

# What Happens To Your Body When You're Stressed?

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*Summary: A new report examines the effect stress can have on our bodies and general health.*

*Source: The Conversation.*

**We all feel stressed from time to time – it's all part of the emotional ups and downs of life. Stress has many sources, it can come from our environment, from our bodies, or our own thoughts and how we view the world around us. It is very natural to feel stressed around moments of pressure such as exam time – but we are physiologically designed to deal with stress, and react to it.**

When we feel under pressure the nervous system instructs our bodies to release [stress hormones](#) including adrenaline, noradrenaline and cortisol. These produce physiological changes to help us cope with the threat or danger we see to be upon us. This is called the “stress response” or the “fight-or-flight” response.

Stress can actually be [positive](#), as the stress response help us stay alert, motivated and focused on the task at hand. Usually, when the pressure subsides, the body rebalances and we start to feel calm again. But when we experience stress too often or for too long, or when the negative feelings overwhelm our ability to cope, then problems will arise. Continuous activation of the nervous system – experiencing the “stress response” – causes wear and tear on the body.

When we are stressed, the [respiratory system](#) is immediately affected. We tend to breathe harder and more quickly in an effort to quickly distribute oxygen-rich blood around our body. Although this is not an issue for most

of us, it could be a problem for people with asthma who may feel short of breath and struggle to take in enough oxygen. It can also cause quick and shallow breathing, where minimal air is taken in, which can lead to hyperventilation. This is more likely if someone is prone to anxiety and panic attacks.

Stress wreaks havoc on our immune systems. Cortisol released in our bodies suppresses the immune system and inflammatory pathways, and we become more susceptible to infections and chronic inflammatory conditions. Our ability to fight off illness is reduced.

The [musculoskeletal system](#) is also affected. Our muscles tense up, which is the body's natural way of protecting ourselves from injury and pain. Repeated muscle tension can cause bodily aches and pains, and when it occurs in the shoulders, neck and head it may result in [tension headaches and migraines](#).

There are cardiovascular effects. When stress is acute (in the moment), heart rate and blood pressure increase, but they return to normal once the acute stress has passed. If acute stress is repeatedly experienced, or if stress becomes chronic (over a long period of time) it can cause damage to blood vessels and arteries. This increases the risk for hypertension, heart attack or stroke.

The [endocrine system](#) also suffers. This system plays an important role in regulating mood, growth and development, tissue function, metabolism and reproductive processes. Our metabolism is affected. The hypothalamus is located in the brain and it plays a key role in connecting the endocrine system with the nervous system. Stress signals coming from the hypothalamus trigger the release of stress hormones cortisol and epinephrine, and then blood sugar (glucose) is produced by the liver to provide you with energy to deal with the stressful situation. Most people reabsorb the extra blood sugar when the stress subsides, but for some people there is an increased risk of diabetes.

Stress can have some unpleasant gastrointestinal effects. We might

experience heartburn and acid reflux especially if we have changed our eating habits to eat more or less, or increased our consumption of fatty and sugary foods. The ability of our intestines to absorb nutrients from our food may be reduced. We may experience stomach pain, bloating and nausea, diarrhoea or constipation.



*Repeated muscle tension can cause bodily aches and pains, and when it occurs in the shoulders, neck and head it may result in tension headaches and migraines. NeuroscienceNews.com image is adapted The Conversation news release.*

There can be problems with our reproductive systems too. For men, chronic stress may affect the production of [testosterone and sperm](#). It may even lead to erectile dysfunction or impotence. Women can experience changes to their menstrual cycles and increased premenstrual symptoms.

## **Stress and your mind**

Stress has marked effects on our emotional well-being. It is normal to experience high and low moods in our daily lives, but when we are stressed we may feel more tired, have mood swings or feel more irritable than usual. [Stress causes hyperarousal](#), which means we may have difficulty

falling or staying asleep and experience restless nights. This impairs concentration, attention, learning and memory, all of which are particularly important around exam time. Researchers have linked poor sleep to chronic health problems, depression and even obesity .

The way that we cope with stress has an additional, indirect effect on our health. Under pressure, people may adopt more harmful habits such as [smoking, drinking too much alcohol or taking drugs](#) to relieve stress. But these behaviours are inappropriate ways to adapt and only lead to more health problems and risks to our personal safety and well-being.

So learn to manage your stress, before it manages you. It's all about keeping it in check. Some stress in life is normal – and a little stress can help us to feel alert, motivated, focused, energetic and even excited. Take positive actions to channel this energy effectively and you may find yourself performing better, achieving more and feeling good.

### **About this neuroscience research article**

**Source:** Holly Blake – [The Conversation](#)

**Image Source:** NeuroscienceNews.com image is adapted from The Conversation news release.

Additional information about the study can be found [here](#).

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