

THE MODEL HEALTH SHOW

EPISODE 574

How Gut Health Influences Mental Health & The Truth About Circadian Medicine

With Guest Dr. Amy Shah

You are now listening to The Model Health Show with Shawn Stevenson. For more, visit themodelhealthshow.com.

SHAWN STEVENSON: Welcome to The Model Health Show, this is fitness and nutrition expert Shawn Stevenson, and I'm so grateful for you tuning with me today. What is your gut trying to tell you? Little do most people realize that our gut is the home of massive amounts of neurotransmitters, hormones, and so much more that is affecting our thinking, that is affecting our mood, that is affecting our minds. For example, there are these cool enterochromaffin cells located in our gut, that's producing hormones that affect literally every aspect of our bodies and our health, ranging from our sleep quality to our energy, to even our digestion and our metabolism. Again, all rooted in our gut.

And today we're going to be talking about the body, mind, gut connection, with one of the foremost experts in this subject matter. We're going to be talking about everything, circadian medicine, the time change act that's being proposed right now with daylight savings time, we're going to be talking about Vegas, so many cool things. Again, with one of the foremost experts in understanding this powerful system within our own bodies. So really, really excited about that. And one of the things that we have in common is her love of tea, this is something that's part of her morning routine, as you're going to get to hear the morning routine of one of the leading experts in circadian medicine today, when she talks about that, that it's having her tea is a part of her morning routine.

And for me, if we're talking about the microbiome, if we're talking about gut health, we need to look at what can we actually do to support a healthy microbial community. Because what we know now is that there are specific bacteria in our gut that communicate with the enterochromaffin cells, with the endocrine cells and nervous system cells and generators. The vast majority of our serotonin, for example, is being produced and stored in our gut. And serotonin is well noted to be this kind of dual hormone neurotransmitter that has a dramatic impact on our mood, it's known to be this kind of feel-good neurotransmitter/hormone, and again, it's rooted in what's happening in our bellies. And so, understanding is, we want to avoid, proactively avoid things that is damaging to our microbiome, and of course, add in things that are supportive for our microbiome.

For me, one of my favorite things is a simple tea, traditional tea that's been utilized for a thousands of years. And is featured in a recent study published in the Peer Review Journal, Nature Communications, and uncovered that there's a unique compound called theabrownin and is found in the traditional fermented tea called Pu-erh. Now, this has some remarkable impacts on our microbiome, this compound theabrownin. The research has found that theabrownin positively alters gut bacteria and directly reduces excessive hepatic cholesterol and reduces lipogenesis, AKA the creation of fat. Another study published in the Journal of

Agricultural and Food Chemistry found that Pu-erh may be able to reverse gut dysbiosis by dramatically reducing ratios of potentially harmful bacteria and increasing ratios of beneficial bacteria. This is a lot, there's a lot of really cool things that Pu-erh has been found to do, but again, it's been around for a thousands of years.

But the quality matters. Marketers find out about this stuff, and they start doubling down on toxicity and poor production practices and really missing out on the essence of something really special that you want to seek out the very best source as possible. For me, the only Pu-erh that I drink is from Pique teas. Go to pikelife.com/model for an exclusive 10% off their incredible triple toxin screened wild crafted Pu-erh tea that extracts the bioactive compounds at cold to low temperatures and retains their nutritional density in their patented tea crystals, really, really cool stuff. And again, they're making sure that there's no nefarious compounds coming along with your teas, which is commonplace in tea today. So many great benefits can be found in the diversity of teas out there. Tut the microplastics, the heavy metals, the pesticides, the toxic molds, all this stuff we don't want coming through in our tea. So, go to pikelife.com, that's P-I-Q-U-E-L-I-F-E.com/model, use the code MODEL at check out, you get an exclusive 10% off their entire catalog of over 20 delicious, award-winning tea flavors.

Again, this is exclusive alert, exclusive with The Model Health Show is 10% off. Again, go to pikelife.com, that's P-I-Q-U-E-L-I-F-E.com/model. Now, let's get to the Apple Podcasts review of the week.

ITUNES REVIEW: Another five-star review titled, "Excellent supplement to his books, or the books are an excellent supplement to this podcast," by [theoriginalcrispy](#). "I used to struggle with sleep, still do, it's hereditary. My family has used opioid prescriptions from doctors, which is no bueno. I have read and listened to these podcasts to know how bad that is. These have been a game changer for me, no sleeping pills, no fake sleeping remedies, candles, Vitamin D, daily walks, minimal blue light, etcetera. There's always room for improvement, so now working on eating the right foods for a longer healthier life. And have been intermittent fasting for several years. And I feel great."

SHAWN STEVENSON: Wow, wow, that's just incredible. Thank you so much for taking the time to share your voice, share your story, and that means so much. And thank you to everybody who's popping over to Apple Podcasts and leaving a review for The Model Health Show. It means so much. Hopefully, we can get your review read here on the show, and again, thank you so much, it means everything, and it helps to get the word out and to encourage more people to push that button on their phone and get into this universe of health and empowerment. And it's more needed to date than ever, as you know. And on that note, let's get to our special guest and topic of the day. Our guest today is Dr. Amy Shah, and she's a double board-certified medical doctor and nutrition expert with training from Cornell,

Columbia, and Harvard University, and also the author of the best-selling book, *I'm So Effing Tired: A Proven Plan to Beat Burnout, Boost Your Energy and Reclaim Your Life*. Let's jump into this conversation with the one and only Dr. Amy Shah, welcome back to The Model Health Show.

DR. AMY SHAH: Thanks so much for having me. It's so fun.

SHAWN STEVENSON: It's good to see you. And I want to talk about this mind, body, gut connection. Alright, this is something that's a term is growing more, which is wonderful, but what does it really mean at its foundation? What is this mind, body, gut connection?

DR. AMY SHAH: Did you know that the way you're thinking right now, your mood, your anxious thoughts or your happy or depressed thoughts are most likely coming from your gut? And it's not really... You're not even consciously aware that there's something else controlling... These bacteria are actual... Think of them like little people, they have personalities, they have thoughts and they send signals like dopamine and serotonin, GABA to your brain. It's fascinating, you can actually take... They took schizophrenic people, and they blinded the researchers, and the researchers could pick out which people had schizophrenia based on their gut microbiome alone, knew nothing else about them. And so, you can see... I mean, this is an area that you don't even think or talk about, but it is insane. So, there's a 100 trillion bacteria, they have more genes than stars in the universe, and they live inside, and they make decisions for us.

So, the gut brain connection is something that is so fascinating to me, because I was like, how can you... How do we not know about this? We don't even consider this in our studies on mental health. So, the anxiety, depression, feeling good can come from that gut bacterial communication with the brain, and there's four different ways, at least that we know of, that they communicate, so it's not just one... You know, Vagus nerve is what people think about, it's a connection between the brain and the gut, but there are lots of other ways, like the serotonin, dopamine, GABA pathway, they produce these little vesicles with messengers to the brain. So, there's so many different things that are happening. It is just fascinating to me, because I don't know about... I think most people that are listening or watching want to feel happier, more focused, less anxious, and if you knew that there was another way to do it besides medications and just living with it, then that's kind of exciting.

SHAWN STEVENSON: Yeah. And I love this, because you're somebody who's been a voice for circadian medicine and paying attention to these undertones. And it's really strange, because pharmaceutical drugs obviously have their place, but it's been the go-to, the immediate go-to instead of addressing the underlying dysfunction, like, what is causing the symptom? And you

mentioned something that I'm so glad that you brought up, is the fact that these bacteria, these trillions of bacteria we carry in and, on our bodies, they have genes as well.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: Right? And so, we think about the human genome is determining our fate, but if we go gene for gene, 99 plus percent of the genes that we carry are microbial...

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And they obviously have a huge influence. And another thing that I picked up from our earlier conversation was, even when we're talking about our circadian clocks, these themselves are genes, these are clock genes that are determining when our body is doing everything that is doing, but are microbes, our bacteria have essentially clock genes as well and circadian rhythms as well.

DR. AMY SHAH: Yeah, these... They need to sleep too, and they need time, they follow day and night cycle, and we were talking about it, but basically, if they don't see light and dark for 24 hours, those clock genes in their body gets damaged and they don't function the way they're supposed to. So not only are we damaging our gut bacteria by eating horrible foods with high sugar and preservatives, emulsifiers, etcetera, we're also putting them in a dark place for over 24 hours where they don't know what night and day is, and they're dying off that way.

SHAWN STEVENSON: So, we need that exposure to natural light, to sunlight.

DR. AMY SHAH: The natural light is absolutely necessary for the functioning of not only our clock genes, but also our gut bacteria's clock genes. 80% of the body's functions at least that we know of work on circadian input. And so, one of the easiest interventions people can do is start getting more natural light in the day. And I know for me, that was like the first thing that actually made me feel better, and so, people are always like, there's so many things you guys talk about, but if you really just started with getting some natural light in the morning, and then maybe some natural light in the evening, it could really start to change so much of your body without changing one thing in your diet.

SHAWN STEVENSON: So, what is it about getting exposure to sunlight in the morning that actually helps to kind of set your circadian timing system?

DR. AMY SHAH: So in your eyes, you have direct receptors that go to your brain to the suprachiasmatic nucleus, and so when your retina sees natural lights, it's different than this indoor light that we're in, it will send signals, and it will say, it's daytime, time to focus, time to

process complex thoughts, time to get your digestion going, time for the metabolism to start working, their signals that get sent all over the body and it's coming from the suprachiasmatic nucleus, your hormones, and all of those processes start to calibrate, and we need that. So, each cell has its own clock, but it gets input from this master clock so that it can start working properly. That's why you feel so much better when you go outside, your brain works better, your mood is improved, and that's why we've kind of ignored this for too long, and we were talking Vegas before, places where you're spending a ton of time indoors without natural light is going to damage our body in ways that we're just starting to understand now.

SHAWN STEVENSON: Yeah, and so before this show got started, we were talking about trips to Vegas, so my wife just planned a trip... The last time we went to Vegas... I've spoken in Vegas probably four or five times at some pretty epic events, but I never stayed and done the stuff.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And when my wife and I went together, the last time was about 11 years ago when she was pregnant with my youngest son and I was speaking at an event, of course, and we were getting by, but we weren't doing particularly well, and so we even flew stand by to get to the event, because we have a friend who works for an airline.

DR. AMY SHAH: Nice.

SHAWN STEVENSON: And so, what stand by me is that you literally stand by. I didn't really get it because when we first went from St. Louis to Vegas, we got right on the plane, it was all like, "Oh, this is cool," but coming back was a whole other story. And because of that, we didn't get to get on the first flight. You have to wear a certain attire as well. I don't know if people know that for a certain airline, because what they told me is, you represent the airline. So, I had to like run... I just had like a jeans and a t-shirt on, I had to run to... There's a golf store in Las Vegas, I had to jump on a train, fly over there, get this golf outfit on, I wanted to punch myself in the face a little bit, but I threw that outfit on and I ran back, raced across the... I looked like Tiger Woods on a really bad day.

DR. AMY SHAH: Yeah, you had to look the part. Yeah.

SHAWN STEVENSON: And so, now... But now we missed this flight as well, and so we ended up having to stay a night in a whole different city, and it was just this crazy ordeal because of finances. And so, all these years later it's a very different experience, my wife put the weekend together, because for me, I'm just like I... Personally, I wouldn't have any interest in going, necessarily, you know?

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: It was like, "It was cool, but whatever," like, I like my routine, I like feeling good, and everything starts at 9:00 PM, everything. And so... But she... The deal breaker for me that was just like, "Oh yeah, this is awesome," was we went to the Silk Sonic concert, shout out to Bruno Mars and Anderson Paak, and it was bananas. It was one of the most incredible things I've seen. But what I saw was what we're talking about, the casino environment. So, we stayed at a hotel that was connected to other casinos, and it's changed a lot. Even since I went last time, there's a lot less smoking environments than when we went last time. But just this atmosphere, these very strange lights and sounds...

DR. AMY SHAH: Right.

SHAWN STEVENSON: Can really start to throw off your body's rhythm. It's like, your body essentially... We haven't evolved with those kinds of inputs, and so, people are there from dusk to dawn at their slot machines or at their tables, and they lose track, like their body gets so discombobulated.

DR. AMY SHAH: Yeah, and it's so... I don't think we understood the impact of that. Of course, it's great for the casino owners 'cause we're discombobulated, we kind of don't know when to sleep, when to wake up, we don't feel good, so we're just kind of eating and drinking more to see if maybe that makes us feel better, and really that kind of... You can actually damage the clock genes in your cells to the point where they don't work anymore. And so, this is not just about, oh, you went for a day or two, that's fine, but people who are doing this all the time... And during the pandemic, what I notice is a lot of the children were indoors all the time, and I had to tell my kids, you have to go outside, even though everything's online, and during their breaks, they would be on their iPad or on their phone, you have to go outside. It's so important for children to get that input of circadian rhythms, and that doesn't come from even a window, it comes from natural light.

SHAWN STEVENSON: Yeah, thank you so much for sharing, that because these are the... This is the collateral damage that's not getting talked about, especially for children, and the CDC published a report looking at some of the outcomes. Just recently, even one came out last week. We'll put a couple up for people to see if they're watching the video version, but they were looking at the mental health outcomes for children, adolescents, and almost half of the children analyzed, teens, had depressive thoughts, thoughts of... And also, one out of five had thoughts of suicide, suicidal contemplation, and the numbers just jumped up mightily. It had already been climbing in recent years, but it just took this mighty jump.

But I'm bringing this up to say another CDC report looked at childhood obesity and I want to ask you about this as well, and what they found was that childhood obesity took a gigantic leap during this time of shutdown to mandates and children who are moderately obese... And we'll put this study up for people to see, published by the CDC, children with moderate levels of obesity, their annual rate of weight gain doubled. So, it went from around 6 lbs. annually increased to 12 lbs. in just that short span, and it's just like again, we're getting this feedback that something is seriously awry here.

Well, you might say, "Oh, it is a short-term thing." But then we have a recidivism, where you pick up these things when you're a child, it becomes increased like ridiculously exponentially more difficult to address that when you get older. So, I wanted to ask you about this, because part of regulating our metabolic rate and our insulin sensitivity comes from being aligned with a certain clock and sun exposure and those kinds of things. So how has it thrown off our children's rhythm and playing into challenges with body composition and obesity?

DR. AMY SHAH: Absolutely. Obesity is so closely linked with circadian rhythms as well, insulin levels, so we know that our ability to process sugar changes throughout the day, and we need those circadian rhythms to kind of help the body know that you should process sugar during the day and usually around 8 o'clock, we notice that your ability to process sugar goes much lower. And so, if you are following circadian rhythms, you can actually improve blood sugar control and reduce obesity by educating people on this circadian pattern. But there's so much that goes into obesity. So one is, these brain pathways that are getting set, like you said, things that we are doing as children get set as neurological pathways. Our brain wants to be efficient, and so it figures out, oh, when you're hungry, you have this junk food, and it satisfies this craving, it's going to become a pathway.

And so a lot of people will notice when they're adults, they still kind of go back to those comfort foods of childhood as go-tos when they're stressed or when they're not feeling good, and it's because these pathways were set as a child, and it's really hard to break it, and that's what we're doing when we're increasing the amount of drive-throughs and processed foods that we're having, we're setting these patterns that are often lifelong for people. So, you know, we talk about trauma as a child that carries through the years, it's the same thing, of course, not to minimize trauma, but you can actually program your brain to want certain foods, to go to certain things for comfort, because the brain wants to create easy ways to comfort our bodies and our brains.

And so, we end up creating these horrible habits. 56% of Americans say that they have problems with their mental health right now. Anxiety prescriptions have gone up. Anxiety medication prescriptions have gone up 30%, antidepressant prescriptions have gone up 26%. I mean, we are the un-happiest we've been in 50 years. So, we're definitely noticing that there's

something beyond just what the external events that are happening to us, so not only are we getting fatter, but we're also getting sadder.

SHAWN STEVENSON: Wow, oh wow. The good news is, we can do something about this, but it's going to take a lot of work. Because there's...

DR. AMY SHAH: Yeah. I wish there was like a one pill deal with this, but it's not.

SHAWN STEVENSON: Yeah. It's the systems that are governing all of this, I mentioned that the CDC is the one who reported with childhood obesity, and yet they've also been the propagator of mandates that resulted in that particular manifestation. It's just like, we have to take a step back and look at the bigger picture. And this is also true, because this is the next thing, I want to talk to you about, which circles back to, you mentioned these pathways getting created with these certain food inputs, but that also involves that psychological connection with what's happening with the gut.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: Because guess where that food is hitting when you're having that processed food, it's affecting our microbiome. So, how does this all tie in with our feelings of our cravings, our emotions, our mental health when it comes to the food that we're eating in relation to our gut health?

DR. AMY SHAH: So, cravings are different than hunger, and our gut bacteria often dictate that. So sometimes you're craving something, not because you're craving it, but your gut bacteria are craving it. And when you're eating a ton of... Say, during the first part of the pandemic, you might have done takeout a lot, you might have been eating a lot of fast foods, and say your gut bacteria now are growing, the ones that like the sugar and the processed foods are growing and the ones that like the broccoli and the vegetables or whatever are scarce and dying off, those bacteria will ask for more and they will send signals to your brain as craving for the foods that they like. And so, those gut bacteria start to rule your thoughts and you know those... Okay, so dopamine is a molecule of motivation, and when it comes to food, alcohol, and drugs, this can be a very powerful motivation.

It can be a negative or a positive, because dopamine is also the one that motivates you to do better, to challenge yourself, to compete, but it's also the one that makes you get up out of this chair and go get a food or an alcoholic drink or a drug, because you are craving it so bad that you will motivate yourself to go get that. And so, it can be so powerful in a negative or positive way, but we don't get any education around that. And so, in schools, even in medical school, we really didn't learn that there is... When you see a patient or you're talking to

someone, educate them about their gut bacteria, because maybe they'll understand or motivate them more to eat the healthier foods, to get more sunlight, to get better sleep, because they'll say, "Oh, then those bacteria actually will start to change your cravings, and we'll start to want different foods." But we don't know that, and we don't talk about it, but the food companies know that, and they know that if they motivate you with the dopamine, the more they can motivate you, the more you will buy their product.

And it's a secret that I think everyone should know, so we can stop our cravings. For example, I'll give you an example. My kids, I was telling... I was educating them about this, because I don't think anybody really tells them, because they just think that they love chips or cookies, but they don't really know why, right? So, I was telling them that there's these... At Trader Joe's, they have these rolled tortilla chips that I had got once because it's like a healthier version of Takis, okay. And when I explained this dopamine pathway, I said, "There are some foods that you want so badly that when you get it, it's almost like pleasure mixed with discomfort," it's like, you love it so much, but you're like, "When am I going to get more?" It's like this almost uncomfortable with pleasure feelings, not pure pleasure.

And they identified those, they said, "Oh yeah, it's like when you get those... When you bring those chips home, it's like, you want to have more, but you can't, and then you can't wait till the next time. It's almost an uncomfortable feeling." And that's when you're tapped into that dopamine pathway. And that's alcoholism, and that's the craving for drugs, and that's how you know you're addicted or not addicted, but you have that dopamine pathway trigger with certain foods or activities or pleasures, and that's what you have to watch yourself around, because that can be a negative thing.

SHAWN STEVENSON: Yeah. Wow, wow. So, you mentioned this, which should be Captain Obvious at this point, but not being taught this in medical school of asking patients about certain things like this and educating them about their microbiome health. And you've had the opportunity to be educated at some of the most prestigious institutions in the world, Cornell and Columbia and Harvard. And there is, and I want to do a lot more right now, and I've been working for years on this subject, and I'm working with some great people at Harvard and at NYU and Stanford to help to change some of this in education. Because the outcomes, it's not necessarily just a lack of education for what physicians and nurse practitioners are able to teach patients, but it's what they're being taught themselves.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And I want you to... If you could talk about this culture that's been created and encouraged in healthcare of just absolutely demolishing one's health in the name of achieving a certain status or education.

DR. AMY SHAH: Absolutely.

SHAWN STEVENSON: You know, it's a very... This culture... And the reason I'm bringing this up is, I really feel like one of our greatest leverage points is to help to heal healers and to help folks who are entrusted with taking care of the public, doing something to take care of themselves. Because as you know, and if you can articulate this, the levels of stress, the processed food consumption, the sleep deprivation, all of these things becoming commonplace for our healthcare practitioners and wondering why their education isn't reaching the patient.

DR. AMY SHAH: Absolutely. I think what happens is, you also get these dopamine pathways, or these set neural pathways, because during our grueling years of training we are told that if you sleep, you're lazy. If you leave early and you go to work out, you're lazy, or you're not a good doctor, especially in residency training, it was kind of like a hazing where it was, who can stay the latest, who can get the least sleep, who is the most dedicated resident. And Boston was a very toxic environment in that way for me, because it was dark outside, you never really knew... You're never really getting out early enough to get sunlight anyway, and there's this kind of competition of who can work the hardest, who can work the longest, who can work the most shifts. And it's so toxic, because it's teaching people that you have to trash your body in order to be someone that's respectful or respected.

And what you're taught is that food is basically a fuel to get you to the next thing, like we would eat these... So, they have these like, Graham crackers, and like peanut butter packets that they would save for patients when their blood sugar would be low. And literally we would eat those to kind of sustain ourselves to the next meal and it was... Meals were provided, were insanely processed. And so, you're living that life, and then you graduate, and you're supposed to tell people how to be healthier when you have basically trashed your body for the last 20 years, and so, it was such a... So, when I was at my peak in my field, really, finished all this training and double board certified and got my first job, became a partner, and I was supposed to be at my peak on the outside, I was at my lowest on the inside, I felt exhausted.

I felt like my gut health was so poor, my mind was always anxious and running all the time, never in the moment. Because at that point I had convinced myself that doing these things, getting sunlight, getting sleep, getting exercise was something that I didn't have time for or that I shouldn't make time for, because I'm a busy mom, doctor, and I'm dedicated, and that meant that you have to skimp on those things. So really, it's so pervasive in the culture, and there's almost like, you kind of the older attendings, we call them, the senior people, they'll say, "Oh, in my day we worked 100 hour weeks, you guys only have to work 80 hour weeks," and it's just insane that you can do that. You can tell people that that's normal and then expect

them to come out of that without mental health disease, without physical health disease and without some kind of... They're not prepared to counsel people on health and nutrition when you're not living it yourself, you really can't counsel.

I couldn't even... Being a nutrition major in college, I had lost all of that during my training years in medicine, and then I was out in the real world, and medicine today still does not have a nutrition component to the standard medical visit, for most. And now things are changing 'cause I... This is... I graduated medical school in 2004. And so, it's been almost 20 years. And so, things have changed rapidly, and I think it's going in the right direction. But as you know, we have... We're sorely late to the game. And we have a lot more work to do. And that's why people look to other sources for guidance because they're not really getting it sometimes from their medical provider.

SHAWN STEVENSON: Yeah, and thank you so much for that, because this has even helped to birth your amazing book, *So Effing Tired*...

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And sharing your story. And you proactively... This is the unfortunate scenario; you've got to figure this stuff out on your own when you're investing in the most prestigious education that you can get. But then what does that even equal if you lose yourself and your health?

DR. AMY SHAH: Right.

SHAWN STEVENSON: And so, I'm really hoping to help make a shift in this. And I know that we can. As you mentioned, things are changing. And it's taking some really pioneering voices, and a lot of intention, a lot of work because as systems exist, and they just kind of coast along, unless something outrageous happens, and especially if people are making money from the system, it's very difficult to change it. And it's kind of... COVID has come along and really shaken things up and disrupted things, is creating a great opportunity for things to change. And I want to ask you about this, because if we look at the health outcomes, because we've got the data on this stuff now, you know, if we look at the health outcomes of nurses versus a general population, higher rates of cancer, higher rates of insulin resistance, physicians having the highest rate of substance abuse of any other field.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And partially, of course, we're looking at the environment, but also the accessibility to drugs, you know? And these things are not being talked about, the mental

health issues. And so, if we're going to really heal as a nation, and as a species, we've got to address this. Because, right now, if we look at the outcomes of our population, overall, we are the sickest nation in the history of humanity. If we're talking about chronic diseases, it's unbelievable. We don't have to look very far to see the results, but this goes back to what are the inputs? And so, for you, if you could talk a little bit about what... Once you had this revelation, like, "I've done all this stuff, but I feel like this is the outcomes that I'm having," what was the first steps that you were taking to address that? Like, what got you to think outside of the box that you were taught to think in and start to address getting yourself Well?

DR. AMY SHAH: I was always interested in the gut microbiome and immune system interplay. Because in my family, everyone kind of dies at age... A young age, 60 is like the average age and there's heart disease, and there's diabetes. And these are like, smallish Indian men and women... I mean they don't look unhealthy, and a lot of this disease came when they moved to the US. And even though they had a pretty high carbohydrate diet, vegetarian diet in India, when they moved, something changed. And it was always interesting to me, I was wondering, is it... Of course, it was the food, there's a lot more Coke and Pepsi, Pizza Huts visits, but there was also a change, shift in their lifestyle. They're sitting more at desk jobs because they're trying to hustle and make money. And so, it was always fascinating to me, like, "What is happening? What is going on in the body that is... We don't understand?"

And at that time, nutrition was not popular at all, it was considered a soft science. Nobody really in the serious academic world was talking about nutrition, like it is now. And so, that... When I started to make my shift, I thought to myself, "What is it that I'm doing wrong that's making me feel like crap? That's making me gain weight, even though I'm working out. That's making my sleep so poor, that I can't even sleep through the night?" And so, I started to look into... I kept thinking, it must be my hormones, my immune system, or my gut, and then I realized that they're all three intertwined in one, and that's when I started to really be interested in circadian rhythms and gut bacteria. So, one thing I wanted to share as I remember, the reason I went to immunology fellowship is this concept of the hygiene hypothesis.

So, for people who don't know, at the turn of the century around in London, some smart doctors started to notice that the kids or rich kids living in London were starting to have a lot of problems, health problems, allergies, asthma, autoimmune things. And the kids who were poor, "poor kids" living on the farm still in the outskirts of London, weren't having those issues. And so, it started a series of investigations of what's going on when you move from a rural farm environment to an urban environment?

And that work is still going on, 'cause we don't know, right? Like, even the immigrant thing that I was telling you, we don't know exactly what's changed and what's bad. But what they

found is, one of the biggest things that changed is that the kids, the rich kids had a cleaner life. They were around less bacteria. They had less siblings in the home, less animals, less dirt, less exposure to nature. And of course, they had more refined foods, less stuff right from the farm, right? So, they created this hypothesis, which is still the leading hypothesis of why our immune system and gut bacteria go haywire, called the hygiene hypothesis that we need bacteria, we need dirt, we need farm or we need something about that old environment to populate our gut and teach our immune system. And it's so fascinating. So, when I was thinking to myself, like, "I need to go back to some of those basic things that I used to do as a kid or as a young adult when I felt good, because, for some reason, I feel like this gut, immune, hormone connection is... We don't know exactly what it is, but there's something about it.

So, I just started to spend a little more time outdoors or to learn about circadian rhythms, started to eat more closer to the source, less refined foods. And of course, as you know, once you start eating a little better, all the sudden your thoughts change, your mood changes, you start to have ideas of like, I hate what I'm doing on a daily basis. I need to start to do some creative work. So, it starts, right, that gut brain connection is so clear in most people. And then I just kind of made a side turn, which was not the best decision financially. It was not the best decision for my career in terms of my medical career. I could open more clinics. I could work more... It really was, people were looking at me like, "What the heck is she doing? She could literally be making millions," but really, what I wanted to do is figure out what was working and what wasn't working so I could share that, and I knew that that's something that could really help impact a lot of people.

SHAWN STEVENSON: Yeah, and then, of course, in the long-term, the impact that you are making is remarkable. And I just... Truly, I just want to acknowledge you for doing that, because especially when we have so much invested in a certain way of thinking and living, it can be incredibly difficult to shift gears and to just acknowledge when something's not working and let me double down on this when people around you is like, "You're crazy. What are you doing? You've got such and such." But I think it's really anchored in the fact of like, once you start to actually feel good and you are in this state and you can't identify what it is, other healthcare professionals are telling you, "Oh, it's this, this and that," and nothing happens to work, and you figure that thing out, it creates a level of authority in you that you can't really even describe with words.

And you mentioned this hygiene hypothesis, and this is kind of... Not contrary, but it's another angle of the gene theory of... I'm sorry, the germ theory of disease...

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: Which when this came about... Because we went from things like the miasmatic theory of disease, like its bad air is killing you, but the germ theory... Once we were able to identify like, "Oh, there's these little microbial things that are the cause of all of our problems."

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And then the world went to war, the world of medicine went to war, we're trying to kill these very small things, not understanding we're made from those very small things. So, in indiscriminately killing the stuff that we're actually made of and look where that has brought us. We went too far, not to say that certain microbes can't be... Aren't harmful to us, but often we put this label of they're opportunistic.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: That means when the opportunity's, presented when there's a deficiency within the system or there's a degradation or something isn't working right, like, basic immune function, that's when the thing can get on top of you, but a healthy sovereign system requires a good balance of microbes. And the question I want to ask you about is that this still... It still circles back to gut health because the vast majority of our immune system is...

DR. AMY SHAH: Yeah, in our gut. And not only is our immune system in our gut, our gut bacteria are constantly talking to our immune system, and they are in communication at all times. And so, when you say inflammation, it's that gut bacteria telling the immune system, "Hey, there's something wrong here." Tell the body so it creates these interleukins like Interleukin-17 will say to the brain, "Hey, there's something going on here. We're inflamed. We need some time to rest." And that's why when you are sick, you'll kind of feel down or tired or want to sleep 'cause it's these inflammatory signals that came to the brain that said, "Hey, we need to concentrate on what's going on here. We can't be doing all the things that you want to do. We got to fix this issue."

And unfortunately, a lot of us are living in this inflamed state a lot of the time. And so that immune system, gut, and hormone connection is so strong that people don't even realize that, oh, when your hormones are imbalanced, it really means your gut is imbalanced, and it means your immune system is imbalanced, and so it's all one. It's not like you can fix it by just replacing the hormone or giving an adrenal cocktail, or this is... You know, people make millions and billions of dollars off supplements to support the hormone system or to boost immune system, and what they don't understand, it all comes down to that interplay in that gut.

SHAWN STEVENSON: Yeah. And again, it's like another Band-Aid treatment, you know?

DR. AMY SHAH: Right.

SHAWN STEVENSON: Instead of like, what is causing the issue at its core... And I love that you mentioned that. I think everybody can relate to that. If you come down with something and just your mood is lower, you're not really feeling as motivated, but also coming out of it, once you start to feel better, like, when you get over maybe a cold or a flu or something like that, like, you feel amazing. It's just like, that's that neurochemistry that's linking back up and your body's like, "Okay, immune system job, we've done this. Here's some more energy that we can dedicate towards your cognition and your motivation."

DR. AMY SHAH: Yeah, that's why when you start fixing that gut bacteria, which by the way, it starts happening at three days if you rapidly change your diet and your lifestyle, you all of a sudden feel like you're waking up to thoughts that you really weren't able to process before. And for me, and I know this is probably true for you, for me that meant hey, I got to shift gears here. I can't just... I was kind of in this blind routine automated mode of, do this in the morning, do this in the... And it was like, you just rinse and repeat all day, and most people are in that mode, they can relate, right? So, a lot of people use the weekends to kind of use alcohol or drugs or escapism, so that they can kind of get out of this routine state, and then they start all over on Monday, right? So, it's a way to say, "Hey, maybe you try this for a couple of days and see, maybe you have better ideas about what's going on in your life, maybe you make some changes, maybe relationships, maybe jobs or friends aren't serving you anymore. Maybe there's thoughts or patterns that you want to change, and that's a great way to get this... Get on a population level, get people to start making changes."

SHAWN STEVENSON: Yeah, absolutely. Like, the thing that... And it wasn't until a few years ago that I really looked at this. The thing that was most unexpected when I was focusing on getting myself physically healthy when I was 20 years old, very similar situation, being told that this thing I'm experiencing is normal, in a sense like, there's nothing I can really do about it, it's part of the process. For me, what was normalized was I had this so-called incurable arthritic condition in my spine, in my bone density, and just like, told or programmed to believe that this was incurable, there's nothing I can do about it. And through the process of changing my thinking around this and getting myself well, I was just trying to get physically well and get out of pain. And when I started to give these new inputs into my body, what I was feeding my gut bacteria, which I had no idea about, I wasn't thinking anything about that, I was just trying to lose weight.

DR. AMY SHAH: Yeah, yeah.

SHAWN STEVENSON: But doing that in an efficacious manner where I was like, Okay, my body... In order to regenerate my spine and my bone density, I need the raw materials that are coming from foods that I was so deficient in, because at the time I was living in Ferguson, Missouri, surrounded by fast food, and processed food that I ate, and I'm not exaggerating, every single meal of every day. I was made out of sh*t, like the worst sh*t possible. And wondering why I'm in such pain and I'm not getting well. When I started to provide my body with those raw materials to regenerate the tissues... Because your body... We don't... We still... We're scratching the surface in understanding the intelligence of the human body.

DR. AMY SHAH: Oh, yeah.

SHAWN STEVENSON: Your body knows what to do so far beyond our capacity to understand it, but once I started to provide these base nutrients and changing some of the things I was doing during the day, my movement practices, what I didn't realize was just how much my mind changed and I started to become much more optimistic, and I started to see solutions. Whereas like I know people know, somebody like this, everybody does, somebody who's got a problem for every solution, you know? And so, I started to see a solution to every problem. As a matter of fact, multiple solutions, as a matter of fact, I realize that all this time these things were available, I just wasn't attuned to them, you know? And the point I wanted to make was, what changed the most that was most unexpected was my standards for relationships, and I had no idea. Part of the process of being unwell was like being in unhealthy relationship...

DR. AMY SHAH: Toxic, yeah.

SHAWN STEVENSON: In unhealthy relationships. And now just like, I was just done. I just like... I'm not going to associate, I'm not going to tolerate, I'm not going to even participate in the sh*tty behaviors that I was engaging in as a young man in college, you know?

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And it's just like, I got so dedicated, I just wanted to help people. Because part of that too was once, I got better and this is what happened with you, I wanted to tell everybody about it, you know?

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And so, I got so focused on that, my mind changed, because I was getting myself healthier and I didn't realize why that happened.

DR. AMY SHAH: Yeah, I'm so glad you mentioned the relationship part of health, because I don't think we talk about that enough. And we already know that the longest living people around the world, these centenarians, people who live 100 plus years and that healthy living 100 plus years, they name connection, relationship is one of the main things that seem to keep them going on a daily basis. And I think that having good relationships is such a key part of health that... We don't even talk about... We talk about... In medicine... No, sorry, in the wellness world, we talk about fitness as health, that's basically all we talk about. We don't even talk about mind health, maybe We're starting to know. We don't talk about relationship health, and that's something that is such a key part of health.

And so, learning which people both in your personal relationships with a spouse or a loved one, with your family, with your friends, who are the people that you can help and that can support you and to understand what these... What you're doing that may be wrong, and how you can help them and vice versa, recognizing when you're around toxic people or people that are bringing your health and your mental health down, and really getting rid of that energy towards them is something that you can improve your health in ways you don't even understand. I mean, that thought of you are the product of the people that you spend the most time with, biologically, that makes sense, because you pick up their gut bacteria, you pick up their habits. And we know that your gut bacteria determine how you think, how you feel, and so, when you're spending time with people, you're really picking up a lot of their microbiome too.

SHAWN STEVENSON: Wow, thank you for bringing that up, 'cause we've got data on this now too, your gut bacteria is much more correlated, like your spouse than it is your siblings or your parents, right? So, it just really articulates that. Your environment has a huge impact on your gut health and also just your out-picturing of your health. We've got a quick break coming up, we'll be right back.

Mental performance is more important than ever, and there are specific foods that are proven to enhance our cognitive abilities, like few things can. A study published in advanced biomedical research found that royal jelly has the potential to improve spatial learning, attention, and enhance our memory. And to add to that, it was found to be antimicrobial anti-tumor and anti-inflammatory. One of the biggest issues we're facing with cognitive decline, with diminishing brain health is neuroinflammation, specifically hypothalamic inflammation. With our hypothalamus being a master regulator of our endocrine system and our nervous system and addressing this helps not just our brain work better, but our body working better as well. Royal jelly has also been found to facilitate the differentiation of all different types of brain cells, and to top it off, researchers in Japan discovered that royal jelly has the power to stimulate neurogenesis in the hippocampus, this is the Memory Center of the brain.

Very few things ever discovered have been found to be able to do this. This is the power of royal jelly. Royal jelly has been prized for centuries for all of its metabolic and cognitive benefits, but this is just one of the most remarkable superfoods for the brain. Another one of my favorite things is Bacopa. A randomized double-blind placebo-controlled human trial, with a gold standard of clinical testing published in 2016 found that after just six weeks of use, Bacopa significantly improved speed of visual information processing, learning rate, memory consolidation and even decreased anxiety in study participants. Now, I've got both of these powerful superfoods together in one of my all-time favorite Nootropics and it's called B.Smart, from the incredible folks at Beekeepers Naturals. They're dedicated to sustainable beekeeping, that's where this amazing royal jelly comes from, to deliver the cleanest most bioavailable forms of bee products, and they're committed to third-party testing for over 70 pesticide residues commonly found in bee products.

With some of the most pervasive offenders being things like DDT, that's again, commonly found in bee products. They also test for a wide variety of other things commonly found in bee products that a lot of folks don't know about, like, heavy metals like arsenic and lead, and also testing for E. Coli and salmonella and things that you do not want coming through with the incredible bee products that we're trying to get and get the value from. We don't want toxins and poisons coming along with those things, so I'm a huge fan of Beekeepers Naturals and my favorite thing, my favorite Nootropic is B.Smart from Beekeepers Naturals. Go to beekeepersnaturals.com for 15% off the B.Smart and all of their other incredible products, you've got to check out their superfood honey as well, it's amazing. Go to B-E-E-K-E-E-P-E-R-S-naturals.com/model. They give you 15% off all of their incredible products. B.Smart is a must-have for mental performance. Pop over there. Check them out, beekeepersnaturals.com/model. Now, back to the show.

I wanted to bring this up too, because you mentioned in our society, we're really... We've got this week framework, and then you know get to the weekend, and it's like these two kinds of dual realities, and... But the thing is, we just made this sh*t up, even the days of the week, it's a socially accepted agreement on how we structure things in society and what tends to happen is, we'll follow the rules, the court rules, social rules through the week, and the weekend comes around, it's just like, I'm free...

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And we throw off our rhythms and our routines and our patterns, and then come Monday morning when we have to get back to the court rules, we experience this social jet lag.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: Can you talk a little bit about that?

DR. AMY SHAH: So, I don't know how long it's been since you've stayed up late and partied, but I don't do it that often anymore, but when I do, I'm reminded of how a lot of people live like this on a week, every week basis. Where most of our thoughts are automated anyway, but a lot of people live in a very automated state where they're not present in the moment, and I think you can relate and I can relate when you're driving, you don't even know you're driving, you're just driving to the place that you know, you have memorized and your brain knows, your body knows. And so, you're living in this automated state where you're not in the moment, you're just kind of in your head all the time, and then you go to the weekend where you basically try to relax, but relax sometimes means staying up late, having a lot of alcohol or drugs or whatever, food, and you basically have created a situation in your brain, and your body where it doesn't know what time it is, it doesn't know... You're feeling jet lagged the next day, it's perpetually jet lagged, and you're really never getting to the point where you're in that moment where... You know, a lot of meditation and mindfulness is really just bringing you back into that... Into the present moment.

Because so many of us spent our weeks, the entire week, not in the present moment because we have learned behaviors and unconsciously just do everything, and then on the weekends, we are never able to catch up with that nature time, that relaxation, that good food. And so, you're trashing your body and your brain again on the weekend. You wake up on Monday morning and you're exhausted, you're jet lagged and you're kind of going back into that automated thoughts, process again, and it's like a perpetual cycle. And I know I was there, so I can... I don't know if you can relate, but I was there. I just went through the motions of the day, I did everything I needed to do, but I really wasn't in the moment. And then the weekends I spent kind of trashing my body, and then Monday, it was back to the same grind again. And it's like you never actually were alone with your thoughts at any point. You were never actually thinking about how to break patterns that weren't serving you. And your circadian rhythms were completely thrown off because you stayed up half the night and now you have to wake up at 6:00 or 7:00 AM again. It's a really...

It's a pattern that we've created with society that most people can kind of relate to, that we can easily make changes to if... I always say smart entrepreneurs will change the world. We already know that there's innovation. And when you know this information, you can start creating solutions for people that are easier, that are streamlined, that... Wake up really, wake up out of this kind of fog that's leading us to poor mental health, to obesity, to disease.

SHAWN STEVENSON: Yeah, wake up is a good term to use. And so, this reminds me of a really interesting study, and I talked about this in, Eat Smarter, in my latest book, but... And we'll put

it up... We'll put this study up for people to see what the researchers were wanting to see what happens with your microbiome when changing time zones, when altering people's sleep cycles. And so, there's a human study, and so they had folks basically changing time zones, crossing multiple time zones and having their stool sample before and after, and they could see just by altering their sleeping schedule and their body and association to the sun and the entire galaxy really is what...

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: And humans had... The thing is, and what I want to reiterate is, we haven't been able to do this throughout our evolution. We're talking, again, the Earth's been around, according to the latest science, a couple of billion years, but only within about a century have we been able to literally take our body, pluck it from one place and fly it across the globe and pop it down in another, something that would take months of travel to achieve can happen in a few hours. And so, the disorientation that takes place with our body and relationship to the solar system is remarkable. And so not that we can't do this and have a good time, but we need to be anchored in understanding this is new, and we probably need to stack conditions in our favor to help our bodies to adjust.

And so, what they found is that after altering their time schedule and their body in association to the solar system, what happened was in their stool samples, they found increased prevalence of bacteria associated with insulin resistance, obesity, diabetes, altering their gut bacteria that quickly to being as someone who is experiencing those states of disease. Good news is, once they got them back onto a normal sleep schedule, things resolved. But who is perpetually living in that state? Are we doing this to ourselves with the social jet lag constantly throwing off our rhythms just because of it's this thing going on? And I don't want to create a neurosis here where we can't go out and kicking and do stuff, but I'm just saying if we're proactively doing this on a regular basis and wondering why we're not getting the results we want with our blood sugar being healthy, with our weight, with our mental health, these are the core things, it's literally... It's not just, you're making this decision to do this thing. It is at its core, is affecting your gut bacteria like instantaneously, which is going to have a out-picturing on your health. And so, this leads into the question, if you could articulate this, because you're somebody who for me is a leading voice in the subject matter, what is circadian medicine and circadian nutrition like? What are they? What do they do?

DR. AMY SHAH: Our bodies work on this day and night cycle and so much of our metabolism, how we digest food, how we process medications, for example, blood pressure medications given day versus night have a huge difference in their impact because we... Even our metabolism of foods and medications changes throughout the day. And so, understanding how important... We have talked about daylight savings a little bit before, but one shift of one

less hour of sleep, that Monday, there's a spike, 22% spike in heart attacks and car accidents, we know that our body really is finely attuned. I mean one hour of lost sleep and we're doing this on the weekends with three, four hours of shifting our sleep, so you can imagine what havoc it's wreaking on all of our bodily functions when we're shifting our rhythms all the time. We're not getting enough sleep, we are not sleeping at the right times, we're not eating at the right times, we're not getting enough input to our brains, and it impacts not only your insulin, it impacts our brain function, it impacts, as you knew, heart attack and our ability to have higher reflexes.

I kind of remember this feeling all the time when I would work an overnight shift and then you'd come back home, and then you'd wake up and you were completely disoriented. And I remember that I was literally had... People got into accidents all the time, both car accidents and physical... Your reflexes are just not working when your circadian rhythms are disturbed. So, reflexes, heart disease, insulin levels, you name it and it gets damaged or disrupted by circadian rhythm and balance, so that's something that we've left on the table. Only in, I think it was 2017, the Nobel Prize in medicine went to Jeffrey Hall and colleagues about their circadian rhythm, the molecular effects of circadian rhythm. So literally, it's brand-new science that we're just learning about now. And ever since Jeffrey Hall and his colleague's kind of came out with this information, it's just opened this whole new world because now we're like, "Oh wait, it effects for gut health, oh wait, it affects your brain health, oh wait..." Every single thing goes back to... Can be linked back to circadian rhythms.

SHAWN STEVENSON: So powerful. So, the timing of things affects everything basically. So, when you're taking even medication, there are ideal times to take things that's now being addressed and affirmed, our food, when we're eating, it's going to influence everything about us but also our bodies themselves can essentially... And I want to ask you about this, our individual template is going to determine when's best for us... Best time for us to eat. I think it goes both ways; I would imagine.

DR. AMY SHAH: Yeah, you want to use the sun... I always tell people, it's like you don't have to go back to hunter-gatherer days and pack... Once the sun goes down, you're done for the evening. It's just not practical in our lives right now but use it as a rough guide to think about it evolutionarily that we're learning more and more that, hey, when the sun goes down and it's late in the evening, you probably want to wrap up and not have your huge meal at 10:00 PM. You probably want to have your biggest meals during the daytime when your digestion is strong. Eastern medicine knew this all the time. They always talk about eating your meals in mid-day. I have heard talks about mid-day meals trying to be your biggest between 12:00 PM and 5:00 PM should be kind of where you eat the most food.

So, they knew that intuitively thousands of years ago and we're starting to learn that again now. And so, you can see it's like waking... If I woke you up in the middle of the night and I asked you to do a complex math problem, you may not get it right or you may get it right and then you're pissed because I woke you up in the middle of the night, and then when you wake up the next day, you're exhausted because you got woken up in the middle of the night. And that's how our body, our metabolism works when you try to feed... Try to have that huge meal late at night. And I know personally, I have experienced this, and I don't know if you have, eating super big meal late at night right before bed, it is terrible for your sleep, for your digestion, and you wake up the next day almost like hung over and your insulin levels are really disrupted. So just learning these things can... And people probably can relate, but they were never told to do anything different.

SHAWN STEVENSON: Yeah, you bringing up so many things that we all experience but we don't really put language to, so this is super fascinating stuff. And we're looking at circadian medicine, really paying attention to when our genes, which again, we have these clock genes that are now being affirmed that control what other genes do, that control what our proteins do based on the time it is or our body trying to sort out what time it is, because that's the thing about humans, we can just manufacture the time of day we want in a superficial way. It's not true, we are just kind of... We can try to hide out basically from nature, but your body is always trying to get synced up again with life itself. And so again, even our inputs with exercise, with sleep, our genes are expecting certain inputs that will give us certain outcomes based on when we're doing these things.

And really this interesting phenomenon, you mentioned this, what happens with this daylight savings phenomenon we've been experiencing for... It's been about 100 years now that has been something utilized and part of the culture, specifically, we're talking about here in the US, World War I, towards the end of that, it was implemented, but then it was taken away, and then World War II, same thing. It was under the guise of saving energy was what it was supposed to be for. This is never about human biology and health, and it was actually deemed to be "war time", that was what they called these time changes because it was implemented during these times of war. And it's just like we've been at war with our health ever since. And you mentioned this uptick when we go to daylight savings time, we're losing an hour in traffic accidents, we see over 20% increase in things like strokes and heart attacks.

But another thing is this increased incidence of adverse events taking place in healthcare settings. More mistakes with whether it's a procedure or a medication, again, because we really are throwing off the system and we're not showing up as our best self, and oftentimes we're proactively doing this to ourselves and don't realize. I think the reason it's getting tracked is because it's a societal, it's societal database.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: So, I want to ask you about, recently, there's been litigation pushed through, it's already passed the Senate, the Sunshine Protection Act to abolish this time change, which is a great first step, but you live in Arizona where it's one of the two states, they're just like, "We're not participating in this time change in the first place." The other place is Hawaii. But you have more access to sunlight at a longer span than a lot of other places in the US. So, I want to know your thoughts on the Sunshine Protection Act and... Yeah.

DR. AMY SHAH: Yeah, thanks for articulating it so well. Our bodies, no matter what your job is, whether you work night shift, day shift, and we live in a 24/7 society now, your body still works on circadian rhythms day and night. So, people always say to me as night shift workers like, "Oh, can I just shift my circadian rhythms?" No, you will never be able to shift your body's entire genome into a nighttime animal. You'll never get adjusted. Every time you see that sunlight, natural light, you get re-adjusted today and night. We're just built that way. So you have to work around that. And so...

SHAWN STEVENSON: Wait, so you're saying we are not in fact owls?

DR. AMY SHAH: Yes, we cannot switch like people will say, "Can I switch my circadian rhythm?" and you cannot. You can shift it slowly, but you really can't go from... Become a nocturnal human. So, when it comes to daylight savings time, it's a very... Like you said, when you travel time zones, it's a huge hit to your body in so many ways. So, we're basically doing that purposely when we shift the time for people with daylight savings time. So, I'm a huge fan of keeping the times stable throughout the year. So that's one thing. Because you really don't want to be shifting people's time zones twice a year, more so than they're already experiencing through travel, through disrupted circadian rhythms of their daily life.

Once we understand the science, we have to make better options in society. It's only been... 24/7 drive-throughs weren't even available even when I was a kid. I don't remember that. There's very few things that were open all night and there wasn't Uber Eats all night long. And so, we have to remember that the circadian disruption has been so rapid and so life-changing in the last 20 years. And then we're adding to that a stress of daylight savings time and that can be so disruptive. So, I'm a huge fan of not doing any time changes. But when it comes to what time is appropriate, why are we sticking to a daylight savings schedule? It's just puzzling to me because biologically, that makes no sense, we should be staying on the circadian day and night standard time that our bodies are attuned to, so that we can have health outcomes that are better than we had.

If you tell people that you are perpetually going to be in a different time zone than your body, that's going to create health problems and problems that we won't even see for many years now.

SHAWN STEVENSON: Yeah, yeah, we were talking about this before the show a little bit, but during the shortest day of the year in New York City, if we... As of now, with the times changing and having standard time and daylight savings time during the shortest day of the year, December 21st, the sun would rise currently at 7:30 AM in New York City. If this bill passes through its completion and we stay on daylight savings time, the sun will now rise on the same day for New Yorkers at 8:30 AM, and under the guise of like, "Oh, we're going to get an extra hour of sunlight after work as we're sitting in traffic on the way home," but... And I get it. Of course, it's a socially accepted thing. We want to have a little bit more daylight to do stuff, I understand that. But biologically, we need more light in the morning and less light in the evening. And we're altering our clocks to stay on that time which is, again, it's pushing us more into abnormality. But the ultimate thing, I really appreciate the fact that we're looking at stopping switching times, but we're not looking at what's ideal.

DR. AMY SHAH: Right. The biology of circadian rhythms, like I said, it's such a new but kind of blew this world open and the science, and now that we understand what an impact it has, we really need to listen to what the science is telling us, which is very clear that our reflexes, our metabolism, hormones are going to be impacted in a negative way if you keep switching our circadian rhythms. Some of it's under our control and some of it comes from external governmental sources like time changes like this.

SHAWN STEVENSON: Yeah, so everybody listening, if you can, contact your representative, implore them to, yes, let's keep the time from changing, but let's go with standard time versus daylight savings time. And in closing, I want to ask you about this because I know a lot of folks want to know this stuff from the person themselves, but what does your morning routine look like, for Dr. Amy Shah?

DR. AMY SHAH: I have really refined this over the years because I didn't allow myself to... I used to... One day I had off in the morning and I went to a morning workout class, it was at 9:00 AM, and I said to the people exiting that class, "You're so lucky. I wish I could work out in the mornings, but I can't, I might have to go to work." And one of the women in that class said, "Well, aren't you a doctor? Couldn't you change your schedule? Couldn't you tell your admin or your front desk or just maybe leave a little time for a workout in the morning?" It was so eye-opening to me. I was like, "Wow, you do have the power." If you wanted to say, "Okay, I'm going to get up," either you get up an hour earlier or you make time in the morning. So, it's not at 9:00 AM, but it's early in the morning that I get up, I...

First thing I do after I wash my face; I do look at my phone because I'm a mom and I'm a doctor and I have to check for any emergencies overnight. So, I usually just check to make sure that there was no serious things, family, friends, everybody's safe, then I put it away. Then I go and get some natural light first thing in the morning, and that's a time to do some mindset work because mindset work doesn't need to be 60 minutes of meditation. I think that was like a mind... Like a revelation to me that, "Oh, I don't need to sit down for 60 minutes. Just do like two, three minutes in the morning and get some natural light." So, most of the time, I will get dressed and do a fasted workout outdoors, or I will do partially mindset work and a few minutes outdoors, and then go do a workout indoors and it's kind of an open-air workout. And my whole goal is maybe to have a little bit of time after the workout to reset my circadian rhythms and also reset for the day, do some... That exercise of being in the now in nature so that you can kind of... Your creative thoughts come when you're not distracted. And most of the day we spend distracted with our phones, drive to work, whatever it is, internet. And so, I try to spend a couple of minutes, it's so hard, un-distracted, just in the moment, maybe just walking, something that doesn't require a lot of attention.

And do that every morning. And I usually stay fasted with just water until that point. And so usually it's at least two hours into the day before I have my first meal. And then I know that study after study shows that the order of nutrients that you eat especially in the first meal can really determine the path of your day, so I'm very intentional of not eating refined carbohydrates and sugar as my first food that I eat. I usually go fiber, protein forward along with my chai, because I love tea with spices, so I usually do...

And there's a ritual aspect to having tea. It also reduces DNA damage by 25%. Actually, coffee does too. They're actually very, very healthy for you, and as long as you're not adding a lot of sugar and additives to it. And so, I break my fast, and then I'm off to the day. And it just sets me up for a great day. Like if I don't do that morning routine... And even when I travel, I do at least a shortened version. It's not an hour or two like it usually is, but it's a couple of minutes, but I do a mini version of that because I think that it sets you up, it gives... It prepares your mind and your body for the day, and it helps me show up as my best self... And like we said, sometimes these healthy habits and routines, it becomes so routine that some days when you wake up un-motivated to do it, you just do it because it's out of habit, and once I do it, I feel so much better, and then I'm setting up the momentum for the day.

SHAWN STEVENSON: That's so awesome. Thank you for sharing that, also that additional nugget of like even when you travel, you're taking that with you, the neural association is there, it puts you in that state. So super good stuff. Listen, you're one of my favorite people in this space, and I appreciate you so much, could you share, number one, where people can

follow you, get more information, you do some great stuff on Instagram, by the way, and also where people can pick up your book.

DR. AMY SHAH: Well, it goes right back to you. You are one of my favorite people in the wellness community. You have so much amazing science to share, but you're also a really amazing person and colleague in this world, so thank you for what you do for everyone and for being such a collaborative, amazing person.

SHAWN STEVENSON: Thank you.

DR. AMY SHAH: You can find me at @fastingMD on Instagram, amymdwellness.com is my website, and @AmyShahMD on Twitter and Facebook.

SHAWN STEVENSON: Awesome. And your book?

DR. AMY SHAH: My book is called, I'm So Effing Tired. Actually, the paperback just came out a few days ago, so I'm excited about getting that to the world. It's so funny, Shawn, I put so much pressure on myself as a first-time author to make this book the best thing it ever could, and then about a week into it, I realized I'm killing myself and I'm killing my creativity and my vibe and the energy I put out into the world and I'm putting so much pressure. So, I did what runners do. I decided to put 85% effort, and then for that last 15%, I just wanted to have fun and relax and be in the moment, and then everything started to change 'cause my energy changed my way of speaking about it, interacting with people changed, and all of a sudden the book got to reach the people that I wanted to and it was actually... Fortune just named it one of the top five books, business books of 2021, so I was excited about that.

SHAWN STEVENSON: Boom. So awesome, so needed, timely, and you are the vessel that is coming through, your representation, that's what I admire most about you. You walk your talk.

DR. AMY SHAH: Yeah.

SHAWN STEVENSON: So, I appreciate you so much for coming on and hanging out with us.

DR. AMY SHAH: Thank you. Thank you so much for having me the second time. It's an honor.

SHAWN STEVENSON: Awesome. Second. We'll make it a third soon.

DR. AMY SHAH: Yeah, I can't wait.

SHAWN STEVENSON: Let's go. Dr. Amy Shah everybody. Thank you so much for tuning in to the show today. I hope you got a lot of value out of this. Again, pop over and check out Dr. Amy Shah on Instagram. She's at fastingMD on Instagram. And of course, her wonderful book is called, I'm So Effing Tired: A Proven Plan to Beat Burnout, Boost Your Energy and Reclaim Your Life. Now, we're talking about reclaiming your life at a whole new level right now because it's so needed, empowering our citizens, our families, and our communities. And this message of empowerment is something that's been severely lacking in the past few years, but we're working to make a change to that, and you are part of that mission. And one of the best ways to help to move this mission forward is to share this episode, share it out with your friends and family. If you share it on social media, take a screenshot of this episode, tag me, I'm @shawnmodel, of course. Tag Dr. Shah as well @fastingMD. Just share what you thought about this episode. And of course, you could send this episode directly from the podcast app that you're listening on to a friend or family member. That's the great thing about technology today is that things are so shareable, the good stuff and the not so good stuff.

And so, we want to upgrade the amount of good stuff that we're sharing with friends and family and getting folks feeling more empowered and educated. And again, it's never been more important. We're just scratching the surface on what we're here to accomplish. I appreciate you so much for tuning in to the show today. We got some epic shows coming your way very soon, so make sure to stay tuned. Take care, have an amazing day and I'll talk with you soon. And for more after the show, make sure to head over to themodelhealthshow.com. That's where you can find all of the show notes, you can find transcriptions, videos for each episode, and if you got a comment, you can leave me a comment there as well. And please make sure to head over to iTunes and leave us a rating to let everybody know that 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.