

US Marines study finds link between PTSD and immune system

A new study of blood samples from US Marines has identified genetic markers associated with post-traumatic stress disorder that are also linked to the immune system response. The research team – from the U.S. and UK – says the discovery could lead to new diagnostic techniques and treatments for the condition, as well as predict which individuals are most at risk for the disorder.

[Post-traumatic stress disorder](#) (PTSD) is a [mental health](#) condition that can occur after experiencing a terrifying event or situation. Violent assaults, accidents, natural or human-caused disasters and military combat are some common triggers of PTSD.

It is estimated that around 6.8 percent of Americans will develop PTSD at some point in their lives. These individuals may have recurrent, distressing memories of the terrifying ordeal they have been through, sleep problems, severe [anxiety](#) and [depression](#), and they may even have [suicidal thoughts](#).

Previous studies have aimed to uncover genetic markers of PTSD by investigating differences in gene expression between people with the disorder and those without it. But the team involved in this latest research decided to adopt a “systems-level approach,” which involved using whole transcriptome RNA sequencing on blood samples of U.S. Marines with and without PTSD.

“By comparing U.S. Marines who develop PTSD symptoms to those who do not, we can measure differences in genes, but also take into consideration the dynamic relationships between and among them, their connectivity,” explains senior author Michael S. Breen, of the University of Southampton in the UK.

“Because PTSD is thought to be such a complex disorder,” he adds, “measuring these dynamic relationships is crucial to better understanding the PTSD pathology.”

Read full, original article: [Genetic markers for PTSD linked to immune system response](#)