as you're go through that cycle more and more and you have more weight on your body,

you are also at the same time depleting your antioxidants further and further. And this is why we have obesity being associated with all these other diseases. But it's not the root cause, and weight loss itself will not help you. What will help you is getting your metabolism healthy by getting your body fat healthy and Controlling oxidative stress in every cell in your body.

**SHAWN STEVENSON:** What's so incredible about this in your work with the Los Angeles Lakers, for example, is that, that has trickled its way into so many other amazing sports teams and athletes that we all marvel at. I hope everybody heard this, you know, seeing people who are literally like, these are physical specimens on the outside, but understanding that this does not protect you from like, what are you making your tissues out of? And seeing these apparently very fit people having inflamed livers and prediabetes and really helping to reorient them and to get them healthier and to perform better.

And I'm just going to share this really quickly. Your influence extended its way to, again, other teams and players. For instance, the Villanova Wildcats ditched seed oils in 2015. And just coincidentally, in 2016, they won their first championship in 30 years. Then they won again two years later. Eh, it's just a coincidence, you know? But just, you were asking the question, how can we ensure better performance, more longevity, faster recovery, better energy, and all these different things. And if you could, can you share a little bit about your experience working with the Los Angeles Lakers? Because there's an icon out there, all right?

Number eight, number 24, Kobe Bryant, who Fortunately, you know, we've had his trainer on the show, many times, good friend Tim Grover. And there was a point in his career, and this seems to coincide with when you started working with him, where Kobe was always looking for bone broth at the different hotels to make sure that he had his bone broth handy for when he traveled for games as well. Did you have anything to do with that?

**DR. CATE SHANAHAN:** Kobe didn't know what bone broth was before I started working with the Lakers and he was so excited to learn about it because what I told him was that bone broth is, it's like a natural anti-inflammatory. And it's better though than ibuprofen because ibuprofen doesn't hone right in on where the inflammation is in your joints, but the compounds in bone broth are somehow chemically attracted; it seems like to injure joints. And we know this from a study that I cite in one of my other books on radio ad. They radio labeled some of the components in bone broth and fed them to little mice with injured joints. And they saw the radiation just honing in on the injured little kneecaps that they did to the poor mice. So anyway, I think I maybe even told that story to Kobe because he was hugely intellectual.

He wanted to know the science behind stuff. And, he also just wanted to try new things and see if they worked. And. He went insane once he started learning about the bone broth, because first of all, it tasted good, right? He loved the chicken soups and the other soups that the hotels were making specifically for the Lakers, because I would call them, get on the phone ahead and speak with the head chef. Boy, are they hard to track down, let me tell you. And say, we got to have these for the players because they're going to want them after the game. And so, they always had them while I was working with them. And there was one point where Kobe sprained his ankle. It was very depressed and down about it.

And he said, this is like the second worst sprain I ever had in my life. He jailing rode, rose me. He showed a picture of his hugely swollen ankle. And the trainers were saying, Oh, he's going to have to be out maybe for, you know, like as long as he was. about as long as he was before, which was something like 10, 11 weeks. But he wasn't even out two weeks because what we did is I, I called up the hotel. I called up his personal assistant and I said, let's get Kobe two bowls of bone broth. Okay. After the game, I know it's late. You're probably maybe not even super hungry, but please. And then just keep eating that much until your ankle is better. And he got better in less than two weeks and he was playing again.

**SHAWN STEVENSON:** Amazing. That's such a great story. Oh, I love that so much. This is, you are amazing. All right. Just your influence. And again, you're putting all this information together for all of us. And this is really the definitive guide on this subject matter when it comes to these vegetable oils, integrating itself into our culture. And also what are some of the things that we can do to reverse this issue and to get ourselves healthier and stronger and more resilient. So I want to talk to you about, you know, we've said this word already, but and it's a part of our culture and health lexicon, but.. Antioxidants, can we talk about specifically how do antioxidants actually protect ourselves from oxidation? And can you share some of the insights because this is not about taking a bunch of supercharged antioxidant supplements to be able to garner these benefits. And most importantly, if we're not removing the cause of us needing more antioxidants, we're going to be missing the point.

**DR. CATE SHANAHAN:** Yeah, I mean that's the key thing. You got to stop eating the vegetable oils and I tell, I like to tell people that. If you can get in that with the one habit that's going to change your life more than anything else, it's just picking up whatever packages you have, turning around, reading the labels and scanning for the hateful eight.

If you can turn the package around, you can turn your metabolism around. And it's really true. You got to get those out of your diet. So turning back to antioxidants now, what, okay. What does an antioxidant do? Well, what it does is it chemically traps a free radical. And each type of free radical that can form in our body has a different energy level. It's just to do with spin states. And it's really now we're touching on complex chemistry that is like quantum physics.

almost. And I would not have known any of this had I not gone to Cornell and studied biochemistry. So, don't feel bad if you haven't heard of this stuff before. Yeah, so antioxidants, they catch those free radicals that are flying around.

It's like the guy in the matrix that can catch bullets. Like that's what antioxidants need to do. But unlike the guy in the matrix, you know, they can't do it all by themselves. They need a team. And so here's where we have another analogy, like the energy level of these things is so high that one antioxidant can take it down just a little bit, but then it has to pass it off like a hot potato. That's the analogy. So antioxidants work in teams like a group of people playing hot potato. It's not just one that you need. And it's also. Not what vegetables need or what blueberries need or the antioxidants that are in like any, whatever supplement that generally come from plants. Our bodies need to manufacture these different types of antioxidants.

And the most powerful ones, the most powerful antioxidants are actually not chemicals, but little biological machines made out of protein called enzymes. And the, they're called antioxidant enzymes and the antioxidant enzymes are the fastest enzymes, the fastest biological machines that we know of. That's how important they are. And we ourselves need to be stuffed with these enzymes in every nook and cranny. And no matter how many goji berries or resveratrol compounds or other like, you know, encapsulated antioxidant supplements we eat, that will not help our body stuff. It sells with these enzymes because they have to be made from protein and they have to be made from scratch in our bodies.

We have to, we can't eat enzymes either. They're just proteins. We would, to our digestive system, they would be broken down. So this is like the difference between food and us, right? We cannot eat an eyeball and have, you know, a better eyeball, right? It's just, that just doesn't happen. But somehow with antioxidant enzymes, people think that we can eat the enzymes and it'll somehow help us so that we can eat antioxidant compounds and it will somehow help us. But it doesn't do that. And so in order to fight oxidation and oxidative stress, we certainly need plenty of healthy whole food proteins. We also need plenty of vitamins and minerals and a wide variety of other compounds like choline and lecithin and all the stuff that you're going to get from a healthy whole food balanced diet.

You have to kind of make sure you get enough protein. A lot of women don't. So I teach you how to figure out all of this in the back of the book. So the last third of the book is devoted to walking you through step by step everything you need to know in order to balance out your diet and replete yourselves with those life saving antioxidant enzymes. And so it's step by step walking through it, and there's also even like a two weeks. A bunch of very simple recipes that you can use to follow, to take what I call the two week challenge. Because I think after two weeks of taking on the challenge of totally eliminating these oils from your diet, including restaurants and processed foods that you might buy. You're totally eliminating it by

becoming food self-sufficient, making your own healthy fast food, that you will feel so much better just after two weeks. You're going to want to continue it for longer.

**SHAWN STEVENSON:** I love that. I love that. And, you know, just to reiterate this point, you know, you mentioned how these antioxidants work as teams and you did share some of this breakdown in the book, which was so fascinating how vitamin E can grab that oxidative event and it passes to vitamin C. Then it passes to something like glutathione is this hot potato analogy and the potatoes getting cooler and cooler. Along the way, right? But, of course, these things have to be available to our tissues. And also, most importantly, as you just shared, it's not a direct one to one that we're getting some of these things from food.

We need to be able to provide our bodies with the elements to build certain things. To do certain things that are beyond like, hey, let me get this antioxidant supplement, right? We need to make sure that our bodies have adequate amounts of protein and you just mentioned this, you know, this is a big issue in our society overall, but in particular for women. We have to understand this, which again, I paid for a college education and I was not told this blatantly if we're talking about hormones.

We're talking about proteins. If we're talking about enzymes, we're talking about proteins, our neurotransmitters, these things are all built with proteins and fats, of course, are involved in a lot of these things too, and so if we're not providing our bodies with these raw materials to build these things in the first place, we're really missing the point. And so, you know, again, all of this is contained in dark calories. And just before I let you go, though, I know folks are just like, well, what do I start cooking with today? I understand finally that these so-called vegetable oils, which are not made of vegetables, are causing harm to my health and my family's health. I'm going to get these out of my kitchen. No more canola oil is setting foot in this place. What should I use instead, Dr. Cate?

**DR. CATE SHANAHAN:** Well, my favorite is butter. I also use olive oil, peanut oil, sesame oil, and coconut oil. Those are my favorite five. There's a bunch of others that, you know, I list in the book. They're also good. Basically anything that's not refined. Oh, that's, it's going to be good, but it's hard. The thing is, it's hard to know if something's been refined. The hateful eight always happen when you see them on a label, so yeah. So, you know, just for an example of how you can really double up on your benefits here, if you steam, say broccoli or any vegetable, whatever your favorite vegetable here, it's maybe steam your favorite vegetable.

And then you melt plenty of butter and you throw some fresh cut garlic in that butter as it's melting. It's going to become nice and aromatic. You pour that garlic butter over steamed



broccoli or whatever steamed vegetables you have, sprinkle on some salt. It's good. You know, I mean, if you're a fan of garlic bread, this is like, it kind of hits that spot, except it's not full of empty starchy calories. It's full of antioxidants and vitamins.

**SHAWN STEVENSON:** Ooh, I love this. I didn't know he's going to get seductive with the food imagery. All right. Now also again, what you just mentioned with these different cooking fats. These have been funny enough utilized for centuries, if not thousands of years, all of them. And we're just really returning to what humans have found. And here's the key, it takes minimal processing to get these oils. When you mentioned olive oil earlier, you know, and I'm just like, again, we don't realize olives are a fruit, right? So it's usually, you know, cold pressed, and it's just a very simple process versus the process that takes place when creating canola oil.

And we'll put up some B roll, as a matter of fact, of canola oil getting made just so you could see this horror movie. All right, get a glimpse at it. It's crazy, you know, that much refining and the deodorizers and, you know, the, the, the cleaning agents and all this stuff added to make this "suitable for consumption" and the damage that it's doing. And as you shared so, so bluntly in the book, it's not necessarily again about these polyunsaturated fats or these seeds and of themselves. It's this oxidation and the process of creating these oils creates inflammation in a bottle creates oxidative stress in a bottle. And dark calories is highlighting that for all of us. Can you let everybody know where they can pick up a copy of dark calories?

**DR. CATE SHANAHAN:** Yeah, you can pick it up properly just at your favorite bookseller, whether it's Amazon or Barnes and Noble or Google reads. They sell books. But why don't please come to my website dot com. D. R. C. A. T. E .com. There is a big banner up there that tells you all the different places you can buy Dark Calories Plus tells you a bit more about it while you're there, scroll down to the bottom and sign up for my free newsletter. It comes out maybe once a month. After the initial like, get to know your series of emails so I don't flood your inbox. It's just so that you can stay up to date if I do any new cool projects.

**SHAWN STEVENSON:** Awesome. And truly your site has some of the very best scientific data in, again, you just lay it out for us. It's a great resource for myself as well as a scientist just to be able to like, what, what does Dr. Cate have to say on this?

And so again, you're one of my favorite people in this space and I'm so happy to talk to you and, I'm very proud to say that, you know, a book like this exists and I can just direct friends, and colleagues, and family members to a resource like this to get educated on the subject matter because unfortunately, there is a recent campaign to reframe things to say hey these these are innocuous oils. These don't really cause harm like that. That's not really true. No,

you have the data And we have to make a choice right now. And we're voting with our dollars and investing in our health with the oils that we're using in the preparation of our foods. And we can make a huge difference in our health moving forward. But as you shared too, this takes time. This takes time, but the changes start to happen immediately as soon as we make the switch. So again, I appreciate you so much for coming to hang out with us and sharing your brilliance.

**DR. CATE SHANAHAN:** Well, thank you so much for the opportunity, Shawn. I just, I really enjoyed this conversation. It was a lot of fun.

**SHAWN STEVENSON:** Awesome. Dr. Cate Shanahan, everybody. Thank you so much for tuning into this episode today. I hope that you got a lot of value out of this. Dr. Cate Shanahan truly, truly is a pioneer in the field. In the field of health and wellness, so many different health experts are utilizing research that they learned from her She's helped to integrate many of the things that are not popular into popular culture will really reintegrate them Things like bone broth things like fermented foods things that have fallen out of favor in popular culture She's really helped to re energize these things and most importantly the education around these newly invented quote vegetable oils That are far from being anything vegetable related and she's really highlighting the insane amount of health washing where titles are given to products like vegetable oil, right?

Slapping the term vegetable, which is something that is framed as healthy in our society and largely is. But slapping it onto these ultra processed toxic oils creates this identity that this is healthy. And I know this intimately how it affects us because I was seduced by that marketing. My family was seduced by that marketing.

And once we become aware, just being able to take a peek behind the curtain and understand what's happening behind the scenes. Where this stuff is really coming from and just how integrated is now in our food supply is insane. About 30 of our calories according to our data is coming from these newly invented oils today. That's crazy pants All right to put it in simple terms. It's just straight up insane Now we can change this and we can start to make our tissues Our energy right the process of converting food into energy cleaner fuels. We could change this by upgrading our family's oils. So definitely check out Dark Calories and make some small action today to start to swap out some of these low quality oils for things that are truly time tested, science backed and sustainable.

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episode to them. Or of course, you could share this out with your community on social media. Take a screenshot of the episode.

Of course, you could tag me. I'm @SeanModel on Instagram and tag Dr. Cate as well. Share the love. All right. Share this information. We're creating a movement with this kind of education. We've got some epic masterclasses and world class guests coming your way very, very soon. So make sure to stay tuned, 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 the model health show. com. That's where you can find all of the show notes. You can find transcriptions, videos for each episode. And if you've 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 and take care. I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.