

*Transcript has been edited from automatically generated captions and may contain errors.*

[Dr. Maria:] Hi, everybody.

In case you're wondering what the national thing is about, it's in triathlons, sprint distance. So that's coming up in August.

All right, so you might be wondering, "Why is there a PT talking at a talk about anxiety?" I have one word for you: hormones.

So what I want to talk today about is mainly cortisol and how movement can help balance and regulate hormones.

So let's back up for just a moment and go over what is a hormone. It's a signal that goes out to your body and coordinates an action. So your muscles, for example, in the morning don't know to wake up. So you have cortisol goes up and signals your muscles and your whole body to wake up.

This happens through, and you don't have to remember all the words, but just wanted to throw it out there—through something called the HPA axis. So there's a hypothalamus and pituitary gland, two small parts in your brain that send a signal down to the adrenal glands, which sit right on top of your kidneys right here. And then that goes out into the body to signal, let's go.

So cortisol has two functions that I want to focus on today. One is this natural rhythm. So in the morning, if you look at the graph going up, cortisol is the highest in the morning and it signals your body to wake up. And as the day goes on, it goes down, which is when you start feeling drowsy and in the evening you can fall asleep.

The second thing is we also call cortisol a stress hormone. It's not just for anxiety, but it's also when you need to take action. So the action part is it can be physical—so you see your bus and you realize, "I need to run and catch that bus." But it can also be more mental if you have an exam or a talk coming up. So it gets you ready for something.

So the important thing to remember is that cortisol is not a bad thing or an enemy. It's just about how much of it are we releasing into our body—and the timing.

So back to balance. When it comes to balancing our hormones, I like to think of it like baking a cake. When you're adding salt to cake, it matters how much of it, right? Usually we want to do tablespoons, teaspoons, not cups or buckets. It also matters when we add to it. So if you bake a cake and you add the salt at the end, it's going to throw off the flavor. It's the same thing with our hormones.

It's a similar graph to earlier. So blue is cortisol high in the morning, which signals your entire body to wake up. And as the day goes on, it comes down. If you look at the red line, if cortisol

stays high, you'll often feel tired yet wired at night and you can't fall asleep. So timing of your hormones matters.

So we talked a little bit about releasing cortisol into the body. So how do we get rid of it out of our body? It's actually cleared by the liver automatically. You don't have to do anything. And it's usually produced as long as your body feels like, OK, there's a need—so there's an upcoming action, an event coming up that we need to get ready for—let's keep releasing it.

When that comes to an end, your body stops producing it and your liver clears it out. So the tricky part about anxiety is because we often think about the past or the future or something more abstract, there's not a clear end to it and we keep releasing cortisol into our body.

So the beauty of movement—this is where it comes in—is that with the power of exercise, it has a clear end and that can help stop releasing so much cortisol.

This is a lot of slides, I'm realizing. Good job, Kiara [laughing].

So something to remember with the baking a cake analogy—if you're learning how to bake a cake and you never get to taste it, you have no idea how much salt you added or if you should tweak it. So with anxiety, you really don't have this clear end, so you don't have a feedback loop of how should I tweak and change how much cortisol I am releasing into the body.

Exercise, what it does is low to moderate amount of exercise—like intensity—helps fine-tune how much should I be releasing. So much so that it even translates into when you're in a stressful situation, you end up not releasing as much of the stress hormone as if you didn't exercise at all.

One more benefit of exercise as well—amongst many benefits—is that it also improves the efficiency of your body to use the cortisol that is running through your system. So it gets better at taking up whatever is already there, so it doesn't have to release as much. So your overall baseline of cortisol goes down, which makes you better at handling stressful situations because you don't dump as much.

So I mentioned just briefly intensity of exercise. I want to go over light, moderate and high intensity. And if you're wondering, "Well, how do I know how intense something is for my body in the season or even just today?"—a simple talk test can be very helpful.

So light exercise is you can have a full conversation, you can even sing. Moderate intensity is your sentences are getting shorter. It wouldn't be comfortable to sing, for those of you who enjoy singing. And then high intensity is more things where you can have a few words, but you definitely can't have a conversation.

So examples for these are a slow walk, gentle stretching for light. For moderate, it's more of a brisk walk or cycling. And then your high intensity, you can think of things like running or a HIIT workout.

I want to just briefly highlight a couple benefits for those three. So light amount of exercise has this incredible benefit of calming the nervous system. Somebody earlier mentioned the parasympathetic nervous system—it's actually part of your body that calms. It's rest and digest and it's calming and soothing. So any kind of calm walks, stretching—automatically activates that system, and if you do that on a daily, regular basis you can lower your anxiety as a whole.

Moderate intensity is that feedback loop. So you're learning how much cortisol should I release and tweaking that. Generally the recommendation is about 2 1/2 hours per week. Please spread that out over the week.

High intensity has the same benefit of fine-tuning how much cortisol—that stress hormone—you should release, but also it releases a couple extra signals like dopamine and serotonin, which are amazing mood stabilizers.

So if we pause for just a moment here—if you are currently not moving much or haven't in the last month or two, it's totally OK. And as you're starting, make sure that you're gradually getting into it. So it's not about starting all three intensities and moving a ton. Don't overwhelm yourself with it. Slow and steady.

If you are already active, wonderful, good job. Keep going. I would just ask you to take a look at your exercise program and see—are you doing a little bit of each of the three? Is there some light exercise, some moderate and some high intensity in your week?

Couple things to remember: this is about progress, not perfection. So if you are tired on a day or you are sub-zero motivated, if you decide to still show up and all you can give is 10 percent, 10% of something good is still something good. And remember that we're stacking little bits. So if it's 10% upon 10% upon 10% and that's all you have to give, you are building something amazing that's still incredibly beneficial for you.

A couple reasons to please adjust your exercise and pay attention to how you're feeling and where you're at: if you're just recently having a cold or getting over a cold, or if you're traveling or have an intense week, it's absolutely OK to adjust.

So for example, if I fly to go see my parents, I've learned that the first two days after flying, my body is incredibly tired. So I don't schedule a run. I go for a slow walk. I do a little bit of stretching, do deep breathing, laughing with them, playing cards. And it's all about refueling those two days, not expending more.

And the last thing I want to leave you with is we are wonderfully and beautifully made, and we are made for community. So find the right community for you and that right form. So this might look for some people like going for a walk with a friend. Others might enjoy a workout class or a yoga class. Or maybe you like working out by yourself, but having an online community like joining a step challenge or Strava.

So listen to your body and remember that regular movement bakes the best cake.

