

A shot of cortisone stops traumatic stress

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As soldiers return home from tours in Afghanistan and Iraq, America must cope with the toll that war takes on mental health. But the treatment of Post Traumatic Stress Disorder (PTSD) is becoming increasingly expensive, and promises to escalate as yet another generation of veterans tries to heal its psychological wounds.

New hope for preventing the development of PTSD has been uncovered by Prof. Joseph Zohar of Tel Aviv University's Sackler Faculty of Medicine and the Sheba Medical Center, in collaboration with Prof. Hagit Cohen from Ben-Gurion University -- and the key is a single dose of a common medication.

When a person suffers trauma, the body naturally increases its secretion of [cortisone](#). Taking this [natural phenomenon](#) into account, Prof. Zohar set out to discover what a single extra dose of cortisone could do, when administered up to six hours after test subjects experienced a traumatizing event. The results, which will be published in the journal *European Neuropsychopharmacology* in October 2011, indicate that the likelihood that the patient will later develop PTSD is reduced by 60 percent.

Opening the window of opportunity

In most [psychiatric conditions](#), it is impossible to establish a precise point of time at which the disorder manifested, Prof. Zohar says. But PTSD is unique in that it has an easily established timeline, beginning from the moment a patient experiences trauma. This makes PTSD

eligible for treatment in the "golden hours" -- a medical term that defines the precious few hours in which treatment can be most beneficial following a trauma, heart attack, stroke, or medical event. Receiving treatment in this window of opportunity can be critical.

In their animal models, Prof. Zohar and his fellow researchers first began treating PTSD in the window of opportunity up to six hours after a traumatic event. Two groups of rats were exposed to the smell of a cat, and one group was treated with cortisone after the event.

Following promising results with the rats, the researchers initiated a double-blind study in an emergency room, in which trauma victims entering the hospital were randomly assigned to receive a placebo or the cortisone treatment. Follow-up exams took place two weeks, one month, and three months after the event. Those patients who had received a shot of cortisone were more than sixty percent less likely to develop PTSD, they discovered.

Mimicking Mother Nature

When searching for a treatment method for PTSD, Prof. Zohar took his cue from Mother Nature. Most people who survive a traumatic experience don't develop PTSD because the cortisone that our body naturally produces protects us from developing the condition. But the right dose of cortisone at the right time could prove a source of secondary prevention for PTSD, he posited, helping along a natural process.

His approach also may circumvent the harm caused by dosing traumatised patients with other pharmaceuticals. In the emergency room, traumatized patients are often given medications such as Valium or Xanax, aimed at calming them down. In fact, Prof. Zohar says, these pills interfere with our natural and potent recovery process, hindering the

secretion of cortisone. "Looking at the long term effect, people who received these medications had a greater chance of developing PTSD than those who did not," he explains.

Prof. Zohar will expand this small pilot study with a \$1.3 million dollar grant from the National Institute of Mental Health. He and his fellow researchers are teaming up with Prof. Rachel Yehuda of Mount Sinai Hospital in New York City, who will help them uncover the biochemical processes and underlying mechanisms of cortisone treatments for traumatized patients.

People who suffer from PTSD are haunted by their traumatic memories; for them, the past is always present, Prof. Zohar explains. Cortisone, given at the right dose at the right time, may alleviate the power of these traumatic memories by preventing their consolidation.

Provided by Tel Aviv University

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