

Lesson 10: Stress and Sleep

Hi everybody. This is coach Terri Lance. Welcome to lesson 10 of the masterclass. Today's lesson is focused on stress, the stress hormone, cortisol, and sleep. All important factors in your healthy, metabolic functioning. At the fasting method, we are very aware that managing stress is an important skill to develop due to the myriad of ways that it negatively affects many of our biomarkers, a particular note in the topic of this masterclass, our blood sugar, insulin resistance and weight gain, or weight loss resistance. Some of us might take an initial response to resolving the stress dilemma by focusing on trying to eliminate stressors. There are naturally some life stressors that we just cannot avoid. We're going to have stress. We have financial stress, family stress. We have career stress. Currently we have a virus pandemic. We have different things going on.

Some stressors are unavoidable. And so for me, just to say, hey, just focus on getting less stress in your life, that's not very realistic. What's more important than just trying to eliminate stress is to change the way you process stress. Stress is one of those weird things that's paradoxical and that it can be damaging for us, but lower levels of stress are actually helpful. It's actually a positive thing. It gets us to act. It gets our body to move and to do things. Even fasting is a stressor, but it's a good stressor unless it's overdone, then it becomes problematic. Working to shift how you see or think about the impact of stress in your life is key to whether it can be a helpful tool or negative burden. There are studies shown where people are taught some of the benefits of stress. They then fare better. They show better biomarkers based on their stress experiences, because they understand the benefits rather than only the negative effects of stress.

So identifying what part of a stressful situation you can handle is one of the key factors in reducing the negative impact of that resulting stress. You might think of it this way. Maybe I can't control how someone is acting, but I can manage how much exposure I have to them, or how much I listen to the negative things that they say, or I might have a difficult situation at home, and I need to spend certain amounts of time doing certain activities and avoiding certain amount of time doing other activities. So what parts I can control take back our control of the parts that we have control of is really key here. There's research to show that having a sense of being able to control these pieces of stressful events is really important in how the stress affects us overall.

When things that are stressful to us have meaning to us, we tend to think of the stress less negatively. For example, if you have raised children, or grandchildren and they drive you crazy, they leave their clothes on the floor. They ask for things a lot. They forget to do chores or homework, but they also bring you positive things like pride, joy, and fun. And so when you see those stressors as having importance to you, the impact of the stress can be less negative. So working on identifying for yourself, this is important to me. There's value in it. This stressor also brings important things to my life. This can make a difference. So let's say, for example, you're dealing with a situation at work that's very stressful. Being able to identify that there are also good things that this work, this career, this colleague, whatever it is, brings to you, and that if

you can focus on that, if you can see that getting through this stress is doable and worthwhile, the stress will have a much less negative impact on you.

If the stressful event, or the stressful thing happening feels worthwhile, we don't take it in and hold onto it quite as negatively. We tend to have a lot of stressful things happening throughout our day. And sometimes they're minor things. For example, you go to the grocery store and you're standing in the self checkout aisle. The person in front of you is taking a very long time to swipe each of their goods, and then they can't get their credit card to work. And so things are just going really slow. Research has shown that people who identify having a lot of stressors, but who make sense of them as a natural part of life, not as a super negative thing, do better than people who identify them, but hold on to them as negative, as barriers, or annoyances, versus saying, this is a part of life. This is a part of going to the grocery store, the line is going to take a while.

In our culture nowadays, when things are so fast paced and we're taught to hurry and achieve more and do more, and be more, those daily things that slow us down, that cause us to pause, sometimes can be frustrating, but the more we can look at them as just natural parts of life, the less negative stress response they'll have on us. Let's switch gears a little bit and talk about the relevant hormone here, cortisol. Cortisol is a stress hormone that is released from our adrenal glands. Its primary job is to activate gluconeogenesis, and that is, the new production of glucose, the new release of glucose, so that in the state of danger, our body can respond. That's the stress response. This way we can have energy, or our movement can be fast and we can be very alert in these stressful events. This is a good thing for us, but it also has a bad effect.

What happens when we have cortisol on board and stress does its job of gluconeogenesis, meaning that it keeps our blood sugar up, it keeps our insulin higher than in response to this glucose, and it also dampens our immune response. So we don't want our cortisol to be too high too often, just like we don't want our insulin one too high too often as you've been learning. The good thing about cortisol is that it helps us in stressful or dangerous situations. Again, if you had a lion chasing you, cortisol would make you run, or try to escape, or hide, or whatever you needed to do. In uncomfortable situations, dangerous situations, it gives you energy, it gives you alertness in order to be able to respond. The reason it suppresses the immune system is that it takes away all of the energy that would be used for this protective mechanism so that you have the energy available to you to flee, or to fight.

It's really that fight or flight response. It activates the sympathetic nervous system. That is the alert nervous system. And this keeps us wired. So you can see why this becomes a problem. If you have a lot of stress going on, and if you don't manage the stress, you're going to have a lot of cortisol. Too much cortisol too much of the time has some negative effects for us like weight gain, high blood pressure, type two diabetes. It can lead to heart disease, insomnia, or difficulty sleeping, and mood irregularities, as well as low energy levels. Unlike other animals, humans tend to hold onto stress responses beyond the actual event. So let's say for an example, in the wild, a zebra standing at the watering hole drinking and a lion jumps out to attack it, but at the last second, the lion turns and grabs some other animal, it doesn't kill that zebra.

What happens is the zebra pauses for a moment in that stress response. And then it just keeps drinking. It doesn't hold that charge, or that cortisol response. Unfortunately, we humans hold that cortisol hormone, and that's something that we need to work on being able to reduce so that we don't incur all of the negative impact. Exercise is one way to reduce cortisol. Now, the challenge with this is that too intensive exercise, or too much exercise, is also a stressor. So it can increase our levels of cortisol. Now a workout can increase your cortisol briefly, and then within a couple of hours it can come back down. But if we exercise too frequently and too intensely, it tends to cause overall higher cortisol, which isn't helpful for us. Working out, exercising, or getting some movement, especially earlier in the day is good. Earlier in the day is more helpful with good sleep, which is another way to reduce our cortisol.

Another cortisol reducing strategy is having a pet. Research shows that pets are useful in helping us to lower our cortisol. So taking the time out, if you have a pet, to connect with them, even just touching your pet and breathing with them is a way to lower your stress response. Eating healthy fats, omega-3 fats, are known to be connected with lowering cortisol. So making sure that your omega-6s and omega-3s are in the right balance is a helpful tool. It's also not surprising that so many of us experience, or self-report overusing carbohydrate rich foods when stressed, because consuming carbs actually decreases cortisol. And this is one that I want to encourage everyone to use judiciously.

Researchers find that people who have more fun involved in their life tend to respond better to cortisol, work through it more quickly, and don't hold onto it as long. They even find that laughter can affect our levels of cortisol, even faked laughter. There's something about the physical act of laughing that can help to lower our cortisol levels. Having hobbies is another way to lower cortisol. A lot of us in our community talk about food and eating as one of our primary things that we do. And when we stop doing it as often, or stop eating certain foods, many of us struggle with what to do. So having hobbies is connected with more life satisfaction, but also connected with lower cortisol levels. Relationships, social interactions and touch, hugging someone. All of these give us oxytocin, which is a calming hormone reducing cortisol.

Another helpful tool in reducing cortisol is doing breathwork, slow deeper breaths, longer exhale than our inhale are keys. Breath work is the quickest way to change our state. So for example, rapid breath gives us the change of state, it increases panic, or brings on the sense of panic. And slow and audible breath, like a verbal, ah, that brings about a state of relaxation. There are hundreds of different breathing strategies, but just paying attention to your breath, slowing it down, taking deeper breaths, especially slowing down the exhale can be powerful in lowering cortisol. The inhale is the invigorating and the exhale is the relaxing part of the breath. So the inhale invigorates or activates the sympathetic nervous system, the one that makes us active. And the exhale is that, that activates the parasympathetic part of our nervous system that calms us.

Learning to take fewer breaths per minute can have profound health benefits. On an average, we breathe about 15 breaths per minute. This is actually a lot of breathing. In 1939, our average was about 4.9. And as recently as 1980, it was at about 7.8. So we have doubled our breath rate per minute since 1980. And a higher breath rate means that we're activating our sympathetic nervous system, again, that activating fight or flight response. It's important to know

that breathing just 10 beats per minute puts us in fight or flight mode. So we want to work on slowing our breath down. And you can affect change in this just by practicing a few minutes every day.

Many activities that enhance our mindfulness like meditation, Tai Chi, Qigong, yoga. These can all be created as a mindfulness practice. People who use these practices have a significant positive impact on their overall health and can definitely lower their cortisol. Staying well hydrated also helps to lower cortisol. We can actually control our cortisol levels by playing out negative emotions too much of the time, especially guilt and shame. And I know these are feelings that many of us struggle with. Some research looking at this studied couples who were in couples' therapy. And they said that when they were taught the skill of forgiveness in their therapy, that they had lower levels of cortisol. So forgiving yourself and learning to forgive others, finding that positive connection, can help lower cortisol. Relaxing music can be a way to lower cortisol. Playing an instrument, humming, singing. I know this sounds weird, but even gurgling.

Part of what I mentioned in our lesson on our brain and nervous system was about the vagus nerve. And the vagus nerve has connections in our throat, in our neck, in our mouth. And so sounds that we create in our mouth, humming and chanting and singing, can be ways to activate that calming nervous system. Another key influence on our metabolic health is something that many people are researching and teaching us to address more proactively, and that is our sleep. If you find yourself not getting enough sleep, or not quality sleep, I probably don't have to tell you how much of a negative impact it has on your health, your cognitive abilities, your mood, your appetite, and your stress levels.

But many of you may feel stuck and unable to resolve your sleep challenges while others may not be aware that their sleep is not as good as their body and brain actually need. Almost every one of us could benefit from improving our sleep. Sleep is a topic that could span a couple of lessons all on its own, as many of these topics could. So instead, I'm going to just summarize some key components of improved sleep that come from many resources, but I invite you to all learn more and explore your own sleep quality needs. Sleep hygiene is a common term used to discuss practices that help foster quality sleep. So let's go over some of these. First, sleep in a dark room. Having light in the eyes while we're sleeping is disruptive. Even covering up any lit up digital clocks, any little lights on VCRs, TVs, systems could be helpful. Sleep in a cool temperature room. Even if this means that you need to have blankets on you, just sleeping in the cooler air can be helpful.

You want to reduce or eliminate sounds like television. Keep the sound or distractions at a minimum. Leave your cell phone away from your bed. Ideally not even in your bedroom, and even more ideally turn off your internet signal at night. If you work night shift, or a split shift, you may need to take some naps during the day to help make up for the inadequate sleep at night. Being well hydrated can help with sleep. Another area that we are learning about to improve sleep is to not have bright light touching your eyes late at night. And bright light interferes with melatonin, which is the hormone that stimulates our sleep. By late night, I mean between 10:00 PM and 4:00 AM. So keeping your screens off, keeping your lights off, turning lamps in your home down, if you're still up at that point, turning off your devices, your iPad, your laptop, your



phone, whatever you're using. This bright light, not only diminishes our melatonin, but it also interferes with our dopamine structures. And as we discussed dopamine previously, it's hopefully clear why we do not want to disrupt our dopamine responses from working effectively.

I want to talk a little bit about how this all relates to fasting and eating in a healthy way. Much of what I've talked about is looking at how our body works and how our brain works, and how it signals us about hunger and satiety and cravings. But the other piece of this is that the stress and the cortisol affect our ability to manage our hunger. Our cravings are going to be much higher when we're extra tired. Our ability to make good decisions is going to be lower when we're stressed and when we're tired, or haven't gotten a good night's sleep. These factors about how our body and our brain work affect our ability to fast and our ability to make healthy choices with our food.

Here's one example of how this plays out. If you recall me telling you about that little almond shaped part of the inner brain called the amygdala, that main driver of the fight or flight response. Well, it's more highly activated, meaning more likely to put you in the stress response when you have gotten inadequate sleep the night before. So research shows that it's 60% more active the day following a poor night's sleep. This costs us by increasing our cortisol level, feeding our brain negative messages and behavior responses, as well as increasing our hunger and cravings for problematic food that we somehow perceive will help. If you're super tired, or super stressed, your body's really unlikely to say, let's go get some healthy protein and some broccoli, no. It's going to want something that's a quick burst of energy. So highly processed food might be a quick choice, and it's going to want things that bring it that chemical response, the serotonin and the dopamine. And so, again, more palatable processed foods rather than good whole foods.

Managing our stress, bringing down our cortisol levels, and getting adequate and quality sleep are important in managing that whole biological system. We are not completely just victims to our cravings and our hunger and what our body tells us it needs and wants at certain times. We have a huge role to play in creating an environment that helps our body to process those things more effectively and to make better choices, to feel that better choices are even available to us. You may recognize this when you are tapped out with your stress level, thoughts about problematic foods, or if you're fasting, thoughts about food in general, will become much stronger and will seem harder to just ride out. It really does affect us to learn how to better manage our stress and our cortisol levels and our sleep. Making choices with our food that don't hijack our dopamine system, or our reward system, will be much easier when we do this. These are all really important things as you think about your lifestyle and the skills you're developing for your health and your future.

The action points from today's lesson are, one, create a resource list of ways you can activate your calming system. Number two, set up routines that help you get good sleep. To help support you while trying to implement these action items, I encourage you to join the healthy habits challenge each week, and also to join the healthy habits check-in on Wednesdays. I want to remind you to register for the next masterclass Q&A, where we answer your questions that you send in to us by email at masterclass@thefastingmethod.com. All sessions are listed in our course syllabus. So make sure to check out this syllabus regularly, so that you don't miss these



appointments. Also, make sure that you stop in and say hello to us in the masterclass forum thread. Lots of great conversation going on there. I wish you great luck with all of these things. Take good care and I'll see you again soon. Bye everybody.