

Women may be buffered from traumatic stress by high estrogen levels

Whether a woman's estrogen level is high or low could determine if she may be susceptible to developing [post-traumatic stress disorder \(PTSD\)](#), according to recent research. Estrogen has been found to epigenetically change gene activity in the brain and could even protect a woman from emotional numbness, flashbacks, and difficulty sleeping – all symptoms of PTSD – after a shocking or traumatic situation.

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[The estrogen-modulated site associated with PTSD] is found in a gene known as HDAC4, which...is implicated in the regulation of memory and learning. They found that DNA methylation differences of HDAC4 CpG sites were associated with PTSD diagnosis in women.

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In addition, genetic variation in HDAC4 was connected to a lower level of HDAC4 gene activity and impacted how women responded to and recovered from fear. Those with the variation reacted more fearfully on a fear-related test than those without it.

Brain imaging even showed changes in their “resting state”. Two regions of the brain linked to fear learning, known as the amygdala and the cingulate cortex, demonstrated stronger connections when active.

[The study can be found [here](#).]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [High Estrogen Levels Might Epigenetically Protect Women From a Traumatic Event](#)