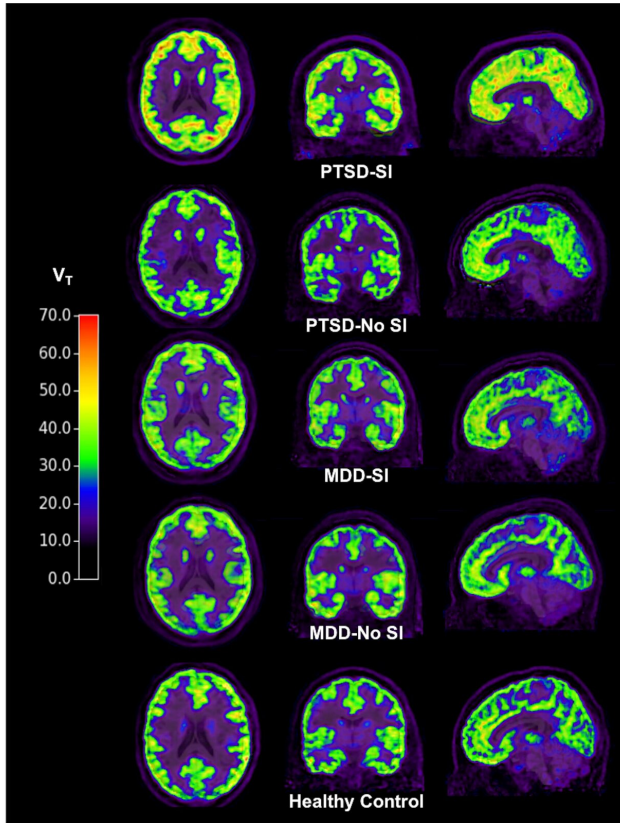


Biomarker reveals PTSD sufferers at risk of suicide

14 May 2019, by Bill Hathaway



mGluR5 availability linked to suicidal ideation (SI) in PTSD. Credit: Margaret T. Davis and Irina Esterlis.

The risk of suicide among individuals with post-traumatic stress disorder (PTSD) is much higher than the general population, but identifying those individuals at greatest risk has been difficult. However, a team at Yale has discovered a biological marker linked to individuals with PTSD who are most likely to think about suicide, the researchers report May 13 in the journal *Proceedings of the National Academy of Sciences*.

Researchers used PET imaging to measure levels of metabotropic glutamatergic receptor 5

(mGluR5)—which has been implicated in anxiety and mood disorders—in individuals with PTSD and major depressive disorder. They found high levels of mGluR5 in the PTSD group with current suicidal thoughts. They found no such elevated levels in the PTSD group with no suicidal thoughts or in those with depression, with or without current [suicidal thoughts](#).

There are two FDA approved treatments for PTSD, both of which are anti-depressants. It can take weeks or months to determine whether they are effective. That can be too late for those who are suicidal, note the researchers.

"If you have people who suffer from [high blood pressure](#), you want to reduce those levels right away," said Irina Esterlis, associate professor of psychiatry at Yale and senior author of the study. "We don't have that option with PTSD."

Esterlis said testing for levels of mGluR5 in people who have experienced severe trauma might help identify those at greatest risk of harming themselves and prompt psychiatric interventions. Also, researchers might investigate ways to regulate levels mGluR5 with hopes of minimizing suicide risk in PTSD patients, she said.

Yale's Margaret T. Davis is lead author of the paper.

More information: Margaret T. Davis et al. In vivo evidence for dysregulation of mGluR5 as a biomarker of suicidal ideation, *Proceedings of the National Academy of Sciences* (2019). [DOI: 10.1073/pnas.1818871116](#)

Provided by Yale University

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