

# Traumatic Stress and its Effects on the Body and Brain

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## Perspective

People who experience traumatic events, especially early in life, maybe at risk of developing Post-traumatic Stress Disorder (PTSD). PTSD affects 3.5% of adults, and 1 in 11 is diagnosed at some point in life. Although it is a mental illness, it also affects physical health and can cause many complications that can accumulate over time. The areas of the brain involved in the stress response include the amygdala, hippocampus, and prefrontal cortex. Traumatic stress may be associated with permanent changes in these areas of the brain. Traumatic stress is associated with an increased response of cortisol and norepinephrine to subsequent stressors. Antidepressants affect the hippocampus and counteract the effects of stress. The results of animal studies have been extended to patients with post-traumatic stress disorder (PTSD) with small hippocampal and anterior cingulate gyrus volumes, increased amygdala function, and decreased medial prefrontal cortex/anterior cingulate gyrus function.

In addition, patients with post-traumatic stress disorder show an increased response of cortisol and norepinephrine to stress. Effective treatments with post-traumatic stress disorder have been shown in animal studies to enhance neurogenesis, as well as memory enhancement and hippocampal volume increase in post-traumatic stress disorder. Symptoms usually begin within 3 months of trauma. But they may not appear until a few years later. They last for at least a month. Without treatment, you can suffer from post-traumatic stress disorder for years, or even the rest of your life. You may feel better or worse over time. For example, a news report of an attack on television can give you overwhelming memories of your attack. Post-traumatic stress disorder affects your life. It makes it difficult for you to trust, communicate, and solve problems. This can lead to problems with relationships with friends, family, and colleagues. It also affects your physical health. Studies have shown an increased risk of heart disease and indigestion.

Our body is well equipped to handle small amounts of stress, but long-term or chronic stress can have serious consequences for your body. When your body is stressed, your muscles become tense. Muscle tension is close to the reflex response to stress. This is a physical way to protect you from injury and pain. When stress begins suddenly, the muscles suddenly cramp, and when the stress ends, they loosen. Chronic stress keeps the muscles of the body more or less constant wakefulness. If the muscles are tense for an extended period, this can cause other reactions in the body and even promote

stress-related disorders. For example, both tension headaches and migraine headaches are associated with chronic muscle tension in the shoulder, neck, and head areas. Musculoskeletal back pain and upper limb pain are also associated with stress, especially at work.

Stress is a chain reaction. "When someone experiences a stressful event, the amygdala, an area of the brain that contributes to emotional processing, sends a distress signal to the hypothalamus. This area of the brain acts as a command center and through the nervous system. Communicate with other parts of the body so that a person has the energy to fight or escape. "This" fighting escape "reaction is the cause of external physical reactions. Most people associate stress such as increased heart rate, increased sensation, deeper oxygen intake, and adrenaline rush. Eventually, a hormone called cortisol is released, which helps restore the energy lost in the reaction. At the end of a stressful event, cortisol levels drop and the body returns to rest. Stress itself is not always a problem, but the accumulation of cortisol in the brain can have long-term effects. Chronic stress can cause health problems. Chronic stress does more than just lead to cognitive impairment. It can also cause other serious problems such as heart disease, high blood pressure, and an increased risk of diabetes. Other systems in the body, such as the digestive system, excretory system, and reproductive system, are no longer functioning properly. Toxic stress can damage the body's immune system and exacerbate existing illnesses [1-5].

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