



How Stress Changes the Way Your Brain Fires.

Amelia Scott Barrett, MD with Irene Cop MD, DC

Amelia Scott Barrett, MD

Hi everybody. Welcome to the reboot Your brain podcast. I'm Dr. Barrett and I am so excited about our guest today. Dr. Irene Cop is going to tell us a little bit about what's going on in the brain when we are under stress and what we can do about it. Dr. Irene so glad to have you here today.

Irene Cop MD, DC

Thank you so much for having me. Dr. Amelia.

Amelia Scott Barrett, MD

So let's start. Tell us a little bit about your very impressive background.

Irene Cop MD, DC

Oh thank you. I am a medical doctor, I'm a doctor of chiropractic and I am the CEO and founder of the stress to success shift institute.

Amelia Scott Barrett, MD

Wow, okay That must have been stressful to get all of those credentials. Alright. Anyway, can you tell us a little bit about the effects of stress on the brain?

Irene Cop MD, DC

Great question Dr. Amelia and it all depends on what phase of the stress cycle you are in as well as how effectively you manage your stress. So to start I'll give a really quick overview of the phases of stress and what your brain goes through in that time. So in the very beginning when your brain first perceives a threat right before you are even consciously aware of it. Your hard wired stress response kicks into gear, it's milliseconds and in that time you go into whatever hardwired response you have just like animals, we either want to run away, We want to fight, we want to we freeze and pretend you know hope they don't notice us or we faint and play dead and no matter which of those, we still have the common physical responses in our body and in our brains. So in our brains, your what I love to call your executive rockstar team, your prefrontal cortex gets wiped off line because that's not the time to think. So your prefrontal cortex is what's needed for thinking logically coming up with creative solutions,

making good decisions, acting on those decisions and also regulating your emotions. So that's the very first thing that gets wiped off line at the same time. The parts of the brain that are involved in focused, right? It's like you get like hyper focused hyper vigilant, you're almost like tunnel vision is like you're focused on that one threat, your pupils dilate and blood rushes to your brain as well as to your muscles. All of this happens without you even realizing it and it happens within like as I said milliseconds now, if the threat goes on, say you're being chased by a saber tooth tiger and they're not giving up, it's like you have to go into the marathon stage, it's like I gotta keep going, gotta keep going and you gotta keep going. Your body releases cortisol hormone, which is kind of like think of medium octane, your energy and it impacts the brain by spiking your blood sugar, right? Because it wants to have sugar for your brain for your muscles, for the fuel.

It is a side effect, unfortunately ruins your stress your sleep so that you're more likely to have sleep problems, whether it's ray mind going to sleep, whether you wake up in the middle of the night or just even that, you're just not getting a restorative sleep. That is all part of this. And it also impacts your metabolism in multiple ways so that you'll likely find that you're gaining weight. Most people under stress tend to gain weight, some lose that's it, but the vast majority actually gain weight. So that's the middle term. If it goes on too long, you hit a stage where you've run out of energy, you've run out of all of the tools in your arsenal and in your body that's called adrenal exhaustion in your brain. It's like it's like the lights are gone, it's like the lights are out and you've got nothing left. And so the very important thing to understand is that while all of these effects are what might happen, I'm gonna just show a quick image of what's called functional M. R. I. Which actually measures your blood oxygen levels in your brain on and as colors in your brain.

So for those of you not watching the actual video, I'm showing here a picture of two brains, one that is under stress and not coping so well right. It's like full on in in stress response mode and that is actually where you might find yourself with risky coping mechanisms like emotional eating, binge drinking or doing drugs or whatever other coping mechanism might be addictions, it might be retail therapy right? Whatever makes you feel good at the time is what you'll jump to as a way to make you feel yourself feel better and kind of give yourself a momentary like you know up your energy, right? Whereas the good news is that you can learn resilience coping skills that light up your prefrontal cortex again which means that you can think straight, you can think logically you can make good decisions and you can act on them and you're not calling off and slugging somebody because you're angry at them.

Amelia Scott Barrett, MD

Wow this is amazing. So what I'm hearing here then is that when we are under stress, a part of the brain called the prefrontal cortex goes offline and it sounds like that's kind of the seat of our higher human cells. But what you're saying is based on this M. R. I. Research we can actually learn techniques that will keep our prefrontal cortex working for us even during those times of stress. Is that right?

Irene Cop MD, DC

Absolutely. And it's those resilience tools resilience just means how easily you adapt as well as its it's also how confident you are in how you can handle and effectively manage stressful events, curveballs as I like to call them right because life is always going to throw curveballs trauma adversity and it's how well we respond to them. So it is first and foremost about understanding that you're not bad, stupid or lazy when you have that initial knee jerk reaction, it's your hard wired stress response and then understanding that very shortly within seconds or minutes with training, you can bring your, your thinking brain back online so that you can effectively manage the situation and control it.

Amelia Scott Barrett, MD

Yeah. So this is super empowering information for people. And so what I'm curious about is this, how do people know if they may need to develop these tools? In other words, how do they know if they're having these symptoms of stress on the brain or there are symptoms that people get that can tip them off?

Irene Cop MD, DC

Absolutely. So what I see with people because when they are under stress, they don't necessarily realize. In fact, many of my elite performer, like high achiever clients would say I'm not under stress. This is just normal for me, right? It's kind of like, I know you're a specialist in headaches. That's like saying, well I only get normal headaches, right?

Amelia Scott Barrett, MD

Yeah.

Irene Cop MD, DC

Great. So the symptoms that people and I'll say signs like the numbers, family members might say like, so they might feel anxious. They may feel overwhelmed. They may feel like they have brain fog, they, their memory goes out the window. It's like they, they'll be, it's kind of like standing in front of the fridge, you know, wondering why they went there in the first place. Sometimes they even feel like they're losing their marbles. Like am I getting early Alzheimer's because I can't think of words. I can't remember what I did five minutes ago and I have to go back and did I lock the door.

Their sleep is poor, whether they have a racing mind and can't get to sleep or whether they're waking up in the middle of the night. At any rate, they're waking up exhausted, which is another symptom that they may not attribute to the stress where it's just like, why am I so tired? And I need another coffee? And oh, I better have that donut to go with the coffee because I need more energy, right? Which causes like whole nasty cycle that we could talk about other times. They can't get motivated. They can't get motivated. They may be like grind to a halt and you know, they're the couch potato or they're, they're distracting themselves, you know, mindlessly scrolling instagram or facebook so they can't focus,

they're, they're exhausted. They feel like they have low energy there, as we mentioned in the first question you asked me, they're, they're gaining weight, especially that troublesome belly fat that feels awful. And so they're feeling crappy about themselves and wondering like, why am I gaining weight? They have cravings for their comfort foods, which goes back to that donut, right? Because they have cravings because your brain is telling you that it's like you may be starving to death I need you to eat. Right? So there's the emotional side of I want to feel better. But then you're actually having cravings for those very foods high carb foods that will give you that increase in sugar for your brain and your muscles.

Amelia Scott Barrett, MD

Wow. Yeah so that's a lot more going on. I think most people would just sort of automatically think stress feels like you know racing hard things like that. But you're describing so many other things that people might go to see their doctor for that really cannot be traced back to stress. That's good to know. So what can people do once they're in this situation? Do you have any sort of quick tips for us?

Irene Cop MD, DC

Absolutely. So as I said when I showed the that amazing picture of the functional M. R. I. You can train your brain and your body to be more resilient and one of the favorite ways that I teach people that takes only seconds is that your actions create your feelings. And that means that your body language sends a message to you and especially to your brain telling you how to feel. So for instance if you're smiling it activates the smile muscles and sends the message up to the brain they're happy. So it's not just the other way where you feel good and so therefore you smile. So literally I will have clients stick a pencil between the teeth like that. Exactly.

But well no matter how bad you're feeling, it puts you into that smile position and not only it may make you laugh because you're feeling kind of funny about it, but I literally teach this to whole families like the, and the whole family has permission to stick a pencil in it. You do the same thing when a lot of much of resilience is knowing that you have the confidence, the self belief that you've got what it takes no matter what is thrown at you. So there's a really good reason why the military, any military spend so long with new recruits teaching them posture, right shoulders down, stand up or sit up straight, chin up, gaze straight forward and you can add a smile on it, right? Because that is sending the message to your brain that I'm confident I've got what it takes no matter what, even if it means racing headlong into the heat of battle,

Amelia Scott Barrett, MD

Wow. Yeah, wow. Well said, so do you have any resources for us? So maybe we can sort of figure out, you know, where we're at with all this and what we can do

Irene Cop MD, DC

Absolutely one of the most important factors is awareness. I always say awareness is 80% of the battle

and the solution and as we just mentioned, so many people don't even realize the level of stress they're under and how it's impacting them. So, I created the flameout syndrome risk assessment. Now, Flameout syndrome really quickly is that Kratom catastrophic level of, of burnout and burnouts usually think, you know, thought of as just mental and emotional feelings, This is where you are about to crash and burn physically mentally emotionally on all levels. And so that is a very in depth comprehensive assessment for all areas of your life that determines your risk of developing severe illness. So you may be very resilient and, and score low. So you're at low risk of severe illness or injury. On the other hand, it may tell you that you are at serious risk for flameout syndrome and you're about to crash and burn if you do not take immediate action right now. So it literally goes through all of those. There's, I think there's over 100 questions, so it's very, very comprehensive. Looks at every area of your life to determine whether you need, how well you are doing with your resilience and how much action you need to take right here right now,

Amelia Scott Barrett, MD

Wow, that sounds amazing. How can people get a hold of that.

Irene Cop MD, DC

They can go to drirene.lifeforward/flameoutquiz Flameout is the words flame out quiz all one word,

Amelia Scott Barrett, MD

I love it. Okay, well, thank you for sharing that and I, I am sure that that will help raise awareness of flame out syndrome and what people can do about it. So Dr. Irene, thank you so much for being here today and sharing your expertise with us. I deeply appreciate it.

Irene Cop MD, DC

Thank you. This has been it's what I'm passionate about. So thank you very much for allowing me to help.

Amelia Scott Barrett, MD

Thanks again. Bye everybody.