



...RED ALERT

If you've been feeling frazzled, overwhelmed and stressed to the max, your brain can suffer.
Discover how to protect your mind from the madness of modern-day life.

BY KARLA WALSH

INFLATION. GEOPOLITICAL INSTABILITY. THE NEVER-ending news cycle. More unpredictable weather patterns. A deadly virus that claimed more than 6 million lives. For all of these reasons and many more, four in 10 Americans admit they're now experiencing sustained stress far beyond what they had pre-pandemic, according to a recent report by The Harris Poll on behalf of the American Psychological Association. All this anxiety about the unpredictability of the world these days isn't doing your health any favors: Americans are less active, gaining weight and drinking more alcohol, the survey confirmed.

In the past, a stressor looked something like a grumpy boss or a past-due bill statement in the mail. But today, your body is being attacked by a barrage of smartphone "dings," news alerts and more—not to mention the impact of all of those external forces above. Without the close presence of a shouting supervisor, but amid a tornado of smaller, often less immediate worries, your brain struggles to know which of these things are worthy of triggering your stress response—prepping the body to fight or flee—and which are far enough in the distance to simply keep calm and forge on.

"We can't avoid stress, but we *can* learn to reduce the amount of stress in our life and manage it to keep it from overwhelming us," says Komal Naik, DO, a neurologist and the department chair of neurosciences at Summit Health.

● UNDER PRESSURE

Stress is a physical and psychological response to an external force, such as an important deadline at work, an angrily worded email, an unexpected bill or an argument with a loved one. "It's not necessarily good or bad," explains Jennifer Beckjord, PsyD, the senior director for clinical services at UPMC Western Psychiatric Hospital. "As with most things, a moderate amount of stress can be beneficial, but too much or too little can have negative implications."

There are three types of stress, according to Beckjord:

Acute Stress Typically a one-off stressful situation, such as a car accident or missing your flight the night before a big presentation

Episodic Acute Stress Mini "crises" that regularly recur causing you to experience waxing-and-waning stress, like periodic deadlines

Chronic Stress Serious, ongoing life issues that are constantly problematic, such as relationship troubles, mounting debt or a long-term illness

"Our bodily functions are regulated by the sympathetic, or 'fight-or-flight' system, and the parasympathetic, or 'rest and digest' system," says Veronica Guadagni, PhD, a postdoctoral fellow at the University of Calgary's Cumming School of Medicine. "Usually these two systems work together in balance, but when we react to a stimulus that we perceive as a danger or stressor, the sympathetic system tends to be overactive," and we go into defense mode. (This fight-or-flight reflex turns off energy dedicated to less-important tasks like digestion and diverts it to, say, the heart and lungs to help us run or take action to avoid a serious threat.)

At the same time, our stressed-out systems pump out a hormone, cortisol, that works in tandem with melatonin as the fuel for our circadian rhythm, impacting when and how well our body can rest and recover when we don't need to be on high alert. Cortisol levels are generally higher in the morning and decrease throughout the day, while melatonin levels start low and rise as bedtime approaches. When we're in a constant state of low-grade stress (for instance, during a two-year-plus-long pandemic that may or may not make us and our loved ones very sick), chronically elevated levels of cortisol can throw off our circadian rhythm and affect the normal functioning of the brain. At the same time, stress can affect melatonin secretion.

"Increased cortisol impairs plasticity in areas of the brain such as the hippocampus, that are involved in cognitive abilities like memory. Stress also impacts people's



Being out in nature provides light, exercise, fresh air and a brain reset that can turn down stress levels.

ability to get a restful night of sleep, which in turn further reduces the ability to concentrate, multitask and regulate emotions,” Guadagni explains. (One bad night of sleep will prove that.)

While that acute stress can be a boon, and is something our body and brain have millennia of training to process, chronic stress is more of a feature of modern-day life. Unsure of which of these seemingly constant news cycle updates, account alerts and digital pings are an *actual* threat, our brain keeps pumping out cortisol just in case. An overflowing cortisol “cup” is also correlated with an increased risk for some of the most deadly chronic conditions in America, including heart disease, diabetes, high blood pressure and mental illness, according to a January 2021 study in the journal *Physiological Reports*.

“Chronic stress can change our neural networks and over long periods can wear on the body and manifest in different ways, such as with aches and pains, a weakened immune system and more,” Naik adds. (Stress can make pain sensations more intense, in fact.) Over time, stress can decrease the size of the prefrontal cortex and hippocampus and increase the size of the amygdala, Guadagni adds. As a result, you become less effective at paying attention, learning, processing emotions and tapping into your memory. And your emotional reactivity may feel outsized compared to the triggers.

● GIVE YOUR BRAIN A CHILL PILL

When you’re on a quest to stress less, the first and most important factor is being able to decipher when you’re actually experiencing it. (Since chances are, it’s not going to be as apparent as a bullying boss or burst water pipe.) The following are all ways that stress can manifest physically:

- Chest pain, racing heart and/or shallow breathing
- Exhaustion or difficulty sleeping
- Increased heart rate
- High blood pressure (symptoms are often silent)
- Muscle or jaw tension
- Headaches or dizziness
- Sweating
- Changes in appetite
- Trouble having sex and/or a change in libido
- Digestion issues (including reflux, constipation, diarrhea and IBS)
- Inability to concentrate
- Difficulty regulating emotions

As physical as many of the signs of stress are, stress itself can literally be all in our head, Beckjord says. It can manifest in mental and emotional ways. “Stress can lead to feeling tense, excessive worry and uneasiness, and may affect mood,” she says.

It takes brain power—and effort—to change how we handle stress. “Our response to it can make a significant difference on its impact. Rather than viewing stress as entirely negative, it’s helpful to take a step back and realistically appraise the situation to identify the type of stress you’re experiencing and whether it can be reframed as potentially beneficial. Focus on your scope of control: Instead of trying to eliminate stress entirely, it can be helpful and more realistic to focus on aspects you can manage.”

In moments of stress, try a worry list: Jot down what’s making you feel frazzled at that time, then “star” the items that you can control. From there, you can start a to-do list of action steps that can help you feel more empowered and less encumbered.

These “stress Rx” ideas from Guadagni and Naik have also been scientifically proven to help the brain better balance life’s stress storms.

Get Moving “When we exercise, our body produces endorphins,” Guadagni says, which can help reduce tension within the body if your stress response tends toward physical manifestations. It can also help relieve the mental and emotional effects of stress.

Enjoy Time al Fresco Bonus points if you can do so early in the day, Guadagni explains: “Exposure to natural light in the morning helps regulate the circadian rhythm and signals the body when is the right time to be active and the right time to fall asleep.”

Treat Yourself Self care isn’t just about a glass of wine and a bubble bath; carving out enough time for sleep (ideally, seven to nine hours), a spa treatment that you find particularly relaxing or even some quiet time alone can help you reduce feelings of being overwhelmed.

Practice Gratitude At the end of each day, jot down three things that went right or that you’re thankful for. “Reflecting on all the positives in your life can be beneficial to put things into perspective,” Naik says.

Become a Goal Getter Whether they’re as small as responding to one of the dozens of flagged emails or as big as paying off your student loans, checking items off a to-do list can act as a visual reminder that you *do* have things under control.

Ask for Help If you don’t feel like you can be open with your loved ones about what’s worrying you, “there are many online programs and apps available to help with relaxation and managing stress,” Naik says. A mental health professional can also help you talk through challenges and set up a plan to conquer them.

THE 2-MINUTE DE-STRESSOR YOU CAN DO ANYWHERE

Slow, deep breathing has been proven to turn up the volume on the parasympathetic nervous system so you can “rest and digest” rather than “fight or flight.” “Inhaling and exhaling deeply and slowly immediately reduces the activity of the sympathetic system by decreasing the heart rate,” says Veronica Guadagni, PhD. Some research has shown that slowing your respirations to about six per minute—10 to 12 is normal—is key for shutting off your panic button.

To instantly reset your system, she recommends a pattern of inhales and exhales called box breathing. Here’s how to do it:

