

# How Does Exercise Beat Stress?

Exercise not only shapes our bodies, it also shapes our minds. With the ability to calm, elevate mood and counter anxiety and depression, exercise is a valuable tool for combating stress. But how does it work?

## Chemical Reactions

One of the most well-known ways that exercise provides mental benefit is through chemical reactions brought about in the brain. During exercise, the body's stress hormones, such as cortisol and adrenaline, are reduced, while endorphins, the body's natural painkillers, are stimulated. Endorphins have also been associated with providing a sense of euphoria, but according to the review article, "[The Antidepressive Effects of Exercise](#)," published in *Sports Medicine*, it is unclear if the endorphins are directly responsible for these feelings or if they simply block pain while allowing the pleasure chemicals, dopamine and serotonin, to be more apparent.



## Brain Reconstruction and Resilience

Currently, the National Institutes of Mental Health are studying the effects of exercise on mice and results suggest that regular physical activity can actually reshape the brain circuitry involved with emotional processing while protecting against stress. Other studies, published in *The Journal of Neuroscience and Behavioral Neuroscience*, have found that brain-derived neurotrophic factor (BDNF), involved in protecting and producing neurons, was higher in active mice than in those who were sedentary. Additionally, the active mice developed new neurons that appeared to be more resilient; when faced with stress, they displayed more controlled reactions than the inactive mice.

## Total Body Communication

The American Psychological Association describes the **benefits of exercise** as total body communication, "Biologically, exercise seems to give the body a chance to practice dealing with

stress. It forces the body's physiological systems -- all of which are involved in the stress response -- to communicate much more closely than usual...And all of these are controlled by the central and sympathetic nervous systems, which also must communicate with each other. This **workout** of the body's communication system may be the true value of exercise..." By regularly activating these communication pathways, the better the body becomes at handling stress. The less often this happens, the less efficient the body is with coping.

## Improved Overall Well Being

By performing regular physical activity, the body typically becomes healthier and stronger which can reduce stress associated with other **health issues** that may be worsened, or brought on, by inactivity. Lost work and lost wages, doctor's visits, and expensive medications can lead to worry, insomnia, and irritability. According to Harvard University Health Publications, during the stress response, mind and body can amplify each other's distress signals, creating a vicious cycle.

Although they can work against each other, the mind and body are also capable of working together to provide tremendous benefits. Regular exercise provides improved health, better sleep, and more energy. This can lead to improved self-confidence and a sense of command over body and life, which can help an individual feel more equipped and confident when faced with stress.

Whether it's a needed escape, meditation or playtime, exercise can provide a way to get away from it all, either in solitude or with friends or family. Harvard University Health Publications state, "...when your body is busy, your mind will be distracted from the worries of daily life and will be free to think creatively."