

Does Stress Damage the Brain?

Understanding Trauma-Related Disorders from a Mind-Body Perspective

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As a researcher in the field of clinical psychiatry, I have long been fascinated by the possibility that experience can have lasting effects on the individual, and have wondered whether experience can even change how the brain works. This has led me to wonder whether what we see, hear, and feel can lead to changes in the brain or, phrased more simply in a single provocative question, can stress damage the brain? If stress-related psychiatric symptoms have their basis in the brain, can stress-induced changes in brain structure and function lead to psychiatric disorders such as posttraumatic stress disorder (PTSD) and depression?

The idea that stress damages the brain could have important implications for mental health. A group of psychiatric disorders related to stress, what I call *trauma spectrum disorders*, could share in common a basis in brain abnormalities that are caused by stress. The idea of trauma spectrum disorders could help to explain why there is so much overlap in biological findings and bases in the brain between the different

psychiatric disorders that are related to stress. It would also explain why if you have one of the trauma-related disorders, you are much more likely to have another one of the disorders.

The idea of a trauma spectrum group of disorders came out of research conducted by colleagues and myself, and by groups at other institutions, on the effects of traumatic stress on the brain. At this time we became aware of research in animals showing that stress has long-term effects on the brain. Studies in humans exposed to extreme stress showed similar results, including the effects of stress on the brain, to those found in animal studies. The idea that stress causes neurological damage has natural implications for diagnosis and treatment of trauma-related disorders. If a single type of neurological insult follows exposure to stress, then it follows that all psychiatric disorders related to stress have in common one type of neurological deficit.

A correlate of the theme that stress has effects on the brain and neurological function is that stress has effects on all parts of the body, including the heart, immune systems, digestion, immunity, and could even be related to cancer. This leads us to the natural conclusion that distinctions between mind and brain, body and spirit, and psychology and biology are artificial, and that doctors do a disservice to their patients, and patients do a disservice to themselves, by perpetuating this false dichotomy. If doctors start listening to their patients and patients listen to their own hearts, minds, and bodies, we may go a long way toward alleviating the debilitating effects of stress on our lives.