

## Why 'Letting Steam Off' Is Crucial ?

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**A stressful situation can trigger a cascade of stress hormones that produce well-orchestrated physiological changes in the body**



A new study by Kingston University's Business School and Maynooth University in Ireland has shown that people in the early stages of their careers were more likely to be impacted by workplace stress during the COVID-19 pandemic than senior colleagues. On the other hand, a few studies revealed that some individuals weathered the stress of the pandemic better than others, in part, due to their genetics.

Focusing on India, a Deloitte report says that 80 per cent of the Indian workforce reported mental health issues during the past one year and it has cost organisations Rs 1.1 lakh crore or \$14 billion. Out of the Rs 1.1 lakh crore, Rs 14,000 crore was the cost of absenteeism, while presenteeism cost Rs 51,000 crore and employee turnover cost Rs 45,000 crore.

Presenteeism, a phenomenon of attending to work while under mental stress and thus performing at low productivity, has a much higher effect than attrition and shows how much work stress can impact productivity.

It's high time we took a closer look at the concept and science behind stress that is taking a toll on our daily lives and overall health. In general, scientists think of stress as our body's response to being pushed out of balance.

Most of the time, the stress response relaxes once the perceived threat or situation passes, and our body recovers its balance. When a threat continues over a longer period, however, the stress response stays in a heightened state of alert. This chronic stress can take a long-term toll not only psychologically, but also physically.

A stressful situation can trigger a cascade of stress hormones that produce well-orchestrated physiological changes such as fast heart rate, tensed muscles, sweating, compromising the immune system, etc. More preliminary research suggests that chronic stress may also contribute to obesity, both through direct mechanisms (causing people to eat more) or indirectly (decreasing sleep and exercise).

Known as the hypothalamic-pituitary-adrenocortical (HPA) axis because it comprises the hypothalamus, pituitary gland, and the adrenal cortex, this stress response system regulates hormones, particularly the stress hormone cortisol. By rapidly increasing glucose levels, speeding the heart rate, and increasing blood flow to the muscles in our arms and legs, this stress response allows us to respond to a threat or situation.

Because stress changes the way the brain's neurons communicate with each other, chronic stress can cause our brains, nervous systems, and our behaviour to adjust to a vigilant and reactive state which can be devastating and lead to newer problems and diseases.

For instance, scientists in the US have shown that stress, such as intraocular pressure (IOP) elevation in the eye, can cause retinal tissue to undergo epigenetic and transcriptional changes similar to natural ageing. Thus, continuous stress may induce features of accelerated ageing in the eyes of young adults, further leading to age-related eye diseases.

Researchers have also revealed that high levels of stress is responsible for aggravating eczema, a condition that causes uncomfortably dry, itchy skin, and it is one of the most common chronic diseases worldwide. There is a cyclical connection between eczema and stress because stress can trigger or worsen eczema symptoms, for which there is no cure in allopathy.

While stress is a condition for which no allopathic drugs or interventions exists, technology is nowadays being pitched as the best possible solution in the form of health wearables or smart watches. The in-built sensors can measure biometrics like breathing or pulse rates, including the smallest variations in our heart's functioning, optimising our sleep, etc. Since these devices merely provide stress-related data and not any remedial measures, to what extent these devices can effectively assist stress management is still largely unclear, many scientists argue.

Since our body constantly communicates with us and the outside world, presenting real-time 'positive and negative' feedback, it would be prudent to act upon these 'signals from our body' at the very first instance.

Dr Manbeena Chawla

Executive Editor, BioSpectrum