

Preventing posttraumatic stress disorder by facing trauma memories

November 27 2012

Posttraumatic stress disorder (PTSD) is a form of learning that begins at the moment of the exposure to extremely stressful situations and that grows in impact as trauma-related memories are rehearsed and strengthened repeatedly. This somewhat oversimplified view of PTSD yields a powerful prediction: if one could disrupt the rehearsal and strengthening of traumatic memories, a process called reconsolidation of memories, then one might reduce PTSD risk or PTSD severity after potentially traumatic events.

To be certain, it is tricky to attempt to alter traumatic memory reconsolidation. In fact, some early strategies for "trauma debriefing" turned out to strengthen rather than diminish posttraumatic learning.

Despite these challenges, a new study by Dr. Barbara Rothbaum and colleagues reports that a [behavioral intervention](#) delivered to patients immediately post-trauma is effective at reducing posttraumatic stress reactions.

"[PTSD](#) is a major public health concern," said Rothbaum, professor in Emory's Department of Psychiatry and Behavioral Sciences. "In so many people, what happens immediately after a traumatic event can make things worse or better. Right now, there are no accepted interventions delivered in the immediate aftermath of trauma."

To conduct the study, the researchers approached patients who presented to the local emergency room due to a traumatic event, including rape, car

accident, or [physical assault](#). Half of those who agreed to participate received the behavioral intervention, which was started immediately, while the other half did not. All patients were repeatedly assessed for [symptoms of depression](#) and stress over a twelve-week period.

The intervention is a modified form of [exposure therapy](#) in which a survivor confronts anxiety about a traumatic event by recounting it. Administered over the course of 3 1-hour sessions, the goal is to alter the person's thoughts and feelings about the traumatic event. Trained therapists asked the participants to describe the trauma they just experienced and recorded the description. The patients were instructed to listen to their recordings every day. The therapists also helped the patients look at obtrusive thoughts of guilt or responsibility, and taught them a brief breathing relaxation technique and self care.

They found that the intervention was safe, feasible, and successful at reducing posttraumatic stress reactions, compared to those who were assigned to the assessment-only condition, at 4 and 12 weeks post-injury.

"This study provides an elegant and clinically important test of the trauma reconsolidation hypothesis," commented Dr. John Krystal, editor of *Biological Psychiatry*.

The implications of this study are immense, Rothbaum explained. "If we know what to do, then we can train emergency workers to intervene with patients on a large scale. In addition to being implemented in the emergency room, it can help on the battlefield, in natural disasters, or after criminal assaults."

She concluded, "More research is needed, but this prevention model could have significant public health implications. A long-standing hope of mental health research is to prevent the development of psychopathology in those at risk instead of being limited to symptom

treatment after disease onset."

More information: The article is "Early Intervention May Prevent the Development of Posttraumatic Stress Disorder: A Randomized Pilot Civilian Study with Modified Prolonged Exposure" by Barbara Olasov Rothbaum, Megan C. Kearns, Matthew Price, Emily Malcoun, Michael Davis, Kerry J. Ressler, Delia Lang, and Debra Houry ([doi: 10.1016/j.biopsych.2012.06.002](https://doi.org/10.1016/j.biopsych.2012.06.002)). The article appears in *Biological Psychiatry*, Volume 72, Issue 11 (December 1, 2012)

Provided by Elsevier

Citation: Preventing posttraumatic stress disorder by facing trauma memories (2012, November 27) retrieved 3 May 2024 from <https://medicalxpress.com/news/2012-11-posttraumatic-stress-disorder-trauma-memories.html>

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