THE MODEL HEALTH SHOW

EPISODE 663

The Twisted Landscape of Nutrition, Pharmaceutical Drugs, & The Psychology of Eating

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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 to me today. On this episode, we're going to be covering a lot of ground. We're going to talk about metabolic health, we're going to talk about nutrition, we're going to talk about the influence of the pharmaceutical industry in our healthcare system today. We're going to be talking about the psychology of eating and how our thoughts impact the metabolic effect of foods, and so much more.

This episode is very, very special. It is a conversation that I had with one of the most successful, insightful people that I've ever met. And he actually interviewed me and asked me about all of these topics for his top-rated show, Impact Theory. And this episode went viral on that platform, several of the social media pieces have millions upon millions of views, but I wanted to package this up and provide this here for you today as well. I don't want you to miss a single ounce of this incredible information.

And it's packed with a lot of insight, a lot of science but also a lot of heart. And this is information that every single person deserves to know. We have the capacity to gain this information, to embody it and to share it with the people that we care about. So, getting really excited about this.

Now, if you've ever wondered what do I do for my cognitive performance, what am I doing to really stay sharp? Well, obviously, it's a foundation of real food nutrition, healthy lifestyle practices, good sleep, healthy relationships, all the things we know about. However, there are certain things specifically that add that extra 1%, 5% of cognitive performance that go far beyond these new synthetic nootropics, this category of nutrition has been growing so much in the last few years.

What I'm utilizing has history dating back thousands of years, and now we have modern, peer-reviewed data to affirm its effectiveness. And what I'm talking about is featured first and foremost in journals like Advanced Biomedical Research, and they found that royal jelly, this phenomenal product from bees, has the potential to improve spatial learning, improve our attention span and to improve our memory. In addition, the researchers noted that it has anti-microbial, anti-tumor and anti-inflammatory capacities.

Royal jelly has also been found to facilitate the differentiation of all of our types of brain cells and to top it off, researchers in Japan recently discovered that royal jelly has the power to stimulate neurogenesis in the memory center of the brain, in the hippocampus. This is why it

does what it does. And again, this has been utilized for thousands of years, but now we have modern science affirming its efficacy.

Now for me, number one, the quality in sourcing. When you hear about stuff like this, you got to make sure that you are being mindful of the quality in sourcing, to make sure that things are done in an efficacious way, not just for ourselves, but also for our environment. And there is a huge problem going on in our society with the populations of bees steadily dropping.

And this is serious business because bees have so much to do with our entire food system, and losing our bees, we're going to potentially lose our life as a species and we're going to have to find some huge pivots because they're a primary pollinator of our foods. And so, investing in regenerative beekeeping, that's not just protecting our bees, but expanding populations of bees, matters so much in the choices that we're making.

This is why I get my royal jelly nootropic from Beekeeper's Naturals. Go to beekeepersnaturals.com/model, get 20% off their incredible nootropic called Brain Fuel. Now, not only does this have the basis of organic royal jelly, but in this, by the way, it's beyond organic, because they're doing third-party testing for things that no other bee company is doing. And they're actually doing third party testing for all of these nefarious things that are common in bee products today. We're talking about pesticide residues, we're talking about heavy metals, we're talking about toxic molds.

They're going above and beyond to make sure that you're getting the very best. So, in addition to the foundation of the royal jelly included in the Brain Fuel, in their nootropic, they also have Bacopa, which is one of my favorite things. I've been utilizing Bacopa for many years, and to find that they added this to the formulation was so incredible.

A randomized, double-blind, placebo-controlled human trial published in 2016 found that after just six weeks of use, Bacopa significantly improves speed of visual information processing, learning rate, memory consolidation and even decreases anxiety in study participants. Truly remarkable. This is the combination that you're getting with Brain Fuel. Head over there, check 'em out. It's beekeepersnaturals.com/model for 20% off store wide. Head over there, check 'em out. And on that note, let's get to the Apple Podcast review of the week.

ITUNES REVIEW: Another five-star review titled “Big up!” By theenoah, "Big thanks and props to Shawn for the important work he's doing with this show. For anyone interested in discussions of health that are truly holistic, that transcend the tired conflations of body aesthetics and health, that aim beyond mere calorie counting, you'll find here intellectually rigorous yet accessible conversations, hosted by a charismatic brother with a clear head and a good heart. Keep up the good work."

SHAWN STEVENSON: Thank you and will do, I appreciate this so much. Thank you for leaving me that review over on Apple Podcast. And if you have yet to do so, please pop over to Apple Podcast and leave a review for The Model Health Show. And on that note, let's get to our topic of the day.

On this episode, we're diving into the topics of epigenetics, of metabolic health, of the connection between metabolism and COVID-19. We're talking about the impact and influence of the pharmaceutical industry in health and wellness today, and so much more. This is a conversation on one of the top shows in the country, Impact Theory, with my good friend Tom Bilyeu. And he is the co-founder of the billion-dollar Quest Nutrition brand.

And now he's just dedicated to creating empowering content, empowering information, and really creating a platform dedicated to inspiration and utilizing the technologies that we have today with audio and with video, and even with virtual reality, by providing empowering content through those mediums.

And in this episode, he's turning the tables on me. He's going to be asking me about all of these incredible topics and we're going to dig in, so be prepared. Let's dive into this powerful episode, and most importantly, as always, let's do our best to employ and utilize the information that we learn.

TOM BILYEU: Shawn Stevenson, welcome back to the show. I am very excited to talk to you and at the end, I want everybody to say tuned, because I'm going to give you the best Shawn Stevenson quote, which sums up one of the most important principles you'll ever encounter in your life. But first I want to ask you, for people that struggle with weight loss and/or chronic inflammation, what is something that they can add to their diet that would help? Or is this simply a game of stripping away?

SHAWN STEVENSON: Oh, it's such a great question. Even if we look at something like obesity, it's always important to look at what is the underlying foundation of this outward appearance or this outward manifestation of a thing. And so, this term "inflammation" has been gaining traction, it's been around for a long time.

In the Latin and Greek roots, it's essentially "to set ablaze", to set something on fire. And inflammation can get drug through the mud as this bad thing, and we want to stop all inflammation, but inflammation is critical for all functions of life. Without inflammation, we wouldn't heal from an infection, we wouldn't heal from wounds, we wouldn't heal from a workout.

It's a critical part of our lives and of our livelihood. However, when we dip into this place of chronic inflammation, acute inflammation is one thing, but it's kind of like a low-grade fever. And one of the things that we know today is that when our fat cells are overly full, they start to send out sort of this false distress signal, pulling in immune factors as if you're infected.

And so, researchers at the Albert Einstein College of Medicine found out how this is connected. And essentially one of the biggest issues with inflammation is hypothalamic inflammation in the brain. Okay, so we've got inflammation in the body from the fat cells' distress signal, and they found that this inflammation in the brain was creating more body fat and creating higher levels of metabolic dysfunction. And that metabolic dysfunction and higher levels of body fat is creating more inflammation in the brain.

So, what do we do to help to bring a resolution here, because what happens is a vicious circle, obviously. If neural inflammation is creating more body fat and body fat's creating more neuro inflammation, we're getting trapped in this vicious circle and most people are stuck in that. And their favorite Instagram account or even their physician isn't telling them, "We need to address this inflammation specifically in your brain to help to heal your body."

So, researchers at Auburn University found that there was this particular food... And I don't have a dog in the fight, I didn't care this much about the food...

TOM BILYEU: Not like you're backed by...

SHAWN STEVENSON: Yeah. And I was just blown away that this actually had this action in the body. What they found was that oleocanthal-rich, extra-virgin olive oil, is able to help to reduce neural inflammation, specifically helping to heal the blood-brain barrier, which has a tendency to get broken down by our abnormal diet, allowing more of these kind of toxicants into the brain and creating more inflammation.

TOM BILYEU: Do they know the method of action?

SHAWN STEVENSON: No, we know so little still. We know a ton in nutrition right now, we probably know maybe 1% of all that there is to know right now. It's still so much more for us to discover. And so, when folks are reaching out to learn from folks, you got to keep in mind that even your favorite expert knows so little.

And we can tend to put all of our eggs in one basket, in a sense, with a certain diet framework, a belief about diet. We might find out later on that olive oil has some opposite effect, but this is what we know right now. And I always like to point people to leaning into tradition.

Humans have been utilizing olive oil for thousands, thousands upon thousands of years. And it's very simply made. Because there's also this movement today, which I'm grateful for, towards addressing our consumption of ultra-processed foods. Right now, the average American, the average American's diet is 60% ultra-processed foods right now.

TOM BILYEU: Whoa.

SHAWN STEVENSON: Alright?

TOM BILYEU: I'm not surprised at all, but still hearing you say that is startling.

SHAWN STEVENSON: It's crazy, it's crazy. But we have to be clear.

TOM BILYEU: I grew up on ultra-processed food.

SHAWN STEVENSON: I know you did. Me too.

TOM BILYEU: Brother, ultra-processed. So, I look at my family, morbidly obese, have been my entire life, but many of them have managed to get into their 70s, and at the risk of completely derailing where we were headed, I don't think people of our generation are going to be able to look the same as they looked and live as long as they lived.

Because my mom didn't get into ultra-processed, let's say, until she was in her 20s. Whereas kids now, in the womb, brother, they're into ultra-processed food. And I think that that 20, 30-year span is going to be devastating to people of our generation. Even I am so freaked out by the fact that I know my mom was eating terribly when she was pregnant with me. She smoked also while she was pregnant, that did not help.

And then my whole life, I used to eat fried turkey nuggets and French fries, deep-fried turkey nuggets and French fries almost every night. You can't do that. You can't do that.

SHAWN STEVENSON: Listen, this is getting into the fields of nutrigenomics and nutrigenetics. We have entire fields of science looking at how each and every bite of food that we eat impacts our genetic expression. And also, how our unique genetic makeup leans towards certain nutrients, certain foods that work better for us versus somebody else, right?

Now, you're speaking to this really important thing, which is, what if we're doing this earlier, because there's so much of the body being made, foundational things like your brain, being made out of these compounds. And so... But also mentioning your family is very similar to mine, very similar.

This also speaks to something that we look over, which is the resilience of the human body. You just said it. We can be in a state where we're probably experiencing four different chronic diseases and carrying an insane amount of excess body fat as well, and still be able to keep trucking along. The body is always trying to sort things out and to fix things.

If you think about something like Type 2 diabetes, which here in the United States, somewhere in the ballpark of about 130 million Americans have Type 2 diabetes or pre-diabetes right now, alright? A huge portion of our population. Now, if you look at this condition, so we've got dysfunction happening with our blood sugar, essentially.

We've got these beta cells in our pancreas that are making insulin, and insulin is getting made and released in response to glucose entering our blood stream from the food that we're eating primarily. Today we have the ability to shuttle insane amounts of food into our blood stream at one time, that we never evolved with.

And so, insulin is going to be hyperactive and at some point, it's kind of like... It's kind of like a spam email scenario happening where you keep getting this insulin message over and over and over again, until the inbox, the cell is just like, "I'm going to block you, I'm not going to whitelist this message," and it's going to down-regulate its interaction with insulin.

So now we've got all of this glucose running wild in the bloodstream, which... It's not exactly like this, but a good analogy is kind of like little shards of glass, it can just tear stuff up. This is why we tend have, when we're in this state of insulin resistance and diabetes, capillary issues, losing vision, losing limbs and things that are further away from the core. So, where things are starting to get a little bit more constricted, start to get torn up.

So, with that said, even though we're in this state, the body is making an adaptation to that abnormal glucose to keep you alive. What insulin resistance and diabetes is it is the body adapting to less than ideal conditions or circumstances...

TOM BILYEU: That's a very kind way to put it.

SHAWN STEVENSON: To keep this person alive when exposed to all of this blood sugar that could kill you. Alright? So, there's this intelligence and grace that the body has to keep operating and trucking us along. Because what people tend to do on the surface is like, "Well, we're still living longer." No. Right now this generation is the first generation, and anybody can look this up, that's not going to outlive our predecessors. That process is reversed.

But also with our innovation, you would think our lifespan would continue regardless. We're not living longer, we're dying longer. We're just extending the suffering. With this ultra-processed food awareness, which I'm grateful for, we can get into a little bit of teetering back and forth because something like olive oil is a processed food.

TOM BILYEU: How much can I heat it though?

SHAWN STEVENSON: I'll answer that in one second. With olive oil, we've got a very simple processing. We take olives, we crush the olives with low temperature. That's how it's traditionally done. That is processing, but it's minor processing versus you taking a couple of ears of corn and turning it into Lucky Charms. There's no connection whatsoever to this thing and it's so riddled with artificial colors and flavors and the like. How high can you heat olive oil?

To answer that question, fantastic question. Traditionally, we're not really cooking with it as much, by the way. Salad dressings, putting it on bread, these are some of the ways it would be used traditionally. If we are cooking with it, we got to be mindful. The reason it's in dark glass is that it's heat and light sensitive. It doesn't change just because you pour it into a pan. So just keep that in mind. The common moniker is...

TOM BILYEU: What's happening to it when it's getting heated up though? Is it turning rancid?

SHAWN STEVENSON: Oxidation.

TOM BILYEU: Okay.

SHAWN STEVENSON: Oh, and also yeah, it can become rancid as well by not being packaged correctly. But olive oil is kind of... If you think about wines, it could stay. There was some research that came out not too long ago that they were finding old bottles of olive oil, like 100 years old or whatever, and cracking into it, and...

TOM BILYEU: And it was fine?

SHAWN STEVENSON: I wouldn't say it was fine personally, but it was edible, and they didn't die. You know what I'm saying? [chuckle]

TOM BILYEU: Okay, so I've heard a lot about olive oil, the benefits, all of that. I'm excited that you can actually layer that on and still get some added benefit. The epithelial lining in the blood-brain barrier, which a lot of people may not even realize so they know they have one in their gut.

I have only heard people talking about the blood-brain barrier as a similar epithelial lining recently, so I imagine a lot of people are unaware of that. If you're getting the breakdown in the gut, you're almost certainly getting the breakdown in the brain. So being able to add something like olive oil and get the effect is tremendous, but I eat a lot of olive oil.

But I worry, I always heat it up, always. And I've never been able to get a great answer, I'm assuming it's because there's not a ton of research that says, "Okay, you can heat it to this point, but not above." But like for instance, I don't use butter in my pan or anything like that, I eat eggs most days, but I'll put olive oil as the lubricant on the pan.

But I'm scrambling eggs. It's hot. Am I doing myself any favors? Or would I be better off with something like ghee, which is clarified butter for those who don't know, what's the right move there?

SHAWN STEVENSON: I love that you ask questions like this because this is the level that you're on and also a lot of the audience is as well, which is like, "We want to be our very best." Most people though, Tom, are like... They're not thinking about their eggs in olive oil. You know what I mean? They're eating Dunkin' Donuts and mini muffins. So now we're getting into the minutia, which is you're still so far superior, so far better off by having those eggs scrambled up in some olive oil than you would the like.

Now, what's the good, better, best practice? Even with the eggs, we've got to be mindful of damaging the yolk through high heat, there's some omega-3 fatty acids there, they're very heat-sensitive. And so low to moderate heating with the olive oil, fantastic. And also, even eggs, if you talk to a chef, somebody who's really versed in making eggs and omelets, they're cooking their eggs like longer.

But I know myself, probably you too, I'm just trying to whip those bad boys up and get busy. But the ideal practice is to be mindful that these compounds don't want to get damaged by heat. But we're still so far better off doing that than eating some Frosted Mini Wheats.

TOM BILYEU: Right, yeah. Frosted Mini Wheats are so good though, Shawn.

SHAWN STEVENSON: That's why I brought it up, it jumped right up on my spirit, Tom. [chuckle]

TOM BILYEU: No man, that's interesting. Okay, so that's a good angle on inflammation. What about fat loss? Are there implications with olive oil, are there other things we can add? We'll get to subtracting in a minute, but if there are other things that we can add, is there something on the fat loss side that...

SHAWN STEVENSON: Yeah. In my book, Eat Smarter, it was a randomized trial, they put olive oil up against soybean oil supplementation. And also, there's a study that when MCT oil versus long-chain fatty acid oil coming from things like vegetable soybean oil, people had greater levels of weight loss and fat loss, and also improvements in their satiety hormones by including monounsaturated fats from olive oil and also medium-chain fatty acids, like from coconut and things like that. But also of course, MCT oil is popping right now.

TOM BILYEU: Now, if you had to guess, so knowing what you know, is that because they reduce their intake of the soybean oil? Or is it like if they kept eating the soybean oil and added olive oil, would they get the effect? Or is it that they've replaced the soybean oil with olive oil?

SHAWN STEVENSON: So, they gave either group soybean supplement, soybean oil supplement or the olive oil or, another trial, MCT oil.

TOM BILYEU: As a supplement?

SHAWN STEVENSON: They're taking an oil. Exactly.

TOM BILYEU: Okay, so they're not replacing anything, this is just supplementation.

SHAWN STEVENSON: Right. Their diet's the same. Just adding that piece in improved fat loss. That's why I thought it was so remarkable.

TOM BILYEU: Do they know the mechanism of action, or do you have a guess?

SHAWN STEVENSON: Yeah. And this goes back to... I mentioned this a little bit early about what you're making your brain out of. But the same thing happens with the mitochondria and what kind of efficiency we are feeding our mitochondria and are we gumming up the system. So, a good example and we actually talked about this the last time we talked. This was published in the journal, Food and Nutrition Research.

And they were looking at the metabolic impact of a meal of whole foods versus processed foods. And so, they had the test subjects to consume one of two sandwiches. So in one part of the study, they're eating a sandwich that is "processed foods" which is, it was white bread and cheese product. And so, we mentioned this last time. That's Kraft Singles. They can't legally call it Kraft cheese it's Kraft Singles because there's not enough cheese in the cheese.

And then that's the processed food sandwich versus a meal of whole food, which was multi-grain bread or whole grain bread and cheddar cheese. Again, we get into the debate, and this

is why I started talking about this earlier, what's processed and not. This is minimally processed. Cheddar cheese is like four things, Kraft Singles is like 15 things all right. Very different products. And also, how long have humans had each of these.

And so, the two sandwiches of the same amount of calories, the same amount of proteins, fats and carbohydrates. On paper, they should have the same metabolic impact. But after consuming the two different sandwiches when the people who had the processed food sandwich, they had a 50% reduction in calorie expenditure, calorie burn after eating that sandwich versus when they had the whole food meal sandwich.

And what happens is it's kind of creating this metabolic clog. It's gumming up the system. And again, your body's intelligence is just like, "Oh, I don't know exactly what to do with this. Let's tuck this away here. Let's... " It's trying to protect us some kind of way and it's slowing down that expenditure of this less-than-ideal substance. Just trying to figure it out. It's kind of creating this confusion.

Now, with that said, this boils down to what are you making your tissues out of. And this is one of the most important take-aways for anybody. When you're eating food, you're not just eating food, you're choosing what you're making your cells out of. Every cell in your body from your heart to your brain, is made from food.

We have this cognitive bias in our reality, we think we're just here. Right? You are literally made, as I'm looking at you, I'm seeing the food that you've eaten.

TOM BILYEU: Ain't that crazy?

SHAWN STEVENSON: Yes. It is mind-blowing.

TOM BILYEU: Okay. So, all of my cells are turning over. I am literally what I eat but do you pay attention to the... There are some very smart people that are like, "A calorie is a calorie, bruh." And so, this is one of those things... You're very eloquent on this point. I try not to be arrogant about this. I try to look for, as you say, "What am I wrong about?" So I do not value myself for being right. I promise you, like, none of this is coming from a place of like, "I know something you don't know."

But I have a allergic reaction to people who are like, "A calorie is a calorie, and there's no difference." But there are really smart people who say that. And I don't... It may just be that I'm so ignorant, I can't see past. But it seems obvious to me that if I'm eating a polyunsaturated fatty acid, or polyunsaturated fats gets stored as polyunsaturated fatty acids, that that is going

to be materially different than another kind of fat, even if they're stored within the same fat cell.

But I don't know the ways in which they are different, so can you... Are you familiar enough with their stance to steel-man that argument, and then can you tell me what they're missing? 'Cause if you can, I would love that.

SHAWN STEVENSON: Of course, absolutely. Because when I came into this... I went to a conventional university, and my Nutritional Science class, one of those big auditorium classes, the first day of class, the teacher said that if you want to manage your weight, you just need to manage calories. And then the calories dogma began.

TOM BILYEU: Which is true by the way, to an extent. If I make you hungry enough, if I deny you of calories enough, you will lose basically all of your tissues, but you will get skinny. So we know that's true, but where does that begin to break down?

SHAWN STEVENSON: Yes. So today, again, it has its place in science and what we tend to do, of course, is we get bought into an ideal, we might see results with ourselves and even with people that we're working with, but what tends to happen is we'll ignore the people who aren't getting the result with our thing.

It happens with the very best researchers, scientists, physicians. We mean well, but we tend to think that our way is the way, like the Mandalorian, and there is so many other versions of that. And so today what we've uncovered is that there are epicaloric controllers. There are multiple controllers that control what calories do in your body versus the next person.

So, one of them I just mentioned is the quality of the food itself is going to react differently in your body. So, you might be doing a point system or managing your calories but you're eating processed food and creating a barrier in your body's ability to expend the calories that it possibly could if you were eating real food.

We can't let that go. We can't just be like, "That doesn't exist." But we get that tunnel vision when we're just like calories in, calories out. That's it. End of story. And I'm so glad you set this up by saying these are very, very smart people. But here's the thing.

If we take a very smart person and we teach them the wrong thing, they become world-class at teaching the wrong thing. And this happens a lot in medicine today. But of course, there are great innovations, there are great things that happen, but we have to look at the results. Is it working for the majority of people? And the data clearly shows that most people who are doing a standard calorie restriction, they do lose some weight then something happens.

Something happens, which that something is, their metabolic rate adapts their body's expenditure. Because when you cut calories, it isn't just magic fat loss time, it's going to change the way that your thyroid is working, it's going to change the way that your adrenals are working, it's going to change the way that your brain is working.

Everything is going to get affected, and your body that's hard wired for survival doesn't give us a about you trying to lose weight. It's going to adapt. But then it's just like, "You just need to diet harder; you need to cut more calories. Have you tried to cut caloric deficit?"

I've seen it so much to the degree that people end up... They'll come into my office when I was doing clinical work, they're on 900 calories a day, and the scale is not budging. And they're broken. They feel broken, and just in tears like, "I'm trying so hard. Why won't this work for me?" And oftentimes, they had this story work before. They did this thing before, and it worked.

But this is us trying to say, you know what, this human body that has evolved over millions of years, we can just operate it like a calculator. It isn't this ultra-complex, highly sophisticated. You've had on Michio Kaku, I believe, right?

TOM BILYEU: Yeah.

SHAWN STEVENSON: Michio Kaku said the human brain is the most complicated organ in the known universe, the most complicated object in the known universe, and we're just like, "I could trick you, silly brain. I could trick you with a little caloric manipulation." Your hypothalamus is the master gland in your brain, and it's an integration point for your endocrine system and your nervous system.

Your nervous system is kind of responding to the environment and providing feedback, internal and external, and we know about the neurotransmitters that are associated with the nervous system. So, we've got stuff that makes us feel good, stuff that makes us feel terrible, stuff that makes us feel pain, all the like.

The endocrine system is your hormones. These are essentially chemical messengers that are sending messages, these little metabolic DMs from cell to cell, to keep every cell in your body on the same page. You want that community with good communication. Communication breaks down. When people say, "My hormones are out of whack," they don't really know what that means, but the cellular communication is run amok and so the things that you want to happen are not happening.

All of that's getting married in this powerful master glad. Not to mention it's responsible for controlling your body temperature, your hunger, your thirst. So many other things. And when you suddenly go into this caloric restriction, your hypothalamus, its job is to help your body to adjust to said restriction. Alright?

So that part of the equation is known, and it has to be honored, and the way that people adjust or their body adapts is going to change for person to person. We can't just berate people like, "You just need to cut your calories." And the rated at which it happens to different people, that's another glaring thing. Like is everybody going to be... Is this going to be like an assembly line thing? No, everybody's going to be different because we're all different.

And so, another one of these epicaloric controllers, I took a moment to talk about the hypothalamus, for example. And this is one of the great things, this about education and empowerment. Because even folks who are really, they've anchored into calories in, calories out, they still want to help people. And that's wonderful.

We're not saying this is wrong, it's this, and you have to understand and respect the complexity of the human body, and pay attention to your audience who's saying, "I did what you're saying and it didn't work for me," because we tend to want to block that out. With that said, researchers at Yale, its pretty smart people, alright? Researchers at Yale found that everybody...

Well, not everybody. A lot of people today have heard of the vagus nerve. Connecting the brain and the gut. This gut-brain connection. And the gut itself is often called the second brain or the enteric nervous system. There's a tremendous amount of neuro transmit. There's so much action happening in the gut. It's an intelligent force itself.

So, what the researchers at Yale University found was that the human brain is basically keeping tabs on, it's kind of a governing entity with the gut. And based on your brain and your gut's assessment of your caloric needs and your nutrient needs, your brain can tell your gut to decrease or increase the assimilation of calories from your food.

TOM BILYEU: That's so crazy.

SHAWN STEVENSON: But it makes sense because your body has this intelligence. Now the question is, if I'm riddled with, if I've already got all of this caloric energy stored on my body, why would my body still allow me to assimilate so much of this caloric energy? And this gets into the breakdown of that gut, the breakdown of that intelligence between the brain and the gut. This gets into food scientists being able to manipulate these systems and things to go haywire.

But with that said, if we are eating real whole foods and eating foods that really resonate well with our body, it's very difficult in the first place to overeat those foods. Like this is getting into more of the practicality, not just using, looking at the human body as a glorified calculator, but that it has its intelligence.

Because I know you've done this, try to do this as well. I know a lot of guys do. We might try to put on a little size. And we're eating a caloric abundance. We're eating more than enough. It's just so difficult to put on that extra size, that extra weight. You got the dirty bulk makes it easier.

TOM BILYEU: Yeah, I was going to say, I can put on fat nice and easy.

SHAWN STEVENSON: Okay. Yeah.

TOM BILYEU: Muscle is a whole different question.

SHAWN STEVENSON: The dirty bulk is easier, but if you're doing that with real food, sweet potatoes and high protein foods, fish and things like that.

TOM BILYEU: It's miserable.

SHAWN STEVENSON: It is. Yes. Not only is it difficult...

TOM BILYEU: I hated eating so much.

SHAWN STEVENSON: It can be miserable. And I was fascinated by this topic, so I looked into it a little bit more, and I believe the researchers are based in Kansas City, but what they found was essentially that our tongue, even the human tongue is ridiculously intelligent. But I was wondering, why do we suddenly not have a taste for something?

We're eating a food and then it's just like, "Ugh." Something is good at first bite, few bites in, you're just like it's not as attractive, but it slowly goes away. We're, our taste buds are literally changed, the proteins that we're producing as well. Change as we're eating.

TOM BILYEU: In your mouth?

SHAWN STEVENSON: In our mouth. Absolutely. And over time, the overall pallet. 'Cause you've heard this as well and probably experienced this, our cravings and our desire for certain foods changes. Like we could just lose our desire to do what we were doing, which I was getting fast

food at 300 plus days a year. If I had a buck, I'm pulling up in that drive-through. The drive-through diet.

TOM BILYEU: Yeah. Oh, I did it for years.

SHAWN STEVENSON: But now it's just like I have no attraction whatsoever to that food. And if I eat it, it tastes so fake, so fake. There's this intelligence that's been nurtured. But if I kept eating that stuff, guess what's going to happen? It's going to switch over and I'm going to crave these artificial things, especially these chemicals, artificial colors, flavors. You want to talk a little bit about artificial flavors?

TOM BILYEU: Tell me.

SHAWN STEVENSON: So, this was a huge breakthrough in food science, when researchers did the thing that kind of like what we're talking about today, everything breaks down into chemistry. So, a certain flavor is just a compilation of certain chemicals. It's a chemical complex. And so, using a gas chromatograph, they could identify the flavors, the chemicals that make the flavor of strawberry per se. And now we could take that strawberry flavor and add it to other BLEEP.

So now we got strawberry flavored ice cream, no strawberries necessary, strawberry flavored soda and candy, all the things. And it might not taste exactly like a strawberry, but it's just enough to muddy up the metabolic waters and confuse your system. And so...

TOM BILYEU: Because you're saying that my body will react to those cues in some way, that even though it isn't a strawberry, it's tripping enough of those signals that my body anticipates a strawberry?

SHAWN STEVENSON: This is where some of the magic happens right here, because we evolved attaching certain nutrients and caloric density to certain flavors. Again, this data is not just coming from us, it's coming from our ancestors. And so when we're getting a certain flavor note without that, even sweet, if we get a sweet sensation, but it's not coming along with the expected nutrients and/or caloric density, we think we could just trick our body.

But now a recent study just came out, you might have seen it getting passed around, looking at changes that happened with the microbiome in association with artificial sweeteners. Not to say again that they can't be used to great success for some people, but you can't think that the body and the brain is stupid, like I'm going to give you this sweet taste with none of the side effects.

One of the studies that I put in Eat Smarter as well, found that the consumption of Sequilhos for example, increase the production of insulin. Alright? It's not supposed to, but insulin is going up. What happens when insulin goes up? Insulin is that lock and key to open your fat cells up to store more BLEEP.

We think we can trick the system, but our bodies are far smarter than us. And I started the show saying that there's so much that we don't know and we're trying to figure stuff out, we don't want to act like we've got it all figured out. When it comes to like artificial sweeteners for example, they have their place, it's cool we can come up with this stuff, but we have to keep an open mind that it might not be exactly what we think it is.

TOM BILYEU: I'm going to reframe it a little bit. Tell me if this lands. I get the impulse to say that the body is smart, but it might be more useful for people to understand that the body is kind of dumb and it's lagging behind. Because what it is, is you had a blind watchmaker over millions of years of evolution, and the people that started secreting insulin or whatever, when they put it in their mouth, they survive longer than the people that waited until it hit the gut and actually got digested. And by then it's too late and your sugars are elevated for too long and so you end up dying younger than other people.

And because of that, now as you're in a modern context, you have all this fake food, your body doesn't realize that, "Oh, there's a difference between this thing which is giving me these signals." Which is why it tastes so good and we're like, "Oh my god, this is amazing."

Because evolution told me, "Yeah, eat strawberries, eat these sweet things because they're only here in this narrow window as it's leading up to winter, you need to put on a little fat." And so one, I trigger a response that it's more likely to make you fat from things that taste like a fruit.

But the reality is that the body doesn't see the difference between this engineered thing, which shouldn't trigger all of those responses, but still does, and this is why people should wait until the end. Because I have something tied to this that you said, I think is brilliant, and it's really going to lock something for people, and I am going to make people wait till the end for it.

But that to me, once I understood, "Okay, I get it." My body thinks, because of evolution, my body thinks these mean X, Y, Z, but they don't mean that anymore. And so now I'm getting myself into maybe a better bit of trouble, but still a bit of trouble than if I were just shoveling the full sugar version of these things in my mouth.

SHAWN STEVENSON: Yeah, I love that. It's such a... It's a great balancing act to look at, let's look at the other end of the spectrum, which is the body's is dumb and just responding to these inputs, and the reality is probably going to be somewhere in the middle here, as with most things, but just taking that on, like is how our system can be manipulated, clearly.

We have brilliant scientists who were able to, again, use a gas chromatograph and break down the flavor complex, but also create things where we have this vanishing caloric energy, where we eat... I was just talking to my youngest son about this, because he was asking about teeth.

Something came up about wisdom teeth, and I just got to this conversation about it, that a lot of American adults, our wisdom teeth don't come in it. They're all usually impacted, or they're crooked or whatever. And it didn't use to be that way, all of our teeth would just come in normally.

But a part of that, my wife brought it up was, she's from Kenya, and so they grew up eating sugar cane, for example, like chewing on stuff, having hard stuff to chew on. But it was moreso her mom's generation. With her generation they are getting more and more processed food coming in. And also, very low tier carbohydrate-based foods versus the hunter-gatherer...

They have the Masai there as well, who would still have this husbandry and they're doing the milk and that kind of thing, then they've got another tribe who was out with the fish and that kind of thing, better dental health. Both areas, right? And so we were getting in this conversation about not chewing hard stuff.

And he had this thing come up like, "What about chips and stuff like that? That's hard." But it's like one crunch, like one good crunch and it turns into sauce, turns into mush. And it's this vanishing caloric density where the brain, you got this big intense flavor and you've got this chewing action that takes place, but then it disappears.

So, our bodies get tricked in a sense, going back to can be a little bit slow, it can be Lloyd Christmas. It could be a Lloyd Christmas version of itself. This Dumb and Dumber, for anybody who's not see it. But that aspect of the body being tricked into thinking it's consuming less calories than it actually is. Because hey, it disappears, it's not a big input coming into my gut. Right? So, we have brilliant scientists who figured this stuff out.

At the end of the day though, the human body is going to take its due, and it's going to figure out or stop trying to figure stuff out when it keeps being faced with all this abnormality, all of these things that it's never been exposed to. And that's what we're seeing now as a society. We're the sickest society in really the documented history of humanity. We have the highest rate of chronic diseases ever known to man.

And we're supposed to be so much better than this. We are so smart, we're so technologically advanced. Why are we so sick? This should be one of the things that we think about every day, like this doesn't make sense. And to have this generation be the first generation to not outlive our predecessors, that our life span is reversing, that should put on all kinds of red flags for us to say, "Hey, if we're going to be results-oriented, something's not working."

Something in this equation is not working. Could it be that we're trying to trick our bodies into doing the things we wanted to do, versus us understanding the things we evolve with and bringing in more of that?

TOM BILYEU: Can I give you my favorite quote from Thomas Sowell?

SHAWN STEVENSON: Please do, yeah.

TOM BILYEU: "The last 30 years have been marked by exchanging what worked for what sounds good." As somebody who was in the food industry, I can tell you we were breaking ourselves in half trying to do right by the people eating it. But science changes and so who knows, like 10 years from now we may realize things we were doing didn't make any sense.

But we really were trying, like sincerely, even just the right metabolic answer over profitability, and we made decisions that cost us hundreds of millions of dollars, so I put my money where my mouth is on that. But inevitably time will look back and say, "You should have done it like this, you should have done it like that." I recognize that.

But we make things that don't necessarily work because, "Hey, we want to drive the cost of food down. Hey, we want to make sure that the farmers that are making the things that make food taste better and people like it more and therefore they will eat them, we want to make sure that we subsidize that." And so it's like these string of things.

But I remember back at Quest that this was still in the height of "fat is going to kill you" days. And we were like, "No, you guys have this all wrong. Like fat is going to be this huge thing." This was... I had never heard of ketogenics when we first started Quest and we started learning about it and I'm like, "Oh my god, like this is amazing. Could have cancer implications," like all this stuff.

But this is all happening as the government is like, "We're going to tax food with fat," and like they were going crazy on anti-fat and we're like, "Whoa, like you may mean well. I'm perfectly willing to accept you actually believe what you're saying, but you are moving us in the wrong direction."

And so, when I look at age or the length of life expectancy now going backwards, and I think, but they don't intend to have that effect, but damn, we replaced a lot of things that worked for things that we wish would work, but don't actually. So, at what point do we have to hold ourselves accountable, pharma, food? Like at some point somebody has got to say this sh*t isn't working.

Yeah. It takes a lot of courage to... You know, we all have our biases. It's important to come into the conversation with that. And to be willing to continuously question your biases. And that might mean that you're going to be wrong. And here's one of the other things, especially about food science, you're going to find stuff that validates two totally different perceptions. But what I like to do is like, what does the majority of data say?

And also, my biases towards what have humans been doing the longest? But even still, I have to be open to the fact that maybe a Twinkie might activate some kind of hidden longevity pathway like we can become telepathic or something.

TOM BILYEU: I'm willing to go on record to say Twinkies do not do that.
Yes, you're a hundred percent right. And even that I'm joking because you're right. You have got to open yourself up to that, for sure.

SHAWN STEVENSON: Yeah. And it's beautiful because what happens is this really interesting thing takes place where you start being right a lot more when you're willing to be wrong and proactively looking for ways that you're wrong. Right now, we're living at the golden age of "my way is the way". And this is coming from the top down in society and the bottom up.

And so I love this piece because, you know, just again, what we've experienced the last couple of years, the most obvious thing was not addressed. And I said this at the very beginning, and I was looking at the data coming out of Italy and seeing that upwards of around 89% of the folks hospitalized had one or more preexisting chronic diseases.

And I was just like, "Oh BLEEP, like this is our SuperBowl moment. This is our time. We've got to focus on getting our citizens healthier." The instant argument comes up of, "We can't get people healthier overnight." Right?

TOM BILYEU: "And so let's not talk about it." Was that sort of the underlying...

SHAWN STEVENSON: The problem is when fear takes over as well, you know, that's another part of the ingredient, the recipe that can make us ignore essential basic things. But here's the thing that I wanted to communicate. If you look at the vast amount of peer-reviewed data that

we have, we can absolutely derange our metabolism in a day, or we can improve it in a day. Right?

So just for example, one night of sleep deprivation, guess what's going to happen to your immune system? Guess what's going to happen to your insulin sensitivity? Guess what's going to happen to your leptin and all the things? There's going to become dysfunction, opening, increasing the risk of you getting sick. Period.

And so Appalachian State University researchers found that simply going for a 20-minute walk instantly boosts immune parameters, most notably neutrophils, natural killer cells. Just going for a walk.

TOM BILYEU: One walk?

SHAWN STEVENSON: But this is a, it's a short-term boost. But what if you have that practice integrated, right? Not to say that this is the end all be all or some kind of like shield against a viral infection. But here's the thing that we... We did what we typically do. We have a problem. We try to find a drug for it. Right?

So, I had my eye on the data coming out of Italy and I was just being a voice of reason and logic, like, let's stay balanced in this so we don't venture into the ridiculous. Cut to a year later, I get a study from the CDC. I know people at the CDC, and I'll tell you most of them, the vast majority, pretty much everybody that I know with these entities, they really do want to help people.

There can be, of course, decision makers and people in the process that have some, what we tend to do again, if there's a nefarious outcome, but money's tied to it or the reputation, all the things they make tough decisions. Right? So, I keep trying to validate and hold a space for people to be good people. So, I'm coming into it with that.

Now here's what I got, this was published in July of 2021. Huge meta-analysis looking at the data from over 800 United States hospitals and over 540,000 COVID-19 patients. And we'll put the study for people, you can put that in the show notes, if you like, as well, because seeing is believing. So, compiling this huge database of people, what they found was that the number one risk factor for death was obesity. And the thing is, we can have this justification, "Well, people won't do it." Look at how we were galvanized to do things.

I just went to the gym today and I see all the stickers on the floor, "stay 6 feet apart, stay safe". Oh, guess what people were doing? They were doing the things. If it was coming from a place of authority with a little bit of science and encouragement, that fear could have been used as a tool for real empowerment.

TOM BILYEU: Do you think that was a perfect storm? 'Cause I think... So, part of it feels like a hundred percent, so many people like confronted with their own mortality still will not change their diet. There's a book called Change or Die, which highlights how few people will actually make the necessary changes when even the change that they have to make is deadly simple, they still won't do it. So, there's that.

But it also coincided right as we were getting to the point where you can't call somebody fat or obese, that's shaming them in some way. And so now it's like people are called onto the carpet for saying that you're overweight, you've got this whole movement of healthy at any size, and it's coming right as we're like, we have to do something right now and we know that people won't change. And you put all that together and years in and it still like considered almost like you're being mean by pointing out... It's crazy.

SHAWN STEVENSON: It all came to a head at the same time, right? You know, having that conversation, so blaming, "So you're blaming fat people for the problem. "No, we're just talking about reality. We're talking about science. And doing the work where I'm sitting across the table from a patient and they're coming in, they're dealing with something and be able to look them in the eye.

I've seen this so many times. I haven't met one person who didn't want to be healthy. Alright? There is a difference. Of course, there's this like, "People won't do the thing." We use that in medicine so much that people won't listen. You just have to get better at your job because there's a way. And so, it's finding out what is that person's motivations, you know, what are their, what are the... What is the leverage point that you can find?

Because within that human is the potential for so much. But of course, what happens is we get into a place of complacency. We have a perception that that's way harder than me sitting here and having my Doritos, which I used to go to 7-Eleven, open the Doritos, pump chili and cheese into the bag.

TOM BILYEU: Nice.

SHAWN STEVENSON: Shake it up. Alright? So that's so much easier than me going for a walk every day. Why on earth would I put myself in that discomfort? But I'm creating this physiological discomfort and disease in my body all the while that is going to force me to make decisions, right? So, it's just like, you get to choose your hard, you get to choose your difficult.

Most people are never even presented with that idea. Most people are never even presented with that idea, right? They're never even presented with that idea. And we're so disempowered

in our culture. And also, we have all of... We have a societal revolution of convenience and complacency and disempowerment and lack of movement.

We have a society that has made everything so accessible. If we wanted to... We didn't... We wouldn't have to get up right now to get food sat in front of us. Whereas our ancestors, it was just so labor intensive just to get a meal. Blessing, but also potential curse. Alright? We have to keep this in context.

So, this story that people won't do the thing, with motivations, people did that they never thought they would do. In the last two years we can really look out and see that. At the end of the day, if we can provide more empowerment, science-based empowerment, and create a culture. Right now, we've created a culture of sickness, and so to be healthy, you're weird as BLEEP. To be the healthy person.

What state are we in where it's weird to be healthy? And a lot of people have seen the study that, it came out about a year ago. Maybe it was two years ago. But this big meta-analysis and they were looking at the metabolic health of the United States citizens, and they found that 88% of the United States citizens are metabolically unhealthy.

TOM BILYEU: How many?

SHAWN STEVENSON: 88%.

TOM BILYEU: What?

SHAWN STEVENSON: Give this to you to put in the show notes for everybody as well. And again, if you look at, it's no longer the exception versus the rule. The rule is, the rule is poor health and disease, right? So, let's go back actually to that study I mentioned from the CDC. The CDC was getting tagged in everything related to COVID.

But I was actually reading the studies, looking at the references, not window dressing, looking at it, even an abstract sometimes can be misleading. 540,000, over 540,000 COVID-19 patients, over 800 US hospitals, number one risk factor for death was obesity. The question is why? That pro-inflammatory state of inflammation. We're pre-inflamed. What is COVID-19? An inflammatory condition.

So, you already got a bonfire going in your body, now we come in and we throw some extra fuel on the fire. What do you think is going to happen?

TOM BILYEU: A bonfire. Just for people that are really getting into the nitty gritty, is the immune system is already kicking off.

SHAWN STEVENSON: Yes, hyperactive.

TOM BILYEU: The cytokines, we now know the idea of the cytokine storm. So, you have the immune system attacking the body itself. It's kind of like if you have a fly in your house. If you hit it with a fly swatter, all is well. If you bring in a shotgun, you start doing damage. If you bring in 150 shotguns and you just start obliterating everything, you're going to have massive collateral damage.

And so, you're getting this, the attack of virus with all these shotguns, and now you're just tearing the body apart as you try to end the virus.

SHAWN STEVENSON: Exactly. And we can see this with other metrics. We can measure homocysteine, C-reactive protein. We could see that inflammation is a problem in the body. And this is a consistent thing we see when we're venturing into being overweight and obese. Here's the second leading risk factor for death. Number one was obesity. Number two was fear and anxiety-related disorders.

TOM BILYEU: Yeah. I had never heard that until I started researching for this episode. And I was like, "What? How didn't I get it?" But that's shocking.

SHAWN STEVENSON: That should have been everywhere. How in the world could the second leading risk factor for death from COVID published by the CDC be anxiety and fear-related disorders? What the hell is going on here? What's the connection? At that time, when the study came out, I had already been sharing so much data on psychoneuroimmunology, on the psychosomatic effects of COVID, all published data, like we know this happens.

We have entire field of psychoneuroimmunology, understanding how our mind and our thoughts affect our immune system. Right? So if we're in a state where we're riddled with fear, like we've been the last two years, bombarded, fear without context, not to say that there isn't something for us to be concerned about and protect ourselves, but to get to the place where we're debilitated and we're frightened, just at the sight of another human being. Guess what's going to happen?

You're going to be pumping out all of these catabolic, stress-related hormones. And it's just going to be hammered away at your immune system, especially over time. We didn't just have a week of it, two weeks, few months. Years. What do you think's going to happen? It's not good.

So that was the second leading risk factor for death. The third was diabetes and its related complications. Again, going back to the...

TOM BILYEU: I can't believe that anxiety and fear outpace diabetes. It's crazy. That's fascinating to me.

SHAWN STEVENSON: We've got a quick break coming up. We'll be right back. The importance of vitamin C cannot be overstated. The big issue today, is its simplicity, something so simple cannot be so effective, can it? Vitamin C is obviously a major part of our immune system function and how it does its work. And this is the key, is that it helps to reduce infection-oriented inflammation. A recent study cited in the journal, PharmaNutrition, investigated the impact of vitamin C in relation to the cytokine activity associated with COVID-19 and found that vitamin C is effective by inhibiting the production of a cytokine storm.

Several clinical studies are now affirming that timely administration of vitamin C can dramatically influence the outcome of COVID-19 infections, and this simply has not been talked about. But we're going to change that, now, it's important to also know that all vitamin C is not created equal. We've got synthetic forms of vitamin C and we've got botanical real-food based vitamin C. A study published in the journal of Cardiology, had 20 male smokers consume the number 1 source, the highest botanical source of vitamin C found in Camu-camu berry over the course of the 1-week study and it led to significantly lowered oxidative stress and inflammatory biomarkers. They were measuring this by utilizing C-reactive proteins. Now, here's the rub, the Camu-camu berry was not just put up against a placebo, it wasn't put up against nothing, it was put up against synthetic versions of vitamin C. Just an ordinary vitamin C tablet you might find as you're checking out at the cash register or at a gas station or something of the like. And here's what they found, the researchers saw no change in these biomarkers reducing inflammation and oxidative stress in the placebo group. The placebo group again, was a synthetic version of vitamin C.

For the researchers, this indicated that the combination of other antioxidants from the Camu-Camu berries had a more powerful antioxidant effect than standard vitamin C products alone. This is why I utilize Camu-camu berry, combined with Amla berry, combined with Acerola cherry, the 3 highest botanical sources of vitamin C ever discovered. And my favorite vitamin C supplement of all time is Essential C Complex from Paleovalley. Go to paleovalley.com/model you're going to get 15% off their incredible Essential C formula. Go to P-A-L-E-O-V-A-L-L-E-Y.com/model, for that special 15% off right now. Vitamin C is of the at most importance but our sourcing matters more than ever, get the very, very best. Not the 3rd best, not the 5th best, not the 100th best, get the best vitamin C possible. That's going to be in the Essential C Complex from Paleovalley. Go to Paleovalley.com/model, and now, back to the show.

TOM BILYEU: I would have... For so long, it seemed like everybody was lumping those two together, obesity and diabetes. So, it's very interesting to me that they seem to have a slightly different mechanism of action, so that I would have thought that diabetes would be even more life threatening than just garden variety obesity. Why do you think they're flipped?

SHAWN STEVENSON: Yeah, that's such a good question. And by the way, I want to throw this little bit of data out here too. So, this was published by the CDC as well. Healthcare workers obviously had a great level of exposure. So, they're a great data set. And plus, controlled environment, we can get better feedback. 89% of healthcare workers who were hospitalized with COVID-19 had at least one preexisting chronic disease. And over 75, right around 75% of them obese. Okay?

So, this isn't again, sort of, it might be a correlation. We know this is the issue. And so, with obesity and diabetes, these two, they do tend to come hand in hand. You know, they're like, they're paired up. Alright? They met on Tinder, they're, you know what I mean, whatever. But there are different metabolic situations happening. Alright?

Because somebody can be not... They can have Type 2 diabetes and not be obese. And also, people who are obese don't necessarily have to have diabetes. This gets back to this very important foundational understanding that we're all different in our body's metabolism. We have a unique metabolic fingerprint and how our body adapts to things is, can be dramatically different from one person to another.

But what we do is we tend to put these umbrella diagnoses on people, right? So, they get the diabetes label. If they have, you know, the fasting blood sugar is too high or hemoglobin A1C is too high, whatever the case might be, "You're diabetic." That's it. No two people have the same diabetes, ever. Because they're a unique human entity and everything is different in their body.

There are, of course, similarities where we can classify people and provide a treatment, but oftentimes it's that standard of care. And this is why we suck at fixing it because we're not taking the person into consideration. Another thing with battling this issue is we're fighting against ourselves. You know, we're fighting this internal battle.

And there's a lack of respect. Like our fat cells, this is my bias, but our fat cells are smart too. Of course, again, they could be dumb, but they're really intelligent at helping to keep us alive. Through our evolution, they were developed... They developed in such a way that they can keep us alive during times of famine.

But now we're living in a famine that never comes, not even remotely close. As a matter of fact, it's anti-famine, right? And our fat cells have the capacity to expand their volume by a thousand times.

TOM BILYEU: Whoa.

SHAWN STEVENSON: A thousand times. Crazy. It's insane. So now the problem is as that's happening, it's sending out that distress signal that something is wrong here. Like I have too much stored in this system. There's some kind of infection, something is breaking down. But here's the beauty. When we start to move away from the behavior patterns that's causing the problem, the body knows how to fix itself, it knows how to sort the stuff out.

This is where we can get into the conversation about a caloric restriction or the like, but the caloric restriction naturally happens when we're eating nutrient dense foods, because it starts to cover all of these bases, these metabolic bases. Because even the process of fat loss itself, which is lost on so many people, there are key nutrients that are involved in the process.

Even the mitochondria itself, our mitochondria is the end destination. We have lipolysis, where the fat cell lets go of its contents, but that can get reabsorbed, right? So, lipolysis is a step. Now it needs to get shuttled to the mitochondria to actually be used as fuel. We've got cellular respiration and beta oxidation.

So now that that's getting utilized, here's the crazy part. The mitochondria, really all of our cells, I can't think of anything that isn't dependent upon the sodium potassium pump. These key electrolytes that enable all of our cells to do all the they do, right?

Magnesium is also another critical electrolyte in our mitochondria, being able to, we have in this kind of mitochondrial genesis, creating new mitochondria, we need magnesium to help it to do their job. And the last point, this is so cool. When I was in my university classes, I was taught that the energy currency of the body, ATP, everybody knows ATP. ATP.

No, that's not the bio-active from. The bio-active form is when ATP is binded with magnesia. That's when it's actually bioactive. Able to do BLEEP. This is why electrolytes; these key nutrients are so important. So, if we get dogmatic and we're just like, "Cut your calories." Are you deficient in these key electrolytes? BLEEP's not going to work as good.

What if we start stacking conditions in people's favor, using our primitive understanding of nutrition with trying to treat the body like a calculator, we're also adding on the advanced stuff, which is epicaloric controllers, so we can really start to get people help.

TOM BILYEU: Man, this stuff gets really complicated. There was something you said earlier that I want to go back to around the idea of how much your mind, your psychology influences things. But I also want to be clear, so when I say that the body is dumb, that's probably a more useful way to think about it, but I also believe that if you want to believe in God, look inside the cell.

Every time I look at how cells function, which is way over my head, but even the parts that I can grasp are so terrifyingly complicated. They like, wow it is hard to believe that we just came to that. So, it's pretty intense. But now applying that to the mind, it's really incredible how powerful the mind is, and when I was researching you, you were talking about a study where they gave people the same shake, it's the same shake, but they told people different stories about those shakes.

Walk us through that? Because this was startling to me, in terms of somebody trying to figure out this complex game of weight loss.

SHAWN STEVENSON: Perfect, yeah. So this was a study coming out of Stanford at the time, and the lead researcher was Alia Crum. And she wanted to find out if our thoughts might affect our metabolism. And so they blended up a big batch of milkshakes for study participants to come by, and on some of the milkshakes, even though they were all calorically the same amount, they slapped a label on some of the milkshakes had said "140 calorie sensible milkshake" right? "Sensible".

TOM BILYEU: Right.

SHAWN STEVENSON: Even though they were 380 calories. And some of the other ones they slapped on a label that said, "620 calorie indulgent milkshake" right? And so they allowed test participants to consume them, they were running a hormone panel to see what was going on with their biochemistry. And so, here's what happened.

When folks were consuming the indulgent shake that they thought was a high calorie indulgent milkshake, their ghrelin levels, which ghrelin is this kind of glorified hunger hormone that drives us to seek food, seek nutrition, seek core density, seek key nutrients, it creates a situation where we are driven towards food. When they had the indulgent shake, their ghrelin levels dropped as if they had three times more calories than they actually did.

TOM BILYEU: Whoa.

SHAWN STEVENSON: Alright? So essentially, because they believed they were consuming a lot of calories, something that was super indulgent, their ghrelin levels responded. And ghrelin

also plays a big role in metabolism overall in metabolism of fat. Their ghrelin levels and their desire to eat dropped as if they had three times more calories than they actually did.

On the other side, the sensible milkshake. Again, keep in mind, all the milkshakes are the same amount of calories, 380 calories. When people had the sensible milkshake, their ghrelin levels barely budged at all.

TOM BILYEU: That's crazy.

SHAWN STEVENSON: Non-significant, okay? So these folks, what's going to tend to happen is you're going to be hungry sooner after. Even though you had more calories than you thought you had. Ghrelin didn't change, okay? And this speaks to again, every thought that we have creates correlating chemistry in our bodies instantaneously. It's happening 24/7 always, will never stop.

But that's the part of medicine in the last couple of generations, there's been the separation between mind and body. And it is the most ignorant thing because you cannot possibly separate the two. And so, understanding, and again, pointing people back to their choice and your ability to choose the thoughts that you want to think.

For example, we can tell ourselves, we can basically Joe Dispenza, You Are the Placebo. So, after I read the study, I immediately thought of him and I really got it. We can tell ourselves that this meal is incredibly nourishing and indulgent. Even though it might be a low-calorie meal, right?

So, when people are doing a calorie restriction thing and they might not be happy with the fact that they're eating this low-calorie salad. But telling themselves and this gets into the debate like, "Are we lying? Are we faking it 'til we make it?" Doesn't matter. You're changing your biochemistry. And your body will...

TOM BILYEU: Does it work even if you're telling it to yourself? Like if I know that it's a 380-calorie shake, can I tell myself it's 160 calories or that it's the indulgent so that I stop being hungry?

SHAWN STEVENSON: Great question. Because we know the greatest effects come when it's coming from an authority figure, right?

TOM BILYEU: Not surprising.

SHAWN STEVENSON: So, another study that Alia Crum and her team did was a skin prick test. And basically, they gave people, you know, prick their skin and created this reaction. The

histamine's kind of skin rash would come up. And then they brought in researchers to tell them that they're going to apply an ointment and either it's going to be an agonist or an antagonist. It's going to either make the skin rash better or it's going to go away, okay?

TOM BILYEU: I see where this is headed.

SHAWN STEVENSON: And so, as study participants were given the cream that was a non-treatment, there was no treatment factor or active ingredients in this cream that can do anything, alright? But the test subjects who rubbed the cream believing by their physician, by the researcher, by the scientist, that this would help their rash go away, it started to go away within 10 minutes.

TOM BILYEU: It's bananas.

SHAWN STEVENSON: And the study participants who had the antagonist cream where it's going to get worse, the skin rash got worse within 10 minutes. Now, here's the thing. The degree of change, how quickly it changed and how effective it was, was based on the study participants belief about how intelligent their practitioner was. How qualified they were, their aptitude. Their faith in them impacted whether or not the rash changed.

TOM BILYEU: It helps.

SHAWN STEVENSON: And how fast it changed, right? So, keep this in mind, what usually happens is we outsource our thinking for our bodies to other people. And I know this deeply because this is how I got into this field in the first place. I had no intentions on working in health and wellness, I... It just wasn't in my perception.

But when I went to that physician experiencing some leg pain and he had me get an MRI of my spine, first of all, I didn't even know why I was getting an MRI of my spine when my leg hurt. That was so disconnected from how this entity works. And I go in to see him and he puts the MRI up and he's looking at it with me and tells me I have these two ruptured discs and severe degeneration, L4-L5 S1.

And I'm just like... I'm like... I'm a kid, I'm 20 years old, I'm like, "Okay so what do we do? Let's go. What so we do to fix it?" And he looks at me like, "Whoa, whoa, whoa." He kind of even pumps his hand like this, like, "Pump your breaks, kid." And he says, "Son, you have the spine of an 80-year-old."

TOM BILYEU: Jesus.

SHAWN STEVENSON: "This is unfortunately something that's incurable. But we're going to help you, we're going to get you some medication, we're going to help you to manage this." It was the key word he said, "We're going to help you manage this." Untreatable. Un-curable. Un-curable condition. It's only downhill from here and he's going to help me manage it. And when I shared this with you before, I didn't really...

Because I've been thinking about this the last couple of years, I had some extra time Tom. I was like... I asked him a question that I believed prior that I had no grounds to ask him, which is, "Is this due, or is there anything I can do? Should I change the way that I'm eating?" I asked him that question. Had no grounds for it, so I thought.

"Should I change the way I'm eating? Should I change the way I'm exercising?" And of course, he said this has... He... These were the exact words. "This has nothing to do with what you're eating." But then he wrote me a prescription to eat some pills, right? But after thinking about it again and again and again, that Nutritional Science class that I had was before this happened.

This was almost two years before. I was like 17, 18 in my first Nutritional Science class. Which was a prerequisite on the pre-med track. I didn't have to take it. But I thought nutrition was about fitness. And my teacher was overweight, alright? And so when I saw him, I'm like, "He can't really teach me how to be fit."

Just like I never said it and never really said the words to myself, but just I realized that I had this little disconnection of trust. And so I had this in my memory bank that nutrition matters. But when I asked that question and for him to give me that immediate feedback that nutrition, food doesn't matter in a disease state, my doctor was not just overweight, he was obese.

And I remember him leaning over on me, right? And just like... He was clearly not well, and he was probably doing the things that he believed to be effective. He's not just not trying to not be healthy, right? But in that moment, what happened to me was the nocebo effect. Giving someone a negative injunction from an authority figure that things are going to get worse. Just like that skin prick test. But globally, like for myself.

I went from a nuisance of a pain to chronic debilitating pain within a couple of weeks. Because I believed I'm un-helpable. My life is over. And so, I carried that with me day after day for two years, seeking out multiple... Which I always recommend people, if you get a bad bill of news, please seek out another opinion. Getting a diagnosis, it's only the same. Like literally bar for bar, the same diagnosis around 20% of the time from physician to physician, alright?

Now, them talking about clear difference, but just in general, 20, 30, 40% of the time, there's going to be some plays within that diagnosis that are going to be different. Seek that out but

here's the thing I learned over time. If you're going to seek out another perspective, don't just seek out the same type of thinking.

Einstein, he had this wonderful statement that's attributed to him, that we can't solve a problem from the same level of thinking that created the problem. And so, I applied that even in the help that I would implore people to seek out, ask somebody with a different way of thinking about this thing, right?

But I didn't. I didn't know that piece of data at a time, so I went to the same kind of conventional thing, and each time I'm heartbroken leaving there and I'm leaving there with another drug. Celebrex was popping at the time. So I was on Celebrex. I got Celebrex from the second guy. Eventually get sleeping medication, eventually... The list goes on and on. I found my little on over the counter plus prescription cocktail to knock me out at night because I'm on so much pain.

TOM BILYEU: You see, this is where it's interesting 'cause you've got the age-old recommendation, like thousands of years old, "Let food be thy medicine." Hippocrates, I think it was, that said that all disease starts in the gut. And so, we've known this stuff for a long time, and this goes back to that idea of replacing what works for what sounds good.

So, drugs are powerful, man, like when you get a drug, that really works, like if you've ever had a bad headache and you take Tylenol or Advil, it is awesome. It is awesome. And I thought a dozen times more, I'm sure that I've taken it and thought, "I'm so glad I live in an age where I can actually get medicine that has this kind of impact because it's really powerful."

So, I get how people end up getting confused, but man, have you got to really look at the data. And so rarely are people actually looking at, "Was is this effective? Did this actually work?"

SHAWN STEVENSON: Yeah. This gets us into this really important part of the conversation, which is, I had a conversation with Dr. John Abramson, and he's a professor at Harvard. And he's been huge. And it was not his intention to be involved in so much drug company litigation. Pharmaceutical company litigation.

He was just brought in as an expert witness one time and then just kind of got pulled into that universe. And so, he's under so many different NDAs and things like that. He can't talk about a lot of details. But some of the outcomes that we've seen even in the Vioxx scandal that took place... I could have been put on Vioxx at that time, I was put on Celebrex. Vioxx killed, affirmed in the data, over 40,000 Americans.

TOM BILYEU: Whoa.

SHAWN STEVENSON: Affirmed in the data. Over 40,000. We're talking about the low end. Killed them from this drug that again, according to the guy who was involved in the damn case, Merck knew about the dangers, they saw it in the data, in their clinical trials. They still put the drug out because, "Hey, these non-steroidal anti-inflammatories are hot right now, we got to put ours out."

And so again, there's these little brushes with faith that I have, and specifically even shares some of the stories in his book that young people were dying, right? So like one of the stories that he shared was an athlete. She hit her head and she was having headaches, they gave her Vioxx. She ended up freaking having a stroke and dying, you know? So crazy.

But we got to keep his in mind. Merck's doing better than ever. They killed 40,000 Americans; we could argue intentionally. They knew the dangers and they put the drug out. And not to mention all the stuff they did to try to hide it. That's why they were hit with such a huge lawsuit, the fines, all the stuff. But these fines to them are like, it's nothing to them. They actually have accounts just kind of like for the lawsuits. It's already set aside, they have the most powerful legal teams in the world.

So, with that said, knowing so many people who work at pharmaceutical companies, mostly good people, people... They're trying to... They're trying to serve, they're trying to help people, they really believe in the mission. They're not in the lab. They're not looking at the data. They're not paying attention to the fact that our physicians are not...

When we go to a physician, we think that there's the medical school training for this particular drug they're prescribing. The vast majority of the time they're educated on a drug by a sales rep. A sales rep is educating your doctor on a drug. And they have the chance if they want to to look at the peer reviewed data because that's how a drug gets approved by the FDA, it's part of the process. You have this peer review process.

But there's another thing that John showed me that blew my mind, I couldn't believe it. Most of the drug trials that are published in our most prestigious journals, the review board, most of them never actually see the real clinical trial data. They get a summary from the drug company. Who is actually looking at the trial data? The FDA isn't doing that. They don't do that.

And a little not so fun fact that I've really been trying to press into culture, because again, we need to check these systems so that when drugs are necessary, we have safety. The FDA, over 75% of their scientific review budget is funded by drug companies. Our FDA that's supposed to be regulating and checking, keeping in and check drug companies, are funded by those same drug companies.

TOM BILYEU: Because they pay for fees. They get the... Yeah.

SHAWN STEVENSON: User fees. The advent of user fees is a recent thing that took place all under the guise of getting drugs, "We need more drugs. We need drugs to people faster." FDA's like, "We need money." So, drug companies like, "We'll give you the money to get more employees, more computers, whatever you need." Make the process faster, user fees.

Now but here's the thing, Tom. It's not just 75% of their scientific review budget. The FDA's overall budget, 50% of it is coming from drug companies. We have... It doesn't take Michio Kaku, a brilliant level thinker to see there's a huge conflict of interest here. This is dangerous.

But for me, that's still surface, I dug more. Published The Journal of Science, one of our most prestigious journals, they looked at the process of scientific review for a drug. To see, "Are not just the entity of the FDA itself, but are individuals at the FDA itself being compromised by drug companies?" And so, what they found was that...

TOM BILYEU: Yeah, I know, I've spent too much time with you online, I know the punchline, this is rough.

SHAWN STEVENSON: What they discovered was that when a new drug is brought up for the review process, the physician advisors who are on the board for approving this approval process, end up getting paid by a drug company who was involved in that clinical trial. Almost 40% of the time they receive a payment from that same drug company or a competitor, okay? Now how is this legal? It's a post hoc payment. So they're not paying them and then getting the thing, Ii might be six months later.

TOM BILYEU: Right.

SHAWN STEVENSON: It might be nine months later. They're getting either cash, they're getting a grant, they're getting money. And this was literally there are cases where millions, hundreds of thousands, thousands dollars. How is this even possible in what's supposed to be the gold standard for drug regulation in the world?

It's so riddled with layers of corruption that even the good people who are trying to get good products, helpful products to people, it's being compromised at every level. Last part here I've got a share. In 2020, two thirds... Because again, how is this all happening? Why isn't Congress or Senate, why aren't our leaders going after these drug companies in this process and addressing this corruption? In 2020, two-thirds of the United States Congress members received a check from a drug company.

TOM BILYEU: Whoa. Now that one I didn't know.

SHAWN STEVENSON: So, it's the question is, how could we get this sick? How can we be disconnected? Why are we so mentally unwell? The number one cause of death right now here in the United States, Tom, for people between the age of 18 to 45, our prime... Our "prime of life" years. The number one cause of death right now is Fentanyl.

TOM BILYEU: Really?

SHAWN STEVENSON: Yes. Number one cause of death. Not just overdose, specifically Fentanyl. Why isn't this... You know your BLEEP. Why doesn't everybody know this?

TOM BILYEU: So, I've started hearing about fentanyl in the last, I don't know, maybe year, 18 months. I'm probably way behind the curve on that. What... Is fentanyl an opioid?

SHAWN STEVENSON: Yeah, it's in the family of opioids. But it's a synthetic opioid.

TOM BILYEU: And is it used in the medical system?

SHAWN STEVENSON: That's where it started. It's where it got it's start. And they're great documentaries on this.

TOM BILYEU: Painkiller?

SHAWN STEVENSON: Absolutely. And this question is why would... When we hear "overdose", we tend to have this perception of the person that overdosed. Man, I've got so many people just floods of stories because of putting this data out, of like their uncle or their... People are going in because they have pain and end up getting hooked on these opioids. They have no intention on being a "drug abuser". So many people.

And also, Fentanyl is so deadly, literally just a few sprinkles of it can kill you. But it's being laced in so many other products today. So cocaine...

TOM BILYEU: From a drug, like illicit drug perspective?

SHAWN STEVENSON: Yes. So, it's being laced in a lot of things. But also...

TOM BILYEU: Because it makes the high better? Like what's the... If it's that dangerous...

SHAWN STEVENSON: You can put less of the other stuff and just a little bit of Fentanyl.

TOM BILYEU: And Fentanyl's cheap?

SHAWN STEVENSON: Oh, it's super cheap. It's the hottest thing going right now. Again, to the degree it's the number one leading... It's the leading cause of death. That's sounds... It doesn't even sound right. I know it doesn't sound right. So, I spent a lot of time, almost too much time looking into these figures are trying to see, breaking down how this is, something like this is possible. This goes back to...

TOM BILYEU: How many people are dying per year from fentanyl, do you know? Or even just opioids in general?

SHAWN STEVENSON: In 2015-ish, we had about 50,000 drug overdose deaths. Just overall. By 2020, it was 100,000. It doubled.

TOM BILYEU: Wow.

SHAWN STEVENSON: Overdose deaths doubled in that time span. And so HBO max, there's a great documentary, and also there's a series on Hulu starring Michael Keaton of all people.

TOM BILYEU: Dopesick.

SHAWN STEVENSON: Kind of like... Yeah, Dopesick.

TOM BILYEU: I haven't seen it. Is it good?

SHAWN STEVENSON: It's pretty good.

TOM BILYEU: Yeah, it is pretty good.

SHAWN STEVENSON: But that's a fictional implementation of real events, versus Crime of the Century documentary on HBO Max. Or of course, because we have such a visual culture, I like to point people to those things, there are entire books on the subject matter as well. Obviously, the data is out there. It's scary.

TOM BILYEU: My more terrifying question is, why are we turning to drugs so much? So all the rat studies and stuff, and I don't know this literature well, so I'm very much reciting headlines here. But the headline feels so right, I would be surprised if it isn't accurate. That it is very

difficult to get a rat addicted to drugs in its open field, like where it can literally just live its life. But if you put it in a cage, then they'll get addicted lickety-split.

So, my question is, what is going... If we gave... If we drop drugs into the savanna, 150,000 years ago, would they get addicted? Or would they be so occupied? I won't even say so thrilled, but so occupied with their life of hunting, gathering, loving, marriage, death, dealing with attacks, all that stuff, that they just wouldn't think about it? Or would they, boom, it's just that kind of thing and they would all get addicted as well?

SHAWN STEVENSON: I love your thinking, man. There's always been mind-altering substances that humans have tinkered with it, and there's a big movement towards plant medicine and all these different things for certain experiences. But historically what it would be involved with is something that might be a rite of passage or might be involved in like it's a experience that is a tribal aspect to it. It's always been done with this layer of respect to the thing. Today...

TOM BILYEU: I also have a feeling that they were... And I don't know, I am super ignorant on drugs, but looking at what they've done to weed where they've made it hyper-potent, like massively increased the THC levels, we've done the same thing to fruit, so I have to imagine that the drugs while obviously still psychedelic, may not have packed quite the punch.

SHAWN STEVENSON: Of course. Way different scenario, you know? Again, our ancestors happening upon this stuff might take a little dabble and just, "Let's wear this stuff off," it just might be overwhelming, too much to senses, all the things. Even though our, even though our genes haven't changed much in this time, our environment has, and our level of intelligence in a sense.

And I'm saying it to say, I'm trying to set up the answer, which is, today is very different because we're seeking it out. We're seeking out a solution to our pain. We're seeking...

TOM BILYEU: We're causing our pain.

SHAWN STEVENSON: I've shared this many times, we have epidemic levels of physical pain and mental pain. Mental health issues, all time high, you name it, ADHD, depression, anxiety, schizophrenia, everything is everything. And nobody's stopping to ask what is causing all of this dysfunction.

Part of it is. Obviously, our exposures, our environments are very abnormal, our food is very abnormal, and there's a direct inroad obviously with what we're putting into our bodies having... In essence, we can have degrees of these kind of mind-altering experiences, right?

Because believe it or not, that bowl of Lucky Charms is a mind-altering experience.

TOM BILYEU: No doubt.

SHAWN STEVENSON: Right? And so, but we have this classification of, "Oh, these are safe to do." In our society, alcohol is huge. Huge. It's one thing you're out at the stadium getting up, verses you being at home by yourself and doing it. And also, it's socially acceptable. If the police really wanted to get DUI's they'd just sit outside of stadiums, but they don't do that. It's not fair game.

But that is the most socially acceptable psychoactive substance that kills more people than other drugs until fentanyl came along. But that's even still, alcohol is way up there. It's not in that same kind of classification, right? Violence, weight gain, all the things. Non-alcoholic fatty liver disease is, it's inched its way into the top 10 two liver disease.

TOM BILYEU: Whoa.

SHAWN STEVENSON: So, it's either 11 or 10 right now. Our livers are getting up. What are the inputs here? Alcohol is one of the big ones, and also obviously sugar too. Okay, so this sets up the point, oftentimes we have this perception of what somebody who uses drugs is. Right? We negate the fact that over 70% of United States citizens are on prescription drugs. Okay? Right now our society, we are very adept at taking a pill to make us feel something.

TOM BILYEU: That's a really terrifying number.

SHAWN STEVENSON: Okay? It's normalized. And so whether it's self-medicated or your doctor is your dealer, we have a culture that is seeking to suppress our pain, physical and mental. Instead of removing the root cause or addressing what's causing the manifestation. I was just talking with Wendy Suzuki, Dr. Wendy Suzuki. She's a neuroscientist out of NYU. I've done some guest lectures for her neuroscience students as well.

And she has a wonderful book, it's called, Good Anxiety. And she's addressing our epidemic of anxiety. Epidemics, because anxiety isn't just one thing, every person is different. But directing people towards something that's more sustainable and effective, which is addressing what is causing the anxiety, and not just what drugs are appropriate in instances.

Absolutely, it's great to have these things, but when it's relied upon, what tends to happen is we're suppressing something our body is giving us in our mind this important, critical biological feedback that something is off here, but we don't want to feel the feeling. Don't want to feel that.

So, we push it down, we suppress it, take mind-altering substances, whether it's a drug, whether it's food, whatever the case might be, and we're not connected to our humanness. So going back to our ancestors happening upon this stuff, they were more connected to their humanness.

Today, we have these voids within our psyche and within our spirit in our bodies, we're so disassociated from how makes us feel, and we're so externally focused. Social media, it's the gold age of television, there's a lot of, a lot of great competing, right? To not be able to have control. Most people don't, Tom. They're binge watching daily. Alright?

It's great to have a nice binge watch, I like Stranger Things. It's great. But I put it in its pocket, and if I'm going to be a healthy sovereign individual today, I need to focus more on creation than on consumption. Right? Cultivating my humanness. The biggest change that happened to me, Tom, over those two years of pain, I was in so much pain, I was afraid to get up.

So, I sat and laid on the floor as much as I could in this one bedroom apartment in Ferguson, Missouri, where I was sleeping on the floor. Everything changed unexpectedly when I decided, number one, of course I decided to do something, when I've been outsourcing my health and my potential to everybody else.

TOM BILYEU: What happened? The last physician that I saw... Again, I was seeking out, a friend will be like, "This person is the best." So, three other opinions. And the final one, I was sitting at home, I had my pill bottle sitting on the side of my bed about to take these drugs and try to knock me out, and I just really visualized...

SHAWN STEVENSON: For whatever reason, I don't know why this happened, but I visualized the doctor being at home with his family and kicking back by the fireplace, maybe smoking a pipe or some BLEEP, like a very cartoonish kind of romantic idea. But the feeling, Tom, was he's happy. He's not thinking about me. I left with the baggage; he's living his life. And I outsourced my potential to somebody who's not even thinking about me. Not to say that he didn't mean well.

TOM BILYEU: No, no, no, but that, that's a keen insight. Very keen.

SHAWN STEVENSON: Yeah.

TOM BILYEU: So, "He's not thinking about me, I'm thinking about me." But what makes you... In that moment, are you deciding something is possible? Or "I'm just going to try. I'm not going to outsource and I'm going to start over."?

SHAWN STEVENSON: Yeah. In that moment, the trigger was a change in my question, my habitual question. Because at the time, I was like, "Why won't he help me? Why won't somebody help me? Why me, why me? Why won't somebody help me?" And the question changed to, "What can I do? What can I do to feel better?" And I had never thought about that once those two years.

TOM BILYEU: Were you fed up and you got to that point? Did you read something; somebody say something? That moment right there is the most profound change anyone will ever make, so I really want to know what made you make that change?

SHAWN STEVENSON: Being able to work with so many people over the years, this recipe is different for everybody, but for me is this recipe of ingredients. One of them was my grandmother, and she had been in my mind harassing me to check on me those last two years. 'Cause it's like my grandma like, "I'm fine, leave me alone."

TOM BILYEU: She's just like, "Are you good? Are you good?"

SHAWN STEVENSON: Just checking in on me, you know? What I felt to be way too much. She knew I wasn't okay. But I'd always been the one that was okay.

TOM BILYEU: With knowing that she loved you? 'Cause I really want to know the recipe to... It won't work for everybody, but there will be more people like you. "So somebody loves me. The doctor is not thinking about me." What else?

SHAWN STEVENSON: Yeah. It wasn't just love, it was belief in me. She believed that I would be successful. She taught me from a young age that I was going to do something great with my life, I was going to be a great man, she would say. My life conditions didn't match up to my blueprint of what my life was supposed to be.

Tom, the reason that I was at this place was because I'd been fighting so much of my life up to that age of 20. Again, I'm in Ferguson sleeping on the floor. My mattress is on the floor, and I'm barely hanging on in college. I'm the first person in my family to go to college, let alone graduate.

And I grew up in a state where I got kicked out of my entire junior year, I am graduating in three years of high school, I got kicked up for fighting. When I went to college, you'd think I get my together. I got kicked out of college for fighting. I grew up in an environment where we solve problems through violence. And I didn't really feel like I was a violent person. I didn't want to start anything, but if you start it, I'm going to finish it, or I'm going to do something.

TOM BILYEU: And so that way of living, we live... In my most formative years, when I really feel like I went from being a kid to really takin ownership of myself and my life, we lived right door store to a crack house, and my father, my stepfather... I just thought, because we saw the devastation happened with my uncles dying from crack cocaine, or continuously getting up and end up in prison, all the thing, I thought we'd established that, "This wouldn't be you. You would never do this."

SHAWN STEVENSON: And he's in this house next door, and I was 12, 13 years old, heard my mother outside yelling at him, and I just kind of peeped my head down the stairs and I heard what she said that he was in there, in the crack house. And he started to walk up the stairs, I wanted to kick him down the stairs so bad. I could have hurt him.

I loved him so much. So, what I did instead, I ran over to the, it was a four-family flat and has a glass door to get to their real door, and I went to the door and I broke the glass, of this crack house where they have guns, you know what I'm saying? I was just screaming, "I hate you, I hate you. Why did you do this to my family?"

Fortunately, a friend of the family grabbed me, they hid me, I was hid in this, in a closet somewhere, and I can still hear all the commotion outside and they were looking for me, and they were able to deescalate the situation, but again, I was responding like this. And again, you could see maybe rightfully so, right?

But I grow up in this very volatile circumstance, I was the one that was supposed to make it. And here I was, I gave my power away. The one who always took his power, gave my power away when he gave me permission to. That first physician, when he said I'm unhelpful, it gave me... It gave me a permission slip to stop fighting. And I took it.

TOM BILYEU: Just gave me the chills.

SHAWN STEVENSON: So, but hat didn't sit well, obviously with my spirit, eventually it took two years and I'd gotten, I was overweight and in a lot of pain. But my grandmother harassing me, checking it on me, and coupled with that vision of, "This person says he can't help me. Why am I listening to him? What can I do to get healthier? My life is supposed to be great. What can I do to get well?"

And I changed the question. And as you know, the human brain really, questions are the answer. There's this process in the brain, it's called "instinctive elaboration". So, when you pose the human mind a question, this is why shows get us, the open loops, like it's seeking out to find answers. And I asked, "What can I do to feel better?"

And also, I'm a very practical person, which I turned that off for those two years, I was like, "What are some actual tactical things that I could do to get better?" I need to lose weight. First thing I do was SlimFast. Don't recommend. It's not very effective. But it's because of like, "Okay, what do I have access to?"

But the low-hanging fruit for me, I'd always been an athlete, and so I just started going to the gym. Every doctor said, "Don't do anything," which the worst thing you could do is do nothing. I could still walk, Tom. I could walk. I was in pain, but I could move, and they're telling me, "Don't move. That's our advice to you, that's how we're going to help you."

But then again, they don't talk to me again, they send me out the door with a back brace and some drugs, they say, "Don't do anything." And now not only is my spine at atrophying, my entire physiology is. And so just being able to start to move my body, to upgrade the food I'm bringing in.

Because again, the real solution at the end of the day was what was I making my tissues out of? My disc that looked like two pieces of fried baloney on the MRI initially, the light should be shining through them, it was made of absolute BLEEP, like absolute garbage. I ate fast food every day. Unless again, like I didn't have a dollar, then I ate fast at the house.

Well, ultra-processed food, which was my favorite meal, Dorito shells and cheese, I just eat a box of that BLEEP. You know? And ramen noodles. Again, I'm just eating processed food every day. So, I'm making my tissues out of really low quality BLEEP. My body is doing the best it can do to keep me alive. What if I get my body the best stuff? The sulfur-bearing amino acids, the vitamin D? You need vitamin D just for assimilation of nutrients for your bones.

And we talked a little bit before the show, I broke my hip at track practice just running. Why are my bones so brittle? All I knew was calcium from the commercials, but there were so many other things that I uncovered. And here's the last part of story, the solutions were there the whole time, I just wasn't attuned to them. The books, the resources, the people. They were there.

I was just so busy in my world of "I'm unhelpful and things can't get better", that I just ignored the solutions, possible solutions, access to solutions, that were there all along.

TOM BILYEU: That's so powerful. There's a quote, I forget the exact idea, but, "Never explain an outcome to nefarious intent, what can be explained by incompetence." And so I don't think people mean to us up, I don't think the drug companies mean to us up. I'm grateful for a lot of the drugs.

I don't think the food industry means to us up, I'm grateful for hyper-palatable food, cheap and convenience. I don't think social media means to us up, I'm grateful for the people that I've been able to connect with. You and I wouldn't be sitting here together if it wasn't for social media.

SHAWN STEVENSON: Absolutely.

TOM BILYEU: So, all of these things have had huge benefits in my life, but like you, I sat on the edge of the bed one day and I looked at my life not moving in the direction that I wanted, and I decided to take complete responsibility for the outcome of my life. Now, once you do that, you have to start looking at the data, what's actually working, what allows me to predict the outcome of my actions better?

And so that puts you on this very useful trajectory. But if you never have that click over moment, then you get prescribed the drugs, you take the drugs, you go to McDonalds because it has the dollar menu, or at least it did when I was younger. And all of these things sort of snowball you into a really dark place.

I am concerned right now because of the way things are going, and I feel like the... I mean you gave some crazy stats today, "80% this, 88% that, 78% this." It's just really, really startling. And so, I'm about to tell people the coolest piece of information I've ever gotten from you, which will be the punch line to all this.

The quote that I wrote down when I was researching you is, "Food is information." But so are thoughts, thoughts are information, and once people realize what you are eating is having an impact on how you think, believe it or not, so I went on a horrendous journey of anxiety dealing with that.

And I realized that 70% of my anxiety, the part that made it overwhelming and made my life near untenable was from diet drinks. And once I removed them, I could not believe. That changed my life. In no small way. And the thought that the biggest part of it, it's not the total cause of my anxiety, but the biggest part of my anxiety was something I was drinking, just... It seemed impossible.

And so, getting people to recognize that, that food is information, it's communicating to you at a cellular level, it's making you think in different ways, we didn't get to it today, but you've talked about how in prisons they did a study, if you increase their nutrition, make their nutrition superior, it decreases the violence pretty substantially. It's insane.

So, getting people to understand what you're eating, believe it or not, matters. How you sleep matters, your exercise matters, and what you allow yourself to think matters. And so, I hope that they don't need to go through a two-year struggle like you did, or the multi-year struggle that I went through with anxiety.

And instead, they can learn easily what you and I have learned with great difficulty, and recognize what they think matters as well, and that they have to get that right, because it's all information.

Shawn, thank you so much for being here. Speaking of good information, if you haven't already, be sure to subscribe. And until next time my friends, be legendary. Take care. Peace.

SHAWN STEVENSON: Thank you so very much for tuning in to the show today, I truly hope you got a lot of value out of this. This is one to share out with your friends and family. You can send this directly from the podcast app that you're listening on. Of course, you can take a screen shot of the episode, share it on social media. You could tag me, I'm @shawnmodel on Instagram and Twitter, and I'm at The Model Health Show on Facebook.

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I appreciate you so much for tuning in to the show today. Take care. Have an amazing day, and I'll talk with you soon.

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