

Stress: A silent killer

Sanjewa K Singh*

Abstract

Stress is a natural feeling of not being able to cope with specific demands and events. However, stress can become a chronic condition if a person does not take steps to manage it. These demands can come from work, relationships, financial pressures, and other situations, but anything that poses a real or perceived challenge or threat to a person's well-being can cause stress. Stress can be a motivator, and it can even be essential to survival. The body's fight-or-flight mechanism tells a person when and how to respond to danger. However, when the body becomes triggered too easily, or there are too many stressors at one time, it can undermine a person's mental and physical health and become harmful. Stress is our body's response to pressure. Many different situations or life events can cause stress. It is often triggered when we experience something new, unexpected or that threatens our sense of self, or when we feel we have little control over a situation. We all deal with stress differently. Our ability to cope can depend on our genetics, early life events, personality and social and economic circumstances. Sometimes, this stress response can be useful: it can help us push through fear or pain so we can run a marathon or deliver a speech, for example. Our stress hormones will usually go back to normal quickly once the stressful event is over, and there won't be any lasting effects. However, too much stress can cause negative effects. It can leave us in a permanent stage of fight or flight, leaving us overwhelmed or unable to cope. Long term, this can affect our physical and mental health. This article aims to provide information about stress, its effects and strategies to manage it.

Introduction

Stress is the feeling of being overwhelmed or unable to cope with mental or emotional pressure. Stress is the feeling of being overwhelmed or unable to cope with mental or emotional pressure. Stress is a reaction of the body due to any effect of a change leading to physical, mental, or emotional tension. It may arise from any occurrence that

*Associate Professor & Head, Department of Psychology, Udai Pratap Autonomous College, Varanasi- 221002

leads to frustrations, anger, and nervousness. The body's reaction to these feelings is stress. Stress may be may bring a positive or negative effect, depending on how it is handled. Stress response may be beneficial in protecting the body. However, stress has its harmful effects, which may become a serious chronic condition if not well managed. When the body becomes triggered too easily, or there are too many stressors at a go, it can undermine one's mental and physical health and become harmful. Feelings of stress tend to increase the number of stressors.

When someone faces a challenge or a threat, they have a partly physical response. The body activates resources that help it either stay and confront the challenge or seek safety as fast as possible. The body produces larger quantities of cortisol, epinephrine, and norepinephrine. These chemicals can trigger specific physical reactions such as alertness, sweating, heightened muscle preparedness and high blood pressure. These factors help in improving someone's ability to respond to challenging situations.

Historically, the human body's reaction to stress used to be a matter of life or death. "From an evolutionary perspective, having a stress response is important. If you're being chased by a predator, you need to get away, so your body responds by creating protective barriers to stress. Your blood pressure goes up; you become hyper vigilant; and your blood even releases compounds that allow it to clot better, in case you get hurt," explains family physician Scott Kaiser, MD, director of geriatric cognitive health at the Pacific Neuroscience Institute.

However, not all stress is created equal. And today's most common stressors—before the corona virus pandemic happened, that is—are rarely predators; they're usually the little things that tend to wear on us over time. "It's when you react to answering emails and attending to all the notifications from your phone as if you are being chased by a tiger that stress becomes a real problem," Kaiser says. "Chronic stress is what raises our risks for disease. We can't get rid of stress in our lives, so it's how we deal with stress that will help us in the long run." With the corona virus adding a slew of worries to the ones you were already managing in your daily life, the impact of stress adds up—possibly more quickly now than ever before.

There are two major types of stress, namely acute stress, and chronic stress.

1. Acute stress: Acute stress is short-term and is more common and often develops when people consider the pressures of events that have recently occurred or face upcoming challenges soon. Usually, this stress will reduce or disappear once somebody resolves the stressing issue. It's often due to a new stressor and tends to have a simple and possible easy solution. Even if the situation may be difficult, there's always a possible way to get rid of the stress or get a solution. Acute stress does not cause a lot of damage as long-term, chronic stress. Short-term effects may include tension headaches and an upset stomach, and a moderate amount of distress. However, cumulative acute stress over longer periods can become chronic and harmful.

2. Chronic stress: Chronic stress is long term stress and is more harmful. It results from long-term poverty, family issues, unhappy marriages, or prolonged dissatisfaction issues hence chronic stress. It occurs when the individual has no view of avoiding their stressors and stops finding a solution ending up experiencing traumatic experiences. This stress can make it almost impossible for the individual's body to return to a normal stress hormone activity, thereby leading to complications in; respiratory system, cardiovascular system, immune system, reproductive system, and sleep. Recurrent stress increases one's risk of type 2 diabetes, high blood pressure, and heart diseases. Moreover, depression, anxiety, and other mental disorders like post-traumatic stress disorder (PTSD) may develop if stress gets chronic.

Chronic stress may continue unnoticed, as people can become used to feeling agitated and hopeless. Therefore, it becomes part of an individual's personality, making them constantly prone to the effects of stress regardless of the scenarios that they encounter, putting one at the risk of the effects of stress, hence becoming victims of this silent killer. Individuals with chronic stress are at risk of having a last-minute breakdown, leading to suicide, violent actions, a heart attack, or stroke.

Biology of Stress: Researches show when an individual appraises a situation as being stressful, the adrenal medulla releases the hormone adrenaline, which prepares the body for a fight or flight response. This increases heart, sweating, blood pressure, and breathing rates. The hypothalamus, which is a brain structure associated with emotional reactions, such as fear responds to stress by activating the pituitary gland, which in turn secretes adrenocorticotrophic hormone (ACTH) that activates the adrenal glands to release the hormone corticosteroid.

Cortisol helps the body to maintain steady supplies of blood sugar. When the stress response (flight/fight response) is activated it is important to get it back to its baseline.

Learning to relax can play a tremendous difference in alleviating stress. This can be achieved by activating the parasympathetic nervous system (PNS) of the autonomic nervous system (ANS) to elicit the relaxation response, which is a "physical state of deep rest that changes the physical and emotional responses to stress." The relaxation response works in the opposite way of the fight-or-flight response. It lowers the stress hormone levels and lowers blood pressure. New evidences suggest stress accelerates aging. Epigenetic clocks, which "judge" the biological age of an organism based on the methylation of its DNA, have been developed over the past decade. Multiple studies show that stress accelerates biological aging and can influence metabolism. Now, researchers demonstrate that while stress does accelerate biological aging, it is possible to moderate this with emotional regulation and self-control. It is a common belief that stress can prematurely age us, but this had not been quantifiable until relatively recently.

Diagnosis: A doctor will typically diagnose stress by asking an individual about their symptoms and life events. Diagnosing stress can be challenging because it depends on many factors. Doctors have used questionnaires, biochemical measures, and physiological techniques to identify stress. However, these may not be objective or effective. The most direct way to diagnose stress and its effects on a person is through a comprehensive, stress-oriented, face-to-face interview.

Signs and Symptoms: These are the silent signs of stress. Be alert if-

- You have chronic migraines and headaches.
- You constantly crave sweets and fatty foods.
- Your blood sugar levels are unstable.
- Your skin is breaking out.
- You're developing fine lines and wrinkles.
- You're getting cold sores, shingles, or other rashes.
- You have high blood pressure.
- You're having breathing issues.
- Your libido is low.
- You're struggling to get pregnant.
- You forget things.
- Just don't feel you're sharpest.

- You get sick more often than you used to.
- You're moody or anxious.
- You're experiencing digestive issues.
- You can't stay asleep at night.
- You're always tired.
- You grind your teeth at night.

Causes: People react differently to stressful situations. What is stressful for one person may not be stressful for another and almost any event can potentially cause stress. For some people, just thinking about a trigger or several smaller triggers can cause stress. There is no identifiable reason why one person may feel less stressed than another when facing the same stressor. Mental health conditions, such as depression, or a building sense of frustration, injustice, and anxiety can make some people feel stressed more easily than others. Previous experiences may affect how a person reacts to stressors. Common major life events that can trigger stress include:

- Job issues or retirement
- Lack of time or money
- Bereavement
- Family problems
- Illness
- Moving home
- Relationships, marriage, and divorce

Other commonly reported causes of stress are:

- Abortion or pregnancy loss
- Driving in heavy traffic or fear of an accident
- Fear of crime or problems with neighbours
- Pregnancy and becoming a parent
- Excessive noise, overcrowding, and pollution
- Uncertainty or waiting for an important outcome

Some people experience ongoing stress after a traumatic event, such as an accident or some kind of abuse. Doctors will diagnose this as Post-Traumatic Stress Disorder (PTSD). Those who work in stressful jobs, such as the military or the emergency services, will have a debriefing session following a major incident, and occupational healthcare services will monitor them for PTSD.

Managing Stress-People may find that the following lifestyle measures can help them manage or prevent stress-induced feelings of being overwhelmed.

1. Recognise when stress is a problem: It's important to connect the physical and emotional signs you're experiencing to the pressures you are faced with. Don't ignore physical warning signs such as tense muscles, tiredness, headaches or migraines. Think about what's causing your stress. Sort them into issues with a practical solution, things that will get better with time and things you can't do anything about. Take control by taking small steps towards the things you can improve. Make a plan to address the things that you can. This might involve setting yourself realistic expectations and prioritising essential commitments. If you feel overwhelmed, ask for help and say no to things you can't take on.

2. Think about where you can make changes: Are you taking on too much? Could you hand over some things to someone else? Can you do things in a more leisurely way? You may need to prioritise things and reorganise your life so you're not trying to do everything at once.

3. Build supportive relationships: Find close friends or family who can offer help and practical advice can support you in managing stress. Joining a club or a course can help to expand your social network and encourage you to do something different. Activities like volunteering can change your perspective and have a beneficial impact on your mood.

4. Eat healthily: A healthy diet can improve your mood. Getting enough nutrients (including essential vitamins and minerals) and water can help your mental wellbeing.

5. Be aware of your smoking and drinking: Cut down or cut out smoking and drinking if you can. They may seem to reduce tension but actually make problems worse. Alcohol and caffeine can increase feelings of anxiety.

6. Get some exercise: Physical exercise can help manage the effects of stress by producing endorphins that boost your mood. It can be hard to motivate yourself if you're stressed, but even a little bit of activity can make a difference. For example, you could aim to walk for 15-20 minutes three times a week.

7. Take time out: Take time to relax and practice self-care, where you do positive things for yourself. For instance, you could listen to our podcasts about relaxation to calm your body and mind. Striking a balance between responsibility to others and responsibility to yourself is vital in reducing stress levels.

8. Be mindful: Mindfulness meditation can be practiced anywhere at any time. Research has suggested it can be helpful for managing and reducing the effect of stress and anxiety.

9. Get some restful sleep: If you're having difficulty sleeping, you can try to reduce the amount of caffeine you consume and avoid too much screen time before bed. Write down a to do list for the next day to help you prioritise, but make sure you put it aside before bed.

10. Be kind to yourself: Try to keep things in perspective and don't be too hard on yourself. Look for things in your life that are positive and write down things that make you feel grateful.

11. Priority management: It may help to spend a little time organizing a daily to-do list and focusing on urgent or time sensitive tasks. People can then focus on what they have completed or accomplished for the day, rather than on the tasks they have yet to complete.

12. Talking: Sharing feelings and concerns with family, friends, and work colleagues may help a person "let off steam" and reduce feelings of isolation. Other people may be able to suggest unexpected, workable solutions to the stressor.

13. Get professional help: If you continue to feel overwhelmed by stress, don't be afraid to seek professional help. It doesn't mean you're a failure. It's important to get help as soon as possible so you can start to feel better. Talk to your doctor about how you're feeling. They should be able to advise you on treatment and may refer you for further help. They may suggest talking therapies such as:

- Cognitive Behavioural Therapy (CBT), which can help reduce stress by changing the ways you think about stressful situations
- Brief interpersonal counselling, which can give you the chance to talk about what causes you stress and develop coping strategies
- Mindfulness-based approaches.

Stress management can also help by:

- Removing or changing the source of stress
- Altering how a person views a stressful event
- Lowering the effects that stress might have on the body
- Learning alternative ways of coping

Different people have different self-devised techniques on how to get rid of stress. The most effective stress management techniques involve indulging in hobbies such as reading books, walking it off, listening to music, hanging out with friends/ pets, working out at the gym, and other activities that help people unwind. Reducing the amount of time one is idle, and keeping oneself busy can avert major stress impacts.

Activities such as one's hobbies may be a good consumer of idle time hence providing the body with joyful moments diverting attention from possible stressors. Whenever stress becomes overwhelming, it would be wise for one to seek professional assistance.

Summary

Stress is part of being human, and it can help motivate you to get things done. Even high stress from serious illness, job loss, a death in the family, or a painful life event can be a natural part of life. You may feel down or anxious, and that's normal too for a while. Talk to your doctor if you feel down or anxious for more than several weeks or if it starts to interfere with your home or work life. Therapy, medication, and other strategies can help. In the meantime, there are things you can learn to help you manage stress before it gets to be too much.

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