

Health 

New brain imaging could improve PTSD treatments

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PALO ALTO, Calif. (KGO) -- It is estimated that 20 percent of returning U.S. troops will suffer from Post Traumatic Stress Disorder or major depression. Research on how best to deal with PTSD is critical as those numbers are expected to grow with more troops coming home from Iraq and Afghanistan.

Here is a look at some new brain imaging research underway at the Palo Alto VA.

AJ Isom spent nearly a year as a medic, helping clear roadside bombs in one of the most dangerous parts of Afghanistan.

"After the experience, looking back on it, I think all of us are pretty amazed first of all, that everybody came home," he told ABC7.

That stress led to a diagnosis of PTSD and therapies that have been only partially successful.

"It's such a roller coast ride. You think you're in a good place and you're thrown for a loop," he said.

To help find a better treatment for himself and fellow veterans, AJ is allowing researchers to probe his brain. For several hours, he lies inside an MRI, responding to instructions while viewing a series of photographs ranging from benign to disturbing. Next door, technicians track the changes in his brain.

"What we're doing is taking images of his brain, pictures of his brain, the whole brain, every two seconds and repeating that over and over and over throughout the task, and analyzing that data afterwards to look at blood flow changes," explained Dr. Amit Etkin.

Etkin is heading up the study, a joint effort between Stanford and the Palo Alto VA. The blood flow images allow his team to map the neural pathways involved in regulating emotion.

"As your brain gets more active and works harder, it needs more blood flow, and we can see that on a moment-by-moment basis," he added.

Once the baseline is established, patients are ready for the second step of the study where they undergo months of standard psychotherapy. As their mental health improves, Etkin's team will continue to map and remap their brain activity using MRI.

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