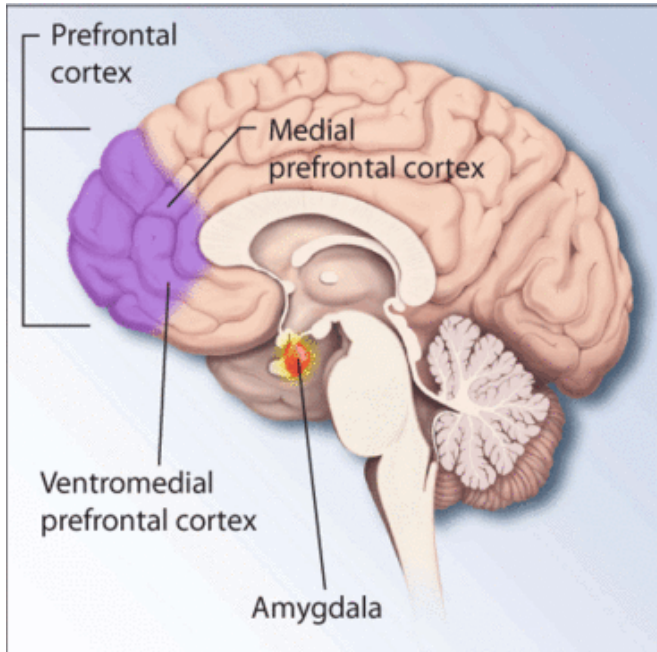


Active prefrontal brain function appears to protect against PTSD after child abuse

21 April 2016, by Robin Reese



Regions of the brain associated with stress and posttraumatic stress disorder. Credit: National Institutes of Health

Increased activation of the prefrontal cortex, the area of the brain that regulates complex cognitive, emotional and behavioral functioning, appears to protect against post-traumatic stress disorder (PTSD) in individuals who suffered abuse as a child, says a recent study by Emory researchers.

The results of the study appear in the journal *Depression and Anxiety*, and were first published online Apr. 8, 2016.

Child [abuse](#) is a primary risk factor for PTSD and other psychiatric and medical issues. The study team, lead by Jennifer Stevens, PhD, a post-doctoral fellow in psychiatry at Emory University School of Medicine, wanted to investigate why some adults who suffered [child](#) abuse do not

develop PTSD.

By looking at the effects of such abuse on the [brain](#), using [functional magnetic resonance](#) imaging (fMRI), researchers determined that resilient individuals who were abused as a child and yet did not experience PTSD as an adult had more prefrontal activation than those with PTSD. This points to a potentially helpful or health-promoting pattern of brain function. It's unclear whether this is due to genetic or environmental factors, however it raises the possibility that early interventions may be able to strengthen the brain and make a person less likely to develop depression or PTSD.

"What we found is that if your brain inhibitory areas function well, despite having been subjected to [child abuse](#), you may be more resilient as an individual," says Tanja Jovanovic, PhD, study co-author and assistant professor of psychiatry and behavioral sciences at Emory University School of Medicine. "It's as though you have this protective factor in your brain."

The study included 90 individuals, all female, who reported traumatic childhood experiences. Thirty-seven participants had PTSD and 53 individuals experienced similar levels of trauma but did not develop PTSD.

The study authors say more research is needed in order to determine the basis of why activity in this region of the brain promotes resilience to PTSD.

More information: Jennifer S. Stevens et al. Childhood Maltreatment Predicts Reduced Inhibition-Related Activity In The Rostral Anterior Cingulate In PTSD, But Not Trauma-Exposed Controls, *Depression and Anxiety* (2016). [DOI: 10.1002/da.22506](https://doi.org/10.1002/da.22506)

Provided by Emory University

APA citation: Active prefrontal brain function appears to protect against PTSD after child abuse (2016, April 21) retrieved 17 November 2019 from <https://medicalxpress.com/news/2016-04-prefrontal-brain-function-ptsd-child.html>

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