

The Effects of Traumatic Stress on the Body and Brain

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Introduction

The amygdala, hippocampus, and prefrontal cortex are all implicated in the stress response in the brain. Traumatic stress may be linked to long-term alterations in these brain regions. Traumatic stress is linked to a higher cortisol and norepinephrine response to future stresses. Antidepressants work by affecting the hippocampus and counteracting stress. Patients with Post-traumatic Stress Disorder (PTSD) who had small hippocampus and anterior cingulate gyrus sizes, increased amygdala function, and decreased medial prefrontal cortex/anterior cingulate gyrus function have had the results of animal research applied to them.

Description

Traumatic Stress

People with post-traumatic stress disorder have a higher cortisol and norepinephrine reaction to stress. In animal studies, effective therapies for post-traumatic stress disorder have been demonstrated to promote neurogenesis, memory enhancement, and hippocampus volume expansion. Symptoms normally appear three months after the event. However, they may not appear for several years [1]. They'll keep you going for at least a month. Post-traumatic stress disorder can last for years or possibly the rest of your life if not treated [2]. Over time, you may feel better or worse. For example, seeing a news programme about an attack on television can bring back vivid recollections of your own attack. Your life is affected by post-traumatic stress disorder. Implementation of a system, communicating, and solving problems difficult. This can cause problems in friendships, family, and work connections. It also has an impact on your physical well-being. Heart disease and dyspepsia have both been linked in studies [3].

Effects

Small quantities of stress are well tolerated by our bodies, but long-term or chronic stress can have major health repercussions. Your muscles get stiff when your body is stressed. The reflex response to stress is similar to muscle tension. This is a physical defence mechanism against damage and discomfort. Muscles cramp when stress starts abruptly, and they loosen when the stress stops. Chronic stress causes the body's muscles to stay awake for longer periods of time. When muscles are stiff for an extended period of time, they might trigger various bodily processes and possibly contribute to stress-related diseases. Chronic muscle strain in the shoulder, neck, and head, for example, is linked to both tension and migraine headaches [4].

Cortisol levels decline after a stressful incident, and the body returns to rest. Stress isn't always a problem, but cortisol buildup in the brain can have

long-term consequences. Chronic stress can harm your health. Chronic stress has ramifications beyond cognitive impairment [5]. It can also lead to other major issues like heart disease, high blood pressure, and a higher chance of diabetes. Other physiological functions, including as the digestive, excretory, and reproductive systems, are no longer operating normally. Toxic stress can harm the immune system and exacerbate pre-existing conditions.

Conclusion

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.

Conflict of Interest

The authors declare that they have no conflict of interest towards the manuscript.

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References

1. Van Der Kolk, Bessel A., Alexander C. McFarlane, and Lars Weisaeth, eds. "Traumatic stress: The effects of overwhelming experience on mind, body, and society." Guilford Press (2012).
2. Bremner, J. Douglas. "Effects of traumatic stress on brain structure and function: Relevance to early responses to trauma." *J Trauma Dissoc* 6 (2005): 51-68.
3. Cushing, Robin E. and Kathryn L. Braun. "Mind-body therapy for military veterans with post-traumatic stress disorder: a systematic review." *J Alt Complement Med* 24 (2018): 106-114.
4. Weiss, Sandra J. "Neurobiological alterations associated with traumatic stress." *Persp Psychiatr Care* 43 (2007): 114-122.
5. Fenster, Robert J., Lauren A.M. Lebois, Kerry J. Ressler, and Junghyup Suh. "Brain circuit dysfunction in post-traumatic stress disorder: from mouse to man." *Nat Rev Neuro* 19 (2018): 535-551.

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