

Chronic stress can hurt your overall health

May 19 2023



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Stress is a normal part of life that everyone experiences from time to time. It can come from health troubles, work challenges, relationship tensions, financial difficulties, and a variety of other sources.

"We almost universally dislike stress, and understandably so, but stress

actually helps us achieve our goals and plays a key role in promoting our survival," says Jeffrey Birk, Ph.D., who studies the relationship between emotions and health at the Center for Behavioral Cardiovascular Health at Columbia University's Vagelos College of Physicians and Surgeons.

When things go well, we conquer the thing causing stress and move on with our lives. We may even learn something that helps us to react faster to the stressor in the future or even avoid it entirely. But sometimes stress lingers, lasting for days, weeks, and months.

"On short timescales, the [stress response](#) restores the body's balance. Over longer periods of time, stress leads to imbalance," says Birk. Research shows that [chronic stress](#) is associated with such health issues as muscle tension, digestive problems, headaches, weight gain or loss, trouble sleeping, [heart disease](#), susceptibility to cancer, [high blood pressure](#), and stroke.

People who have cardiovascular disease can experience chronic stress related to their health condition and associated medical comorbidities, says Birk. Being a caregiver for a partner with a [chronic health condition](#) can be a major source of chronic stress, too.

We asked Birk about chronic stress and its impact on our bodies.

Stress basics

Stress disrupts the body's normal balance, moving from a stable state toward an imbalanced state. As our body and mind respond to situations we perceive as challenging or threatening—the stress response—we can feel this change in status.

Typically, stress becomes noticeable to us and we "feel stressed" when we perceive the demands of a situation to be greater than our ability to

cope. The perceptions of threat and demand are what determine level of stress. Those perceptions may differ for different people in the same situation or for the same person at different times in their life. Either way, the more perceived demands outweigh a person's coping capacity, the more severe stress becomes.

When the stress response is activated, the body releases cortisol and other stress hormones. As the level of activation increases, the impact on the body is even more negative. Usually, [cortisol levels](#) decrease after a stressful event is over, but chronic stressors can keep cortisol levels high, without a break, wearing down the body on a cellular level.

The more we mentally dwell on troubling demands, the more our health is impacted. In fact, [previous research](#) of ours published in *Psychosomatic Medicine* found that when people spent more time thinking about a stressor, they had higher levels of stress, and we showed that more time spent mentally stewing in our problems may be associated with higher blood pressure. It is possible constant worriers who develop cardiovascular disease may find themselves in a health-endangering feedback loop.

Adaptive stress response: the ideal

It's quite unpleasant in the moment, but when a stressor is sufficiently brief (a few seconds, minutes, or hours), stress can be helpful. Imagine slipping on ice, tripping on a curb, or getting a tricky question in an interview. You need an immediate solution: a safe place to land, the right words. Ideally, stress helps us focus and solve problems.

After a stressor appears, our bodies adapt and rise to the challenge by instantaneously releasing catecholamines such as adrenaline, which briefly mobilize our energy to act. More slowly, our bodies release stress hormones, such as cortisol, which are controlled by a stress response

system called the HPA axis (centered in the hypothalamus, pituitary gland, adrenal glands).

Catecholamines and stress hormones help focus our energy, allowing us to rise to the challenge of a difficult situation and restore balance. After balance is restored, stress hormones subside.

Chronic stress and its impacts

As many of us know all too well, sources of stress can pile up, and this has cumulative effects on our bodies.

Chronic stress happens over a longer timeframe (days, weeks, months, or years). It is the result of sustained stressors (debt, long-term illness, caregiving, being unhoused) or stressors that repeat frequently over time (recurring arguments, crowded subway rides, construction noise, difficult relationships).

Chronic stress can lead to a state of imbalance in the body that does not correct itself, keeping the HPA axis activated and levels of stress hormones high.

We know from decades of research that chronic stress can:

- raise blood pressure, making you more susceptible to [heart attack](#) or stroke
- increase heart rate, increasing risk of medical emergency
- cause the heart to beat irregularly
- increase inflammation in the body, weakening your immune response and making you more susceptible to illness and viruses
- make you feel anxious, overwhelmed, or irritable, which makes you more likely to avoid healthy behaviors like [physical activity](#) and turn to unhealthy behaviors such as smoking

The difference between normal and chronic stress

Short-lived stress and chronic stress are ultimately similar, but they differ in course and effects on the body. If you are wondering whether you are experiencing short-lived stress or chronic stress and what to do about it, pay attention to which bodily and emotional symptoms you feel, their severity, and how long they last.

Imagine one stressful week at work or school with three particularly difficult days. On each of these days you feel moderately anxious, have a headache, and bodily and mental fatigue that makes you consider canceling your evening plans. However, you feel relatively replenished and back to normal physically and mentally on most mornings after these difficult days. In this case, you are probably experiencing instances of typical stress.

Now imagine many weeks in a row of difficult days and feeling emotionally overwhelmed. You are consistently depleted to the point of exhaustion, often feel your heart beating quickly even when sitting still, or you are developing a mysterious, debilitating pain in your lower back that is getting progressively worse. In this case, you could be experiencing the effects of chronic stress.

How to manage stress

It is important to identify the sources of stress in your life and find ways to cope with them that work well for you.

Fortunately, even when life circumstances remain difficult (such as when managing a chronic [health condition](#)), there are proven ways to reduce the effects of chronic stress: physical exercise, mindfulness meditation, spending time with loved ones, and slow-paced breathing.

Recent research at Columbia shows that people who develop posttraumatic stress disorder (PTSD) may benefit from this kind of practice to lower their symptoms of distress.

By managing [stress](#) effectively, you can improve your well-being and reduce the risk of future health problems.

Provided by Columbia University Irving Medical Center

Citation: Chronic stress can hurt your overall health (2023, May 19) retrieved 25 April 2024 from <https://medicalxpress.com/news/2023-05-chronic-stress-health.html>

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