THE MODEL HEALTH SHOW

EPISODE 821

These Foods Are ADDICTIVE! Take Back Control of Your Biology With These Tips

With Guests: Dr. Amy Shah, Dr. Tim Spector, Michael Easter & Dr. Jud Brewer

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SHAWN STEVENSON: You're about to discover why certain foods are highly addictive in contributing to our epidemics of health issues. You're about to hear from four incredible experts in food science, food psychology, genetics, and more to help us understand how these foods are hijacking our biology and how to take back control of our health.
And let's kick things off with double board certified medical doctor and nutrition expert, Amy Shah. In this segment, you're going to learn how a certain category of foods are hijacking our brain and altering our neurochemistry. Check out this first segment from the amazing Dr. Amy Shah.

DR. AMY SHAH: Also, I was a nutrition major for undergrad, before I went to medical school. And there's a lab that has electrodes, and they sit and they look at people eating foods, and they're engineering foods that create brain electrical impulses that light up all different parts of our brain, especially the dopamine centers. Because the dopamine is the craving pathway, and we can get into that in a little bit. But they're able to make foods that are so good at lighting up all these pathways. No natural food could ever match that. And so if we think about that, it seems innocent, right? Oh yeah. They're just trying to make foods that are more palatable. They want to make more money. But when I realized 80 percent more mental health days with the people who eat these foods. More depression, more anxiety, more feeling down when you're eating more of these foods. Shouldn't we look at what we're doing here?

SHAWN STEVENSON: Now, what's really remarkable about this bliss point phenomenon is the fact that, like you just said, it's these kind of intense flavors and combinations that incite these reward pathways. Our biology is also very intelligent, but they found a way to hijack that because our biology with anything intense like that, it's going to shut down desire and craving to eat more. So they found this specific point where it takes you there, like right to the tip.

DR. AMY SHAH: Yeah!

SHAWN STEVENSON: But you don't go past it. And so you just keep staying in that kind of bliss point zone and eat more and more.

DR. AMY SHAH: So our biology is so smart. They want us to pursue things over and over again. They want us to work hard to build houses, to provide for our community, to have relationships, all these things are through our reward pathway. So for example, when you

forage for food, Thousands of years ago, you find a beautiful tree full of fruit. You get a reward, a dopamine reward. But there's a little bit of discomfort at the end. It's like you're rewarded, but then you have this feeling you got to do it again. And it's so smart. It keeps us going the next day.

You're going to forage for more food, for better food, for, and it's how we keep evolving, how we keep going and providing for our families. And it's super smart, right? But then you take it to modern times and there's an Oreo or let's take, any kind of processed version and it is creating that kind of dopamine release. And now we're craving more. Now we want more of that. And that's gambling, that's porn, that's alcohol, that's Instagram, that's video games. They all have figured it out. This pathway that we have never been told about. Before I read the research on how these pathways Intricately like how they're really working.

I thought why doesn't everyone know this so that we can be better advocates for ourselves. So we can save ourselves from these addictions from these terrible cravings. If we really understood how it worked, then we'd say oh, that's what's happening. That's why when I crave something so bad It's like I get it and then I feel really good, but then it's uncomfortable like That's the dopamine pathway working.

SHAWN STEVENSON: Yeah, I love this because a big part of what we do is shining a light inward. So we actually know what's happening with our minds and bodies is very empowering. It's obviously the first step is awareness. And you mentioned Oreos just now, you talk about Oreos in the book, a specific study of mice given the opportunity to have Oreos, or cocaine.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And they were going for the cookies.

DR. AMY SHAH: Yeah. It was very sensationalized in the media. I don't know if you remember when, I remember when it was such, people were like, Oreos are more addictive than cocaine. And I think what people didn't understand and they still don't understand is that there are opiate receptors in our brain that get activated with food. That what I didn't know before I got into this research is that there are gut bacteria that can produce these opiate-like substances to help you eat certain foods. They steer you towards certain foods. They make you eat more of what they love. So they can help you. in this process of saving yourself from these addictions. So if we knew that, we would do a better job of saving that gut bacteria because they're actually creating opiate-like receptors.

They're creating dopamine that is 10 to 100 times stronger than our own dopamine. Serotonin, GABA. These guys are literally producing happiness chemicals. For our brain, they're telling our brain what to eat, what not to eat. So the way you're feeling right now, the things you want, your mental state right now, is actually coming from there, not from here.

SHAWN STEVENSON: Yeah, and I think we're looking at this, the average person is looking at this through the lens of logic, and they're like cocaine versus cookies, like nobody, these little mice aren't trying do sexual favors to get some..

DR. AMY SHAH: Right!

SHAWN STEVENSON: ..Oreos, they're not out here selling their bodies to get Oreos.

DR. AMY SHAH: Right.

SHAWN STEVENSON: Humans wouldn't do the same thing, but culturally if we're talking about cocaine versus Oreos are massively socially acceptable.

DR. AMY SHAH: Right.

SHAWN STEVENSON: Very easily accessible as well.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: So acceptable, accessible and it's.. If we're talking about stigma as well around, something like cocaine. And all of these things start to create this mental template about what we would go for. And, we're talking about, we're leaning into the subject of like food addiction, which isn't necessarily the topic we're trying to deconstruct. But if we're in a state where we're eating as you mentioned, 75 percent ultra processed foods, if we're talking about children and adults, are somewhere in that ballpark, 60 to 75 percent as well. Are we not addicted?

DR. AMY SHAH: Yeah, we are. It's like functioning alcoholics, right? The way I think about food these days is how cigarettes used to be, right? We kinda knew they were a little bit bad for us, but it was socially accepted and everywhere you go. People were smoking. It was the socially accepted addiction. And I think what's happening right now is we're realizing, Whoa, the body of evidence is telling us that ultra processed foods are going to kill us earlier. There's proof that it shortens your length of life. It's going to give you diabetes, cancer, and heart disease. And I don't mean to say it's equal to cigarettes, but it's the same concept.

We need to move to a place where there's labels on foods and urge companies to say if you're going to use ultra processed ingredients and you're going to make this, there's going to be a big label. And a warning sign so that kids when families when they're at the supermarket, they see a big sign that says don't choose that one.

SHAWN STEVENSON: Yeah. And these foods contain Obesogens.

DR. AMY SHAH: Yes, and so then they'll say Oh maybe we should make that version without the ultra processed ingredients And what I teach in the book is that it's not about just avoiding the ultra processed foods. It's also repopulating your gut bacteria with foods that will give you the right signals of happiness, of when you're full, of when you should stop eating, when you should be motivated. All of that can happen with just switching out the ultra processed with a real food. The same reasons that we're getting hungrier is the same reasons we're getting sadder and we're getting fatter and we're getting sicker and they're all connected because I think what we're doing is we're missing this big picture and we're concentrating on these individual factors.

We're saying like, oh, how do we create a pill or solution for obesity? How do we create a pill solution for depression? But what about looking at it as the big picture, and I say big because it's brain, immune system, gut, like big picture. If we looked at it through that lens, we would understand that food creates mood, food creates cravings, food creates inflammation, and we can start to change how we view these disorders. It's almost linked as one.

SHAWN STEVENSON: Yeah. Wow. Again, we don't usually think about that. We just get hungry, we go eat some stuff. Yeah, exactly. But it's so much deeper than that. And actually in your book you shared a study, and this was cited in the journal Cell Metabolism, demonstrating how, for example, ultra processed foods trigger us to eat more. To crave them more and to specifically overeat.

DR. AMY SHAH: This is a landmark study. You, we always think that we should go with our intuition. We should just eat what we're craving or hungry for, right? That's the new anti diet trend. But if you think about it in this study, what they said is no, if you eat what you want and you're eating a standard American ultra processed diet, you will eat 500 calories more than the unprocessed group and you will gain two pounds in two weeks with nothing else different. Except that you're eating ultra processed food. They found that there's this hormone called neuropeptide YY. It is, it makes you feel satiated and full. And in the ultra processed food group, that hormone was lower. And ghrelin, our hunger hormone, was higher. So even though you're eating food that's matched in calories, matched in fat, in protein, in fiber, and in sugar. You are hungrier and you're less satisfied.

SHAWN STEVENSON: That's bananas. Again, so they were essentially given the same array of caloric options, same ratios of macronutrients, but they were consistently eating about 500 more calories a day when they put them on the ultra processed food diet versus the whole foods diet.

DR. AMY SHAH: Yeah, imagine this is the perfect study. So diet studies are so hard to do. They brought people in to the NIH and they actually had them stay there so they could monitor all their food for a two week period. And they basically had them do both ways. So they had them do an ultra processed two weeks and then a regular unprocessed two weeks to even say, Hey, is there something different about the people themselves? And in two weeks, that's very little time. Two weeks of monitoring two different groups of people. They saw that the ultra processed group was eating more consistently per day, per meal. They were asking for more snacks. They were less full. And shockingly to me, Shawn, the blood sugar and the insulin and all the things that we would think would be really different weren't.

And I thought that was shocking because it's basically saying that the gut bacteria, these, the neuropeptide YY, the ghrelin, that's driving the difference between these two groups. So when they looked at the conclusions, they said, Okay. What is the difference between the ultra processed food and the real unprocessed food? Because the sugar level stayed the same, the insulin, they checked all these other parameters. But it was the gut hormones that changed and that, to me, is just more, it just puts so much more weight on the fact that our gut bacteria are running the show when it comes to hunger and cravings.

SHAWN STEVENSON: You put on more weight. I heard that. I like that. I like that. You talk about in the book, hunger hijackers.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: So let's talk about some of those.

DR. AMY SHAH: We are a very different world than we were even 70 years ago, right? You can blame it on the internet. You can blame it on UberEats, if you want, or, DoorDash. You can blame it on packaging of foods. You can blame it, but a lot has changed over the last 70 years. And what's happening is we're noticing that people have more hunger. People are less satisfied that people have more craving. So hunger and cravings are two different things. But both of them have gone up. And so we're seeing that you're eating more food, you're undernourished, And you're getting more depressed, but you're getting fatter. It's like obesity is on the rise, but you're undernourished and you're feeling sad. And if you think about it, when you think about it from the gut brain lens, it makes sense because those gut bacteria,

they make dopamine, they make serotonin, they make peptides that make you hungry or full. And so if you start to damage these by, all the things that we're doing, but mostly food, you're going to see a change in how we feel.

SHAWN STEVENSON: Yeah. And you talked about specifically, you called some of them out. You even talked about, for example, emulsifiers causing this disruption.

DR. AMY SHAH: So if you think about how some of these food products, they increase the shelf life. They make it easy for us to ship something from California to Florida. You can't ship real food from California to Florida without it spoiling, right? So you have to put things in it that increase the shelf life. You have to put things in it so it doesn't separate. So emulsifiers, if you don't put emulsifiers in food, it will separate.

SHAWN STEVENSON: Like a salad dressing?

DR. AMY SHAH: Yeah, it'll be like, when you look at a natural salad dressing, it'll separate the water and the oil, right? Or for example, I have you know I make this chai tea just, for with coconut milk. And what happens is people will say, Hey, it doesn't mix that easy in water. You have to like really mix it. And I said, because we don't use emulsifiers. If you use these products, it makes it palatable, makes it easy, makes it convenient.

So what's happened is in the search for the tastiest, most shelf stable, most convenient and inexpensive foods, we have created hunger hijackers. And we didn't know, you could, it depends on if you believe in the conspiracy theory or not, and I'm not gonna I'm not gonna say that I fully believe in that because I am on the medical side of things, and I don't think that there's doctors who are like, getting together and willingly wanting to keep people sick. And so I don't think the food manufacturers, per se, are trying to keep us hungry, but they're keeping us hungry because that helps their bottom line.

It is helpful to have foods that are tasty because you come back for more. When it creates a dopamine explosion in your brain, you're gonna come back for more. A real food is like a dopamine spray, a water gun spray. An ultra processed food is a dopamine explosion. And so what we end up doing is we're teaching our kids that hey, you can get a dopamine explosion from these and they unknowingly start to have more of them. And now 75 percent of adolescents eat ultra processed food as part of their main diet. So you look at a child adolescents diet and only 25 percent is real food. Everything else is ultra processed.

SHAWN STEVENSON: It's insane.

DR. AMY SHAH: It's insane. But if you think about it, you can't blame these guys, right? Why wouldn't you want a dopamine explosion? Who wants to eat a salad and maybe get a spray of dopamine?

SHAWN STEVENSON: Flimsy little ..

DR. AMY SHAH: Yeah, it's like nothing. Going for a sunny walk? That's nothing compared to, drinking alcohol or taking, eating one of these ultra processed snacks. That's what we're up against.

SHAWN STEVENSON: Alright, next up in our compilation dedicated to unpacking the science behind addictive qualities in food. We have epidemiologist, medical doctor, and expert in genetics, Dr. Tim Spector. In this segment, he's going to be sharing an overlook factor that can make it difficult to move away from addictive foods and towards healthier foods in the first place. Check out this segment from the incredible Dr. Tim Spector.

DR. TIM SPECTOR: We're so dumb. We think it's easy, and we think we've. Our problem is we've underestimated food. We said, Oh, it's easy food. It's about calories. It's about saturated fat. It's about the sugars. That's all you need to do or sort this out. All you gotta do is cut out lectins, cut out gluten, do this reductionism, like we're so clever. It's all about this vitamin. Just take vitamin D. You'll be fine. Vitamin C injections, all sorted. It's nonsense. We humans are incredibly complicated. Food has over 30, 000 chemicals in it. Our gut microbes convert that food into hundreds of thousands of different molecules. We still know very little about and all of us produce different ones, and they go into our blood in different ways.

So we're much more complex machines than we've given ourselves credit for and the idea, you know, we with we can divide our food into three sort of sections and that's it. You know, are you high fat, high carb? It's just rubbish. We've got to start thinking much more holistically and realize that Yes, we need to. You know, even with the Zoe program, where we look at fats and sugars and microbiome, they're just the things we can measure at the moment.

It's pretty good, but might be other stuff in 10, 20 years time. There's some other technology that shows us, there's other bits in that picture as well. But at least we're moving in that right direction towards understanding this human complexity. That is, yeah, it's fun because it also, I think, Always keeps coming back to the same thing: that the best bet is to eat a diverse diet. It's to have as many different plants as you can. It's to have these fermented foods with all kinds of different bugs in them, these probiotics. It's to throw everything at you, increase

your sense of smell and taste and try everything, it's that variety. Variety is the spice of life. And I think that's what we keep coming back to is as the way to deal with our complexity.

SHAWN STEVENSON: So with that being said, this information coming from our gut, informing us on what foods to eat to feed them. Let's talk a little bit about that.

DR. TIM SPECTOR: Yeah. So if you think each of your microbes has its own evolution and like we've evolved, but it takes multiple generations for us to change our genes and evolve, whereas some of our gut microbes can reproduce every 30 minutes. Okay. So they're living hard and fast and furious. These guys right there, having sex and having babies and it's all happening, inside an hour. And their genes are changing. And, if you get an overgrowth of, say, particular bugs that are, that like living in an inflammatory environment.Okay, so they like burgers and fries and things that will generate lots of fats and things that will generate a little bit of inflammation, which is the stress molecules you get in your gut. Then they will evolve to send out chemical signals to get more of it if they can. And that's what we know happens in some animal models, that by growing certain microbes, they'll send off chemicals to, say send me more of that food.

And they've done all kinds of really fancy experiments to change the way insect behavior works. So that rather than picking sugars, they'll go for protein, or vice versa, just by switching around their microbes. So they've proven that your microbes can certainly determine your choice of foods, how much sweet, how much protein. And we think the same happens to some extent in humans haven't been approved it, but it makes absolute sense, and it probably is why people get into this junk food cycle where the only microbes that are still living because that, these at least living off a bit of fat that's down there and other chemicals that they're living off in a very inflamed environment, their natural evolution, if they've been there for years or so. They've probably evolved chemicals to say, I give me more of this food because of this symbiotic relationship with the host because they're what, they're just sitting there waiting for you to eat another burger.

And they might well send signals saying I don't want any of that salad. I don't want that gherkin just give me more of the.. I wants more of that bread and more of that burger. So that's what we think happens. We haven't proven it, but it's certainly in the insect world where you can do these experiments by swapping foods around, it's very clear it works and it makes sense.

Because the microbe like us is evolving, but they're just doing so much faster. And so I think it's one of the reasons that it is hard for people to break these habits and to go from very unhealthy diets to healthy diets. Sometimes if you've got the wrong set of microbes, they're

not going to be happy for the first few weeks. And it's also why people with some gut problems do find it hard to. To suddenly shift to a high fiber diet early on, they're not geared up for it. So they have to be, and they often get put off because they feel unwell when they first start. So I think it's all part of this idea that having lost all the healthy microbes, you don't have those guys, they're breaking down the foods as you'd like them as well.

SHAWN STEVENSON: I'd hope that you're enjoying this compilation dedicated to the science behind the addictive qualities of food. And again, we're going to look at how to take back control of our brains and our biology. And I think it's important to understand that there are a lot of science backed strategies to reduce our cravings and desire towards unhealthy foods. And one of those things is highlighted in an incredible study from researchers at Brigham Young University. They actually took test subjects and had them to exercise, and then they strapped them up to EEGs, put all these electrodes around their scalp and showed them a bunch of images. So this would be images of delicious foods and also random stuff like flowers just to see how reactive the brain would be after exercise versus without exercising.

And what they found was post exercise hyperactivity towards food or food desire went down dramatically. What the researchers affirmed was that the act of exercise actually changes the brain. It alters the way that the brain is working and the neurochemistry produced that drives us towards food. Now this doesn't say that the act of exercising completely eliminates our desire to eat unhealthy food or to eat at all.

What the researchers found was that we just tend to make better choices in what we're eating. In particular when we have a consistent exercise regimen now, we might think it's just a psychological thing, right? So i'm exercising so I want to eat right too But what it really is again, it's altering our brain and it's reducing our desire to make snap decisions essentially for us to be more intentional in the foods that we're choosing because you know having a krispy kreme pop up on our drive home or McDonald's sandwich on a billboard. It doesn't seem as attractive when we have this activity that we've put this label as exercise. What our ancestors called it was just living. Just living. All right. But for us, we've got to simulate that and lift some heavy things, do our cardiovascular exercise. And what we're going to find is that's going to help us to reduce our draw towards things that tend to be addictive.

Now, with that being said, right before I came in to do this episode today, I was training with my youngest son, Braden,, who's 12 years old. And we did a variety of different core exercises. But very functional things and also some other strength building exercises as well. But I really wanted to work on his core strength. And one of the things that we did was a farmer's carry. And so I had him to grab one of the Primal kettlebells that I have that I got from Onit and I grabbed a much heavier one. He grabbed the chimpanzee and I grabbed the orangutan. All

right, and so just by walking with that kettlebell in one arm. It's going to engage the other side of your core significantly to keep your body upright and keep you balanced.

And so we love our kettlebells. We love our steel clubs are steel maces. We've got so many incredible pieces of equipment that we've been picking up along the years from onit.com/model. If you go to onit.com/model, you're going to get 10 percent off all of their incredible fitness equipment. Just picking up a couple of these incredible tools. You can do dozens, if not hundreds of different exercises to really add to your health and the health of your family, your overall fitness. I'm a huge fan of the fitness equipment from on it. Definitely head over there and check them out onit.com/model.

That's O N I T. com/model. And by the way, They've got some of the most science backed supplements in the world. They put several of their supplements through randomized placebo controlled trials in particular, their pre workout shroom tech sport, and also their nootropic called alpha brain. So definitely check them out as well. Now, moving on, we've got one of the world's foremost experts in addiction, habits and a craving mindset. He's a professor at UNLV, and he's also a New York Times bestselling author. Enjoy this next segment with the incredible Michael Easter.

MICHAEL EASTER: The food has always been at a premium. Food has always been scarce. It's always been hard to find for the vast majority of time. And if you had the opportunity to eat it, that would give you a survival advantage. So we're unique in that we store a lot of fat. And this is so we could travel long distances so we could explore. It allowed us to survive. So if you think about in the past, if you had every, let's say every seventh day, you couldn't really find that much food. This meant that if you had the opportunity to overeat, you should do it because you're going to not have food at some point. We still have that ancient wiring in a time where we have 7 Elevens on the corner, we got grocery stores, we got Burger King, we got food everywhere, right?

The average I think we throw out about a third of the food we produce in America. And when people, I like to say that getting in trouble with food, let's say if you're at a weight that you don't want to be at because you've eaten too much. I like to say that it's not necessarily your fault because you're doing this thing that humans evolved to do. But it is your problem to solve if you would like to reduce your weight, right? It's still going to take action. You can't, it's a thing you gotta figure out for yourself.

SHAWN STEVENSON: Now, add to this, the fact that we do have these ultra processed food manufacturers who are taking advantage even more of our biology, right? And it gets into

that scarcity loop of the ability to repeat a behavior very easily. Let's talk about that. Let's talk about the, I bet you can't eat just one phenomenon.

MICHAEL EASTER: So I explained the scarcity loop. Now, as I'm reporting the book I come across this quote from a person who is a CEO or an exec at a snack food company. So snacking wasn't really a thing until about 1970. And what happened is that the food industry goes, all right people are eating three meals. They're probably not going to eat a ton more in each meal. But what we can do is we can create a new category of food and give them new opportunities to eat. So the food industry goes, we're going to create this new category called snacking. Now, if people have eaten, you got to be like, all right what will people eat after they've already eaten? So this guy explains, if you want a snack food to take off, it has to have three V's. It's got to have value. It's got to have variety. It's got to have velocity.

So what does that sound like? Sounds like the scarcity loop that I just explained, right? So it's got to be relatively cheap and high calorie. It's got to have variety, meaning there is a lot of flavor per bite, meaning there's a lot of different options. You mentioned Pringles before we started recording. How many different Pringles are there? There's 25 different Pringles. There's like sour cream and onion. There's barbecue. There's spicy barbecue. There's just keep going. And that's got to have velocity, meaning that it has to be easy to eat, meaning you can consume it faster.

Now I think that velocity is the number one thing when it comes to food. So when food companies process of food, turn a food into an ultra processed food, basically repeated steps of processing that are done to increase flavors, increase all these things that make food delicious. People will tend to eat the food a lot faster. So there's a really great NIH study from Kevin Hall, who I'm sure his name has come up on this podcast before. He's done a really great piece of research where he took a group of people and for two weeks, he locks them in a lab, right? So for two weeks, he lets them he gives them only food that is very minimally processed.

He says, eat as much as you want. And they're weighing every single thing these people eat. It's extremely nitty gritty with the tracking. Then after that, for the next two weeks, he gives them a diet that is equivalent in macros and salt and things like that. Except the food is ultra processed. It's the ultra processed take on that. He says, all right, eat as much as you want. Again, they're tracking every single thing. And what he finds is that when people are on the ultra processed diet, they end up eating about 500 calories more per day. And they end up gaining weight. And the reason mainly comes down to the speed at which they ate the food.

So when a food is ultra processed, it's super easy to eat. Think about getting a piece of, I have a guy who's quoted in the book. His name is Mike Roussel. He's a nutritionist. And he's yeah, my son ordered a pizza from pizza hut the other day. He's I had a slice. It's literally just like melts in your mouth and falls down the back of your throat. Think about eating something like broccoli. Like it takes so long to eat. It's crunchy. It's a pain in the ass to eat broccoli. A better comparison might be think of eating potato chips versus a boiled potato, right? You're never going to sit down and eat a thousand calories and boiled potatoes. But people will sit down and need a thousand calories in potato chips all the time because it got all these triggers that make you want to eat it. Also very quick to eat.

SHAWN STEVENSON: Yeah. Wow. And of course, they're manufactured to be that way, it's taking advantage of this hard wiring. One of those phenomenons is the vanishing caloric density So it's like that melt in the mouth experience. So it in a way because when you eat foods through our evolution, there's a certain feedback when you're biting into that food. We were just talking about this as well with gastrophysics and like a certain crunch, a certain experience. And through our evolution, this would be tied to certain nutrient density as well. But now with the food you get this crunch, but then it disappears. So there's like the feedback loop is interrupted.

It's just did I just eat? As much as I thought, okay, next one. It's just it's not, it's tricking our brains in a sense, and our biology, not just our brains, because our brains are really, even though we can hack it, it's very complicated it's been called the most complicated object in the known universe by Michio Kaku, who's we just talked about gastrophysics, but astrophysics, and like modern day Einstein, and our brains are very complicated.

But there are certain things, certain buttons we can push, and you highlight this so well in the book that you can get in there and really manipulate what's happening. Now, with that being said, the fact that we evolved in conditions where there was a lack, there's scarcity. Now that we have all of this abundance, that programming doesn't suddenly turn off.

We're designed for a very different reality than the one that we find ourselves in. And A lot of people are beating themselves up because it's difficult to adjust in this environment. What we're doing is really putting power into people's hands by us. Like I think awareness can really help even what's happening with our brains when we can see the thing happening before it happens. Or while it's happening oh, this is that thing happening. This is that scarcity brain of mine that's doing this thing, obviously, you're getting us a peek behind the scenes of a lot of what's happening. But what are some of the things that we can do about this to take back control of what's happening internally?

MICHAEL EASTER: Yeah I'll give you examples using food. So with any behavior that falls in this scarcity loop, I think the first thing is to your point, becoming aware of it. Once you know how the machine works. Then you have a better probability of choosing not to mess with the machine if you don't want to. But just knowing how it works. I had a, I have a good friend Trevor Cashy, who's who works in the field of nutrition and other fields. He said, The dessert really tastes delicious until you realize the chef put monkey brains in it and then it's not so delicious, is it? So the second way is that you can change or remove any of the three parts of the loop, and that will tend to reduce the behavior.

So we will, we'll use food as an example. You can take away or change the opportunity. So if you've got some food that, once you have one , I think you alluded to that once you pop, you can't stop or whatever. Don't keep it in the house. That's pretty simple, that removes that opportunity that you're going to go. Yeah, I'm you know, I'm on this great bender with my health things are great blah blah blah. But then you know you get stressed out or you get a shitty email from your boss and you go Yeah, I'm just gonna have one Pringle and then all of a sudden the ten of them is gone. Number two, you can take away the unpredictable rewards. A lot of that comes down to does everything that we eat have to taste like a party in our mouth, right? No. So as part of this book, for example I, and I can get into why, but I'll be quick here is that I travel into Bolivia to hang out with this tribe called the Chimane tribe. And they have the healthiest hearts ever recorded by science.

And it all goes down. It goes back to what they eat. Basically their diet is they don't eat processed food. They eat food that has a single ingredient. Now I spend a week with them. I eat what they eat and I'm going to tell you their food was not delicious. It was very boring. There's not a lot of salt. There's not a lot of flavor And when something doesn't taste amazing in every single bite like your likelihood of taking another bite diminishes. At the same time if you're truly hungry, a food that doesn't have a ton of flavor will still be satisfying and still be good so I think realizing that not everything you eat needs to taste amazing like that seems relatively reasonable, right? And then third, quick repeatability. Eating foods that are less processed slows down the process of eating and leads you to take in fewer calories.

SHAWN STEVENSON: Makes sense. Very simple.

MICHAEL EASTER: Yeah, it's simple. It's like, eat foods that are mostly unprocessed that humans have been eating for thousands and thousands of years. And people will look at that and go, yeah I already know that, but okay, now you know why it works. And it absolutely does work. That's the foundation of human health to me.

SHAWN STEVENSON: Yeah. I'm a big fan of just even shifting the ratio. You mentioned that NIH study and being a diet that's just completely ultra processed foods. You're going, you're inherently going to eat more. Calories the same, macronutrients the same, that was so fascinating and also in this study, what happened was for, just subconsciously folks ended up eating less protein in those ultra processed meals. They were just like weeding it out and getting to more carbohydrate dominant things, which stimulates more appetite.

It's just like our biology is cleverly finding a way for you to eat more of that stuff. And so just shifting the ratio, you don't have to go completely. Yeah. If you're right now, the average American adult, according to the BMJ, 60 percent of our diet as an adult is ultra processed foods. What if we, instead of the 60, 40, the way that the house is winning, go 60, 40 whole foods, that is going to probably have some tremendous benefits for your health.

MICHAEL EASTER: And I think that once you start that and you get good feedback from doing that, I think it increases probability that you'll continue with the behavior, maybe even shift the ratio to even better. And I think you're spot on that. I'm not saying that people should only eat foods with one ingredient for the rest of their life. I don't want to live in a world where I don't have the option to occasionally have some Pringles. It's a delicious food. The problem is when that is 60 percent of your diet, you start to see a lot of the problems that we face today. Me, like the scale weight thing is irrelevant, but really the problem with being obese is that increases the likelihood that you will have certain chronic diseases, right? So people will say, just because you're obese, doesn't mean you're going to be unhealthy. Of course not. But what it does mean is that it loads the dice in favor of disease. So it's do you want to roll the loaded dice or do you not want to roll the loaded dice?

SHAWN STEVENSON: Yeah. Can you talk about the Miami study?

MICHAEL EASTER: Yes. So this one was really fascinating about how scarcity cues affect us. So a scarcity cue is a piece of information that we encounter in the environment that suggests that things that we need to survive are scarce or all is not right with the world, basically. So what these scientists did is they had this table where they had a bowl of low calorie M&Ms and high calorie M&Ms, and they would let, students choose whichever they wanted. And when students received a scarcity queue, which was like news of a war that could put, a ration on food or something like that. People were to, people chose the high calorie M&Ms and they ate twice as many of them compared to if they didn't receive that scarcity queue. So the sort of conclusion from the researchers was that, when we think the things we need are going to be scarce. We tend to react by eating food. And that makes sense from a historical perspective. It's if you think that all of a sudden there's going to be a run on food we've got built in refrigerators on our frame in the form of fat.

It's just start eating food. And that among all animals too.

SHAWN STEVENSON: Now, a big part of taking back control of our hunger and satiety is addressing our hunger and satiety hormones. And researchers at Harvard Medical School discovered that test subjects who regularly drink coffee have higher levels of a satiety hormone called adiponectin and lower levels of inflammation. Now, adiponectin has recently gained a lot of notoriety as being one of the most potent hormones influencing our appetite and fat metabolism. While another study that was published in the American Journal of Clinical Nutrition revealed that coffee also stimulates the release of another hormone called CCK.

When CCK is released, it increases satiety to help us to feel fuller, faster, and CCK is produced primarily by cells in our gut. And according to research published in the journal Physiology and Behavior, optimizing levels of CCK could play a key role in reducing levels of body fat. Now, Coffee has been utilized by human beings for centuries, but today we know that the quality matters. Coffee can mean completely different things to different people. So we want to make sure that the coffee that we're getting is organic and ideally to address the acidic nature of coffee. We have the complementary inputs. of things like high quality organic medicinal mushrooms, things like Chaga, Lion's Mane, and Reishi.

And there's one company that's utilizing a dual extraction of the very best medicinal mushrooms in the world, like Lion's Mane, like Chaga, and blended with organic high quality coffee. And that's the folks at Four Sigmatic. Go to foursigmatic.com/model, and you're going to get 10 percent off store wide. Plus they've got some other incredible perks there as well. And this is the coffee that I've been utilizing for years. I just made some for my wife and I this morning. I made the think blend that has lion's mane and chaga. And they've also got a great adaptogen blend as well. That includes things like ashwagandha and also chaga as well, of course, and Tulsi and it's half calf. So they got something for everybody over there, head over there, check them out FourSigmatic.com/model. That's F O U R S I G M A T I C.com/model for 10 percent off. And now onto our final expert.

And this is one of my favorite episodes, incredible individual, Dr. Judson Brewer. He's an internationally renowned addiction psychiatrist And neuroscientists. And in this segment, he's going to be talking about how certain foods are designed for addiction. They're designed for addiction. That's what they're made for. And also, he's gonna share how to deconstruct your habit loops and start making healthy choices that you want to make. Let's check out this next segment from the amazing Dr. Jud Brewer.

DR. JUD BREWER: I'm gonna guess that you don't have a Doritos or a Cheetos tree in your backyard. Because there's no such thing. And I love my favorite peer reviewed journal, the Onion. They had a headline that says Doritos celebrates its 1 millionth ingredient, right? Cause they are dialing it in every day. And there's a reason that those both are like electric orange and that she has a great example of vanishing vanishing caloric density where it's did you just eat something? No. Better try it again. Try it again. Try it again. So those are designed for addiction. Michael Moss wrote brilliantly about this where all these things that they engineer from feeling like we're in control with lunchables, like kids being feeling like they're in control of what they're eating to the, all of these, bliss point manipulations to get people just addicted to things.

The funny thing there is. Addiction is not pleasant. And so when we're just mindlessly consuming or feeling like we are under the spell of the, whatever the chip or the ultra processed food is, that's not very, that's not actually very pleasant when you pay attention. Because you feel like there's this drive that you have no control over. Addiction is continued use despite adverse consequences. That's what I learned in residency. Continued use despite adverse consequences. If you look at food and somebody eating an entire bag, continued use despite adverse consequences when they feel like they can't stop. They're designed for addiction.

If we pay attention, we can start to see pretty clearly that they're actually not very rewarding. And so we hit that second step where we become disenchanted when we see, Oh, addiction doesn't feel very good. None of my patients with addiction say this is great. Help me be more addicted doc. They come for me, to me for the opposite. So the third step I think of this is finding the BBO, the bigger, better offer.

SHAWN STEVENSON: Not to be mistaken with the BBL.

DR. JUD BREWER: Yes, not to be mistaken with the BBL. So the BBO, this actually came from my high school days. It's like you set up a date. And you're all looking forward to it on Friday and then suddenly your date's Oh, I'm watching my hair or whatever. Lame excuse. It's Oh, they found somebody else asked him out and they're bigger, better offer than I am. So I'm relegated to watching television while they go out with the other person. So the bigger, better offer our brain is set up this way, where it's going to have preferences is going to say A or B. If B is better, I'm picking B.

So if wine. If we can start to see that our old habits are not that great, that's what that second step is about, becoming disenchanted. We can then give our brain something better. And the nice thing about better is that it's already there. It might simply be paying attention

as we eat and stopping before we're overstuffed. Because what feels better, stopping before you're overstuffed or being overstuffed? Duh, right? It's a no brainer to our brain. So bringing that awareness in, again, awareness is critical for this third step as well. Just seeing oh, where, how much is enough? How much is enough? That in itself can be more rewarding, that bigger, better offer.

Another way to help actually with all of these steps, I think of this curiosity as this bigger, better offer, because it feels better. It feels better than the craving. So if we have a craving for something and we're doing, let's say we're, I think of it as rest and digest. If we're going like 14 hours between eating dinner and breakfast or something like that, like the time restricted eating at first, when somebody is starting to get used to that, they can have craving. If they snack a lot at night, they might have a craving for a snack, even though they're not hungry. And so getting curious about that craving helps them work with and ride that craving out instead of trying to fight with it or try to distract themselves or whatever. So they can disarm that craving. They can see the craving doesn't have any power. If you bring in that the curiosity, because you get curious about it and suddenly. Oh, it's just these sensations. It's not that big of a deal. And so curiosity itself is tremendously powerful. If you can't see what it is, if you can't map it, you can't work with it. So habits, you've got to bring them into the light.

And so we bring these habits into the light. through awareness, through curiosity. Oh, what's this habit? So for example, we can start with our eating behavior. And first off, I want to give a shout out to the stories that I talk about in my book. So my patients and the people in our Eat Right Now program were just so generous with sharing their stories with me that I could share those stories with other people to help them so they could see this is what it's like in real life. And their stories ranged from like stress eating, to just mindless eating, to overeating, to binge eating, to being addicted to fast food. One of the people in the book like really talked about how that was his drug. And so I just want to give a shout out to them for being so kind and generous with their stories.

And with that I highlight in the book how the first step for any of us is to map out what the habit loop around eating is. Because there can be multiple ones. There can be one that's dominant. There can be ones that show up at certain times of day or under certain circumstances. But they all share the same structure. That trigger, that behavior, and the result. And the nice thing here is, the trigger's not important. People might think, what? Trigger? If I, cause most of my patients come in and they're like if I could just Avoid or tackle or, fight with my triggers, then I could win. Triggers only set the process going. They're not what drive the process. So I say, forget about the triggers, right? If you can recognize them, if you can name them great, but don't worry about it. Focus on the behavior. So is it mindless eating? Is it overeating? Is it stress eating? Is it boredom eating? Is it sad eating? Is it happy

eating? You get the idea. It's a lot of kind of eating. Yeah. All of these things get associated with eating, but in the absence of actual hunger, right?

So these are the hunger habits where we think we're hungry. But we're not actually needing food. I think of the differentiation here is between homeostatic hunger, which is the actual need for food and hedonic hunger, which is all the emotional eating. So they've got to map that piece out. Like, why am I going to food, right? What is driving that? Is it boredom? Is it stress? Is it sadness? Whatever. So seeing what that is and how they're eating. So I think of it as the why, what, and how. Like, why are they reaching for food? What are they reaching for? Is it comfort food? There's a reason it's called comfort food. And then, How am I eating it? Are they just pounding it? Are they just mindlessly eating it or are they really paying attention and all of those are important? But that first step is just mapping out that loop So trigger behavior result and if they can't notice the trigger just the behavior and the result. So does that make sense?

SHAWN STEVENSON: Absolutely, that's profound in of itself. Just paying attention to the reason that we're eating. We usually don't do that, and this could be like you said for so many different reasons especially in the fitness space, this could be you're eating because you have to, it's a time thing. It's a math equation that you're doing this on. This could be entertainment is a big thing, just like a taste for something or something interesting. This could be, as you mentioned, comfort food, we could be depressed and looking for that little hit of serotonin for some, from some carbs.

Yeah. But we don't think about it. And so it's just happening. Like we're just we're not really paying attention to our reality, our lives and we're not thinking about our thinking right? And so Even this, like if people get this is going to change your life completely. Just being able to pay attention to why you're doing some of the things you're doing. Be in your body, in your space, in your brain, in your own mind and paying attention. It's freaky. It's like some Neo stuff. When you start to pay attention it's like.

DR. JUD BREWER: Pill blue pill. Yeah. That awareness is critical. And the beauty of it is that I can, as I'm taking a history with, an intake with one of my patients. That's what I'm listening for, right? So certainly their story is important, and we can zoom in on, okay, here's some of these habits that I'm hearing, am I getting this right? So first, I can help them see that I'm actually listening. Which is already, helpful cause in medical space is a mess right now.

So it's yeah, I really do care cause I do. I love working with my patients. So one, I'm listening and I'm reflecting it back to make sure I'm getting the story right, which is also helpful and I'm helping them start to make these connections. So You know, can they see what's the trigger?

What's the behavior? What's the result? And I'm like, Hey, did you, can you see that this is a habit loop? And then I explain it very briefly, like we just talked about, it's Hey, if it's pleasant, you're going to want more of it. If it's unpleasant, you're going to want less of it. That's pretty straightforward.

Your brain is set up that way. And then they say, Oh, cool. Wow. I'd never realized that's where, eating popcorn while I'm watching a movie in, in, when I don't have the popcorn, I feel like there's something off because that's just what they're used to, right? Seeing those habits illuminates them so that they can now. See how their mind works. So you got to see how your mind works before you can work with your mind. And that's where steps two and three come in, working with your mind.

SHAWN STEVENSON: Part two is changing the reward value of these eating behaviors in our brains. Yeah. Let's talk about that.

DR. JUD BREWER: Yeah. So we touched on that a little bit earlier. But this is really where this Raskorla Wagner equation comes in and also critically depends on awareness. So basically, if we know this is how our brain works, that our brain's not going to change a habit until it sees whether that it is actually better than expected or worse than expected, right? So let's start with the worse than expected.

I have people pay attention as they overeat, and as I mentioned that study, relatively quickly, people start to realize overeating does not feel good. The holidays, when somebody over indulges in a holiday, their stomach says, dude, why did you do that again? They're like I wasn't paying attention. This is the food looks good or we're, we're in good conversation or my family's a mess. So I eat to numb myself. And that numbing is actually not that rewarding. So they pay attention as they overeat and they start to, their body tells them everything they need to know, which is, hey, overeating, not so great.

So they start to become disenchanted with that behavior. And we can distill that down to one question, which is, What am I getting from this? Not a thinking. What am I? I shouldn't overeat, but a feeling. What does it feel like to overeat? That's critical. It's the feeling body. That's what drives all of behavior change.

SHAWN STEVENSON: Now moving on in this part of the equation, I think we miss out on a lot. Let's proactively, intelligently put in place a reward. That has to be equal to or better than that other thing. And that's the part, it's so crazy at this point. I love talking to you about this. It's so often left out. It's just again, use your willpower. If it tastes good, spit it out. All these

different things. You have to replace the, you have to add in the reward intentionally. To get the real sustainable change.

DR. JUD BREWER: Here's the crazy thing. The reward is already there.

SHAWN STEVENSON: Yeah.

DR. JUD BREWER: Let's frame this a little bit. How many people can think back to the last time they ate their favorite treat? Ice cream, cake, chocolate, whatever. And think back to, you've got the ice cream in your mouth, and you're already thinking about that next bite, or that next lick of ice cream, or that next bite of cake. You're not actually enjoying what's in your mouth, so you are wasting food. If it's, there's food for calories, but if you're enjoying a really good dessert. You're missing out on all the pleasure that's there. The whole point is that it's a really good dessert, so don't spit it out. Actually pay attention as you eat it. And I think I write about this in the book.

I call it the pleasure plateau. And my friend Dana Small, who's a food scientist at Yale, she actually did this for a PhD thesis where she fed people basically their favorite chocolate while she was measuring their brain activity. And at the beginning, people are like, this is awesome. I love chocolate. And then she would just keep feeding them and feeding them. And what she found, and I think the record, the, was 74 squares of chocolate before somebody's uncle, get me out of here. What did I sign up for? But all of them go from, this is amazing. I want more to this is awful. I feel eating another piece would make me feel sick.

And what that highlights is, I think of this as the pleasure plateau, which is, A little bit tastes good if we really pay attention. And with each bite, our body is going to say, at some point, okay, that's enough. And if we don't pay attention, we're going to hit that pleasure plateau, and we're just going to go right off the cliff of overindulgence. And so if we pay attention with each bite one, We're enjoying the food. That's what it's for. Two, we can see it. We can sense and feel and taste and smell where our body's saying, okay that's good. That's good. Save the rest for later and we can save the rest for later. If it's really good, why not enjoy it twice as compared to not paying attention and just like shoveling it down and craving that next bite.

So it changes the experience completely because we're One, really enjoying the food, and two, we're naturally stopping, without even noticing. Willpower without anything except awareness. Our body is so amazing in that way. It's got everything. All we have to do is tap into its strength, its power, its wisdom.

SHAWN STEVENSON: Thank you so much for tuning into this episode today. I hope that you got a lot of value out of this. Please share this out with your friends, your family, your community. Let's get this education out to more hands and more hearts. I've got some incredible things in store. Listen, we've got some epic masterclasses that you're absolutely going to love. Some of the most incredible guests. Oh my goodness. I'm so excited about these incredible guests who got lined up for you. So again, make sure to stay tuned, take care, have an incredible day, and I'll talk with you soon. And for more after the show, make sure to head over to themodelhealthshow.com. That's where you can find all of the show notes.

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