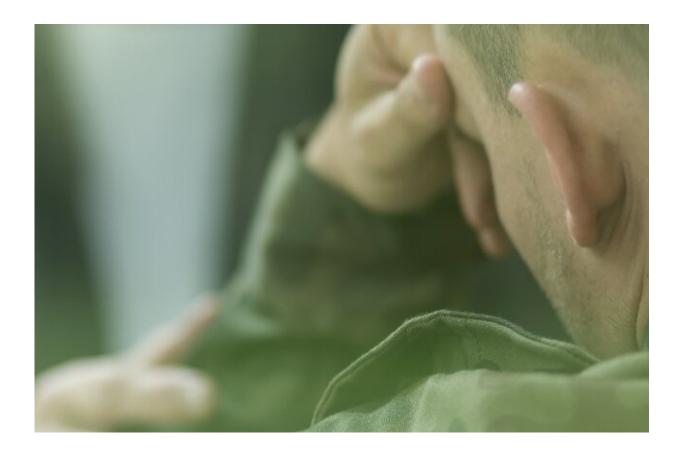


The pain of PTSD—and hope for help

June 26 2019, by Kalimah Redd Knight



"PTSD can feel very isolating, so anything that we can do to counteract that could be helpful," said Lisa Shin. Credit: Depositphotos

Seth Moulton, a Massachusetts Congressman, decorated Iraq War veteran, and Democratic candidate for president, recently revealed that he has struggled with symptoms of post-traumatic stress disorder, or PTSD. While PTSD is commonly associated with military veterans or



and those who have experienced or witnessed a violent event, it is more common than many people think.

"PTSD can occur after a variety of situations that involve the threat of serious injury or death, including natural disasters such as tornados, earthquakes, hurricanes, fires, traumatic childbirth, and life-threatening illnesses such as cancer," said Lisa M. Shin, a psychology professor at Tufts University whose research involves examining <u>brain function</u> and cognitive processing in patients with anxiety disorders, especially PTSD. "Approximately 7 percent of Americans have PTSD at some point in their lifetimes."

In recognition of PTSD Awareness Month this June, Tufts Now spoke to Shin about the condition, the most current forms of <u>treatment</u>, and how people can support loved ones dealing with the disorder.

Tufts Now: Can you explain what post-traumatic stress disorder is?

Lisa Shin: Post-<u>traumatic stress disorder</u> or PTSD is a condition that can affect people who have experienced one or more traumatic events that involved the threat of serious injury or death to oneself or others. Symptoms usually begin within three months of the trauma.

What are the symptoms?

"One of the mysteries of PTSD is that not everyone develops it after exposure to severe trauma," said Lisa Shin.

Some of the classic symptoms of PTSD include nightmares, intrusive memories of the trauma, exaggerated arousal and vigilance, difficulty sleeping, and avoidance of people, topics, or situations that are related to



the trauma.

How do you treat it?

PTSD can be treated with cognitive-behavioral therapy, which may involve talking about and re-processing the trauma, confronting specific trauma-related fears, and changing one's assessment of risk and thoughts related to the trauma. Other treatments include medications such as antidepressants.

Your research seeks to determine whether brain structures such as the amygdala, <u>medial prefrontal cortex</u>, and hippocampus function normally in patients with PTSD. Evidence suggests that in PTSD, the amygdala is over-responsive and the medial prefrontal cortex is under-responsive to threat-related stimuli. How could this information help to improve treatment for those who suffer from PTSD?

Understanding the brain abnormalities associated with PTSD may to help us to develop better diagnostic tests for the disorder, predict who will develop PTSD after trauma, identify new treatments that directly target the dysfunctional brain circuits, and develop tests to help clinicians and patients predict how well a patient will respond to a specific treatment.

Not everyone will respond well to every available treatment. Developing a way to predict a patient's response to a given treatment would be beneficial because it would speed up the improvement of symptoms.

In fact, my lab is working on a study that addresses this. We measure brain function in patients with PTSD, then treat them with a behavior therapy called prolonged exposure. We measure their symptoms before and after treatment and then determine whether initial brain activation predicts their later improvement in symptoms.



For example, preliminary findings suggest that greater activation in the medial prefrontal cortex before treatment is associated with greater improvement after behavior therapy. Of course, this finding needs to be replicated, and many different treatments need to be studied in this way, but it suggests that testing medial prefrontal cortex activity could help clinicians to predict whether a treatment is right for a patient.

Are some people predisposed genetically or otherwise to experience PTSD? If so, could knowing the difference affect treatment, or, say career choices, such as avoiding the military, ambulance work, and so on?

One of the mysteries of PTSD is that not everyone develops it after exposure to severe trauma. Only about 20 to 30 percent of those exposed to severe trauma develop PTSD. This suggests that some people may be more vulnerable to developing PTSD than others, and researchers have been trying to identify the factors that might make some people more vulnerable.

Some of the factors could be genetic, but they also could be environmental, or an interaction of the two. We have found that relatively high activity of the dorsal anterior cingulate cortex in the brain may be one such vulnerability factor.

Once a vulnerability to PTSD is identified and verified to be reliable, then people could theoretically use that information to make <u>career</u> <u>choices</u> that would steer them away from trauma exposure and thus reduce the likelihood of developing PTSD. For example, they may choose to avoid jobs like firefighting, in which the risk of trauma exposure is relatively high.

What can friends, family members—and even



society—do to support those with PTSD?

Social support is well known to help individuals suffering from PTSD, as well as other disorders. We can offer such support to our friends and <u>family members</u> by encouraging them to seek treatment, offering to talk about their experiences, and watching for signs of suicidal thinking or excessive substance use. PTSD can feel very isolating, so anything that we can do to counteract that could be helpful.

At the societal level, we have learned that supporting our troops with respect and appreciation is beneficial. Furthermore, my personal opinion is that we as a society can do a better job at eliminating sources of trauma—and hence reducing the potential impact of PTSD—such as by taking seriously and acting immediately in response to reports of sexual harassment and violence.

Provided by Tufts University

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