

# **THE MODEL HEALTH SHOW**

**EPISODE 528**

## **5 Proven Ways To Make You More Resilient Against Stress & Adversity**

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**SHAWN STEVENSON:** Welcome to the Model Health Show. This is fitness and nutrition expert Shawn Stevenson, and I'm so grateful for you tuning in with me today. We're going through a lot of turbulence right now, a lot of trials and tribulations as a society. And this is a time, more than ever, to make ourselves stronger, more resilient, and more adaptable to the stress that we're facing today. In this episode, we're going to be going to be talking about five clinically-proven strategies to make you more resilient against stress and adversity. Steve Maraboli said, "Life doesn't get easier or more forgiving. We get stronger and more resilient." And that's what this episode is all about, literally making ourselves more capable to handle adversity.

And adversity can come in many forms today, whether it's struggle with friends and family members over social and political issues, whether it's a struggle over health policy and adapting to changes happening with various mandates, whether it's simply fear, and being able to overcome all of the incessant fear messages that are being impressed upon our families. All of these things can create debilitation and depression, anxiety. And, this is the keyword, and they can also create strength, resilience, courage, and power. It's really up to us in how we're going to handle these things. And I want to remind you of how powerful you are to effect change in your own life and the world around you. And again, we're going to focus on today, what can we actually do to make ourselves more resilient against stress and adversity.

The first way, number one, and this is backed by researchers at Harvard Medical School, who reported findings that strength training provides an opportunity to overcome obstacles in a controlled, predictable environment, which, they found, has the capacity to dramatically increase mental resilience. So being able to strength-train in this controlled, predictable environment is then able to out-picture itself in the world as more mental resilience. Now, the question is, why is that? Well, when you lift weights, yes, you're training your muscles, but you're also training your brain and your nervous system. Strength training has a remarkable influence on our nervous system. Part of the recovery process isn't just about recovering from the micro-tears in our muscles. We're also recovering our nervous system.

And this is a big part, if we're looking at somebody who's doing powerlifting, for example, and this isn't about which flavor of this is going to be most effective, whether it's powerlifting or strength training, which there's a difference between the two, but if you're doing max lifts, this is why the next day you can't come back, more than likely, and do another max lifts if you just did one the day before, whether it's a max deadlift, bench press, whatever the case might be. It's not necessarily that your muscles are suddenly unable to do the thing, it's that the nervous system has to recalibrate itself and heal, because it's, really, in training your entire system and encoding your system to be physiologically and psychologically capable, aware that

that stress you just undertook, not only can you do it and supersede it, but I want you, your body...

This is the instructions from your body and your brain, I want you to be strong enough that if you're faced with this challenge again, not only can you do it, you're going to be able to do it and have more left in the tank. Alright. That's really the overlooked benefit of strength training, is that it's not just, again, not just training and making you physically stronger from a muscular standpoint, but also how it makes you stronger by improving the tone and the capacity of your nervous system. The process of lifting weights is, in essence, creating a safe stress or a structured stress that elicits an adaptive response.

To put this in a category, using the lexicon that we have today, lifting weights provides a hormetic stressor. It's a hormetic stressor. So, we tend to have this very black and white perception about stress. Stress bad. Hulk smash, stress bad. But stress isn't all bad. Alright? As a matter of fact, just about anything in life has some form of stress that is riding along with it. Alright? We require stress in order to function. Even our cells replicating, it is a stressful process for our cells to do that job. Stress is not inherently good or bad. And as a matter of fact, again, stress is what's encouraging life to move forward, our development. And the very good example of seeing this first-hand is the development of our bodies getting physically stronger by taking advantage of a physical stress, for example. The body continues to move forward and adapt when it's presented with stress. The same thing with our immune system, same thing with our cardiovascular system, the list goes on and on.

Now, here's the rub. If, for example, we're not allowed or able to recover from said stress, so we get that exercise input, a hormetic stressor is a stress that we are exposed to that makes us better when we are allowed to recover. That's the key. So, if you're just hammering away, beating your body up for hours a day every day, you're not going to be able to have a healthy adaptation to that stress, so it's the recovery period as well that is incredibly valuable. But we first need the trigger, so the lifting weights, the strength training is the trigger that sets off that reaction, it's pushing that button down on that catapult that then moves us forward. But we have to have that process of recovery, so adapting to said stress. Again, I want you to take on this label of a safe stress or a structured stress where we are proactively giving ourselves this stress input and thereby making our body more resilient to outside forces, making our nervous system more resilient to outside external forces. Your brain and your nervous system is facing that challenge along with you, with your muscles. We just think about in terms of muscle, alright? And I'm conjuring up Diana Ross songs right now, "I want muscle," shoutout to Diana Ross. Or Olivia Newton-John, "Physical, physical," you know what I'm talking about.

These are the things conjuring up for me, we think it's that out-picturing with the muscle, but what's really working along with us is your brain and your nervous system. Your brain is there

really not just coaching you through the process, but your brain obviously is controlling what your muscles are doing in the first place. And so, your brain is there with you facing the challenge, or nervous system is there with you facing the challenge, getting stronger, more resilient as well. And again, the Harvard researchers affirm that this then out pictures itself in the external world, making you more resilient to mental factors, to stressors out there. So, you create this structured stress, safe stress makes you more capable and ready to handle what the world is throwing at you. Alright? So how do we really leverage this? Well, again, we're looking at strength training specifically in this instance, and what does that look like? This means lifting weights, so squats, deadlifts, bench press, pull-downs, pull-ups, pushing and pulling with our upper and lower body.

But this can also mean utilizing our body weight for these exercises. Especially if we're just getting started, these are all incredibly viable things for us to do. Even advanced folks, you can make things more challenging. So, this can go from a bodyweight squat to a goblet squat where you hold a dumbbell in front of you, to holding a couple of dumbbells, to if we get really advanced, I'm just saying in the context of not even being in a gym with a barbel on your back, let alone that can really elicit some of the best response as far as our nervous system and muscle development. But what if we're moving forward in that bodyweight paradigm? Well, then we can get to single-leg squats, pistol squats. We can use our own bodies for the resistance. So, when I say strength training, this doesn't just mean you need to be throwing weights around. But that resistance, our body, and gravity, that in and of itself, wow, you can get an incredible structured stress without any rules, you don't need equipment, no excuses, none of that. It's just if you've got a body, you've got a gym. If you've got a body, you have the capacity to make yourself physically and mentally stronger. And this is the time more than ever to do it.

I want you to be a warrior out here. I want you to be strong and capable and courageous and able to deal with all of the turbulence that's happening in the world. We have to proactively get ourselves stronger right now, and that means getting ourselves physically stronger as well. And if you think about the concept or the out-picturing of muscle on our frames, it's literally like a defense. We don't build up the packages just to bounce them up and down, that's not why we do it. It's kind of like a protective shield over your heart. Through our evolution, stuff was wild out here, alright? Facing off against animals, facing off against other tribes, whatever the case might. You're building up, having that muscle is a protective thing on your frame, it's like armor. Alright? It's really remarkable when we start to think about what are the actual utility value of things like this, then we just, again, we think in terms of the Instagram model or magazine cover or those types of things. No, this is something that we were gifted with, we've evolved to enact these things, to make us more resilient.

The term survival of the fittest, this is another dimension of looking at that. So again, strength training doesn't have to be lifting weights per se but just having a mechanism of resistance. And now here's the thing, if we can get a variety of these things, this is even better, because it's a variety of stressors to adapt to. Have you ever noticed even if you've been fit in a certain thing, you really acclimated to doing a certain type of workout, if you do a completely different type of workout...? So maybe you go, and you do the 3 x 10 sets at the gym, three sets of 10, four, or five exercises. But then suddenly you work out with somebody, and you do some supersets where you're doing pushup and immediately going over to a seated row, back-to-back, and you do a bunch of supersets, maybe do five different types of supersets, and you're cooked. Maybe even do less, maybe the workout is half as long, but you're sweating more just like, "Man, I'm in good shape. This workout is kicking my butt." Or you do yoga, and you do a different type of yoga, and you're just like, "Man, this is really kicking my butt." And you're acclimated to...

That category, but that specific one, and it's not that it's harder on you physically. It's harder on your nervous system because you're doing something different. That's the thing. And so, again, change it up, add in some variety, especially right now, try something new. Add in a little bit more unconventional training, because we live in unconventional times. This is why I really love these tools that I have, especially when the world's shut down when the gym's shut down, being able to have my steel clubs and my steel maces, to be able to swing those around to work on my mobility, my musculature in unique ways, but actually, it has a long history of use in warrior training. And of course, kettlebells being a tool that have been used for a very long time, but I really love my steel maces and steel clubs, and I get them from Onnit. Go to [onnit.com/model](http://onnit.com/model), get 10% off their entire inventory of training equipment. And they're the ones who really put these things into popular culture.

You see Dwayne "The Rock" Johnson utilizing their primal kettlebell, for example. And a lot of folks don't realize just how many exercises you can do with just one of these pieces of equipment. You can take that steel mace, which is basically this long pipe-like structure with a weighted ball on the end, and I use that to do a variety of different types of lunges and using it in creative ways as I'm lunging. I use it to do a variety of different types of shoulder exercises and back exercises. There's so many different things that you can do with this one tool. And it's pretty cool. And also, it's just fine. It just adds a new dimension, and it adds some flow. That's another keyword I think we should be looking to, is finding some more flow in life, when things can be a little bit rocky. So, again, [onnit.com/model](http://onnit.com/model), and their training equipment is just absolutely world-class. Get 10% off, [onnit.com/model](http://onnit.com/model).

Now, this is another important tenet here with resistance training, strength training, and becoming more resilient against stress. This study was published in the journal *Frontiers in Psychology*, and it revealed that lifting weights helped to reduce symptoms of anxiety for

study participants. Now, if we look at resilience, if we look at being able to overcome stress, anxiety can be something that acts as an anchor and makes it more difficult to rise over that wall, to rise over that obstacle. Anxiety, these are words that we've created to label symptoms or label an experience. Anxiety, there isn't one flavor of it. And it's not that it's bad, but the word itself has created so much psychological stigma that when the word comes up, it's just this bad thing. And we've talked about this with some of the most renowned experts in the world in psychology, like Dr. Susan David and her work out of Harvard, and understanding that the feeling or the experience of anxiety is giving us valuable feedback, and it can be utilized as a mechanism to help to, essentially, uncover what actions or new ways of thinking we can evolve to get ourselves from this feeling that we describe as anxiety. The anxiety is there giving us some valuable feedback.

Now, what that feedback is could be a myriad of things. This could be anxiety surrounding social interactions and connections, it could be anxiety around health, it could be anxiety around work stuff, family stuff. There's many different flavors of it. But oftentimes, our feelings, they've been medicalized, and we don't honor them anymore. And we're so external in our world and external in our inputs, in our control, with things that are controlling our thinking, that we don't often turn within and ask, "What is this feeling of anxiety trying to teach me? What is this feeling trying to guide me towards? What action or perspective shift is this anxiety trying to guide me towards?" So, feeling more empowered within our emotions, and understanding that these are our emotions. These are ours. And there's nothing inherently bad about them. The issue comes in when they debilitate us, and we're not given tools to have this introspection, and also, tools of resiliency so that it doesn't even get its hooks so deep into us in the first place.

And this is what we see in this particular study. Again, this is published in *Frontiers in Psychology*, revealing that lifting weights help reduce symptoms of anxiety for study participants. And also, health psychologist Kelly McGonigal, that we had the honor of having on the Model Health Show, shared with us these remarkable changes that take place in the brain as a result of exercise. Now, this is opening up the box of exercise to a lot more than just strength training, because again, we're talking about... I'm talking about today what is clinically proven, specifically making us more resilient against stress and adversity, I want to really hit that note of strength training, but really, all forms of movement can, especially when we do things that are a little bit more intense, and it creates shifts in our brain that she noted too, yes, make us more resilient against the effects of stress, and, this is what her new research found, it actually sensitizes the brain for more pleasure.

It actually makes us more sensitive to pleasure. Right now, we're the opposite. So many people in our society, we're far more sensitized to more stress. We're far more sensitized to fear. And our brain is really just hot and cooking in looking for those feelings, and very reactive to it. It's

like a live wire. Whereas we can create a live wire for pleasure and joy. Our brain starts to look for more pleasure, and it starts to react more positively towards it. So, it creates a positive feedback loop, which is pretty remarkable. And a little bonus here, when we're looking at stress and the impact of exercise, a big part of stress is how it can literally create tunnel vision. When we're in a heightened state of stress, when that sympathetic nervous system is running high, it literally changes our focus. Our pupils change and our senses, our vision literally becomes more hyper-focused, but in a very limited range. And we talked about this with neuroscientist Dr. Andrew Huberman out of Stanford, recently on the Model Health Show.

And intense stress and challenge can also create psychological tunnel vision, and that's another aspect. So, it creates a physical tunnel vision and a psychological tunnel vision, and what I mean by that is that when we're faced with intense stress and challenge and adversity, we have this tendency to go from many options to few options. And oftentimes, from many options to only one option. This is the one way, we got to run, we got to do this, we got to hide, whatever the case might be. We go from, "Where there's a will, there's 10,000 ways," to, "There's one way, and I'm just going to keep hammering away at this one way, this one..." Instead of going around the obstacle, under it, I can only go through, and we keep hitting our head against the wall. So psychological stress and adversity can have a tendency to create psychological tunnel vision, where we are not seeing all of the possible ways to overcome said adversity, which I'm telling you, there's so many ways to overcome the challenges in our lives, so many ways. But that creativity begins to get diminished.

Now, here's a little resource for that. A Stanford University study found that the act of literally walking away from the problem, i.e., going for a short walk, was able to increase creative inspiration by an average of 60% for test subjects, versus sitting. Literally walking away from the problem increases something they defined as creative inspiration. The effect, they noted, was evident while and shortly after walking anywhere between 5 and 16 minutes. The enhancement was specific to a flavor of creativity called divergent thinking. We had psychological tunnel vision because of the stress, going for a walk, walking away from the problem, moving our bodies, created divergent thinking, more creative ways to work around said obstacle to the goal. Unconventional thinking, ideas that might not have even seemed obvious.

We're so creative, we have so much capacity for resourcefulness, but sometimes we get limited when stress is able to get on top of us and make us close ourselves off, physiologically contracting, and getting tunnel vision and psychological tunnel vision. Having this in our back pocket, and I'm being 1000 with you, sometimes it's not been easy for me to just unplug, walk away. If I'm working on a particular project, whatever the case might be, I have that tendency toward like, "I'm getting this done." I'm locked, I'm getting it done. But without fail, every time I walk away, just go for a 15-minute walk, I come back, just ideas popping. Alright? Ideas

popping. So, strength training. Right now, let's get ourselves stronger and more resilient to have the capacity and strength to not just face the obstacles in our world right now, but to supersede them, to overcome them.

We're going to move on to number two here, on our five proven ways to make you more resilient against stress and adversity. And number two is cryotherapy. Yes, cryotherapy has been found to increase the activity of brown adipose tissue, a type of fat that burns fat. Yes, it has been found to accelerate recovery from intense exercise. But what's remarkable about it, for our intents and purposes, is how cold exposure can increase your resilience in the face of stress. A study published in the Peer Review-Journal, QJM, Monthly Journal of the Association of Physicians, investigated the antioxidant-based stress response in cold water swimmers versus a control group of healthy subjects who didn't engage in cold water exposure. Their definition of adaptation in the study is, "Adaptation to oxidative stress is an improved ability to resist the damaging effects of reactive oxygen species, resulting from pre-exposure to a lower dose." So, pre-exposing ourselves to stress builds up this anti-oxidant capacity to then buffer the damaging effects of reactive oxygen species.

So physiologically, if we're talking about what's happening with our internal environment when we're faced with excessive stress and adversity. The stress response is a catabolic process. So, we know that there's a resulting stress hormone and the like, but also, there's an uptake in reactive oxygen species. These are elements that are well noted to be connected with accelerated aging of our bodies. And we have these things we think about in terms of just popular culture or popular ideas, that stress kills, or you can tell when somebody's lived a stressful life, they age prematurely. So, these are real things. And we can actually do something about it by utilizing cold exposure. In this study, after obtaining blood samples from the winter swimmers and examining their antioxidant defense systems, defense. They determined the swimmers developed "An adaptative response to repeated oxidative stress and postulated as a new basic molecular mechanism of increased tolerance to environmental stress." This process increases the tolerance for stress in the external world. Outside of the cold water, when they come outside of the cold water, it makes them more resilient to the external world.

Another thing that we talked about with Dr. Andrew Huberman, was when he shared that, when you choose to expose yourself to cold water, even a cold shower, it enacts a physiological stress response, and it elicits a dopamine release. So, the release of these feel-good hormones and neurotransmitters into our system, are enacted as well. You've cut the cold water on while you stand there for a minute or two, even maybe 30 seconds to start, then you shut the water off, or even shifted to warm water, you're dousing your system with feel-good hormones on top of this stress response. He shared that this stress response conditioning can dramatically increase resiliency to stress in our day-to-day lives because when a stressful situation occurs, you're better able to recognize that state. Your body and your brain is now better able to



recognize that stressful state. It's like, "Whoa, this is me feeling alert. I've been here before. I can handle this." In that cold exposure, you can extract a couple of different physiological benefits. In one way, you can relax into the moment with that cold water come on you, coming down on you in the form of a shower, or if we're doing a cold water... An ice bath, or getting ourselves into cold water, you can relax into that moment. You can control your breathing, and you can exercise your ability to stay calm under pressure.

Or you can do what seems like the exact opposite, you can white-knuckle the situation. You can express yourself however you want, to the fact that you don't like this, you don't like what's happening, and you can fight just a little bit longer, you can keep going just a little bit longer. And the fact that you don't like it doesn't deter you, it won't deter you. So again, there's two modalities we can step into this with, where we relax into the moment, we focus on our breathing, we exercise our ability to be calm under pressure, or we can just get into it and just fight for that extra moment because both approaches and everything in between will condition your body and brain to better adapt and persevere through stress.

Now, this is coming from Huberman Lab at Stanford University. And these things, again, we would think are sort of New Age or novel, but in reality, these are things that literally for thousands of years, humans have been utilizing cold thermogenesis or cryotherapy, cold exposure, for a variety of health reasons that are well established. Today, we're utilizing our conventional science to affirm what our ancestors have been doing for a long time. So, this is yet another way that we can, again, based on real peer-reviewed data, we can make ourselves more resilient to stress and adversity right now. And this is a low-cost implement. Again, you don't need a membership somewhere. You can just literally... The keywords here, he said, "When you choose it, it's different." I've had to take a cold shower when I was a kid because we didn't pay that bill. That's a whole different... That is just terrible. There's no part of me that was like, "I'm doing this, I'm..." When you choose psychologically when you choose to expose yourself to something that's so uncomfortable, man, that really, as the data shows, it helps to build resiliency. It's just like, "I've been here before."

And also, another part of that is the consistency of it, which could... Couple times a week, utilizing this practice. And so, we've got cold shower, but then, as he noted, you could switch to the warm at the end, if you like. We've got cold shower, we've got... This study was done on people who swim in cold weather. So, if you've got access to that, maybe a lake or something, maybe you got a pool and it's cold out in your neck of the woods right now. You could do some contrast therapy as well, where you go from the cold to the warm environment, maybe a cold exposure to a sauna, or cold exposure to a hot tub, all kinds of ways to enact some of these benefits. We've got cryotherapy chambers are really popping today.

Many of the most prestigious athletes are utilizing cold therapy in some form or another. It's really built into the fabric of a lot of sports organizations, and now they've got the cold tubs, the ice tubs for the athletes to utilize, cryotherapy chambers, whole-body cryo, utilizing a different type of technology. It's not water but using nitrogen to illicit this cold response. It's a different type of cold, but hey, we can extract some of these benefits from it. But specifically, pretty much a no-cost, low-cost advent for folks is utilizing that cold shower or some type of cold exposure, whole-body cold exposure couple of times a week can be one of these tools that we utilize to increase our resiliency.

Now, I mentioned in this one specifically, this also increases your body's production and mobilization of your brown fat, your brown adipose tissue. This is a type of fat that burns fat. This is a type of fat that literally increases your body's thermic rate or thermic expenditure, where you're burning more calories just doing what you always do, just living life. So, the body adapts in a really interesting way, to become stronger when we're exposed to cold. So again, these are five proven ways to make you more resilient against stress and adversity. Pick what you like. If you do a little bit of each of these, going to extract some major benefits. But maybe the cold isn't for you.

So, let's jump into number three, because number three, instead of cryotherapy, another beneficial implement can be thermotherapy. Whole-body thermotherapy has been utilized in various forms, radiant heat, sweat lodges, etc., for thousands of years, and places all over the world, for a variety of reasons, from hygiene to health, to social and even spiritual experiences. Now, a 2019 study titled Recovery from Sauna Bathing Favorably Modulates Cardiac Autonomic Nervous System. In this study, they state, "During the cooling down period from sauna bathing," so sauna bathing being getting your butt into a sauna. So, this could be a variety of different types of sauna. They've got saunas that are based on hot rocks, steam-based saunas, we've got saunas that are based on infrared technology, so just getting yourself into a sauna where you're, "bathing," this sauna bathing, is just being in a sauna where you're breaking a sweat. So, "During the cooling down period from sauna bathing," so this is post, this is coming out of it, "Heart rate variability increased." This is good. Listen. "Heart rate variability increased, which indicates the dominant role of parasympathetic activity, and decreased sympathetic activity of cardiac autonomic nervous system."

So, when you're coming out of that sauna, which again, we're getting to that state where we're uncomfortable, where your mind might be telling you like, "It's getting hot in here," you start turning into Nelly, and instead, you're like, "Okay, just one more minute." Stay calm, relax, do my breathing. Yes, it's hot. It's hotter than a... It's hot in here, but I'm just going to finish my process. And when you step out of this uncomfortable structure, being in this hot condition in the sauna, your parasympathetic nervous system, these two things have a dualistic experience. The sympathetic, also known as the "fight or flight nervous system" is one of the things that's...

It can run, and there's levels to it, by the way, but for a lot of folks today, they're just constantly running in that sympathetic tone, that sympathetic fight or flight, low-grade, worry and fear, and it's keeping this kind of catabolic state going. Whereas the other side and these are not on at the same time. It's one or the other, you're either sympathetic or you're parasympathetic. The parasympathetic, also known as the "rest and digest aspect of the nervous system," is enacting more of the anabolic processes of the body, the recovery, the tonifying hormones and neurotransmitters, those things that really help us in relaxation and recovery.

So, during the period after the sauna, we see this shift with the parasympathetic activity increasing, and decreasing activity of the sympathetic nervous system. And a brand-new study that literally was just published a few days ago in the peer review journal, *Experimental Gerontology*, reported some remarkable findings about saunas. The study details how sauna use mimics physiological and protective responses induced during exercise. That's pretty interesting. They also detail how repeated sauna use optimizes stress response via hormesis and heat shock proteins, how sauna use appears to reduce morbidity and mortality in a dose-dependent manner, how frequent sauna use may protect against cardiovascular and neurodegenerative diseases, and how sauna use provides a means of preserving muscle mass.

That's pretty freaking... That's amazing. That's really amazing that exposing ourselves to heat enacts all of these properties ranging from, again, we're looking at how can this make us more resilient to stress, and them stating this optimizes stress response via hormesis, so that hormetic stressor, again, makes us better in that recovery period, all the way to protecting our muscle mass, which muscle mass is a protective force in and of itself for external intrusions. So, this is another tool that we can utilize to make ourselves more resilient to stress and adversity. And we can use this in a myriad of different ways, whether it's going to a local gym and utilizing the sauna, or there are places... There are many businesses that are just about saunas. You just go there and utilize their sauna. Some places that are like tanning places and they have saunas as well, like infrared saunas. So, there's a variety of different ways. Or you can make your own little sweat lodge. You can get creative and find a way to make it hot. It's supposed to be make it clap, I added hot. But you could find creative ways to make it hot.

So one of the things that we've actually done several times is getting a pot of water, I didn't know I would even talk about this, boiling a pot of water, putting it on something so that it's safe on the floor, maybe it's a paper bag, we usually use a Whole Foods bag or two, and put that hot pot of water, put a blanket over you and the hot pot of water. Alright? It's going to get hot in there. Nice big blanket, and just sit there, sweat it out. So that's a little bit of a DIY do-it-yourself version of a sauna, but this is, again, we're finding ways to give ourselves these beneficial stressors that then make us stronger in the external environment. And the big key here is what's happening with our psychology, as we're going through these things, realizing

we're strong enough to overcome these stressors and, or being able to maintain a sense of peace and calm through the stress experience.

Now, we cannot do a masterclass on stress, resilience, on the resilience against adversity without talking about a nutritive component. So, I'm just sliding this in here. But I want you to know this is according to data published in the Journal of Nutrition and Food Sciences. Both emotional and physical stress may affect a person's... This is the big player when it comes to antioxidant vitamins that help our bodies to be more resilient to stress. They said both emotional and physical stress may affect a person's vitamin C status. It can increase the requirement for vitamin C to maintain normal blood levels when exposed to emotional, again, emotional and physical stress. When stress depletes vitamin C levels in the body, it reduces the body's resistance to infection and disease, and increases the likelihood of further stress, getting into that vicious circle. When vitamin C intake is increased, the harmful effects of the stress hormones are reduced, and the body's ability to cope with the stress response improves. These are basic things. But yet, these are not things that are being promoted nowhere near the degree that they should be in popular culture right now. This is an essential nutrient and the most critical vitamin in our body's stress response.

In fact, within that, they noted a randomized double-blind placebo-controlled trial on looking at psychological stress of public speaking and concluded that those who received vitamin C supplementation experienced less stage fright and showed a faster recovery of cortisol levels, indicating that the adrenal glands which produce cortisol were functioning better. So, it's helping the body to adapt to the psychological stress and recover faster when utilizing vitamin C. Now, here's the key. We have to be proactive with it. When you know stress is ahead, like times like now, it's probably a good idea to increase your intake of vitamin C.

Now, the biggest thing here, and this is where so many people get messed up, the type of vitamin C matters. It's not just one thing. There are multiple types of vitamin C. And oftentimes, folks are thinking about synthetic forms of vitamin Cs. Little vitamin C packets here or there at the gas station, whatever. Where is it coming from? Is it synthetic, or is it a botanical source of vitamin C? Because one of the most stressful responses to look at how effective different types of vitamin C are, smoking is an incredibly stressful event for the body, in a study published in the Journal of Cardiology had 20 smokers consume Camu Camu berry, the highest source of botanical vitamin C ever discovered, had them take it daily over the course of a one-week study, and it led to significantly lowered oxidative stress and inflammatory biomarkers, like C-reactive protein, for example.

And what's more, they were going up against a placebo group who received an ordinary synthetic vitamin C supplement, and there were no changes in their biomarkers. Camu Camu berry significantly lowered the oxidative stress and inflammatory biomarkers. No changes

with the synthetic vitamin C. Camu Camu berry is, again, the highest botanical source of vitamin C. Just under a teaspoon provides about 700% of your RDA. Camu Camu berry. Number two is amla berry. And then acerola cherry. These are three of my all-time favorite things for years. This is facts. For years, I would go to different companies and get each of these. These are three of my favorite things. Finally, and I got to talk to them about this. I don't know if they've just been listening to the model health show and they were like putting a formula together, but this company is just world-class, they're doing stuff the right way. Integrity at the highest level, organic and they put all three of these together in their essential C formula. My three favorite vitamin C sources, Camu Camu berry, amla berry, and acerola cherry. Go to [paleovalley.com/model](http://paleovalley.com/model).

That's P-A-L-E-O-V-A-L-L-E-Y.com/model, you're going to get 15% off their amazing essential C formula. Got to check it out, also their snacks are incredible. Their turmeric complex as well, so many great things. [paleovalley.com/model](http://paleovalley.com/model), vitamin C is essential right now, if we're going to be resilient, this is not a joke. We have to make sure we're getting this vitamin C need met, you need to be proactive with it. Alright, so that's that nutritive component, now we're going to move on in our list here, we're at number four on our list of five proven ways to make you more resilient against stress and adversity, and this brings us back to the fact that stress and adversity can be so impactful in how it elicits negative emotional states. Excessive stress can put us into cycles of depression or anxiety, and these states can make it difficult for us to face the stress, to face the adversity, and to rise above it. It's not that those states, these emotional and mental states are bad, but they can make it more difficult to rise above and to conquer a particular adversity. A major tool in being more resilient in the face of stress and adversity and being able to more gracefully create a buffer against their debilitating effects in the first place.

This is where a tool like number four, meditation is so valuable. A recent study published in Experimental Biology demonstrated that even a single session of mindfulness meditation can significantly reduce anxiety. People with anxiety demonstrated reduced stress on their arteries, they were actually looking at the stress on their arteries after a one-hour introductory session of mindfulness meditation. And scientists at Harvard University published new research affirming that meditation can dramatically reduce symptoms of depression and even... Listen to this, change the physical make-up of the brain. It's literally changing the physical make-up of the brain of these test subjects. Meditation, how is it able to do this, how is it able to have these effects? It's far more powerful than we realize because meditation can literally shift your genetic expression. A recent report published in Frontiers in Immunology found that meditation can actually down-regulate genes that are associated with inflammation. So, we know that meditation is a powerful epigenetic influence, it has the ability to affect the expression of our various genes. Alright. Now, we existed in a time, we still are still hasn't completely changed yet, where we were being indoctrinated with this belief that our genes control our fate. If we have a gene for a certain fill in the blank thing, even though

we are not even close, we are not even close to understanding our genes right now. You have a gene for a certain thing, you're going to have that thing. It's in your cards, it's in your genetic cards, whereas today, you know that the leading science is epigenetics, and we understand that with the human genome project finding we have somewhere in the ballpark from that particular project, 22,000 genes collectively as humans. Why are we also different with a variety of appearances and health and functionality is because we can have these collective 22,000 genes, but then we can have combinations of millions, tens of millions of billions of combinations of expressions of genes.

So, one particular gene can have thousands of different expressions of itself, then you combine that with the thousands of different genes that you have, then now we get into the domain where there are millions of different outcomes for you physically, mentally, everything about you. The epigenetic controllers are where we're really at right now, one of the most powerful is meditation. Now, the question should be why on a very practical level, why is meditation so effective in the face of stress and adversity in our world right now? Well, there is something really remarkable about us that we really can't even articulate, we can't even really put words to, but you know that our brains are always firing off a lot of these thoughts, there's always a lot of inner chatter going on usually about stuff going on in our lives, fears, concerns, aspirations. Whatever the case might be, just narration, there's this voice that's always chitter, chatter, chitty, chitty, chat, chat, and there can be multiple voices, alright, straight up conversation, ping pong going on in there.

And if you're to tell somebody this, which this is an experience for every human being, you could get locked up, alright, but the reality is, this is how the mind works, and with this going on, which is not that this is a bad thing. This is really a functionality of our evolution to help us to make sense of things, this narration helps us to feel comfortable with the things that we're exposed to, because just seeing something as it is, based on the way that we are conditioned as a society, it could be very uncomfortable. This inner dialogue helps us to extend ourselves basically so that everything is about us, it's helping us to relate to all these things in a context that makes us comfortable, it's this thing that we've evolved to have. Now we can dive in and talk more about that, but the most important thing for us to really understand is that even though this inner dialogue is taking place, which especially today, it can be ripe with a lot of fear, a lot of negativities, a lot of anger, a lot of... You know, fill in the blank.

When we can realize that this dialogue is taking place, but who is listening to the dialogue? Once you can realize that there is a presence that's listening to that inner chatter, and you can make that break and really realize who you are and this beautiful, untouchable thing about yourself, it starts to create a sense of peace and awareness in a space that's already there, but you just become aware of it, and through this process of meditation that space begins to grow. And so, your sense of peace and presence and the awareness that's often, again, it's narrated

by this voice in accordance to what's happening out there, it no longer controls you, it no longer defines you. Now, even the greats can fall in tune and believe that they're that voice, even after practice, it's not about being perfect. But creating a practice of meditation helps expand that inner world, that inner peace, so that you can better respond in a manner that you choose, rather than being at the mercy of the reaction of the world around you.

So, this is a valuable tool in many ways, and I like to couple this also with breathwork, that can be another entry point. And again, this is a science-backed gateway into meditative states and creating adaptations to stress themselves. So, breathing strategies, box breathing, just control, intentionally controlling what's happening with your physiology. So, breathing in for five seconds, holding that breath in deeply for five seconds. Breathing out for five seconds, getting all the air out of your body and holding the air out for five seconds, and then breathing in for five seconds, and doing that process over and over. So, we've got a box, it's five seconds, four times, each side is five times, five seconds, or it can be four seconds, or it could be eight seconds. So, box breathing, and also the Breath of Fire, which we've talked about with multiple experts here on The Model House Show which, it's a tool that my incredible, wise mother-in-law gave me with her being a savant, a teacher of meditation, an example of the beauty that it can behold, giving me this tool.

This was probably, this has got to be 15 years ago. 15, 14 years ago, but the... It has many names for it chaotic breathing, Breath of Fire, but breathing in deeply and out deeply, rapidly. You can have different paces, whatever the case might be. This immediately starts to shift the oxygen transport in your body, carbon dioxide builds up and then getting pushed out, so all these different physiological changes happen. It's a stress, it's a controlled stress that we are enacting, and then maybe you do 50 breaths or 90 breaths, or you do it for two minutes or whatever the case might be, and then just sit. Just sit, you're going to find that your body is going right into a more relaxed state after completing that intensity of the breathing. So, again, many different forms of meditation, breathwork to utilize, there's everything from with meditation, transcendental meditation to mindfulness meditation to guided meditations to...

You name it, there's so many different forms of meditation, but the most important thing is, are you utilizing it to build up that real force field, that real strength, the real inner knowing, and peace so that you are more resilient against stress and adversity today? We're at number five on our list of five proven ways to make you more resilient against stress and adversity. Number five, this transitions right from the meditation, which is something from the Dalai Lama. The Dalai Lama said, "Sleep is the best meditation." The Dalai Lama, alright, he might know a thing or two about meditation, he says sleep is the best meditation. Sleep deprivation, on the other side, literally alters your brain function in a way that reduces your ability to adapt to stress, and actually sensitizes your brain to even more stress. So, this is the opposite of what exercise can do, which sensitizes your brain to pleasure. When we are sleep-deprived, it

sensitizes our brain to more stress, or fear, or anxiety, or fill in the blank. A study published in the Journal of Sleep found that sleep loss amplifies the negative emotive effects of disruptive events. It makes it worse, while, and this is crazy right here, while reducing the positive effect of goal-enhancing events, so when something good happens, you don't like it as much when you're sleep-deprived.

Now, this is crazy and amazing, but we know these things inherently, because sleep controls so much about us, about our biochemistry, about our temperament. It is a major... It controls our immune system, the list goes on and on and on, but here's the practicality of it. We're getting down to literally this decreases your ability to be resilient against adversity, to be resilient against stress. You're putting yourself... You're handicapping yourself coming into it. To take this one step further, researchers at UC Berkeley did some brain imaging, they actually looked at what's going on in a sleep-deprived brain versus when it's well-rested and they determined that a short amount of sleep, just 24 hours, was enough to dramatically decrease the activity in the executive part of the brain. This is the part of your brain responsible for social control, for distinguishing between right and wrong, for forethought, for monitoring and being a rational determination of emotional responses, so helping basically to be the adult in the room. Alright. And that part of the brain, the activity plummets, and what couples with that is they found that there was a dramatic increase in activity in the amygdala. This is a part of the brain more responsible for emotional-based responses for... It's concerned about survival of self.

So, this can be pretty problematic as far as if we're talking about being resilient to stress and adversity, when our more human part of our brain is shutting down and the more primitive aspects of ourselves are turning on, it can just exacerbate, as the study mentioned, published in The Journal of Sleep, it can make negative things far worse. It can amplify negative events and also the good that's taking place in the world, which there's a lot of good going on. It can dramatically diminish our ability to even acknowledge that stuff. So pretty remarkable things that we can do today looking at the brain itself and getting a peek, but these all boil down to very fundamental tenets of human health, so we need to really optimize our sleep right now, give our sleep some respect so we can show up, be our best self, be resilient. And this is never about being 100% perfect. It's not about that. It's simply about putting our intention and taking steps in the direction of optimizing our sleep.

There's a wonderful book on optimizing sleep called Sleep Smarter and it's by this guy Shawn Stevenson and I heard he's cool, he's a good guy. It's an international bestseller. Get to share this with you guys, we just signed a deal for the Mongolian translation. Shout out to everybody in Mongolia. Apparently, it seems they want it. Sleep Smarter is now foreign publisher. This is our 21st foreign publication for Sleep Smarter. Very, very grateful for that. And it's 21 clinically proven strategies to optimize our sleep, and when it really boils down to it, there are some



very simple things that we can do to optimize our sleep. Obviously, light exposure in the morning is going to be just setting that cortisol rhythm, and also our exposure to light in the evenings has really gummed up our circadian clocks. So, we've got these clock genes, which is where some of the most leading-edge signs that we have now that are regulating these clocks based on the time of day can really throw these things off and we're producing stressful chemicals in the evening when we're not supposed to and we're not producing enough in the morning, so reducing our light exposure in the evening, getting some sun exposure in the morning...

Basic tenets like having a cool environment because the body in the evening, no matter where you are in the world, whether you live in a place where it's 110 during the day, at night, even if the temperature is still hot, it's still going to drop. It might go from 110 to 100, but everywhere on planet Earth in the evening, it's cooler than during the day. So, your body is synced up with that through our evolution, so today if it has to work hard to try to cool itself down when it gets dark outside, there's a natural decrease in our body's core temperature to facilitate sleep, to facilitate the release of sleep-related hormones and neurotransmitters is all linked together. So having a cool environment, these are some of the basic tenets and we get, dig in more to the science with those things. Good sleep nutrients. Yeah. So, Sleep Smarter is a great resource for that. Of course, we've got multiple episodes in the Model Health Show you can check out for more insight and advice on optimizing your sleep, but these are the five things, these are five things clinically proven to make you more resilient against stress and adversity.

And lastly, to close things out, I want you to make a mental shift when it comes to your belief about stress. This is thanks in part to the work of Kelly McGonigal, health psychologist. We mentioned her earlier in the context of exercise. She has one of the most popular TED Talks ever, I think it might be in the top 10 of all time, in talking about how our perception of stress is one of the greatest determinants, if not the greatest determinant, on how stress affects us. So, test subjects being exposed to the same stressors, the ones who believe that the stress is making them stronger, the stress makes them stronger, the stress response is healthier, more adaptive versus the folks who believe that the stress is breaking them down, is terrible and so it is. They see that happen clinically. So having a shift in your mindset about stress that, "Hey, this is all making me stronger, this is making me more resilient. These things that are going on in the world, they have no idea how strong they're making me." So really taking on that mantle and also this is a time where one of the greatest stress reducers, a little bonus here, is connecting with community. Talk with people that you trust and have conversations, express yourself. It's such a great stress reducer and stress modulator when we're able to express ourselves, share our voice, and to be embraced and acknowledged.

So, this is a great time to take advantage of these things and to remember how powerful you are because every stressful event you've been through, you're still here. This is a great time to

reach into that memory bank, the mental Rolodex, and remember that, again, everything that you've been exposed to, you've survived, you've overcome, and you're still here. You are more than capable of handling the stress in your life right now, the adversity you're facing. These tools that you learn about today and more of the science on these things are just affirming how much more strong and resilient you're going to be, so the key is putting them into action for yourself.

If you got a lot of value out of this episode, please share it out with your friends and family on social media. You can tag me, I'm @shawnmodel on Instagram. Let everybody know what you thought about the episode. I'm @shawnmodel on Twitter as well. I pop in there and do a little tweet every now and then. I'm at the Model Health Show on Facebook. You could send this episode via the app that you're listening on or if you're watching on YouTube, send it to somebody that you care about. Please like and comment. Drop a comment down, let me know what your favorite part of this episode was. We've got some incredible episodes, master classes, and world-class guests coming very soon. Make sure to stay tuned. Take care, have an amazing day and I'll talk to with you soon.

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