

GIANNA CARLOTTI:

Thank you for joining us today. My name is Gianna Carlotti. I'm a lifestyle health coach with UPMC Health Plan. My colleague, Don, and I are here to talk to you a little bit more about stress management in relation to the 2020 coronavirus pandemic.

Because of the topic I just wanted to start with a few deep breathing exercises. Maybe you had a stressful and hectic morning, or you're just consumed with thoughts about the various tasks that lie ahead of you for the rest of the week or the day. So if everyone could just find a comfortable position. If you're seated or at home and lying down, if you can uncross your hands and your legs. And if you'd like go ahead and gently close your eyes.

Maybe becoming a little bit more mindful of your surroundings, such as the chair that you're sitting in, any noises around you, maybe any muscles that feel tense that you need to relax. Becoming a little bit more aware of the breath. And then whenever you're ready, go ahead take a deep breath in. We're going to fill through the belly, up through the rib cage, into the chest, hold that breath at the top. And then release down. Again, inhale, belly, chest, hold, and exhale out.

Go ahead and repeat that breath cycle just a few more times at your own pace. All right if everyone could open your eyes if you haven't already. Hopefully you're feeling a little bit less tense than when you first joined us today and possibly even less stressed. Which brings us just back to the basics of what is stress.

Stress is the body's response to a perceived threat or demand. There are two different kinds of stress. The eustress which is the, quote unquote, "good stress," and distress, which is also known as the bad stress. These stressors are events or experiences that trigger the body's response to stress.

Causes of stress vary depending on the person. And some of these stressors can include things like work, relationship and family, changes in routine or environment, schedule or lack of time, finances, grief or loss, health issues, and so on and so forth. I'm sure you can name a few different ones, too. Contrary to popular belief, all stress isn't bad.

As seen here in Yerkes-Dodson law, heightened levels of stress cause an adaptive and protective response that aides in motivation, increased performance, and focus. So essentially we need some stress to function. Which is why we use the term stress management as opposed to stress reduction.

However chronic stress in any state has been shown to cause the negative effects that could be detrimental to overall health and well-being. These include a number of physical, emotional, and/or mental symptoms that can lead to behavioral changes and chronic health issues over long periods of time if not treated.

The 2019 or '20 coronavirus pandemic has placed an increased stress response on many individuals and society as a whole. A recent *JAMA* study emphasizes the impact public health disasters, such as natural disasters, terroristic attacks, and widespread illness have been linked with an increase in depression, PTSD, substance use, and a wide range of mental and behavioral disorders and abuse.

According to findings from the American Psychological Association, nearly 8 in 10 Americans have reported the coronavirus to be a significant source of stress. These stressors presumed to be greater amongst low income individuals who may not have access to adequate health care resources or services. Minorities and those with underlying health conditions that are more susceptible to contracting the virus. And especially now, it's ever changing and evolving, we see parents now who have their kids at home who are trying to balance their needs and focus on their developmental needs when in school. Caregivers, the list goes on.

Due to the prevalence of stress in response to the pandemic researchers have now even coined the term COVID stress syndrome. Which places an emphasis on external and additional stressors that many are experiencing in direct correlation to the coronavirus specifically that we haven't seen in previous infectious disease outbreaks and emergencies. Reoccurring of this COVID stress syndrome include things like stress surrounding hygienic behaviors, stockpiling food and resources, avoidance of public areas, and most significantly, dealing with factors related to self-isolation and social distancing, which we know has really been difficult over the past seven or so months.

It's no surprise that health care professionals such as yourself have experienced an increase in overall stress over this past year. Research studies have now found a number of factors that contribute to this. Many of which include, but are of course, not limited to emotional and physical exhaustion due to an increase in workload and caring for infected patients. Shortage of personal protective equipment, and fear of possible exposure to the virus, concerns about infecting family members, loved ones, the people who you're living with or spending your time with. Limited access to ventilators and other medical equipment needed, and evolution of the virus itself.

How to discuss uncertainty with your patients. I know this is a big one a lot of us have experienced because this is something new that none of us have been through before, a global pandemic. So sometimes it's scary and it's difficult to have those conversations with the patients who trust us to give them accurate information when we're really unsure of how the virus is going to evolve in itself.

As most of us know it's difficult to control these stressors that are occurring around us, but we can control how we react to the stress response in various situations. How do we do that? There are a number of stress management techniques and healthy coping mechanisms that have been shown to reduce our body's response to stress. Some of these things include things like deep breathing, progressive muscle relaxation, guided imagery, journaling, chanting, humor, and the list goes on. Actively engaging in these behaviors have been shown to trigger the brain's relaxation response, which in turn counteracts and minimizes the initial perceived stress response.

Of course there are a multitude of other techniques and behavior based therapies that help combat stress. These however are common, quick coping mechanisms that for the most part anyone can do at any given time. And this is what we really focus on as health coaches. It's in my own experience as a health coach that I've found these quick coping mechanisms to be extremely beneficial and actually great stepping stones for furthering behavior change long term.

Example, we work with individuals who are looking to quit smoking, improve nutrition habits, lose weight. And a lot of the success stories, at least in my experience, the individuals are incorporating some type of stress management technique or skill. For example, tobacco cessation, an individual might use deep breathing to help combat cravings, to pass the time when they want a cigarette. As far as nutrition and weight management, maybe just being more mindful of reading those nutrition labels or making healthy food choices when grocery shopping, eating out. Even paying attention to your own body's hunger signals and food cues to avoid things like emotional eating, over eating, to help manage weight.

And Don will touch on a little bit more about what we do as health coaches and the services that we offer. I think it's just a wonderful reminder to patients, as well as ourselves, too, that no small change goes unnoticed. And that incorporating just some of these techniques consistently can have a profound impact on overall health.

So we decided to highlight a video on mindfulness. Due to the fact I'm not very well versed in the area of neuroscience we've included a video that highlights findings from a 2010 study from the *Journal of Psychiatric Research*, which focuses on the effects mindfulness has on the brain. We chose to focus on mindfulness specifically because, for the most part like I mentioned before, it can really be done by anyone at any given time.

That's not an excuse. We're starting to hear the term mindfulness a lot more now, too. It's kind of this umbrella term that a lot of stress management techniques fall under. And I believe this to be true because most of the stress management techniques, especially the deep breathing that we engaged in earlier, must include mindfulness to some degree in order to be efficient. We have to be aware of our surroundings, in tune with ourself.

Also just the research has really been supporting mindfulness and the benefits it has these past few years. A lot of studies have been coming out to prove the beneficial effects mindfulness can have.

[VIDEO PLAYBACK]

- There are 80 to 100 billion neurons in the human brain. And every single one of them can form thousands of connections with other neurons, leading to a complex network of hundreds of trillions of synapses that enable brain cells to communicate with each other. Psychologist Rick Hanson described it as like a computer network built from 500 trillion transistors, each representing a bit of information depending on whether it is on or off. Yet despite the best efforts and findings of modern neuroscience, the true functioning of our mind remains one of the greatest and most fascinating mysteries.

We know a lot about how our brain helps us stay alive, communicate, and perceive the world around us. But this knowledge, however brilliant, continues to change at an extraordinary pace and represents only a tip of a gigantic iceberg whose full beauty is hiding well from our sight. Is it then preposterous to consider that something as trivial as focusing our mind and breathing steadily for a short time every day could have a profound effect on our well-being? Is it in our power at all to make changes to our own brain?

The script for this video was written by Kristyna Zapletal, writer and coach for leaders and entrepreneurs. You can find out more about her and her inspiring articles in the description below.

Neuroscientists have been studying the effects of mindfulness techniques on our brains with some pretty compelling results. The introduction of magnetic resonance imaging, MRI, into clinical practice in the 1980s has resulted in substantial scientific advancement. Sara Lazar, a neuroscientist at Harvard Medical School, uses the MRI technology to look at very fine detailed brain structures and see what's happening to the brain while a person is performing a certain task, including yoga and meditation.

According to her own words, Lazar herself used to be skeptical about the lofty claims her yoga teacher made about the emotional benefits of meditation she should have expected to experience. When, after attending several classes she indeed felt calmer, happier, and more compassionate, she decided to refocus her research on the changes in the brain's physical structure as a result of meditation practice. Can meditation genuinely change brain structure?

In her first study, Lazar looked at individuals with extensive meditation experience, which involved focused attention on internal experiences. The data proved among others that meditation may slow down or prevent age related thinning of the frontal cortex that otherwise contributes to the formation of memories. The common knowledge says that when people get older, they tend to forget stuff. Interestingly, Lazar and her team found out that 40 to 50-year-old meditators had the same amount of gray matter in their cortex as the 20 to 30-year-old ones.

For her second study she engaged people who had never meditated before and put them through a mindfulness-based stress reduction training program, where they took a weekly class and were told to perform mindfulness exercises, including body scan, mindful yoga, and sitting meditation every day for 30 to 40 minutes. Lazar wanted to test the participants for positive effects of mindfulness meditation on their psychological well-being. And alleviating symptoms of various disorders such as anxiety, depression, eating disorder, insomnia, or chronic pain.

After eight weeks she found out that the brain volume increased in four regions from which the most relevant were hippocampus, a seahorse shaped structure responsible for learning, storage of memories, spatial orientation and regulation of emotions. Temporoparietal junction, the area where temporal and parietal lobes meet, and which is responsible for empathy and compassion. On the other hand, the one area whose brain volume decreased was the amygdala, an almond shaped structure responsible for triggering the flight or fight response as a reaction to a threat, whether real or only perceived.

Here the decrease in gray matter correlated with changes in the levels of stress. The smaller their amygdala became, the less stressed people felt even though their external environment remained the same. It proved that the change in amygdala reflected the change in the people's reactions to their environment, not in the environment itself.

What is the main driver of change in our brain? Our brain develops and adapts throughout our whole lives. This phenomenon, called neuroplasticity, means that gray matter can thicken or shrink. Connections between neurons can be improved, new ones can be created, and old ones degraded or even terminated. For a long time it was believed that once your child brain was fully developed the only thing you could anticipate for the future was a gradual decline. Now, we know that our everyday behavior literally changes our brain. And it seems that the same mechanisms which allow our brains to learn new languages or sports can help us learn how to be happy.

Neuroscientist Lara Boyd from the University of British Columbia points out that the human brain changes in three ways to support learning of new things. One, chemical, transfer of chemical signals between neurons, which is linked to short term learning improvements for memory or a motor skill.

Two, structural, changes in connections between neurons which are linked to long term learning improvements. These mean that the brain regions that are important for specific behaviors may change their structure or enlarge. These changes need more time to take place, which underlines the importance of a dedicated practice. And number three, functional, increased excitability of a brain region in relation to a certain behavior. In essence, the more you use a particular brain region the easier it is to trigger its use again.

Is happiness a gift or a developed skill? If we embrace the idea that our well-being is a skill that can be cultivated then it's obvious that meditation is simply a form of exercise tailored for our brain. While there's not enough scientific data available to measure the benefits of a five minute versus a 30 minute mindfulness session, the way in which our brain changes over time suggests that we can actively foster lasting results with regular practice.

Scientists from the Center for Healthy Minds at the University of Wisconsin-Madison defined well-being from the viewpoint of these four areas. Sustained positive emotion, in a study that examined responses to positive images individuals with higher activity in those brain regions linked to positive emotions reported a higher level of psychological well-being. Recovery from negative emotion, there is evidence that mindfulness training leads to greater resilience to painful stimuli. In this study experienced meditators reported the same pain intensity as individuals with little mindfulness experience but less unpleasantness.

Prosocial behavior and generosity, behavior that increases social bonds and improves the quality of social relationships increases well-being. Research then suggests that compassion can be cultivated with mental training. Mindfulness and mind wandering, mindfulness defined as paying attention to the present moment without judgment makes people happier. A study where a smartphone app was used to monitor people's thoughts, feelings, and actions showed that their minds were wandering approximately half of the time. And while doing so, they reported significantly more unhappiness.

We tend to blame our brain a great deal for inability to remember, for making us feel slow, for being slow, as if it was a capricious ruler whom the rest of our body needs to follow no matter what. We refuse to assume responsibility for our brain's health and our mind's happiness. If we did, we could experience this phenomenal organ becoming our loyal friend rather than an eternal enemy.

We understand that to be able to run a 10K race or do 50 push-ups we should exercise regularly. Yet we get put off when our brain doesn't yield results instantly. Like, hey, I've meditated for 20 minutes and I still feel awful. What a new age hype. The human brain is extremely plastic and establishes new neural connections daily. These intricate networks however, need to be reinforced and consolidated through our behavior. Just like a path through a forest needs to be walked, otherwise it will be grown over and eventually disappear.

Meditation can relax you and regulate your emotions in the short term, but it can also change your brain permanently if you approach it as a form of mental exercise. Science shows that if we invest our effort into reprogramming our brains it can truly guide us towards a better life.

Do you meditate? If so, how does it make you feel? And if not, would you consider it after watching this? Comment and let's have a discussion below. Thanks again to Kristyna Zapletal for the script for this video.

[END PLAYBACK]

GIANNA CARLOTTI:

All right, Don, go ahead. Do you want to talk to us a little bit more about just patient and provider stress and what that looks like?

DON MASER:

Absolutely, thank you so much, Gianna for a fantastic first half of the presentation. Hi, everyone. My name is Don Maser. Like Gianna, I am also a lifestyle health code with UPMC Health Plan. And thanks so much for attending today. I'm excited to be here to talk to you more about managing stress during this time.

So before I get into the concept of patient stress and how we can try to better manage that I did want to spend a little bit of time highlighting some of the important points of that great video that we just shared. Again, I wanted to just really define mindfulness. It's a conscious awareness of the present.

And what it can do is help us to clear our minds of unimportant thoughts so our attention can be directed to what we need to or wish to do. So what a great thing. It's about living with intention and attention. So just considering the neuroscience of mindfulness, it's pretty fascinating to think that what the research has shown is that it is in our power to make changes to our own brain.

Through the use of the MRI technology they were able to see changes in brain structure through meditation, which again to define that, it's focused attention on internal experiences. So meditation may slow down or even prevent age related thinning of the frontal cortex.

And again what that particular study showed was that daily meditation for 30 to 40 minutes for eight weeks did cause brain volume to increase in those healthy areas of empathy, compassion, also caused the amygdala to decrease. So actually less stress was felt even though external environment remained the same. So pretty fascinating stuff.

And so think of it as exercise for the brain. We can actively foster results with regular practice, much like physical exercise. So if you think of running a 10K or doing 50 push-ups, same goes for those neural connections. They need to be reinforced and consolidated through our behaviors. So again, you can kind of think of it as mental exercise.

So yeah at this point I'll talk more about patient stress and how to manage that. I do think it's important to note that so on the milder end of the psychosocial spectrum many of the experiences of patients, family members, the public can be appropriately normalized by providing information about usual reactions to this kind of stress and by pointing out that people can and do manage, even in the midst of dire circumstances. So sometimes it just takes normalizing a situation to put people at ease.

But sometimes more is required, and that's where some of these suggestions come in. So the first one here is offer suggestions for stress management and coping, specifically structuring activities, maintaining routines. And so the question is why is it so important, especially during this time, to have a structure, have a routine?

Well what that does is it keeps things organized. It keeps things calm. It keeps things harmonious. And who doesn't want more of that at this point in time. And so by achieving more control over our environment, routines offer us more security and more confidence moving forward in a very uncertain time, again. So that's why structuring activities and maintaining routines is so incredibly important right now.

So link patients to social and mental health services. And that's something that I'm going to go into in much greater detail in a little bit, talking about some of the resources that we offer here at the Health Plan. Next point, counsel patients to seek professional mental health assistance when needed. So is this stress related to COVID-19 or perhaps is someone presenting with a potential anxiety disorder, depressive disorder, post-traumatic stress disorder? At that point we may need to think about referring to therapy, to a psychiatrist, for that quote unquote, "professional mental health assistance."

So recommend that contact with pandemic related news be monitored and limited. And again, we ask, well, why is that important. Well some could argue that limiting contact with the news even before the pandemic was advisable. But at this point too much exposure can be overwhelming and lead to more stress, more worry, and perceived risks.

So one survey that we found showed that extensive exposure to pandemic related news and the conflicting information that we're finding in the news are among the strongest predictors of pandemic specific acute stress. So based on that fact, limiting the exposure to that news can prevent mental and physical health symptoms and promote resilience in people. So best to suggest that contact be monitored and limited.

And then finally encourage parents to have open discussion with children to address their reactions and concerns. Also incredibly important, kids may worry about themselves, their family, their friends, getting ill themselves. And parents can help make sense of what kids hear. And it should be done in a way that's honest, that's accurate, that minimizes anxiety, and really tries to minimize fear. So some suggestions provided actually by the CDC are for parents to remain calm, to reassure their children that they're safe, to make themselves available to listen and talk, to avoid blaming others for the pandemic.

To pay attention to what they see and hear, so again going back to the recommendation that contact with pandemic related news be monitored and limited. Maybe it's appropriate to limit screen time for kids. Provide truthful and appropriate information, and this is going to be based on the age of the child and their developmental level what information you decide is appropriate to share.

Another suggestion is to teach every day actions. For example, wash your hands. So something as simple as that. And then finally, with regard to school. So if school is open, and I think schools it really just depends. But some schools are in session in person and some are still virtual, but it's important to discuss any actions that children can take there to help protect them and to also help protect the staff at the school.

OK so thinking about provider stress and how we can better manage that. First point here is to be informed about the illness and risks and there's obviously no shortage of information out there about COVID-19 and the risks. And whether you get your information from the CDC or whether you're accessing it off those Infonet, UPMC Infonet, where there is actually a wealth of information about COVID-19 that's updated regularly, it's important to stay informed again about the illness and the risks associated.

The second point here is to monitor your own stress reactions. I'll go ahead and point out just some of the many stressors that health care workers have been experiencing. And I'm sure we're all familiar with them, but the novel nature of COVID-19, in some cases inadequate testing, limited treatment options, insufficient PPE, of course extended workloads, and other continuing to emerge concerns. These are all sources of stress and so it's important to really pay attention to your own stress reactions and react accordingly.

The third point here is to seek appropriate assistance with personal and professional responsibilities and concerns. Which can include, and in some cases should include, professional mental health intervention if indicated. I want to say that through my review of the research one point that continually came up was the importance of organizational support. And that's really found to be protective of mental health for health care staff in general.

And also just the importance of checking in. So checking in on the well-being of employees is just incredibly important, even just to discuss just decisions. So if you're a supervisor or a manager, I can't understate the importance of checking in and just providing that support when you're able.

So I want to take a moment just to highlight some of the resources that are available, the UPMC resources for stress management, as well as some related things which I'll go into more. But the first one is the lifestyle health coaching programs which Gianna did touch on a little bit earlier. So the lifestyle health coaching programs include not only stress management, but nutrition, weight management, tobacco cessation, and physical activity.

I thought for the purposes of this presentation, I would talk a little bit more about our stress management coaching program. So as the slide says the programs are designed to help individuals with health goals related to stress management, weight management, nutrition, physical activity, and tobacco cessation, and they are available at no cost to the member. And we do have that phone number here for members to contact us.

So this is for UPMC Health Plan, Medicare Advantage, Medicaid, SNP which is the dually eligible population. And the program is telephonic and it is a six week program. And we do six sessions and each session is about 20 minutes. And the purpose of the program is to give members tools and techniques for managing stress.

So many of the techniques that were mentioned earlier are part of the stress management coaching program. And what we encourage is for members to learn about the techniques, like the deep breathing that we did at the beginning for example, consider trying them and decide which work best for them. Because like with many things people respond differently to different options. So we like to provide the menu of choices.

And we do also send out a welcome packet when we begin the coaching and it includes a stress management workbook, which talks quite a bit about the different techniques, as well as some other related areas. And then we'd like to pair the telephone calls with the workbook. And we also follow up. So once the program is over we reach out after a month, we reach out again after three months, and again after six months. Just to check in, see how folks are doing, and find out if they have any additional needs. And another nice benefit of the program is that health clinic members can earn those take a healthy stock credits for completing a coaching program.

I also wanted to briefly mention RXWell, which is our new digital option for stress management. Also covers anxiety and depression. So through this new digital app, which can be found in the app store, members can learn provider endorsed techniques in 10 minutes or less. And they can also get digital health coach support with setting goals.

So pretty nice, the marketing for that actually just began. So it's brand new, and again it's called RXWell. So that would be the digital option for someone who maybe feels more comfortable going at their own pace as opposed to speaking over the phone with a health coach. They would still get that digital health coach support.

I also wanted to mention we do at the Health Plan also offer coaching for anxiety, for depression, for ADHD, and for substance use disorders. So again, if we're finding that we've moved beyond stress and in to dealing with a mental health condition, that is available as well. So I wanted to provide the telephone number for the behavioral health coaching line at the Health Plan which is 855-770-8762. And I apologize that did not make it into the slides but I did just want to share that. Because I did think that it was relevant to what we're talking about today.

And then as far as EAP resources, so they provide counseling sessions and telephonic support to UPMC members. And they are available at no cost to the member, and there are two. Life Solutions, which is available to all UPMC commercial members. And also Resources for Life, which is available to all UPMC Medicare and SNP members.

Just to share a little bit more about Life Solutions for those of you who may not be familiar with what Life Solutions can do, they offer a wealth of different things. I wanted to also highlight that members of the household are also eligible for services through Life Solutions. So what they do is they say that they enable you to address personal relationship and job related needs in a private and confidential environment. And they are available 24 hours a day, seven days a week.

And some of the different things that they offer include mindfulness sessions, short term counseling, work life balance assistance, legal and financial consultations, assistance with finding caregivers. They have skill builders, online courses, they have substance use disorder resources, information on dealing with grief and loss. So again, this is a free service available to all UPMC commercial members. And so many different things to take advantage of.

And then lastly, just to talk about Resources for Life, similar to Life Solutions, wanted to quickly highlight some of the things that they can assist with. That would include community resources, telephonic counseling, and personal caregiver support. And Life Solutions is available Monday through Friday from 8:00 AM to 5:00 PM and the telephone number is on the slide. And there we just have our references for today's presentation.