

2022 TADD Talk

Your Brain on Stress: Your Lifestyle Is Hurting Your Executive Functions

By Linda Walker

Hello! I'm Linda Walker, an ADHD coach, speaking to you from Montreal, Canada. I'll be speaking about the effects of stress on your executive functions. And I'll tell you what you can do to minimize its negative effects on your brain.

Executive functions are your higher-level mental processes like working memory, focus, planning, organization, decision-making, activation and self-regulation. Your prefrontal cortex manages your Executive Functions. Think of it as the CEO of your brain.

ADHD causes executive dysfunction. It's the reason it's hard to focus. It's why you struggle to plan and follow through. It's why you miss important details. It's even why you may struggle to control your temper. It might make you more impulsive. Your Executive Functions are in charge of a lot, and they're where your ADHD hits hardest.

Does this mean you can't engage those higher-level mental processes? Of course not!

But if you want to get the most out of your Executive Functions, you will need to take greater care of your brain. You'll also need to avoid things that worsen your executive function challenges. Like stress. Stress has a dramatic negative effect on your Executive Functions. So, you'll need to learn how to manage your stress.

But before we go there, let's talk about stress and its impact on the prefrontal cortex, the CEO of your brain.

We can't talk about stress without understanding the role of the amygdala. This brain structure processes emotions, especially fear and anxiety. The amygdala is like your brain's security officer. The security officer scans the environment, including your breathing, any tension in your body, for potential threats. At any real or imagined threat, it coordinates your unconscious stress reactions.

When you are alert and interested in something, the CEO is in charge of your brain. Its neural connections transmit what it says loud and clear throughout your brain.

The CEO is working with those higher-level mental processes we talked about earlier. In the meanwhile, the security officer scans for potential danger. And since there isn't anything to be fearful of, it stays quiet.

Let's say your security officer detects danger. It's a bear!!! The security officer presses a big red button that sounds the alarm. WAH, WAH, WAH! That alarm is norepinephrine flooding your brain. The alarm is so loud, the CEO can't think, and it shuts down. This isn't the time to reflect about the situation. You're in danger and you need to act fast. The security officer takes control. It signals other parts of the brain to get ready to fight or to run like the dickens. Once the stressor (bear) has passed, the CEO takes back control. And the security officer goes back to scanning for danger.

This system keeps you alive when you encounter a bear. But your security officer reacts to all danger, real or imagined, the same way. Anything that causes you stress is "dangerous". But because of your ADHD challenges, you experience a great deal of stress. Running late for a meeting is stressful. Missing an important detail in a critical report is stressful. Falling behind on your tasks at work is stressful. Your security officer reacts the same way to these "dangers" as it does for real threats, like a bear.

Many adults with ADHD live in chaos. We often say, "If it wasn't for the last minute, I wouldn't get anything done." We procrastinate. Or we forget. Poor planning, or no planning, leaves us living with chronic stress.

Your brain is an amazing machine. It has the capacity to grow new nerve cells and to rewire itself to develop new connections. This is neuroplasticity.

Experience and learning determine which connections get stronger and which get weaker. That's why some parts of your brain grow and other parts atrophy. When you learn a new language, connections in parts of your brain responsible for language grow stronger. And your hippocampus (the area of your brain responsible for memory) gets bigger.

The more you use connections in your brain the stronger those connections become. Using your skills or learning new skills is like a workout for those connections. It's also true that if you don't use it, you'll lose it. Unused or seldom used neural connections get weaker. Seldom used brain structures atrophy.

Neuroplasticity is a double-edged sword. This is especially true when you're dealing with chronic stress.

Each time you're under stress, the security officer's neural connections get stronger. And your CEO is offline when you're under stress, so its neural connections get weaker. Over time, as you're faced with more stress and more stress, your prefrontal cortex shrinks, which impairs your executive functions even more.

To make things worse, a cluster of other structures in your brain get involved. The basal ganglia are responsible for procedural learning and forming routines and habits. They're the Process Engineering department of your brain. When they notice you're often doing something the same way, they create a Standard Operating Procedure or habit. Pretty soon your brain's SOP is to put the security officer in charge. It becomes your habit not to listen to your CEO.

Living with chronic stress works out the wrong “brain muscles.” Over time, you become reactive rather than being reflexive. Your weakened prefrontal cortex delivers poor self-control. You have more difficulty focusing. You have an impaired working memory. You are less able to make sound decisions. And more. Overwhelm becomes your way of life.

To avoid chronic stress, you need to:

- 1) Reduce unnecessary stress.
- 2) Manage your response to unavoidable stress, and
- 3) Build your brain’s resilience to stress.

You can reduce unnecessary stress with better planning. We can’t cover all the intricacies of planning in the few minutes I have left. That takes an entire program. But I can offer a few strategies you can use now.

- 1) Learn to say NO! Create a script. For example: "I'd love to take this on. But with everything on my plate right now, I cannot give it the time and attention it deserves."
- 2) Each day, identify the top 1 to 3 tasks you will focus on today. Be precise when you describe them. Instead of listing a task like, “write a book”, write down, “Brainstorm chapter topics for the book.”
- 3) Use your calendar to block out time when you will work on your 1 to 3 tasks. Choose the best times to do those types of tasks.

You can’t eliminate stress but you can learn to change your response to it.

You can’t and shouldn’t eliminate all stress. but you can learn to change your response to it.

- ✓ The best way to manage stress is to prepare. Take time when your CEO is in charge to craft a routine response to stress. You must do it before you are in a stressful situation. For example, create a routine of taking 3 deep breaths whenever you’re feeling stressed. Slowed breathing activates your parasympathetic nervous system. It signals your brain that you are safe and lets your CEO take over. Now you can tap into your higher-level thinking.
- ✓ You can also step away from the stressor. Focus your attention on something in your visual environment that will calm you. If you can’t step away, focus on an image or an object that has meaning to you.
- ✓ Or externalize the stress. Make a list of what you need to get done. Get it out of your head. Then focus on one thing on the list at a time.

Finally, build your brain’s resilience to stress. Take care of your health with sleep, physical activity and nutritious food. Give yourself downtime each day. It can be as simple as a walk in the park. Reading a book. Doing something creative. Connecting with others. Or try meditating or praying.

I'm glad you could join me today for ADDA's TADD talk about stress and your Executive Functions. I'm Linda Walker. And I invite you to get a copy of my free report on strategies to increase your productivity and reduce stress at CreativeGeniusReport.com.