THE MODEL HEALTH SHOW

EPISODE 738

# Boost Fat Loss & Upgrade Your Health with Science-Backed Tools for Beating Stress.

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**SHAWN STEVENSON:** Welcome to The Model Health Show. This is nutritionist and best selling author Shawn Stevenson. And on this episode, we're gonna be diving into the world of stress. The data is clear, we can stress our way into weight gain, we can stress our way into disruptive sleep quality, we can stress our way into all manner of craziness and dysfunction, but stress should not be a dirty 's' word. Stress is not all bad. In fact, if we utilize stress in an appropriate way, it can make us stronger, you've probably heard the old sentiment, what doesn't kill me makes me stronger. Well, when it comes to stress, that definitely holds true. As human beings, we have highly evolved systems that help us to manage and modulate stress, and mini stressors are known as hormetic stressors, there's a process of hormesis that can, yes, break us down a little bit, but we don't just recover from them, we get a little bit better when we create conditions to adapt and to heal from said stressors.

**SHAWN STEVENSON:** Today, we have a lot of stressors, we have a lot of different stress inputs that add to our overall stress load, we can have food stress, we can have relationship stress, we can have work stress, we can have psychological stress, we can have emotional stress, we can have stress in our relationships, the list goes on and on, all these things create our overall unique stress load, and the mission, rather than trying to run away, jump on a plane and go to fantasy island. “A plane! A plane!” And try to run from all this stuff, we need to make healing from stress a habit, we need to make decompression a habit. And that's what this episode is all about. We're not just gonna be talking about the science around stress, we're gonna be talking more so about how to decompress, how to heal from stress, and how to more effectively manage the stress in our lives. And I've got three world leading experts on this subject matter for you to give you all of the tips, tools and insights.

**SHAWN STEVENSON:** Now, before we get to our first expert, if there was one beverage that is most correlated with reducing stress, it's tea. Now, the only tea that I knew about growing up was sweet tea. Alright, my grandmother would make sweet tea or I would go to different restaurants and order the sweet tea, matter of fact, when Lipton Brisk hit the scene, so this is sweet tea that was in bottles that you could buy from the vending machine, it was so full of

sugar that it had this frosted appearance, it was like frosted tea. I'm not talking about that abomination of tea. I'm talking about the storied traditional teas that have been utilized for thousands of years to support human health. Now, one of the most well-known and well-researched teas that help to manage and reduce stress is green tea, green tea contains a unique amino acid called L-theanine, this is one of the rare nutrients that's able to cross the blood-brain barrier with relative ease and impact the activity of a neurotransmitter called GABA, which helps to reduce anxiety and makes us to feel more centered and relaxed.

**SHAWN STEVENSON:** Now, some teas like green tea might have a small amount of caffeine, but because of L-theanine, not only does it not have that stimulating effect, it actually helps to reduce and calm the nervous system, it's really a cool combination that's found naturally in green tea. Another way that L-theanine works to improve our focus specifically, which lack of focus can lead to more stress as well, if we're not able to focus on the things that we need to get done and just get overwhelmed, but a peer-reviewed study published in the journal, Brain Topography, found that L-theanine intake increases the frequency of our alpha brain waves indicating reduced stress, enhanced focus and even increases creativity. Now, this is the most important distinction about this conversation when talking about green tea, not all green tea is created equal, not in the slightest, quality matters immensely here more than ever, because not a lot of folks realize that even some organic teas are contaminated with heavy metals and microplastics, we wanna make sure that we're getting teas from the best source possible, and the green tea that I drink is a Matcha green tea, that's actually shaded 35% longer for extra L-theanine.

**SHAWN STEVENSON:** It's the first quadruple toxin screened Matcha, and there's no preservatives, sugar, artificial flavors, none of that stuff, just the highest quality Matcha green tea in the world from Pique Life. Go to piquelife.com/shawn, that's P-I-Q-U-E-L-I-F-E.com/S-H-A-W-N. And you're gonna get access to some of their incredible bonuses for their different bundles, like free shipping, and also an exclusive 90-day risk-free guarantee, if you don't love their Matcha green tea or any of the products from Pique Life, you can send them back for a full refund. So they're really standing behind their tea quality, they go above and beyond, and highly recommend checking them out. It's piquelife.com/shawn, that's P-I Q-U-E-L-I-F-E.com/S-H-A-W-N. And on that note, let's get to the

Apple Podcast review of the week.

**ITUNES REVIEW:** Another five-star review titled “Real Fun and Packed With Value” by Joe Bain. I found Shawn in 2016 when I bought his epic book, Sleep Smarter, in both book and podcast. He has an uncanny ability to give nuggets of valuable health wisdom while also having fun, keeping it light and above all, reminding people they don't have to be perfect to be healthy.

**SHAWN STEVENSON:** Amazing, I love this so much. Thank you so much for sharing your voice over on Apple Podcast, I really do appreciate that, and if you're yet to do so, please pop over to Apple Podcast and leave a review for The Model Health Show, and now let's get into this special compilation to help make healing a habit, to make stress, decompression and adaptation a daily habit. We've got a compilation of three world leading experts in powerful conversations, up first, you're gonna hear from Dr. Izabella Wentz. Dr. Wentz is a New York Times best selling author, and she's actually a Pharm.D. She started off in the pharmaceutical industry, and when she began to have different struggles with her own health and also not really seeing patients getting well, she began to really take it upon herself to get educated at a different level and not only help to heal her own health challenges going through medical school and all those stressors of working day-to-day in the field of medicine can be incredibly stressful and was breaking her down. Not only did she find a way to transform her own health, but she's also been able to help and support millions of other people with her work.

**SHAWN STEVENSON:** And in this conversation, she's going to be discussing why excess stress can make weight loss more difficult, and why you need to provide your biology with what she calls safety signals in order to improve your metabolic health. And she's going to start off by sharing how someone can be in a notable caloric deficit, but they still can't seem to lose weight. She's gonna talk about why that is. Let's dive into this incredible segment with Dr. Izabella Wentz.

**SHAWN STEVENSON:** This speaks to a lot of people's experience, which is they're really trying hard to lose weight, and they're counting their calories, they're in even a caloric deficit, right? Because that's kind of the superficial scientific thing, you know, when I was in my nutritional science classes in college, you just expend more calories than you take in. It's simple, then you

will lose weight.

**IZABELLA WENTZ:** Basic math, right?

**SHAWN STEVENSON:** Basic math, your body is a calculator, right? But in reality, your thyroid is deeply, and this association, this connection with the adrenals, deeply influential over your "metabolic rate" and how your body is processing and expending that energy, and so you can be in a place where you're cutting, and I've seen this, I've seen people come in to my office and they're eating 900 calories a day, and the scale is not barging, and they're just suffering, they're broken, and they're just like, I don't know what's wrong with me. And of course, you've seen this many times, but helping people to understand what's going on internally and helping to heal and support these glands is a big part of this mission.

**IZABELLA WENTZ:** It's challenging 'cause I'll see some women that are overly exercising and they're restricting their calories and that sends a message to the body, and that message is, hey, girlfriend, we're in a stressful time, but don't you worry, I'm gonna hold on to your calories, so you're not gonna starve. I see that food isn't available right now, and I see you're doing all this running, you must be running from some like intruders, 'cause our genes haven't really adapted to dieting and the stress of our day-to-day lives, they're more... And our stress response is more adapted to, hey, we're being chased by a tiger right now, what are we gonna do, or hey, we're in a famine, can we conserve some of our calories, so we don't have to look for food right now, and so it's really adaptive physiology at its finest, our body is always trying to help us out, trying to help us survive, and if we're sending these messages to the body like, hey, food is not available, or we're under a lot of stress, the body is gonna try to help us out, it's gonna help to, it'd be like, you don't have to look for food, honey, we're gonna hold on to all of your calories for you, right?

**IZABELLA WENTZ:** And so that's what happens, unfortunately, is the base, the metabolic rates slow down, and I will have some women where I will say, hey, how about you really focus on sending yourself safety signals and eating nourishing foods and not exercising so much, maybe switching up the type of exercise that you're doing. And they're like, I'm exercising less and I'm eating more, but I'm actually losing weight because the body knows that it's safe and

it's getting the signals that food is plentiful, that we're not being chased by a bear, and so it's okay to thrive and focus on metabolism. So, we talked about all these stressors that we're bombarded with on a daily basis, whether that's watching the news or whether that's... [chuckle] Yeah, we don't recommend that.

**SHAWN STEVENSON:** Just that in and of itself.

**IZABELLA WENTZ:** Whether caring for others or work stressors or past traumas or just ongoing information exposure to things in our life and thinking about what messages that sends to our body and to our ancient genes and it's saying, okay, we need to conserve energy, we don't have enough energy. There's just too much. Let's slow down metabolism. Now, I for a while, I thought about, when I was trained in functional medicine, what do you do when somebody has adrenal dysfunction, you can put them on replacement hormones, right, so they're not making enough cortisol. Let's give them cortisol, right? But that doesn't necessarily solve the issue if they're still under a lot of stress, and you can suppress their own production of internally-produced hormones that way, you can suppress the feedback loop that way. And so it's not a long-term solution, and the solution is really to rebalance that stress response, and so what if rather than having all these messages to the body that say you're not safe, what if we found a way to tell our body that it's safe in a language that our body could understand, right?

**IZABELLA WENTZ:** And this is what I call safety signals, and these are targeted interventions, I have 14 different ones in the book that focus on making your body feel safe so it could get into that parasympathetic, that rest and digest and heal state. And we can get into more of an anabolic state versus that catabolic let's break everything down because we're stressed out. Let's like, let's clean house, right? Let's focus on rebuilding and healing, and I have a lot of different ones that we do, and it's amazing because it works really, really well in just two to three weeks versus using some of the hormones or some of the extreme lifestyle changes that I used to recommend it would take three months to two years to get better, but a safety signal, so one danger signal might be if you are starving, right, so if you're not getting enough calories, if you're nutrient-deficient, if you're eating foods that are inflammatory to you, your caveman genes are gonna think, oh my goodness, we're just eating grass all day,

that ... [chuckle]

**IZABELLA WENTZ:** We're humans, we don't eat grass, there must not be enough food available, and we're so depleted, we need to conserve energy, we need to slow down our metabolism. And so what we do is we actually focus on nourishing the body and we utilize anti-inflammatory, nutrient-dense foods that focus on getting plenty of macronutrients, so we're doing protein and fat, we're eating blood sugar balanced, and we're also getting a lot of micronutrients, so that lets the body know that we have lots of food, we do not have to conserve energy, we can ramp up our metabolism because we have everything that we need, and it's... I don't know, maybe it sounds boo, but it actually works, and it works in just two to three weeks where people are like, wow, I'm healing. Another thing is getting rest, so getting enough rest is gonna be helpful, your body can heal, you could go into those... You could heal your body with a deep sleep, and you can heal your brain with REM sleep when you get enough of that, then you're gonna start healing really, really effectively.

**SHAWN STEVENSON:** Yeah. Now, there's gonna be arguments coming up psychologically for people, you know, we'll argue within our minds and we'll immediately be like, that sounds nice, but that's part of my problem, I don't have time, I can't get enough rest, but you're saying that we're lacking on an essential safety signal, like when you're sleep-deprived, every cell in your body is going to be more on high alert and put you into this hyper-stress state, and so this is gonna take a reframing of priorities, I would imagine. So just a couple of these. So you mentioned nutrient-dense foods, sending those safety signals, which might be counter-intuitive, again, if we're trying to lose weight and you're saying, hey, you actually need to eat more of this, but specifically nutrient-dense foods, really putting more of an emphasis on rest. Now, would this be in contrast to exercising your face off, if you're trying to lose weight and you're dedicating two hours a day to working out and you're sleeping for six, what would you do, would you shift one of those hours to sleep rather than having those two dedicated to exercise?

**IZABELLA WENTZ:** I would shift that time to sleep more, and then I would also consider the type of exercise that you're doing, so if you're in a catabolic state, you wanna consider what types of exercises are going to be anabolic and build up your metabolism and build up your

body versus what exercises are gonna be catabolic, so if you're doing a lot of biking and aerobic exercise, running, that's actually gonna help to break down your body further, and so you need to build up your body more, so doing things like weight training can be beneficial, doing things like yoga for relaxation, those are usually the types of exercises that I recommend for people that are in that catabolic state and that have low metabolism, because building more muscle is gonna help us become, is gonna help speed up our metabolism along with getting more protein on board. And it sounds counter-intuitive, but it actually works, right, 'cause people are like, But I was told... The math is this and this, but it's like, but there's all these other factors and parenthesis and powers that you need to consider, it's more like trigonometry than really straightforward math.

**SHAWN STEVENSON:** Because it's so counter-culture. I love that you have so many stories sprinkled throughout the book and people's testimonials, and of course, I've seen this time and time again myself, but if we look at the track that our society has been going on, just look at the results, you're like, we're doing the things and we get into this culture of shame and blaming ourselves and beating ourselves down, trying to hate our bodies into change and submission and wondering why... And again, it's just being honest, like has the way we've been doing things, is it actually working? And what you're saying is something so simple and essential, which is we have to put our biology, our metabolism, our psychology, our mind and body in a safe state, and so we've got the nutritive component, and by the way, if people love to cycle and to run and do marathons, that kind of stuff, it's just getting your body well first, it's not saying that these things are off-limits forever, but if we're going to get well and you're hitting a wall and you're not getting the results that you want, if we can make a shift right now and find joy in other things, like again, even walking is super restorative, but to have somebody who loves to run and to tell them like, I'm gonna need you to reel it in a little bit and do some things differently.

**SHAWN STEVENSON:** Again, we're bumping up against that psychological belief for taking something away. When I think humans, we really don't like, number one, being told what to do, and number two, change, we want change, but we don't wanna change that much, and so I love this, and I'm bringing this up because you're giving things that aren't oftentimes just earth-shattering, like you gotta turn your life upside down to get these safety signals going,

so can we talk... You said there's 14 in the book. What are a couple more? Let's talk about a little bit more of these safety signals.

**IZABELLA WENTZ:** Sure. So you mentioned sleep and how hard it is for some people to sleep. And I developed this program initially for myself when I found myself with flatlined adrenals after having my son, and he was eight months old and he wasn't sleeping. So one of the recommendations, and we know that sleep deprivation can get us into adrenal dysfunction, right? Very quickly. And one of the recommendations I used to give to people is sleep for 10 to 12 hours a night for 30 days straight. Then you'll have, that'll be part of your healing protocol. And that works really, really well. Once I had my son, I realized like, maybe that's not super realistic for everybody to sleep 10 to 12 hours a night. And I was like, boy, if I just had that. So I had to find alternative sources of energy and safety that were not sleep, right?

**IZABELLA WENTZ:** So obviously I talk about things for sleep deprived parents, what they need to do, but I also talk about what nutrients we need to replenish when we are under a lot of stress and when we're sleep deprived and when we're focused on healing ourselves. And there are things like the B vitamins, vitamin C as well as magnesium and electrolytes that are just foundational things when we're under a lot of stress, when we're sleep deprived, we're gonna need more of those. And oftentimes we're not gonna be able to get that from our daily diet and from just plain water. So we need to really up our intake to help ourselves heal. There are studies done with utilizing electrolytes with athletes and doing endurance events, how it helps them recover, right? And so we kind of think of it that way, but when you have adrenal dysfunction and when you're fatigued and brain fogged and sluggish and having weight struggles and feeling overwhelmed with everything, everything feels like a marathon, right? And so you can use some of these same things to your advantage. So I focus a lot on replenishing some of the known nutrients that are gonna be lost in a stress response as well as utilizing adaptogens and then mitochondrial support to really help build up resilience.

**SHAWN STEVENSON:** Yeah. That's so profound. I don't think we think about, when our bodies are doing these processes, responding to a stress or a threat, there's energy being utilized. There are certain nutrients that are being utilized to run these processes. One of the things, and this is just in the last few years that this has become a little bit more well-known and

better understood, like your adrenals are just dumping out vitamin C like crazy when under stress. We think of vitamin C just in that lane of like immune function, but it's one of those things that helps to modulate stress and it helps your body with that. And so if you're just purging that from your system, you need to replenish it intentionally. And humans are unique in that we don't make vitamin C ourselves. We have to get it through nutritional sources. And I think that that evolution kind of like kept that, because other, a lot of other animals make it because it's so readily available in real foods, in real whole nutrient dense foods. But then again, look at what our diet is predominantly today. And so we've got nutritional protocols to send these safety signals. Is there anything else that you could share with us?

**IZABELLA WENTZ:** I love focusing on the circadian rhythm. So people talk about, I used to tell people just sleep more, right? Just make more time for sleep. And some people are like, I try, but it doesn't happen for me. I lay in bed and I toss and turn and I have all this energy, or I wake up numerous times throughout the night and it's just, I can't, right? I have trouble with sleep, and so, and I just have trouble getting going in the morning without coffee and I need that wine to wind down. So one of the things that I focus on is really getting aligned with the circadian rhythm, where a lot of us, I feel like, and it's so foundational, but a lot of us don't take the time to step outside and get enough sunshine in our eyes. And just getting that sunshine helps our body to know that it's daytime and that we should turn off our melatonin production, right?

**IZABELLA WENTZ:** And the reverse is also true, where we get too much light into our eyes in the evenings, if we're watching Netflix, if we're playing on our phones, whatever we're doing, that can be a problem in helping us get better sleep. That is a big part of it is utilizing the circadian rhythm and focusing on when is the best time to eat these kind of foods? When is the best time to build your energy in the morning? What kind of foods should you focus on in the evenings? And then what are the things you can do throughout your day, such as if you live in Southern California, you could step outside most mornings and get sunshine. If you live in Chicago, you might need a light therapy box, right? Something like that to help you get some of those messages and those safety signals to your brain that it's time to be awake.

**SHAWN STEVENSON:** This is so simple. This is the thing. It's just like getting sunlight in the

early part of the day is a safety signal, right? I think... Is this because like again, we evolved doing that and then suddenly we're not doing it on a regular basis for a huge percentage of us?

**IZABELLA WENTZ:** I kind of think of what would the caveman do, right? And so if you were not getting the sunshine in your eyes first thing in the morning, probably a reason for that, right? So probably maybe you're scared to go outside or there's something going on, or you're sick or you need to stay back in your cave, right? And same with our caves. Our caves weren't equipped with... [chuckle] with the things that man caves have these days with like these big screen TVs and everything else super fun. So we end up having, we're used to sleeping in complete darkness and that's setting up, and I know you're the genius of that, talking about setting up your sleep environment so well.

[music]

**SHAWN STEVENSON:** Alright, I hope that you enjoyed that first segment. And as Dr. Wentz was closing with the importance of managing our sleep quality in order to help our bodies to manage stress effectively, it can be one of the biggest hangups causing excessive stress and an inability to adapt from stress if we're not sleeping well. It is a top tier concern, and we're gonna talk more about that with our next expert, which is going to blow your mind. Now, with that being said, what is one of the common things that's causing disruption with our sleep quality? Well, a growing body of data has shown that people with confirmed chronic sleep issues like insomniacs and other people in general population, but these folks tend to have a significantly warmer core body temperature at night when their body temperature is supposed to be going down.

**SHAWN STEVENSON:** To help combat this issue, in this study, this was published in the journal, Brain, the scientists had participants wear thermo suits to lower their skin temperature less than one degree Celsius. This was so little that it didn't necessarily affect their core body temperature, but just the skin temperature. And they measured their impact objectively on their sleep quality. The study results found that participants didn't wake up as much during the night, and they actually spent more time in stages three and four deep

sleep. And effectively, these folks were now having their sleep equivalent to people who didn't have notable sleep issues just by reducing the temperature a little bit on their skin surface. Now, what you wanna be aware of is not overheating your body with your bedding, and that's one of the common culprits. And in a new study, test subjects were randomly placed into one of two groups. One sleeping on conventional sheets, just the run of the mill stuff.

**SHAWN STEVENSON:** And another group was sleeping on organic bamboo lyocell sheets from Ettitude. After compiling the data, the researchers found that, and they were actually objectively tracking their sleep quality, there was a 1.5% improvement in sleep efficiency for folks that were sleeping on the Ettitude sheets, which equated to an additional 7.2 more minutes of restorative sleep per night. Now, that might not sound like a lot, but you add that up, that's 43 extra hours of sleep per year doing the same thing they would've been doing, but their sleep efficiency, sleep quality was improved by sleeping on these sheets. And subjectively, after sleeping on these sheets, participants found that their mental alertness during the next day improved by upwards of 25% and 94% of people preferred sleeping on Ettitude Organic Bamboo lyocell Sheets. These are the sheets that I've been sleeping on for years and I can't tell you how much I love them.

**SHAWN STEVENSON:** Check them out at ettitude.com/model. That's E-T-T-I-T-U-D-E.com/model. Use the code MODEL15 at checkout, and you're gonna get 15% off of these incredible sheets. They're antimicrobial, self deodorizing, they're breathable, moisture wicking, and they also support thermo regulation. All right, so these sheets are something truly special. Head over there, check 'em out, ettitude.com/model. And now let's get to our next expert in this powerful compilation on helping us to better manage and modulate stress on a daily basis. Next up we have neuroscientist Dr. Andrew Huberman. In this segment, he's going to be sharing with you specifically why sleep is critical to managing stress effectively, including the principle from my book, Sleep Smarter, he references that a good night of sleep starts the moment that you wake up in the morning. He's also going to discuss how staring at our phones, this new phenomenon in human evolution can significantly increase our stress. And it's a really strange reason why, it's something that you might not expect. And he's also going to dive in on why we need to perceive stress more

accurately. Let's dive into the segment with the one and only Dr. Andrew Huberman.

[music]

**ANDREW HUBERMAN:** I think we've all heard that stress can make us sick and that stress can kill us, and I think we need to be clear that stress can be both good for us or bad for us, depending on how long it lasts and how extreme that stress is. So, there are a couple things I think we can all agree on. One is that trauma, intense fear, things of that sort, those are not good. I mean, if we can avoid exposing children to those things, it's for the better. Fortunately there are ways to rewire the brain to relieve trauma and extreme fear and phobias. That's a lot of what my lab works on. And of course there are a lot of laboratories working on that, but we can say a few other things for sure. First of all, you can have stress without having trauma.

**ANDREW HUBERMAN:** You can have stress without having fear, but you can't really have trauma and fear without stress, right? And then anxiety is one that gets thrown around. People say, I have anxiety. Anxiety is sort of stress about the future, but I think we can set anxiety aside and really just talk about stress and say a couple things. First of all, stress includes the mind and the body. It involves speeding up of the heart rate, speeding up of the breathing, our pupils actually dilate when we are stressed. And it changes, literally changes the way that we view our environment. It changes the optics, it tends to make our visual field narrower. So we get kind of a tunnel or soda straw view of the world when we're relaxed. That aperture, that view of the world dilates and gets bigger literally. And that's because as we stress, the lens of our eye moves and there are changes in the structure of the eye, it's incredible. Short term stress, where we feel triggered by something or we wake up and we realize we didn't do something, that causes the very rapid release of this hormone called adrenaline.

**ANDREW HUBERMAN:** And the equivalent chemical in the brain, just to confuse people, scientists decided to call the hormone in the body adrenaline, but the chemical in the brain, which is adrenaline, they call epinephrine, but they are the same thing, okay? So it creates alertness of the mind and a kind of a hyper focus on whatever is happening. So the troubling

text message, the troubling news article, the troubling comment, whatever it happens to be. And our world shrinks and gets very focused and very intense because the adrenaline in our body tends to make us immediately alert, which is really incredible if you think about it, right? I mean, these are powerful systems. Now, that short term stress, or I should say, that stress provided it's in the short term is not necessarily bad because one additional thing that adrenaline does is adrenaline and short-term stress causes the release of cells in the body that actively fight infection of all kinds, bacterial, viral, et cetera.

**ANDREW HUBERMAN:** And this makes sense. I mean, if it were truly the case that stress reduces the functioning of your immune system, well then anytime we had a challenge to our immune system, we would die, right? That can't be the case. And it's actually the opposite. So there are some really good data that are published in excellent peer review journals showing, for instance, that things like intense breathing or an intense episode of stress or a cold shower, all of which release adrenaline into our body, if you ever got into cold water and you're, oh my goodness, and your eyes go wide and you're filled with adrenaline, that adrenaline response mobilizes the immune response in a way to prepare for whatever challenge is coming. Now, if you've ever been stressed for a long period of time, you've been caring for a loved one, you've been challenged with work or financial things or family things or mental anxiety that goes on and on, and then you finally rest, typically that's when you get sick because your system isn't up on guard.

**ANDREW HUBERMAN:** Now, this doesn't mean that we should seek out stress necessarily. The real key is to be able to experience stress, but then to be able to shut off the stress response. And earlier you and I were talking about this, for instance, we have a stress hormone called cortisol. It is a healthy hormone provided it's released at its highest levels early in the day, when we wake up it is released, and then tapers off. And maybe throughout the day you have a stressful text message, you see something online, you have these little spikes in stress, but provided they come down, that's fine. But when you start seeing peaks in cortisol toward night time again, that's actually a signature of depression, that's a signature of sleep problems, that's a signature of metabolic disorders. So the real key is accept stress as a reality, accept that stress is helpful in the short term, but learn to adopt practices that allow you to clamp down on stress when you feel like it's not serving you or it's been going on for

too long.

**ANDREW HUBERMAN:** And those tools and the science behind those tools are a big part of what my laboratory at Stanford has been about, and what the work with my collaborators at Stanford has been about is figuring out what can people do to control their stress. Because I think a lot of people just feel like stress is like getting thrown into the current of life and you just have to wait until the current slows down. And that's absolutely not the case. There are things that we can all do that don't involve ingesting anything, taking anything at all that can help us reduce our stress levels. If there were one set or even just one practice that can fundamentally change your ability to cope with stress and to sleep better, which as we know is the fundamental layer of health, of all kinds of health, it would be to view morning sunlight, ideally within 30 minutes, but certainly within 60 minutes of waking up.

**ANDREW HUBERMAN:** This is a very simple practice that's anchored in a lot of biology. I know you've written about this before in your book. It's quite simple. We can just list off what the practice is. It's basically get outside. Ideally you don't do this through a window because of the way that windows filter out the light that you want to view. You get outside, if you can do it safely without sunglasses, don't wear sunglasses. On a clear day, maybe five, 10 minutes would be even better, on a cloudy day, 20, 30 minutes. And if it's really overcast and you're in England in the middle of winter or something, trust me, there's more light outside even on that cloudy day than there is indoors with bright lights. Get outside for anywhere from 10 to 60 minutes early in the day. If you have to check your phone out there, do it.

**ANDREW HUBERMAN:** But ideally you get outside, you get that sunlight exposure to your eyes. You don't have to look directly into the sun 'cause there's a lot of what we call photons light energy around. Those photons, the light energy, and this sounds very mystical, but it's not, literally it's captured by neurons, nerve cells in the back of your eye. That signal is then sent to the master clock in your brain, sits right above the roof of your mouth, and that master clock sends out signals, chemical and electrical signals to all the cells of your body. All the cells of your body have a 24 hour clock. And that is not a coincidence. It's timed to the rotation of the earth every 24 hours. So that basic behavior of going outside each morning, you can wear eyeglasses, you can wear contacts, and doing that for 10 to 60 minutes will

fundamentally shift your wellbeing.

**ANDREW HUBERMAN:** It times your cortisol to the correct early part of the day. It tends to ensure that the cortisol bump won't happen later. So it can offset some symptoms of depression. It also sets a timer, as you mentioned, on the serotonin melatonin pathway so that about 16 hours later you start getting sleepy so you can fall asleep well, and on and on and on and on. The question I always get is, what if I wake up before the sun? Well, if you wake up before the sun and you want before the sun rises and you want to be awake, turn on as many lights as you can and then when the sun comes out, go outside. But this practice, it sets the foundation for your ability to cope with stress. It sets your capacity to deal with everything. And I could list off 20 or more positive changes and impacts that this creates.

**ANDREW HUBERMAN:** Some people find that just this one behavior leads to a very large positive effect on mood and ability to sleep. The other thing that I would tether to this, is if possible, and I do think it's possible, unless you're doing shift work or something of that sort, really try and avoid viewing bright artificial lights of any color. Not just blue light, screen lights, at home lights, dim those down, way, way down, or don't have them on at all between the hours of about 10:00 PM and 4:00 AM. There's a study that was done by colleagues of mine at National Institutes of Mental Health and also at Brown University showing that if we expose our eyes to even a little bit of light late in the day or at night, late in the day meaning 10:00 PM to 4:00 AM, that actually can cause reductions in important chemicals that create a sense of wellbeing like dopamine, can create deficits in learning, can create more stress in the subsequent days.

**ANDREW HUBERMAN:** So if you are not getting outside in the morning and getting sunlight and you are on your phone in the middle of the night, even if that phone is dimmed way down, you are setting yourself up for a very challenging situation. Now, if you do wake up and you need to be on your phone for whatever reason, just dim it way, way down and try not to do it too long or too often. But those two practices, I think, really can help anchor people and anchor their stress system so that it's resilient and it can respond to things, but then it can turn off. Otherwise, it's like being on a bumpy ride out to ocean, which if anyone has ever been on that sort of thing, it is really uncomfortable. There's no settling in. We always feel like

we are, as you said, tired and wired, or that little things can kind of knock us over.

**SHAWN STEVENSON:** Yeah, we're kind of living this residual hangover effect. We don't really realize it. So, this is such simple and this is at no cost.

**ANDREW HUBERMAN:** Right. Yeah. It doesn't cost anything. It takes a little bit of discipline. I confess there are days that I wake up and the blinds are closed 'cause I like to keep the room dark when I sleep and immediately get on my phone and I'm checking email and I'm doing this, and I think, okay, 15 minutes I'll go outside, in 20 minutes. There are days that I miss. If you miss a day, just jump right back on, you're not going to collapse all the good and positive benefits of these practices by missing one day. So it's, you can hop right back on and if you really, really want to black belt this process, you get some light in the morning. You also get some light in the afternoon, natural light before the sun sets. And then you avoid light in the middle of the night between 10:00 PM and 4:00 AM, or you dim it way, way down if you need to use lights for safety reasons or work reasons.

**ANDREW HUBERMAN:** If you do those three things, I would be very surprised if you didn't experience tremendous positive benefits. People's appetite tends to regulate. They feel less jittery. They have fewer anxiety attacks, they feel less depressed, they feel more present, able to focus, they sleep better. All the things that then start an upward spiral, because when you're sleeping better, then everything else gets easier. When you're sleeping poorly, everything else gets harder. So it's very straightforward, zero cost. It just takes a little bit of dedication to do it. And you can make it a nice practice. You can take your coffee outside, you can take your, if you must, you can take your phone outside. Although ideally you would just kind of breathe in your environment a little bit and look around as opposed to always being in a box about this big.

**ANDREW HUBERMAN:** And I should mention that when we are looking at our phone or any small space, we are essentially recreating that experience that stress and focus creates of contracting our aperture, making our visual aperture, like looking through a tunnel or a soda straw view. And that's a powerful positive thing when we want to be focused. It's our ability to engage in conversation and not get distracted. But if you are spending most of your time

looking in a little tiny box about the size of your palm, you are pushing your system much harder than you would be otherwise. I think a lot of people forget this. So sometimes just walking to your car without looking at your phone, doing something where you're moving through space, walking or even just driving and not focusing on this little itty bitty box can provide a lot of mental relief and physical relief as well.

**SHAWN STEVENSON:** This is powerful. I didn't know he was gonna bring this one up because I don't know if anybody has ever had the experience of being on their phone for an hour or two and then feeling amazing after, just like...

**ANDREW HUBERMAN:** That's a rare...

**SHAWN STEVENSON:** You know what I mean? It's just like something happens and you're sharing exactly what it is. Our biochemistry is changing. We're getting into a stress state because of our focusing in on that one tiny space for that amount of time. Plus, not to mention all of the scanning and the scrolling and the, all the different brain candy that that has there. So this is bringing to light one of the behind the scenes reasons why this is impacting our health.

**ANDREW HUBERMAN:** Yeah, the dark days and bright nights they say is a quick route to depression, anxiety or worse, you know, there's a well-known phenomenon in hospitals called ICU psychosis. So intensive care unit psychosis. So people come into the hospital, these are people that are not suffering from psychosis of any kind. They might have a leg surgery or something. And many hospitals unfortunately have schedules and budget constraints that make it such that the lights are on at certain times, they're coming in, there's the sounds, there's the lights all the time. And unless they are right next to a natural light window, people start developing psychotic symptoms. They start hearing voices, they start feeling really low, then really kind of manic. They start, excuse me, start having all sorts of agitation, when they leave and they get back onto a regular sunlight schedule, completely disappears.

**ANDREW HUBERMAN:** Now, people who already have existing psychotic symptoms, that's a different issue. But what this means is that we can all go crazy, a little crazy or a lot crazy with

just changes in our lighting and in our environment. And when we're looking at our phone all the time, obviously it's not creating psychosis, but it is creating a kind of a low level stress. And we have to remember that there's just one system. I mentioned the adrenaline from the adrenal glands and the epinephrine in the brain. There's one general system for stress. You don't get to, for instance, it's like a bank account. And so when every time you're looking at your phone, you're pushing your expenditure a little bit more, so then when something happens, you're less prepared for it. You're really less resilient. Now, of course, I use the phone. The phone is wonderful.

**ANDREW HUBERMAN:** We communicate, I frankly, I think there are some elements of social media, they're wonderful. You can learn on social media. I mean, you and I both teach on social media, so I'd be a hypocrite if I said that the phone is bad. The phone is great, but it's just one way to interact with the world. And if you're spending too much time in that little tunnel, of which there are many things in that tunnel...

[laughter]

**ANDREW HUBERMAN:** If you're spending too much time in that tunnel, you will set up your biology to fail in the rest of life. I can confidently make that statement. So you have to control the number of hours. And also just sometimes just knowing what's going on when you're feeling like you're scrolling and like, you don't even know what you're scrolling for, what are you expecting to see that it's suddenly going to seem that incredible? So, then again, there's some comedy specials that just came out on Netflix, and like the other day, I found myself on my phone for an hour, and this was time well spent I felt, it made me laugh. I enjoyed it. That's time well spent. Communicating with people, that's time well spent. But we have to put that down and get back into life if we expect our biology to take care of us and for us to take care of it. So, if you think about the stress response, widening of the pupils, narrowing of the focus, elevated levels of energy in the body and adrenaline and all that, it's very similar to the response that we would call excitement. In fact, those are almost identical. To get technical, if one wants just to look this up or something, it's, they're both what we call increased autonomic arousal.

**ANDREW HUBERMAN:** The autonomic system is kinda like how many RPMs you're idling at in your vehicle, so are you idling high or is it idling low? And so things are ramped up. The difference between stress and happiness or stress and excitement is on the one hand is just cognitive. It's whether or not it was caused by something that we like or caused by something that we don't like. [chuckle] And that's really all it boils down to. The body doesn't have a separate system for alertness, for stress versus happiness. It doesn't have that. Now, there are chemicals like dopamine and serotonin that get woven into the stuff that we like that are less present in our brain and body for something that we would call stressful, but if we were just to think about how to reframe our relationship to stress, that actually can be done.

**ANDREW HUBERMAN:** I have a colleague at Stanford. He's the associate chair of psychiatry. He's an MD. He is a wonderful guy and I'm mentioning him, his name is David Spiegel, because I'm about to quote him and in my professional attribution, it's very important. But he has this great saying, which is, it's not just about stress, it's about how you got into that state of stress and whether or not you had anything to do with it. So the difference between a terrible event in the world that stresses me out, and for instance me choosing to go take a cold shower deliberately, is that in the one case, I actually chose the cold shower. Now, I might not like it, I might have to force myself to do it, but there does seem to be some mechanism that we're not quite sure how this mechanism works but David's lab and my lab is trying to figure this out.

**ANDREW HUBERMAN:** There's some mechanism by which when we choose to put ourselves into these moments of challenge where we're really elevated and we're having all the classic symptoms of stress, that it flips the relationship to one of a positive association. And that has two really important effects. First of all, you get the adrenaline response. You get the boost in the... It's been shown that adrenaline causes a boost in the immune system function, alertness. There's also a well-known now, well-established effect, meaning in the scientific literature, that you get a long and sustained increase in dopamine from cold water exposure, even a cold shower just for a few minutes in the morning. And yes, you can turn the hot water on afterwards. There's no law that says that you can't do that, which is a great relief to me.

**ANDREW HUBERMAN:** So you turn the cold shower on, it's stressful. It's stressful. You're

forcing yourself to do it. And then most people find that they feel all of a sudden it's like, I actually kind of like that. What is that about? Some people always hate it, but they do it anyway. And then you turn the warm water on if you're like me. You've just created a dopamine release. You've just thrown in this feel-good molecule on top of the stress response, and you chose it. So that's one benefit, which is that you're enhancing your overall system in terms of your immune system, your feelings of wellbeing. But the other benefit is that then when something happens in the external world and you feel stressed out because of it, you recognize that state, you recognize, ah, this is me feeling really alert. This is me feeling... And I've been here before, right?

**ANDREW HUBERMAN:** It's sort of like if you've ever, I haven't done this, but I've always wanted to do this. If you ever go to the track and you drive at 120 miles per hour round a track, that's very different than careening down a hill with no brakes at 120 miles an hour. Now, God forbid, I hope nobody ever has to careen down a hill with no brakes at 120 miles an hour. But God forbid, if you were in that situation, you would recognize that situation if you've been at 120 miles an hour before by choice, and I would be willing to bet your outcomes are likely to be better, as opposed to feeling like you've never been in that state. So what's really disruptive about stress is that we don't pick the stressful event. That's why we call it stress. It knocks us off course, but a lot of what my lab has been focused on is trying to figure out what are the things that can allow people to capture themselves when in a state of stress, calm themselves down a bit?

**ANDREW HUBERMAN:** That's one thing. And we can talk about a tool that anyone can use, a zero cost tool to do that. But the other thing is, how do you raise your threshold for stress? We hear about resilience and grit and mental toughness, and we have these amazing examples on social media and in the world and throughout history. But what hasn't really been explained or explored until recently is how do we create a more resilient self? So, if I may, there are two tools that you can use to push back on stress. Let's think about the first one as kind of a stepping on the brake when you feel like you're just too stressed. And there are a lot of ways to do that. You can take a vacation [chuckle], which is not very practical in the moment, especially if you're dealing with kids or life or anything.

**ANDREW HUBERMAN:** You can't step out of life. You can do exercise, you can meditate, but those things require that you step out of the event. And much of life is about dealing with things as they come and not being able to leave the room, not being able to just quit your job because you don't like it. And so the tool that my lab has been focused on quite a lot is something that we call the physiological sigh. So physiological sighs were described as long ago as the 1930s. And actually you do them every night while you're in sleep. And animals do them, in particular dogs right before they go down for a nap. It's a double inhale, followed by a long exhale. The animal lovers out there will learn to recognize this, or you can look for it in your pets. In sleep, whenever we have a buildup of what's called carbon dioxide in our body, it's stress.

**ANDREW HUBERMAN:** We're actually triggered to breathe by an increase in this gas called carbon dioxide. You don't have to know much about carbon dioxide, but what we need to know is that anytime that carbon dioxide gets too high, we do, in sleep, we do a double inhale, followed by a long exhale. Animals do this right before they go down to sleep. Now, it turns out that you can do physiological sighs deliberately in waking. If you're feeling too stressed, it's a double inhale through the nose. So it's followed by a very long exhale. Now, the second inhale is just a tiny one. You can barely sneak in any air you'll find, 'cause it's big inhale and then another little tiny one. That little tiny inhale though is important because our lungs are not just too big bags of air. They have little tiny sacks called alveoli of the lungs.

**ANDREW HUBERMAN:** And when we get stressed, those alveoli of the lungs collapse like empty balloons. And that second inhale re-inflates them so that when we exhale, we exhale all our carbon dioxide. And a lot of the stress response is due to too much carbon dioxide. So to make this very simple, if you're feeling too stressed, do a double inhale through the nose, followed by a long exhale. And chances are just one of those, but maybe repeating that two or three times, but chances are just one of those will immediately bring you back down to a very calm baseline. As far as I know, this is the fastest way to calm your system when you're feeling stressed. And the beauty of it is you can do it most anytime unless you're completely submerged in water. The other great thing about it is that if you do it repeatedly, meaning as you move through life and you have stressful events and you do this physiological sigh, your system starts to react more robustly to the physiological sigh.

**ANDREW HUBERMAN:** It starts to calm you even faster and further. So much so that I know people who can't do too many of these or they get sleepy, it actually starts to put them to sleep. And it's actually a tool that some people use to calm themselves before sleep. They'll do, and they'll repeat that. And we have a study that's now out for review. So it's not quite done, but where people do this as a regular pattern of breathing, so that's kind of like slamming on the brake. Again, zero cost. You can do it any time, any place. Some people might say, well, I have a deviated septum, or I have trouble breathing through my nose. I can't breathe through my nose. If you need to do it through your mouth, you can, but ideally, the inhales are through your mouth.

**ANDREW HUBERMAN:** And the long exhale, excuse me, the inhales are through your nose and the long exhales are through the mouth. Now, that's calming down. But in order to raise your stress threshold to become more resilient, more gritty, or able to handle life better, there is a practice that you can use. One is the one that we talked about before. Get into a cold shower once a day for one to three minutes. It never feels good. I always say the first... It's always like climbing over a wall. That first wall is always there. I wish I could give you a tool that would allow you to enjoy it on impact. But a cold shower, you'll know if it's how cold, because it'll be really cold and you'll want to move away from it, one to three minutes of that, and then turn on the warm water and it will liberate the dopamine and adrenaline into your system.

**ANDREW HUBERMAN:** It will make you more resilient for stress that comes. And I guess it's not completely zero cost, but it's certainly cheaper than hot water. And most people fortunately have access to cold water. If you want to do ice baths and buy ice and that kinda thing, that's actually kind of expensive. It's like to really fill an ice bath is about $50 in ice, if you're gonna do it regularly, that's a lot. So just cold shower is fine. You don't need cryo to go to a cryo device. If you have access to one, great, but that will release adrenaline. The other one is if you don't have access to cold water, you can try a different pattern of breathing, which is, we call it cyclic hyperventilation in the lab. But the other way to get adrenaline going into your system is to breathe as if you were really in a panic attack.

**ANDREW HUBERMAN:** And I just wanna warn people who have panic attacks or who have a predisposition for really bad anxiety, probably shouldn't do this, but never do this near water no matter who you are. But basically, you breathe in and out deeply for 25 breaths. I won't do that all right now, but it's, you'll immediately start to feel warm. You'll start to feel agitated. You'll notice my eyes are a little wider than they were a few seconds ago. That's adrenaline. You're releasing adrenaline. Then, exhale all your air and sit calmly with all that adrenaline in your system. What are you doing? You're learning to be calm when you have a lot of adrenaline in your system. This is a self-driven stress inoculation. And just to put a bow on this, this goes back to my colleague David Spiegel's comment, it's not just about stress, it's how you got there and whether or not you had anything to do with it.

**ANDREW HUBERMAN:** And so these are tools that you can do. You don't even have to do them every day. The intense breathing, 25 breaths followed by an exhale and hold. You could repeat it if you want a few times. Don't hold your breath to see how long you can hold your breath. Just when you feel the impulse to breathe, breathe. But many people report feeling really pleasantly calm, despite being really alert. So it's great to do if you have to lean into life. And the incredible thing about this is that it really does shift your biology so that when stressful events come, you feel more resilient and prepared. You will notice I can deal with things better, but you do have to do this practice probably one to three times a week. You don't have to do it every day.

[music]

**SHAWN STEVENSON:** All right, I hope that you're enjoying this stress management compilation. We've got one more expert in store for you and it is a good one. Now, we've gotta keep in mind that one of the biggest stressors today for our biology is actually through our diet. Yes, ultra processed foods have now been affirmed to cause more biological stress to the human body. A 2021 study published in the International Journal of Environmental Research and Public Health is one of many studies affirming the connection between ultra processed food and excess stress. The study titled Unhealthy Food and Psychological Stress found that people who consume the most ultra processed foods have higher levels of psychological stress. Now, this is one of those chicken or the egg scenarios, which one comes

first, the stress or the ultra processed food eating? But it's really a vicious circle, and another study that's affirming that this is also coming from the direction of eating these foods itself is published in the journal, Nutrients, in 2021. And it detailed how the consumption of ultra processed foods creates cellular alterations that lead to excessive oxidative stress. And they highlight how eating ultra processed foods contributes to inflammation, immune system dysfunction, and set the stage for chronic diseases.

**SHAWN STEVENSON:** One of the biggest offenders in this conversation about ultra processed foods and the stress it causes on our biology has to do with the abhorrent amount of sugar. Now, we don't wanna run from the fact that humans love, we love sweetness, alright? This is something we evolved having a connection to. But of course, all of these ultra processed versions and very concentrated versions of highly refined sugar are something that our biology is not wired up to be able to handle. And so I'm a huge advocate of switching over and utilizing a true time tested and I struggle to even call it a sweetener because it is belittling how remarkable this food really is, it is not a mere sweetener, but it can definitely address a lot of those sweet desires. A recent study published in the peer-reviewed journal, Nutrients, detailed how raw honey intake can actually improve our fasting blood sugar levels, improve lipid metabolism, and reduce the risk of heart disease.

**SHAWN STEVENSON:** Additionally, the scientists noted there's a vast array of antioxidants and anti-inflammatory properties that are found in honey that is simply not found anywhere else. Plus, honey has been found to directly support the human brain. Research cited in the journal, Evidence-Based Complementary and Alternative Medicine, determine that honey antioxidants have nootropic effects such as memory enhancement. This is not a mere sweetener, this is a whole body beneficial food. But, raw honey is the key word denoted in these peer-reviewed studies. And the quality matters more than ever. You wanna make sure that your honey is third party tested for common contaminants, and also making sure that you're investing in companies that are dedicated to regenerative beekeeping. That's why I get my honey exclusively from Beekeeper's Naturals. Go to beekeepersnaturals.com/model and you're going to get 15% off all of their incredible bee products, including their bee pollen, their Royal Jelly brand new Tropic product, and their superfood honey as well.

**SHAWN STEVENSON:** There's so many incredible things there, and Beekeeper's is expanding and supporting real change and helping to protect our populations of bees, they're really dedicated to that and they're just really doing something special. Huge, huge fan, I utilize Beekeeper's Naturals products every day, I absolutely love them. Check them out, that's B-E-E-K-E-E-P-E-R-Snaturals.com/model. Alright, again, you're gonna get 15% off storewide, they're absolutely incredible, check them out, beekeepersnaturals.com/model. And now let's get to our final expert in our compilation dedicated to daily decompression, daily healing from stress. And next up, we've got Dr. Elissa Epel, Dr. Epel and her co-author, Dr. Elizabeth Blackburn, of her first book, The Telomere Effect, her co-author actually won a Nobel Prize for her discovery of telomeres, which is an enzyme that can effectively add length back onto our telomeres and at its core, dramatically slowing down the aging process.

**SHAWN STEVENSON:** But in her most recent project, Dr. Epel, who focuses on the psychology aspect and how our thoughts and our interaction are, association with stress can either accelerate our aging process or dramatically slow it down and potentially even reverse it. And so in this conversation, you're going to learn why it's so important to step back and look at our mind and why mindfulness tools are essential in our highly distracted world today, how we can reorient the way we perceive life's events to reduce the stress toll it takes on us, and more. Let's dive into this final segment with Dr. Elissa Epel.

[music]

**SHAWN STEVENSON:** You shared this great study, and this was a study that you conducted with some colleagues on women who had never meditated before, split into two groups at a luxury resort. Can you talk about that study?

**ELISSA EPEL:** Yeah. I love that study. And there are other retreat studies that show similar things. You asked about, like how is toxic stress getting into the skin and causing disease? And I think inflammation's a main highway of how it does that, but we can now look at like all the different biological pathways with gene expression. And so in this study, that's what we did. We measured everyone on day one when they arrived, and then what their cells were doing close to day seven. And what was so amazing is that there were such dramatic changes

in what our cells were producing. The DNA readout was different, different genes were producing different proteins because the stress response and the immune response thinking that it has to fight things were turned on very, very low volume. So like very low activity there in all of those vigilant fighting modes that our body things have to be on, you know, in urban living they're probably on pretty high.

**ELISSA EPEL:** So at the end of the week, those were really low, and then we had more of these kind of restorative genes, telomeres, mitochondria, growth factors. So short term, both groups showed like 60% reduction in stress, depression, increases in vitality and mindfulness. I mean, I was like, I never see this much change, this is like a real privilege and treat, if people can unhook and afford a retreat for a week, that's the peeling the layers of the onion, right? But the meditation group didn't look too different in the short run, they did look different 10 months later and their depression stayed low.

**ELISSA EPEL:** So that was like, okay, this is a building a skill that over time is gonna promote stress resilience. I think that was it, Shawn, I think it was the change in the mental filter because a small percentage of them kept up the mantra meditation, Deepak Chopra was the teacher, they loved it. Some of them kept it up, some didn't. But as a group, they still benefited, so there's these ways that you kind of shift mindsets of like thoughts are just thoughts and maybe this idea of not trying to control everything that goes along with Buddhist philosophy, but even Buddhists get stressed. I mean, they have beautiful philosophy and ideology and part of it is this idea of causes and conditions, what we can do now in this moment is different than being attached to outcomes, so they try to stay unattached to outcomes and they still get stressed, [chuckle] it's like, I guess my point is, it's work, we can all try to adopt that mindset, but we gotta remind ourselves of that, and we can do that for other people too.

**SHAWN STEVENSON:** Yeah. And I think that's what really, when we look at folks who are, Buddhist monks for example, what we are really seeing, we're not seeing that people that are incapable of experiencing stress, we're seeing people who maybe are better at remembering their ability to perceive stress differently and to manage stress and to employ things, right? And so that's really the gift for all of us is just working on remembering.

**ELISSA EPEL:** Yes.

**SHAWN STEVENSON:** Because any of us can forget and just get immersed in stress.

**ELISSA EPEL:** Yes.

**SHAWN STEVENSON:** But if we can remember, oh, wait a minute, let me breathe, and you kept, even through the book, you kept bringing me back even to breathe, yes.

**ELISSA EPEL:** I pointed you, yep yeah.

**SHAWN STEVENSON:** Yes.

**ELISSA EPEL:** So we want to get to the point where we live it. We can step in and out of busyness to become mindful, to slow down, or within busyness to have our meta awareness on and think about how we're connecting with others and maybe reacting. And it's this observational skill that if we don't have that ability to step back and look at our thoughts and our mind, we can't really do any of that. So there's always this moment of breathing at the end of each chapter, get grounded and now look inside and try this, and so I didn't use the word mindfulness throughout, but they all bring us to, start with breath and checking in with our body, 'cause we can't really do anything until we do that, and then we can try some of these new things. So the informal mindfulness is what's the real buzz and the mindfulness literature is can we get to the point where we're living it, not just having a monk-like meditation with a big chunk of time every day. So that is what we can all try, these moments of meditation, that's really what's being promoted now in the meditation field, but I do think that starting with a base that you had where you really trained your mind in, I will call deep rest states, blue mind, is so helpful, it's a good foundation to live from. [chuckle]

**SHAWN STEVENSON:** This is so cool because I literally, what I'm about to say, I've not shared with anybody, but I was just thinking about, I had a big workload, working on this big project. And I'm kind of, you know, it's, I love it, but it is a laborious process and just being able to, as

I'm doing it, just like, how is this making me feel? There's this inquisitive thing and I've never vocalized the words, it might not necessarily be words, but it's a check-in like, how is this making me feel? What do I need to do right now? Am I overexaggerating stress? There's just this like matrix of, you know, data that I am...

**ELISSA EPEL:** Mindfulness.

**SHAWN STEVENSON:** Sharing. Right. And accessing back and it helps me to, again, to switch to that low battery mode when I need to, if that makes sense.

**ELISSA EPEL:** Yeah, absolutely. Yeah, we can be burning on high battery mode and not aware of it. But the metacognition that you're describing, that ability to step back and look in, it's like going from a two dimensional world where we're just seeing, we think everything's real and we get threatened really easily, to the three dimensional where we're above and we can look down and check in and say, in this moment, how is this mind body reacting? And what does it need? And I love how it can help with creativity and innovation, and that threat mindset, that kind of rules out creativity, innovation, connection.

**SHAWN STEVENSON:** Yeah. Oh, silly us.

[laughter]

**ELISSA EPEL:** Silly us, and we can't help it, it's kind of tragic, right?

[laughter]

**SHAWN STEVENSON:** Yeah.

**ELISSA EPEL:** Yeah. But we can, with some prioritizing it, making it important, it's called the stress prescription, 'cause it's as important as taking some medical drug we need, we need to manage stress, otherwise we're just flooded.

**SHAWN STEVENSON:** Yes. Another part of the stress prescription is, this section, is be the lion. Why is this a part of our stress prescription?

**ELISSA EPEL:** So we've been talking about the stepping back and not reacting and having those moments when we can actually really feel ease. Like, are your hands clenched? Are your brows furrowed? That kind of checking in, but we can only do that when we are not engaged in the moment in a really stressful thing, it's easiest to, but when we are approaching a stressor leading up to it, or in the middle of it, that kind of mindset of like, be the lion is the positive stress response. So rather than the, if we're telling ourself, I am, I feel my heart beating, this is terrible, I'm not gonna cope well, I'm feeling fear, like all of that really fuels the threat response, the cortisol response, and that's, we all know what that feels like, it feels terrible, so that's gonna happen, but we can also try to interrupt that process and move from that, like the frightened gazelle to the lion by saying different things to empower us.

**ELISSA EPEL:** And they are things, I don't know, I've heard on your show, you've talked about mind hacks and they really are empowerment statements. I mean, our body believes what we say to it, and so if you're going in and saying, I got this, I have what it takes, I've been through this before, or anything that kind of takes away the threat, and I can only do as well as I can, and if I do poorly, is this really gonna affect my life in five years? Like anything, there's a lot of options of what we say to ourselves. So like finding what it is and using it in the moment to be the lion...

**SHAWN STEVENSON:** Yeah. Unlike...

**ELISSA EPEL:** Is helpful, yeah.

**SHAWN STEVENSON:** The lion and gazelle scenario where it's just like one or the other, as a human, we get to choose how we're perceiving things and how we're reacting to things, and so with that said, if we're coming into our life conditions and we experience a victim scenario, a gazelle scenario in our life, we can start to have that as our baseline, but you shared in the book Dr. Stephanie Mayer and she's at USCF, she found that people with early childhood trauma do in fact have exaggerated threat appraisals of their daily stressors, which then

contributed to depression. But, she did a follow-up study providing them with mindfulness exercises and found that that improved their stress response, they became more lion-like...

**ELISSA EPEL:** Yeah, exactly.

**SHAWN STEVENSON:** By having these skills.

**ELISSA EPEL:** Yeah. We gotta have some help, she had a... People were buzzed in the day, so like in the moment you get to have a reminder, it's a... That remembering, that's so important, like all this knowledge doesn't help unless we're able to like experience it in the moment and try it. So that was... It's an exciting line of work that she and others are doing to help people with this exaggerated stress response by checking in right at the moment and using some different strategies, and so some are muscling it, like reframing things in a positive way and saying things that empower you, and some of it is letting go, the acceptance. And so we might react automatically with that threat response 'cause we're wired that way, or we had a lot of early childhood adversity, and that's the first response. But things don't have to end there, you don't have to stew in that and have slow recovery, you can actually have some, you can step in and you can have self-compassion and you can actually say something to yourself that you would say to a dearest friend, a person you love in that moment and things like, this is a universal response, I'm not the only one feeling this way, this is natural, this is how my body responds. And that kind of kindness and letting go, this is how it is right now, but this will pass. So that kind of lion mentality is one option, but also that kind of kindness, compassion and riding the wave is another way.

**SHAWN STEVENSON:** Yeah. Oh man, we need this right now.

**ELISSA EPEL:** Yeah, yeah.

**SHAWN STEVENSON:** Because I think, again, one of the biggest issues with our association with stress is we don't really realize that because stress is invisible in a sense, we don't realize the impact that it has on our cardiovascular system or on our metabolism, stress is calorie free is something that I say, but it can deeply kind of alter the way that your body is

associating with food, associating with the calories that you're consuming. And as you know from your research, this can put us into states or nudge us into states where we're more likely to experience disordered eating or...

**ELISSA EPEL:** Yes.

**SHAWN STEVENSON:** Experience insulin resistance or gain weight, so a lot of folks today, you know, there are tens of millions of people in America alone that are on diets right now trying to lose weight, but we discount how impactful stress is on our metabolism.

**ELISSA EPEL:** Oh, Shawn, I'm so happy you're saying this to your large audience because we can't remember this enough, it's so important that it shapes what we eat, how we store fat and our risk for diseases, not just diabetes, but all diseases because they're so related to insulin resistance and inflammation. And so I couldn't agree more, and I've been excited to tell you about a new study. [chuckle] So we've been, you know, working on this nexus, the emotional eating with trying to help people with stress reduction, with using mindful check-ins and mindful eating, like really checking in and seeing how hungry we are, 'cause like the compulsive eating is, so hard to live with compulsive drive to eat, right? They're just, it takes up a lot of mental space and it leads us in the moment to impulsively overeat or make choices of comfort foods that we know are the wrong thing.

**ELISSA EPEL:** But boy, do we like to over consume them in the moment, they're calming to the brain for a very short period, then they lead to the abdominal fat. So in this study we enrolled women who were very high stress, tended to be low income, and they were all early in their pregnancy and overweight, and so they're at really big risk of excessive weight gain, and we know that intervening in pregnancy could be really powerful, everyone's just trying their best, they're really motivated for their baby's health, so we taught them mindful eating and mindful stress reduction, and some nutrition, and I'm grateful for you for educating the public on nutrition because it turns out that even the fundamentals, a lot of people really don't realize, and so what we found was that, well, the big news was that at the end of the eight weeks, they were so much less depressed and stressed than the control group.

**ELISSA EPEL:** That was great, their glucose tolerance was better. So like during pregnancy, we take an oral glucose tolerance test and we see how insulin resistant we are, and maybe we have impaired glucose tolerance, and that means a real risk of diabetes. So the control group got some of that, a lot of impaired glucose tolerance and high insulin during pregnancy. But those who were meeting in a group and learning some mindfulness had better glucose from that sugary drink that they had, they actually had better insulin sensitivity, then here's the big news. So that's exciting because we think it's gonna help the babies and in fact, my colleague Nikki Bush has published many papers how the babies are more stress resilient and are going to the doctor less, so we know that this intervention during pregnancy when the baby's developing, mom's feeling less stressed, babies coming out healthier, with a less reactive nervous system. Eight years later, we just published the follow-up and found that the moms are still less depressed than the control group.

**SHAWN STEVENSON:** Wow.

**ELISSA EPEL:** And so this, it's what you were talking about, like what you've done learning meditation over a decade ago has changed your brain, has had neuroplasticity. These moms... We were quite amazed because it was only eight weeks, but they were left with an imprint of stress resilience.

**SHAWN STEVENSON:** Amazing. And we pass that down to our offspring as well, there's some really fascinating studies, we'll put one up on the screen for everybody, in mouse models, and seeing how traumatic experiences are carried over and the adaptations for our future generations, but also providing the baby mice, the offspring, with "enriching environments" help them to nullify that experience of stress and that adaptation that's basically declining their health, and then they're passing on healthier outcomes to their offspring.

**ELISSA EPEL:** Yeah, absolutely foundational work. Just mind-blowing.

**SHAWN STEVENSON:** Yeah.

**ELISSA EPEL:** Both about how we transmit risk, but how we can mitigate it, how we can help

people live well, even though they've inherited some trauma and stress in their epigenetics or in other ways.

**SHAWN STEVENSON:** Yeah. And I love this because we have these terms that are passed around like generational trauma, for example, and it might sound like a soft, kind of a soft science or soft belief, but to validate these things, we really are this kind of conglomeration of our ancestors, it's not just these hard-line physical characteristics, there are emotional characteristics, there are personality traits, this information, it's information, right? And again, information isn't all tangible, these are things that... And we know this, we know that our genes can affect our emotional health, for example, we know this, but do we really get in the fact that we can pass these things on, and, and, here's the good news, we can pass on higher order traits as well, if we come aware, and so, that study is so powerful, and so... And my mind is spinning right now, and the implications this has for basically helping to create a healthier generation of humans.

**ELISSA EPEL:** Yeah. Yeah. We're excited, we're hoping that it will be... There'll be uptake, there'll be dissemination, because all the women who are pregnant, they don't have access to groups, like these group support or group mindfulness, and we think it's powerful, we think the group is part of the secret sauce, because that's how we are social mammals, we get so much out of sharing with each other and seeing ourselves in other people's eyes.

**SHAWN STEVENSON:** Yeah, so powerful. And this is going back to how we see ourselves as well, through our perception, I think one of the biggest takeaways for me and I think for everybody as well, is changing the way that we see stress, right out of the gate, you were saying, "Hey, stress is normal, natural, it's even helpful. So let's not go too far down that stress is bad, we need to get rid of all stress," that kind of scenario, it's really about how we're seeing stress, that is a top-down thing, it changes everything. And so, yes, we can build our stress resilience, and we're gonna talk about that in a moment, but one of the most important takeaways from today is changing how we associate with stress, simple changes even in our internal language, when we're feeling stressed, like, this is making me more resilient, or I'm made for this, my body is amazing at processing stress.

**ELISSA EPEL:** Yes, yes, exactly, that stress response is healthy, the acute stress response, we are evolved to have that optimize our performance and then recover quickly, and if we remind ourselves of that, with those statements, this is energizing, this is giving me oxygen, this is good for me, this is gonna help me cope, like that, we kind of make that come true more.

**SHAWN STEVENSON:** Yeah.

**ELISSA EPEL:** Yeah.

**SHAWN STEVENSON:** Yeah, 'cause our cells are listening to us.

**ELISSA EPEL:** Exactly.

**SHAWN STEVENSON:** So now, with that being said, we can build up our baseline. Our baseline stress tolerance, and you talk about this in the book, training for resilience is a part of the stress prescription. Let's talk about that.

**ELISSA EPEL:** Well, you must love this section, 'cause this is everything you do, [chuckle] it's both the kind of fitness plus other ways that we increase our health, so even like, the antioxidant diet and the super nutrients you talk about in your book, some of those are actually creating a hermetic stress response in the body, so they're like, some of those chemicals protect plants, and so they create... They're a little bit of a toxin, so in our body, we have that little bit of that stress response by eating a lot of those rainbow fruits and vegetables, so we know that kind of relaxation and restoration and deep breaths, those are precious. And we also know that we can handle short bouts of stress, and in a way that can be really good for us, both in the terms of our emotional growth and coping, but also for our body, so exercise is pretty much the best thing we know about, for everything, mind, body, and we typically think of endurance exercise, you need 45 minutes, three times a week, etcetera. But it turns out that those short bursts during high intensity interval training are more closer to what we've been talking about, about the positive stress to the body, and so when we do HIIT, for example, we are creating this positive stress state, the spikes and the

recovery, and it turns on all of this anti-aging machinery like autophagy, it's boosting mitochondria.

**ELISSA EPEL:** So, we knew that about exercise, but now we know that the short bursts are also as good as the endurance exercise in many way that we've measured so far, for metabolic health, for cell aging, and maybe even better for cell aging because they're really turning on the restorative clean up crew in our cells. Now, there are other ways besides exercise, some people might have disabilities, they might be in a wheelchair, there might be reasons that they can't do aerobic exercise, and there are other ways to create that short-term positive stress to the body, and I call that stress fitness, so it's not aerobic fitness, but it's ways that we're conditioning our nervous system, "Get used to stress, and relaxing into the discomfort of stress." So what do I mean? I think the two obvious ones that are picking up, and some of your audience are already doing them, hot and cold, sauna, get really, heat our core body temperature, hyperthermia, that does great things for health, but also for mental health in the brain, it can help... It's looking like it can help with depression and even resistant depression, chronic depression, so that's an active area of research. And cold, cold exposure, less studied, we know less about its effects on health, but it does look like that is also one way of creating that short-term stress to the body and then the ease and relaxation in the mind.

**ELISSA EPEL:** We've done a study comparing this Wim Hof method, so cold exposure and extreme breathing to more relaxing conditions, and to HIIT, and they all help with stress and depression equally, so it's so nice, there's all these different ways to get there, but people need to... People should know they have choices, and they should do what they're gonna continue to do that they don't hate, so cold showers is something I hate, I will choose sauna, when I can, but I will do 30 seconds of cold, and then part of the training for stress resilience is, rather than tightening up even more, and go, 'cause the immediate response is, is to have a stress response, relaxing into it, relaxing into the discomfort, and that's the challenge where you're mis-matching the mental state to the physical stress, so that physical stress, purely physical, it's not psychological.

**SHAWN STEVENSON:** Wow, it's so good. So again, there's many paths to the goal of improving our stress resilience, we can pick our own flavor, what we feel the connection to.

Of course, challenge yourself. I always encourage people to experiment, of course, find out, because how would you know about, with the cold exposure, because a lot of people would never in a million years think that they would enjoy that, they're the biggest fans of it, and being able to just, again, it's kind of like microdosing stress in a sense...

**ELISSA EPEL:** Yes, interesting, yeah.

**SHAWN STEVENSON:** Yeah. And when you mentioned high intensity interval training, but again, all of these having these great health outcomes with stress resilience, when I think about the ability to push yourself, to challenge yourself, and then to recover, and then to... You're proactively stressing yourself, it's a hermetic stressor, but you're also giving yourself the opportunity to relax.

**ELISSA EPEL:** Yes.

**SHAWN STEVENSON:** And it's just... If you think, and it is just the logical thing that this would build your stress resilience.

**ELISSA EPEL:** Yeah, and you're in control.

**SHAWN STEVENSON:** Yes, yes. So this will be considered like a safe stress.

**ELISSA EPEL:** Yes. Yes, exactly. [laughter] That's really important. Yeah.

**SHAWN STEVENSON:** Yeah. So cool, so cool. And there's countless ways to embark on high intensity interval training, and this is, the great thing is, so much of what you're sharing is free and accessible if you have a body. And so this could be obviously doing some kind of a sprint, some kind of a stationary bike, this could be doing burpees, this could be doing any number of things that get your heart rate elevated, and do that for a segment, maybe it's 20 seconds and recover for a minute, or 30 seconds, recover for 90 seconds, whatever, there's so many ways to slice and dice it, but the question is, are you taking advantage? What would be... Do you think... What if we do that once a week, would that be something...

**ELISSA EPEL:** Great.

**SHAWN STEVENSON:** Yeah.

**ELISSA EPEL:** I think it's great, and we don't even wanna do that every day. It's too intense. So two times a week, maybe three. For people like me, I'm not on the... I'm like on the moderate to mild end, and I find it makes a big difference, I'm not gonna do... I'm never gonna reach extreme fitness [laughter] like a lot of your amazing audience, but these things have ripple effects on mood and on sleep, even if you do them once or twice a week.

**SHAWN STEVENSON:** I love it, I love it. Well, I wanna ask you about, since we're coming to the close here of this amazing conversation, the importance of starting and ending our day with joy. Let's talk about that.

**ELISSA EPEL:** Yeah, yeah, the emotional well-being and happiness literature are really fascinating and clear, and if we're directly seeking happiness, we probably won't find it, and those are some of the people who are most unhappy, if we are waiting to be happy until something happens, we reach this goal, or we get this, we achieve this, that is also not a good formula for happiness, and it turns out that when we can see things right in front of us, that we're grateful for, or that make us happy, when we can notice them and appreciate them, and savor them, that brings daily happiness. And so we can use that, we can just... We can use that when we wake up, we can use that when we go to bed, just asking... Or we can use that at the dinner table, is there something that happened better than you expected today? Is there something you're grateful for? Is there... Waking up and just asking, "What am I looking forward to? What gives me meaning today?" And it can be the small things, making someone smile, doing something kind. Accomplishing something that fits into your north star, it's accessible to all of us, it's just a matter of asking ourselves and noticing, and it's those nudges, those bookends to the day that are helpful to both set us up for a positive trajectory, instead of waking...

**ELISSA EPEL:** Believe me, I do this, waking up with a to-do list and adrenaline, it's like, "Just

wait a minute, [chuckle] let's have a positive boost of emotion and energy," and that's like the opposite of that, getting on high battery node and burning up energy and feeling exhausted, 'cause that joy is energy, it's energizing. And if you can't think of things just... We can ask ourselves, in a gentle way, and brainstorm answers and ask again if we can't think of anything, but what brings you joy, what brings you joy, over and over, and it's those little things that we'll think of that we maybe haven't noticed, pets come up often, coffee, a hug in the morning, all these little things that really are love, really are meaningful. And same with vitality. What brings you vitality? What drains your battery? What people, what situations and what energizes you?

**SHAWN STEVENSON:** Thank you so much for tuning in to the show today, I hope you got a lot of value out of this. If you did, please share this out with the people that you care about, you could send this directly from the podcast app that you are listening on, and of course, you could pop over to the YouTube channel, if you wanna join us in studio, and get to sit in with all of these experts, and of course, we pop some of the studies up on screen and things like that as we go through, but you can also take a screenshot of the episode and give us a shout out on social media, take a screenshot, I'm @shawnmodel on Instagram. I always love to see that, you could share it in your stories, just let people know they need to tune into this goodness and get themselves educated and empowered, we've got some epic masterclasses and world class guests coming your way very, very soon. So make sure to stay tuned. Take care, have an amazing day, and I'll talk with you soon.

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**SHAWN STEVENSON:** 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.