



THE FATIGUE SUPER CONFERENCE

Your relationship with stress

Guest: Heidi Hanna

Alex: Welcome to the Fatigue Super Conference. I'm super excited for this interview. I'm talking with Heidi Hanna, and we're going to be exploring the role of stress in fatigue-related conditions. I think this is a really important conversation, because in almost every interview that I've recorded as part of this conference, people have talked about the role of the sympathetic nervous system being overstimulated, the impact of stress, but this is actually the first interview we've fully taken that piece and explored it.

Just to give Heidi's background, before I welcome her, Dr. Heidi Hanna is a New York Times bestselling author of several books including *The Sharp Solution*, *Stressaholic* and *Recharge*. She's been featured at many global conferences including the Fortune Magazine Most Powerful Women in Business summit, ESPN Leadership Summit, and the Million Dollar Round Table. Her clients have included Google, Starbucks, Microsoft, Morgan Stanley, and WD-40, as well as the PGA Tour and the National Football League. Heidi, welcome. Thank you so much for talking to me today.

Heidi: Thank you. I'm really excited about this topic. It's very important to me, both professionally, but also personally. So I'm looking forward to it.

Alex: Great. Thank you. In fact, that's where I'd love to start, if that's okay. I know that your interest in this area has been certainly academically and professionally, but it's also been your own personal experience. So maybe just say a bit about how, on a personal level, you became interested in stress, and also fatigue.

Heidi: Yeah. It always makes me laugh when people call me a stress expert, because I think the only way we really become expert at anything is to deal with it ourselves. It really does change our perception about stress, and for me, it started really early, actually. So, around the age of 12 I started fainting, and we couldn't figure out what was going on. As I look back now I can say, well, before I was even 12 it started, actually, with headaches and stomach

aches and other issues. But ultimately what ended up happening for me was stress embodied at a really early age.

So, as we went to these different doctors, we were looking at GI tract, and what was going on from a nervous system perspective, neurologists, things like that, is everyone kept coming back with this same quote, unquote diagnosis, which was stress. I just, again, looking back now, think, "Well, it's not really a diagnosis, because stress isn't a disease or a disorder." And for a child especially it's very confusing to know what you're supposed to do about that. So, I felt like my brain was essentially hijacking me. I wanted to learn more about psychology, nutrition, physiology, and I ended up actually doing that through college and grad school, and even my first PhD.

I just kept feeling like the more information I had still wasn't helping me heal this big gap that I saw between my own capacity and the demands that life was giving me, and the challenges that life was giving me. So, it wasn't that I grew up in this really traumatic home environment. I think I grew up very normal. Ended up with my parents getting divorced. Of course, there was some issues in the family, with tension and drama, just like everyone has. But what I've learned, now, is that there's actually about 15%-20% of the population that has a genetic predisposition towards stress sensitivity, and that, in fact, when a child grows up in a home that is stressful at all, that this embodying of that, this nervous system condition, can manifest into what I now know as vasovagal syndrome.

I still have to be very careful about managing my own boundaries and I guess ironically I ended up doing the two things that scare me the most, public speaking and flying, for a living. I have to really walk the talk and practice what I teach. You know, it's made me very, very passionate about talking about this. I do struggle with fatigue and anxiety and depression, still ongoing as I do this work, but what I have found is that instead of the really high highs and low lows, it's become more manageable. I notice the signs and symptoms more quickly, and therefore I can adjust them faster, so it's not taking me out of my life, it's just grabbing my attention so I can have a better life.

Alex: Yes. I remember reading in one of your books that there was a period where the fatigue was quite debilitating, in terms of your life. It sounds like, as you say, it's now, it's a communication rather than a rug being ripped from underneath you and your life collapsing as a part of that.

Heidi: You know, it so feels like someone's tugging at the rug sometimes, I'll be honest. It's like someone's trying to pull it out from underneath me, but the good news is I really had to practice this so much that I have strategies I have to use. I talk about it as being the boss of my own brain. That I make a choice every morning when I wake up to have these routines and rituals that are just

as important as anything else I would do, and when I'm not careful... And this does happen sometimes. It happened in the last couple of weeks because I was traveling so much.

I think what happens for a lot of us, as practitioners, when we're really passionate about this, is we can really deplete our own battery. We keep prioritizing everyone else and everything else, instead of really saying that. I can say for me, honestly, I need about two hours of quiet time by myself every single day, at a minimum, to function optimally. I need about an hour of exercise. I have to have humor in my life, and there's other things like that that I'm sure we'll talk about, but it's not like this is self-care and it's selfish, it's really, this is mandatory. This is what I have to do, not only to be my best self, but just to keep from being hijacked by this nervous system sensitivity that I know is just part of who I am.

Alex: One of the metaphors that you used in your books, that I have to say I loved, and it made me laugh because it reminded me of the real world version of that, was the conflict between the CEO heart and the CFO brain. It made me laugh because the CFO of the Optimum Health Clinic, the day that he came in was basically the day the organization started running in a sustainable way. I was the crazy young entrepreneur in my 20s that was constantly trying to overstretch everything, and it was those boundaries, and those parameters, that was just critical in terms of the actually really achieving the ambitions and the dreams that were there. I just think it's a great analogy, so maybe say a bit about that, and then we can come a bit more into what actually stress is.

Heidi: Yeah. I'd love to. This really brought it home for me as well, because I think what happens in our own system is it's like we have a CFO brain that's just trying to manage our resources. And it's not emotional, it's just, "Do you have glucose? Do you have oxygen? Do you have enough for what is being asked of you?" And it starts at the physical level, but it quickly shifts into things like time, and money, and social support.

So the brain is just scanning non-conscious cues to determine whether or not we're safe, and it becomes emotional, because the brain needs to get our attention if it thinks that we're not going to have enough.

I did a survey last year of over 30,000 people to try to find out what was really causing the most stress for people in our daily lives, and by far the number one answer was the feeling that there's not enough time to get it all done. So, when we wake up in the morning and that's our first thought, as it is for so many of us, we become hijacked by the CFO brain trying to protect us by slowing metabolism, increasing inflammation, making us feel tired. Of

course, because it's like, "You don't have enough. You can't sustain this for a long period of time. I don't care what your heart wants you to do."

I joke about the fact that our heart, as a CEO, is more driven based on our purpose and our values and our mission. So, when I wake up in the morning, my heart wants me to be patient, and loving, and kind, but when I feel like I don't have enough time to get it done, my husband will tell you that I am not patient, loving and kind. In fact, I'm trying to get him to fast-forward his really long stories, which is just he moves at a different pace than me, and I love that about him, but what's challenging is I'm so hijacked by my brain and my nervous system in that moment that I'm not showing up as my best self.

I'll say part of what actually led me to this analogy was working with clients, whether it was one-on-one or in large corporations, I have never yet met a single person who didn't want to be healthy, or happy, or perform at their best. That's never the case. And yet so often we pound people to try to motivate them to want to be healthier, or want to be more engaged at work. That's not the problem. The problem is when their brain feels that they don't have the capacity. So, I think we all need to do a better job of thinking about that, and really looking at stress as just what happens in the gap between demand and capacity.

It is energy, and information, that's trying to help us to feel positive change. It is not a disease or a disorder. And so, we need to learn how to master stress, instead of just trying to manage it.

Alex: One of the quotes that I love, that you... I might have slightly butchered this, but you said that, "Taking on too much at any one time is a neurological threat." And I think that that really struck me. It's not just, "Oh, I've got too much to do," that actually the nervous system is taking that as a threat, as a danger, not just a to do list that's got a little bit out of control.

Heidi: Absolutely, and I think that's something so important for people to understand, that I know we'll get into, is that when that non-conscious cue is triggering the brain, it triggers the sensation part of the brain that really starts to embody that. So it starts to shift everything. Our breathing changes. Our body changes. So we're literally trapping this energy and information in the primal parts of the brain, and over time, the brain and the nervous system will literally rewire themselves to be more reactive and less responsive.

That's where I feel like so many of us are walking through life hijacked by our own brain and not realizing that it's these habits of thought and behavior over time that tell the CFO brain we don't have enough. And that we have to create these course corrections of sensing safety. Not just waking up and

looking in the mirror and saying, you know, "I am enough, I have enough." It's a great strategy. But it really has to be embodied as safety, through breathing practices, and physical exercise and massage, and essential oils, and even things like electrotherapy that can nudge the nervous system into a more positive direction. These aren't things that should be optional. These are things that should be really as critical as the food we eat and the air that we breathe.

Alex: And I think often what can happen is that, particularly with fatigue, that people can get in some quite negative downward spirals where stress causes the system to become more fatigued and more tired, then there's less resource available to meet what needs to be done. So it might be that the demands stay the same, but as someone becomes more fatigued, actually the stress levels start to go up.

Heidi: And fatigue is such an important thing to talk about. I think in a lot of ways it's kind of like stress, that we use the word all the time, but we don't really look into it and learn from it. It is a valuable lesson for us, and I can tell you, the very first words I used, and I don't remember exactly how I said it, but in my book *Recharge* I start by saying, "I hate being tired." Because to me being tired is weak. To me as soon as I start feeling tired, I hear my dad, who was my softball coach, in my ear, saying, "Snap a towel around it," and I don't even know what that means, but I think it has something to do with trying to motivate me. I don't know.

But, you know, I was an athlete in college and so it was always like you pushed through the pain, and you rally for your team, but at some point we need to rest. So using that analogy, I was a college softball pitcher, and we knew that there was only a certain innings that we could pitch in a game to really be at optimum performance. So you wouldn't, say, just push through that muscle fatigue, and when the muscle starts to break down, we know it needs adequate recovery to repair and rebuild, but we don't often think about the same thing when it comes to our brain. We're actually causing our brain to atrophy in the parts that help us to self-regulate, and problem-solve, and use stress to fuel positive change. At the same time we're strengthening our brain that causes us to be over-reactive and over-sensitive.

Alex: I want to come back to that in a second, but also, just to touch on, particularly for those with more severe fatigue, one of the things people can sometimes say is that, "How can I possibly be stressed? Because all I'm doing is waking up and pottering around at home." But of course if their energy's gone from 100 units a day down to 20 units a day, they might have reduced their activity from 110 down to 30, but the activity's still above their capacity,

therefore, they're still stressed, right? Their nervous system is still receiving that as a neurological threat, to use the language that you use.

Heidi: I think, in addition to the physical, we tend to think about that, right? People will say, "I'm just sitting around doing nothing." I think there's nothing more exhausting than doing nothing. In fact, I'm never more tired than when I'm stuck to being on a plane for a long period of time, especially going over the pond, right? It's like our body needs movement and circulation to maintain energy, and when we are forced to sit and be still, our brain is still active.

You know, there's a couple ways that can go. We can push our brain, or nudge our neurons, in a kind way, towards thoughts of gratitude and appreciation and self-care and self-compassion, where that time spent resting is actually healing, or we can worry and feel guilt, and we can feel shame, and we can have all the negative stories that we're telling ourselves about our inability to function.

I mean, I still, even though I practice this, I still have to literally convince myself. This is where I notice my brain saying, "You should be doing this. You could be doing this. You shouldn't be getting a massage," or, "You shouldn't be going and taking time in the hot tub when you should be working out." It's like, what do I really need right now? And I actually, as silly as it sounds, I thank my brain for telling me that because I know it's trying to protect me, but I allow my heart to be in control and say, "I appreciate that threat signal you're giving me, because you're used to being in this depleted state, but I'm going to choose something different."

And guess what? The more you make that choice, the more you slow down and respond instead of react, the more you strengthen your ability to do those things that are nurturing for your system. This message is so important, **Alex.** I'm so glad you got us talking about this.

Alex: Yeah. You mentioned a little bit earlier, you touched on the idea that stress isn't all bad, right? That stress can also be helpful. So let's just touch on that, because I think people can get into a mindset of almost thinking, "I can't ever have stress in my life." And almost people become stressed about being stressed.

Heidi: Yes.

Alex: So let's just touch on the positive aspects of the right kind of stress.

Heidi: There's some different ways to look at this. If we go back through history, Hans Selye, who started the American Institute of Stress, which I now

work for and am a spokesperson for, started talking about stress as this notion, as the physical reaction to any demand for change on the system. This was originally done in animal models. What happened is, as it does today, the media grabs hold of it and starts talking about it. It becomes this big buzzword. Everyone's talking about how bad it is, and Dr. Selye said, "Well, wait a second, it's not all bad."

He then tried to differentiate between distress and eustress. I'm sure many of you are familiar with those terms, that distress is a negative energy stimulating a stress reaction, and eustress is a positive stimulation of some sort that's going to help to enhance the system. Well, the challenge that I have with that, and what makes this so fun and complicated at the same time, is that I think we've all had negative stimulation, or negative experiences lead to positive results, and positive situations lead to negative. So it's much more complex than that, and I'll give a couple of examples.

We know in the research that people who win the lottery are actually less happy after they win the lottery, and yet most of us think... Which, by the way, I would totally sign up for that research project. I would prove to be outside the norm, but-

Alex: I'm there with you as well. We'll sign up together.

Heidi: Yeah. Special new project, but, you know, if you think about the reason for that, even positive things come with some negative stimulation. You've got a lot more responsibility. You have to make decisions you aren't prepared for. You have family coming out of the woodworks asking you for things. I worked with the National Football League for a period of time and we saw just how quickly these athletes were bankrupt after having millions and millions of dollars, because they weren't well-prepared to know how to manage that in their life. Not just the money, but just the people and the expectations, right?

On the other hand, I think all of us can think back on times in our lives that were stressful in a negative way, but were so helpful for us. It gives me goosebumps just thinking about it, because I think for most people, the times that we grow the most, learn the most, develop our courage and our faith, those are always really difficult times. So much so that I now embrace those difficult times because every single time I go through it, it's like the upside gets more and more and more, so even though it's uncomfortable to be in it, I know that it's going to be used for positive change, and that only comes from going through those things.

I think what's important to just differentiate is, again, going back to the basic, that stress is what happens when demand exceeds capacity, that it

happens physically, emotionally, mentally, spiritually, socially. So we're thinking about all of our resources. Financially as well. And that it's all based on the... There's actually three factors I talk about. Our stress load, which is how much demand versus how much capacity, and that gap is called stress load, or the amount of tension between the two. Our stress lens, which is the perception we have of what's happening to us, and then our stress signature which is how it shows up for us personally.

I use those three things and a stress 360 assessment that I take people through, both individually as well as with groups, to help them identify what's the demand, what's the capacity, what can we adjust? Do we need to decrease demand, or is it really more about enhancing capacity? What's the perception or the negativity bias that might be trapping you in this negative thinking around your challenging situations? And then, how does it show up? Because the sooner you can see the signs and symptoms, that you've got too much stress load, the faster you can make those adjustments. And then the last thing I'll say just very simply is we can look at examples, like physical exercise, or any time I say if you want to be more patient, you have to deal with something really challenging to grow your patience muscle.

So that idea, that stress has the potential to stimulate change in a positive way, as long as we have adequate recovery. We can't be constantly stressing the system. Which takes me to, and we can go there if you want to, but the difference between acute versus chronic stress, which is a massive difference.

Alex: Yeah. I'd love to come down to... That's a great model, by the way. I really like what you just described. It's a very helpful way of separating those different pieces, because I guess what can happen is people can just always assume that stress is about the load of what's happening, not realizing that actually their perception is the piece which is the issue, and it's actually more empowering, in some ways, because it's something we can change more easily.

Heidi: We can change that.

Alex: Yeah.

Heidi: We can change negativity bias. We have a lot of research, actually, looking at simple interventions that can do that. I have a very strong negativity bias. A lot of us do. It doesn't make us negative. It's more threat sensitivity. And interventions like humor... I did a humor intervention for 30 days where I just found something funny and shared it with a friend of mine for 30 days, and had a radical shift in that negativity bias getting to a healthy normal range, just through that one, simple, five-minute strategy every day.

Alex: And actually, that negativity bias is something that I've personally found quite useful. I have both my wife and one of my close business partners both have a strong negativity bias, and they're really helpful when it comes to making decisions, because they start to look for all the things. And one could easily become irritated by that, but when you see the value, actually, although it might be fueled by trying to look for threat, it's very helpful in terms of considering different scenarios and different outcomes, and being prepared for those.

Heidi: Yeah. And the people who actually have it just have to be very aware of it, because that same threat sensitivity, most of us that have that also have this highly sensitive genetic trait that makes us process information more deeply into our bodies. So even though we're helping the world by finding all the potential threats, and warning everybody, we can also burn out faster because of actually what's happening in our own system. So very important for people to go ahead and understand threat sensitivity, that it's not negative for us to be aware of those things, but also that we need to be more careful with setting healthy boundaries around not taking in too much news, too much stimulation. Really trying to shift our lens a little bit more towards gratitude and positivity, just so that we have more of a healthy balance, because we are going to pay a lot more attention to the things that are potentially wrong.

Alex: Yeah. I think that's really, really valuable guidance. And just, you touched on acute versus chronic stress. I think that would be helpful just to explain the difference there to people.

Heidi: Yeah. Typically when we talk about stress as being a problem, we're really looking at chronic stress. It's very different in the reaction patterns than acute stress. How I like to explain this for people is to think about diabetes, which most of us are familiar with, that there's a Type 1, which is more acute in nature. Either you're born with Type 1 diabetes or you have a chronic or illness or some sort of injury to the system that makes you diabetic, and you just are. There's no in between. It just doesn't work.

At the same time, there's also Type 2 diabetes, which happens more often, and is really like an over-usage injury, right? Where your system stops being as responsive to insulin, or something's going on in your body where you're not able to utilize and manage blood sugar effectively. So then you're taking medication, but you can also have lifestyle factors helping so you don't need as much medication, but think about what's happening in your system where it's a one-time dangerous situation that you now have a treatment for, versus the ongoing every day chronic.

It's very similar with the brain and the nervous system, where when we experience acute stress, it activates the fight or flight reactions, which most people have heard of before. These are fueled primarily by adrenaline. So, that reaction really is short term, meaning if you don't fix the problem or run away from it within about 30 minutes, you're going to activate a secondary support system, in the chronic system, which is fueled more by cortisol.

Now, cortisol, a lot of people think of as a bad thing because it's been connected with killing brain cells and making us fat and causing inflammation and all sorts of other problems. But it's not cortisol that's the problem. It's kind of like blaming insulin for our diabetes. It's that the cortisol isn't being used effectively enough and the body's having to adapt in these ways that are good for our survival in the short-term, but really deadly, unfortunately, and toxic, in the long-term.

So, if we can think about it that way, I think it's important, because there's actually truly an emergency, and we need that adrenaline to fight or flight our way out of the situation. There's no harm, no foul. In fact, we probably will have enhanced immune function, improved energy, attention, focus, memory, all the things we need to survive. It's when it crosses over.

And what I think happens is when we blame stress, people think about the big things. The death of a family member. A divorce. Loss of a job. We're actually pretty adaptable to those things. It's when it takes a long time. It's the divorce that takes 10 years. It's dealing with watching the impact of that on your children and worrying about them. It's the everyday, nagging stress, even, "I don't have enough time to get it all done," that activates this slower, chronic stress reaction that we often call freeze or faint.

That's also where fatigue really comes in, is that, yes, if you have an emergency and you have to deal with it, there's going to be a spike in energy and a crash in energy afterwards to recover. But when we're talking about chronic fatigue, and some of the other issues that happen from a health perspective with our digestive system, with our anxiety, depression, mental health, emotional health, all of those sort of things are really more based on the chronic situations that we need to take a look at.

This is where, from a statistics perspective, we know that about 75% to 90% of all medical visits are connected somehow to chronic stress. That's what we need to really start navigating. And remember, again, I'm not talking about the things that are out of your control. I'm not talking about the fear that we might lose our job, or the fear that we have about things. I'm talking about the belief that we have enough, that we are enough, that we're nurturing our system, that we're getting adequate sleep and taking breaks and

fueling ourselves with good food, and physical activity. All those types of things that are commonsense, but unfortunately aren't common practice.

Alex: And I think one of the things that can also happen is when we are suffering... For those that are further down the fatigue spectrum, if someone's suffering from a chronic condition, that in of itself is also, inherently, very stressful. The uncertainty of, "What's wrong with me? Why is it wrong with me? Will I recover?" It's a medically unexplained illness and it leads to traditional medicine's perception. So there can also be a lot of chronic stress caused by having a chronic condition, right?

Heidi: Absolutely. And I can tell you, from my story, that most of the issues that a doctor would have treated were not based on those issues but based on exactly what you just said. The feeling that my brain was broken and that I was going to have to live this way for the rest of my life. And that what happens so often in traditional medicine, because they have a short period of time with people, they're not necessarily up on the research or the new findings that we know about these things, and the different types of interventions that are possible, is we get a diagnosis that now becomes part of our identity, of who we are.

I can't tell you, although I'm sure you have even more experience with this than I do, how many people are misdiagnosed so that a doctor can give a prescription, and this person is now actually being made sicker. And I don't want to stress anyone out who's listening and worrying about that. It's not something to worry about, but unfortunately that's just the traditional medical model that we've had for a long period of time, where by the time I'm seeing clients, oftentimes that are on seven or more different medications, all with different side effects, and when I see situations like, unfortunately, are all too common with people acting out in violence towards other people or even in things like suicide, or towards themselves, oftentimes there's misdiagnoses, bad medication, and too many unfortunate circumstances all coming together at the same time.

This is not a logical choice that a human being is making, this is a reactionary, illogical choice that's being made in the primal part of the brain that's only focused on survival in this moment and nothing more than that.

Alex: I think that that's a good place to come a bit more to what are some of the tools and techniques that you either use with your clients, or your teaching, when you're working with organizations, that you find to be effective to start to either reduce the stress load, or the perception, or the way it's impacting on one's body?

Heidi: I'd love to walk our viewers and listeners through two different ways to evaluate this, because it'll really personalize it for everyone who's watching. The name changes all the time. It's kind of five-by-five, meaning there's five times during the day, and then I want to share with you my five personal go-to strategies, although there's many more than that.

When I look at the course of the day, I always like to invite people to think about the timeline of their day, and think about the bookends. Those are two really critical times to be looking at your energy. What are you doing first thing in the morning to prime your brain and your nervous system to believe that you have enough? And actually plug yourself in, just like you would your cellphone battery when it's running out of gas.

In the morning is when the brain is most flexible and adaptable to take in new information and readjust it, but for most people, this is also when we rush to check our email, scroll social media, watch the news. It's really toxic to take that in right off the bat without fueling with other things, and I don't mean fuel by food, I'm talking about fuel like content. I love this saying, a friend of mine said, "You are what you consume," because it's not just food, it's energy and information as well.

So think about what you do, and ideally have a morning ritual within that first 30 to 60 minutes that you really just allow yourself to prime your brain. Call it prime time. And then, before bed, to unwind your brain to be able to sleep more effectively. So this should be, again, a 60-minute or so habit, routine, ritual. Doesn't mean you have to spend 60 minutes doing something, but disconnect from technology. Really start to unwind from the to-do lists you're already worrying about for tomorrow, and reflect to some meditation. I'll talk about the strategies in a moment. Let's just look at the time frames first.

You've got the morning prime time, evening unwind time, and then the three times during the day that are really important are when we eat, when we move our body, and when we take breaks. So, when we're eating, I like to have people think about not just about what we're eating but how we're eating it. Are you eating mindfully? Is your body in a relaxed state? Because that's going to change how you process and digest the food that you consume.

By now most people know what we should be eating, so I don't feel like I need to go into that too much. If we calm down, we also make better choices. So when we eat, making sure that that's in a calm state. Also moving our body regularly. At least every hour we should be getting up and moving, even for just a couple of minutes. Ideally, to optimize energy, doing some interval training, doing some exercise outside. There's a lot of specific things you can get into with that. And then taking breaks where the brain is just reflecting,

recharging. That's what the book Recharge is really all about, and I have a free Recharge Tool Kit online that people can access as well, that has some of the strategies, as well as a little video with a timeline that you can actually map out your day.

The whole key with this is that the human system is designed to oscillate. Ups and downs, not a flat-line, and a flat-line is always deadly. Then, I'll just share, quickly, my high five. These are the things that I do every single day, and that is, and I think I mentioned them already, movement, meditation, mirth, which is another word for humor, music and sound, and massage. So, most of those make common sense. For me, sometimes I do multiple ones at the same time. I might be doing a long run on the bay and I'm also doing a meditation practice, or maybe I'm listening to music.

For me, music, when I say that, oftentimes is more about sound or sound therapy. The studies have shown that listening to the sounds of ocean waves crashing, for example, is very relaxing for most people, and I have this whole beach going on, pretending-

Alex:I noticed. Yeah.

Heidi: So I tend to try to get the beach around me. I have a study that I did on the benefits of taking your brain to the beach, even when you're stuck at the office, so it's kind of a fun thing I like to explore. The sound of oceans, or binaural beats, if you enjoy that type of thing, it's just a little bit of a different vibration in each ear that helps to balance the brain chemistry, and our brainwaves.

Then, for massage, I commit to once a week physical massage. I would do it every day if I could. Because I don't have time to do it every single day, I also do hot tubs, hot baths, anything that's soothing to the body that's going to help to calm the nervous system. As I mentioned, I also do electrotherapy with a specific device called the Alpha-Stim, which helps to nudge the neurons into alpha state. This can be really helpful for people who haven't quite gotten into the zone of meditation, because you can actually be watching TV or doing something else other than driving, and your brain is actually getting to an alpha state without meditation.

Personally, I like to do both at the same time. I just think of it as enhanced meditation, and I also use aromatherapy and essential oils at the same time. So I layer it all on. I like to...

Alex:You do.

Heidi: You know? How do I use imagery? How do I use sound? How do I come to my senses by shifting sensory cues which are processed faster in the brain than my logical thought processes so that those thoughts are going to be more patient, loving and kind, and I can be more of the type of person I want to be in my life.

Alex: That's very, very cool, and I want to come to a few bits a bit more. But one thing, before, you said that... You touched on something which I think's a really crucial point. I'd like to just expand a bit. You said that one of the keys here is the highs and the change, and having a flat-line can be deadly. I think one of the things that can happen is people can get up, they can work, they can spend too long at a desk, get home, watch telly, whatever it is that their thing is, and there's not much change in terms of what they're doing.

Or, if someone's further down the spectrum in terms of a chronic illness, it could be a very different life, but it could be the same rhythm much of the time. So maybe say a bit about why those shifts and those changes are important.

Heidi: Yeah. Well, there's a couple things to think about. I think one is that most people get up and go and go and go and go and go, and they can't understand why they can't sleep well at night. So, that idea that our cortisol, the stress hormone, is supposed to be highest in the morning to help us get out of bed, and then lowest at night to help us sleep. But what happens for most people is we end up with this reversed pattern because we're pushing all day long.

If we're not taking those breaks to recover and recharge and get into the parasympathetic or relaxation response, we're overstimulating and agitating our nervous system, so there is no cortisol fluctuation. We don't have a chance for melatonin to then be enhanced in the evening to help us sleep, so we end up with this reverse cortisol pattern that a lot of people are struggling with.

On the other side, to your point about those that maybe are chronically fatigued and needing to be in active rest, we know that we need some stimulation in order to continue to adapt and grow. So, essentially, after the age of 27 to 30, if we're not engaging in some sort of stimulation, our system is shutting down. It's what we think of as the aging process, but it doesn't have to happen like that.

So, even if we can't go do the things we once did... I find this a lot with people who were former athletes, and they just can't get themselves to work out for 20 minutes because they feel like they need to do it for three hours. But they don't have three hours at this season of life. So it's like getting over

the fact that maybe you can't do what you once did. Maybe for you, physical activity is getting massage, or stretching done with a practitioner, or some sort of rehabilitation. But you're still engaging your muscles versus sitting on the couch or being constantly still.

You could say the same with the brain. We need cognitive engagement, which actually is not, as much as everybody would like for it to be, cognitive stimulation is not best done through crossword puzzles or video games. It's actually more about things like learning a language, or being creative with hobbies. It could be playing games, but much better to do them in person without the computer stimulation, if we can do that. And if computer stimulation is helpful, especially for people who are older and maybe less mobile, you can do that and also play things like Words With Friends, and be engaged and get some social interaction that way as well.

But the key is that, essentially, the brain is either being invited to do something or it's put into a metabolic shutdown mode where it will actually start to atrophy just like the muscles in our body. So it is important to think about that. And the state of what we could call unfocus, as well. A dear friend of mine at Harvard, Dr. Srinivasa Pillay, has a book called Tinker, Dabble, Doodle, Try, and it's all about the power of the unfocused mind, and things like doodling, and how helpful things like that can be to actually allow our default network to take a break and recharge itself.

Alex: Something that also want to touch on is you describe some really effective and powerful ways that people can start to destress, but of course, one of the challenges is that the people that most need to destress can have the most resistance, or indeed, the times in the day we most need to calm things down are the times we least feel like doing it. And your book, Stressaholic, you outline this idea of there's actually an addictive quality to stress. That can, I think, be the resistance to changing. So, maybe just touch a bit on that, and how to work with that if that's coming up for someone.

Heidi: Yes. I think it's really important. This is, again, another aha moment that I had during a really difficult time. I just kept thinking about pushing myself to do more speaking and more traveling, because I still had so much fear and anxiety around that. And what I found is I would try to add a day of rest into work, and I'm sure many of you could relate to this. I'm going to go speak at this really nice place, so I'll just add an extra day and then I'll rest and recharge, which never happens.

I found myself, at one point, sitting in this beautiful spa, sitting in a hot tub, and there was a list of things to do, like sit for this long, and then do this shower, and then do this bathing ritual, and I was like, "All I do is follow the rules," right? And just the first one, it was kind of like looking at my clock.

"Oh, my gosh. How much longer do I have to do this?" And there was this funny aha of, like, "Here I am. I've carved out the time and the space to take care of myself, and it turns out I don't like how it feels, because I like working, and I like being productive."

And then, also, the fact that I think many of us are afraid if we stop maybe we won't start again, because we know, really, under the surface, we're so tired that we have to keep these stress hormones going. I mean, I've had so many of my clients, as soon as they hear I'm going to come talk about stress, they're like, "Well, you can't take my stress away." And will admit, "Is it bad that I procrastinate and wait till the last second?" And, you know, it's not bad that we rely on stress hormones to help us to perform well, but the problem is it's not sustainable. So even if you don't see the cost of it yet, I can tell you from a chemical, neurological perspective, there is wear and tear happening faster than it needs to be.

And honestly, I've had some clients say, "That's okay, because I'm going to just burn the candle at both ends, and I don't care if something happens to me, and I'm not around as long." I was saddened by that, because these are people that I love, and I said, "Well, I want you to be around for a long time." So I think that it's just something that we have to think about, and when we realize that there is actually a chemical, neurological addiction process that happens with stress, that's exactly the same with all other addictive behaviors like gambling, and shopping, and drugs, essentially what's happening is the brain wants you to remember things that are potentially stressful. It's giving chemicals like dopamine to hardwire those habits so that you remember. It doesn't want you to keep doing them, but that's part of that cycle that we get in.

One little interesting tidbit that I've got to share on that, when we think about the chemistry that's really interesting, is that when we have cortisol, and we're in isolation, and we're going through something by ourselves, it's very, very toxic. But new studies have shown that when we have cortisol and oxytocin, which is stimulated when we're feeling supported, or bonded with someone else, it actually has a strengthening effect on the brain.

So I think that this is helpful. I always tell people that, "No question, this is part of our survival instincts, that if we're by ourselves our system will shut down into that freeze faint reaction to protect us, but when we're with other people, we perceive that we have more resources to cope and we're actually strengthened as a result of that." So it's very important, as easy as it is when we feel stressed or feeling fatigued and we don't want to go be social necessarily, that we still reach out and get the support that we need from people that we care about in a way that's not overwhelming.

I'm an introvert. I don't like being social. But I make sure that I have strong connections with a few people so that at least I truly believe that if I needed something that someone would have my back, and that's just really important in this whole stress process.

Alex: That's a fascinating piece of research, and it's interesting just reflecting in my own life that I know, sometimes, if I've had a really full-on week, and I've been... I'm an introvert as well, and going at it, and then I suddenly see in the family diary that we're going out to dinner with friends on Friday night, and it's like my heart sinks. The last thing I want to do is go and sit in a restaurant and be social. And sometimes it is the last thing I want to do.

But other times, it's like I'm amazed. It's like I'm still sat there at midnight and I feel the best I've felt all week. I'm tired but I feel energized by being around people that I'm not talking about work, I'm not talking about kids, I'm not talking about the things that are... I'm just hanging out and having fun. It's amazing how, sometimes, how energizing that can be, even for introverts.

Heidi: Yeah. And there's some simple strategies around that, too, that I've had to learn the hard way. One is, if you don't want to go, don't go. We have to get better at saying, "No." And that's okay, too. But to your point, we can also set healthy boundaries when we do go. My challenge is, I tend to tell people I'm an integrative neuroscientist, and there's nothing else that they want to talk about at that point, or they go, "What's the one thing I should do to diminish my stress?" You know? It's like, "Well, that's going to cost you this much." But, you know-

Alex: That's great.

Heidi: To help everybody. So I'm still in work mode. So giving yourself permission to maybe go and say, "You know, I'd love to talk to you about that another time, but I really don't want to talk about work tonight." Or asking questions. It's like, I actually like being social when I can just sit back and be interested in what someone else has to offer. It takes the pressure off, and it's amazing how quickly people will shift to talk about themselves, once they realize that... You know, they thought they were being nice to you by asking you what you do, but now, they'll share.

And also even just with time, amounts of time. I've gotten better at, when I'm going to events, taking my own car so that I know I could go for a short period of time and leave, even if the group is on a bus, I'll rent a car. I think those are the types of things that we just have to be more confident, and doing the best we can, being our best self, and sometimes it's easier to do that for a short period of time. So, it's greater energy, less time, instead of forcing

ourselves to spend time that we don't have feeling depleted and energy hovering.

Alex: I think that's a great point. And just before we come to how people can find out more about you and your work, just as a kind of final question, for people that feel like they just can't do this, like they've spent their whole life stressed, stress is who they are. It's too hard to change it. What would you tend to say?

Heidi: Well, my first thought is, then, stay away from me, because I don't want your stress in my life, that's my first thought. I do think, actually, along those lines, though, it's important for people to understand that stress is highly contagious. So even if it is who you are, just understand that that has a contagious impact on those around you. This is where I think, especially, parents, I can really tap into their greater purpose, because they may not be willing to do it for themselves, but when they understand that their stress is impacting their children... Children's brains aren't fully formed yet to understand the boundaries between what's theirs and what's yours. They are automatically highly sensitive to see patterns.

You can tell them everything's fine, but in fact, if you tell them everything's fine and you are feeling stressed in your body, you are totally messing up their own sense of self and understanding what's true for them, because they're thinking, "Well, my dad said he's fine, but man, this doesn't feel good. So what's really going on? Did I do something? Is he not telling me because I'm to blame?" I mean, we can all understand those patterns.

And if you don't have children, then it could be the same with your community, your friends, those you're leading in the workplace. Our stress experience is really non-conscious cues to our heart rate, our breathing pattern, obviously nonverbal communication and things like that. And sometimes I think about this on the flip side, when I think about how awful, in so many ways, our world has become, and especially areas and regions that are a little closer to home to me than to you, necessarily.

But in those moments when we feel out of control is when I realize that maybe doing a loving kindness meditation is the best thing I can do, or maybe volunteering to help somebody is the best thing I can do, because on the flip side of the stress contagion is kindness contagion, and we know that there is a ripple effect, that we may never see by sharing love and peace and gratitude with people around us.

Alex: That's a lovely way to end. For people to find out more about you and your work, what's the best way to do that?

Heidi: The best way is to go to my website, which is HeidiHanna.com. I will also share, and I hope it's okay with you that I do this, that if people would like to read the book Recharge, I have a little, hidden space you can do that for free. You can go to HeidiHanna.com/Recharge and it'll actually give you a PDF of the book as well as that assessment that I was telling you about, that takes you through the timeline.

The other one I would just mention is you can go to Stress.org which is the American Institute of Stress, and we have a lot of additional resources there for people as well.

Alex: That's awesome. Dr. Heidi Hanna, thank you so much. I really appreciate your time. It's been fascinating, and I think it's a great way for people to realize... And I loved your answer to the question of, you know, people think they can't change, because you're right, people that are stressed, they impact on everyone else. And if you're not going to change for yourself, change for others. It's a very powerful statement. So, thank you so much.

Heidi: Thank you.