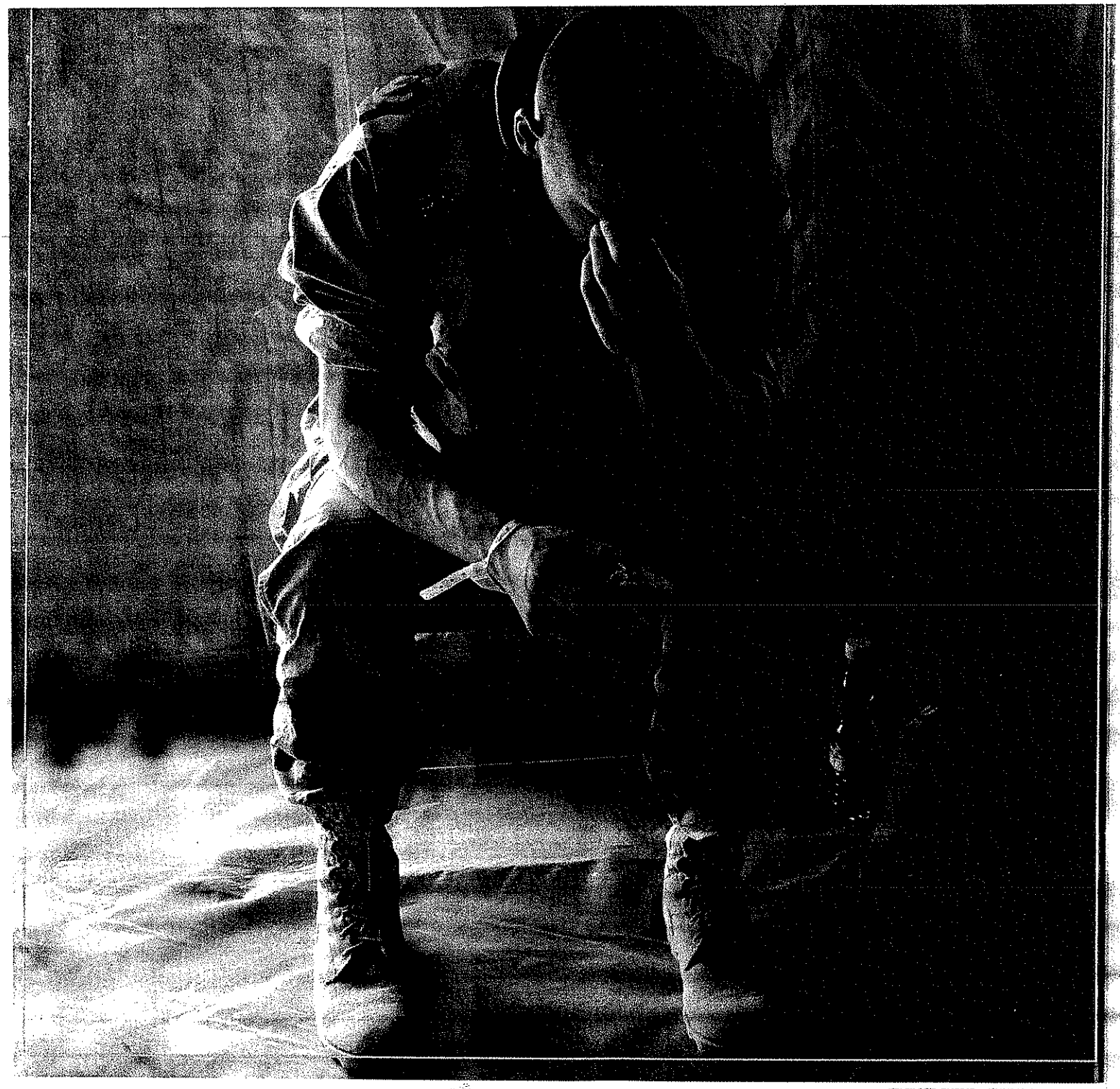


STAFF SGT. CHERIE A. THURLBY

PTSD treatments grow in evidence, effectiveness

Several psychological interventions help to significantly reduce post-traumatic stress disorder symptoms, say new guidelines.

BY TORI DEANGELIS

It's a bittersweet fact: Traumatic events such as the Sept. 11 attacks, Hurricane Katrina, and the wars in Iraq and Afghanistan have enabled researchers to learn a lot more about how best to treat post-traumatic stress disorder (PTSD).

"The advances made have been nothing short of outstanding," says Boston University psychologist Terence M. Keane, PhD, director of the behavioral science division of the National Center for Posttraumatic Stress Disorder and a contributor to the original PTSD diagnosis. "These are very important times in the treatment of PTSD."

In perhaps the most important news, in November, the International Society for Traumatic Stress Studies (ISTSS), a professional society that promotes knowledge on severe stress and trauma, issued new PTSD practice guidelines. Using a grading system from "A" to "E," the guidelines label several PTSD treatments as "A" treatments based on their high degree of empirical support, says Keane, one of the volume's editors. The guidelines—the first since 2000—update and generally confirm recommendations of other major practice-related bodies, including the U.S. Department of Veterans Affairs (VA), the Department of Defense, the American Psychiatric Association, and Great Britain's and Australia's national health-care guidelines, he says.

In other PTSD-treatment advances, researchers are adding medications and virtual-reality simulations to proven treatments to beef up their effectiveness. Clinical investigators are also exploring ways to treat PTSD when other psychological and medical conditions are present, and they are studying specific populations such as those affected by the Sept. 11 attacks.

Though exciting, these breakthroughs are somewhat colored by an October Institute of Medicine (IoM) report that concludes there is still not enough evidence to say which PTSD treatments are effective, except for exposure therapies. Many experts, however, disagree with that conclusion, noting that a number of factors specific to the condition, such as high dropout rates, can lead to what may seem like imperfect study designs (see sidebar).

Treatments that make a difference

The fact that several treatments made the "A" list is great news for psychologists, says Keane. "Having this many evidence-based treatments allows therapists to use what they're comfortable with from their own background and training, and at the same time to select treatments for use with patients with different characteristics," he says.

Moreover, many of these treatments were developed by psychologists, he notes.

They include:

• **Prolonged-exposure therapy,** developed for use in PTSD by Keane, University of Pennsylvania psychologist Edna Foa, PhD, and Emory University psychologist Barbara O. Rothbaum, PhD. In this type of treatment, a therapist guides the client to recall traumatic memories in a controlled fashion so that clients eventually regain mastery of their thoughts and feelings around the incident. While exposing people to the very events that caused their trauma may seem counterintuitive, Rothbaum emphasizes that it's done in a gradual, controlled and repeated manner, until the person can evaluate their circumstances realistically and understand they can safely return to the activities in their current lives that they had been avoiding. Drawing from PTSD best practices, the APA-initiated Center for Deployment Psychology includes exposure therapy in the training of psychologists and other health professionals who are or will be treating returning Iraq and Afghanistan service personnel (see sidebar on page 45).

• **Cognitive-processing therapy,** a form of cognitive behavioral therapy, or CBT, developed by Boston University psychologist Patricia A. Resick, PhD, director of the women's health sciences division of the National Center for PTSD, to treat rape victims and later applied to PTSD. This treatment includes an exposure component but places greater emphasis on cognitive strategies to help people alter erroneous thinking that has emerged because of the event. Practitioners may work with clients on false beliefs that the world is no longer safe, for example, or that they are incompetent because they have "let" a terrible event happen to them.

• **Stress-inoculation training,** another form of CBT, where practitioners teach clients techniques to manage and reduce anxiety, such as breathing, muscle relaxation and positive self-talk.

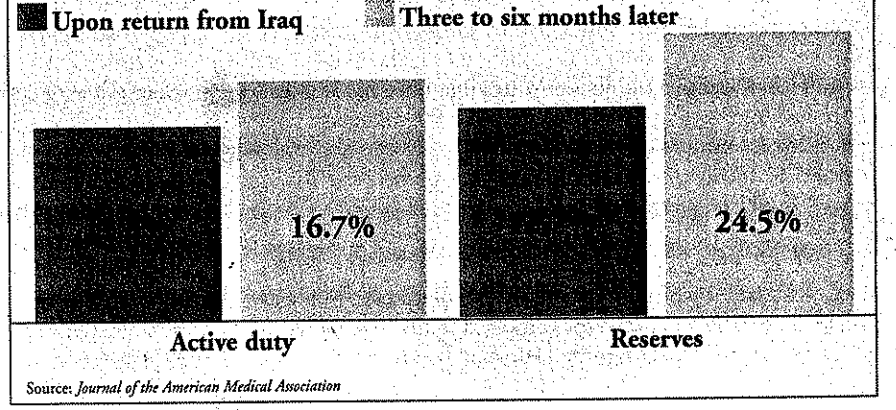
• **Other forms of cognitive therapy,** including cognitive restructuring and cognitive therapy.

• **Eye-movement desensitization and reprocessing,** or EMDR, where the therapist guides clients to make eye

Delayed reaction

When troops returning from Iraq are screened a second time, the proportion who report mental health problems rises.

Percentage of soldiers reporting mental health problems during routine screenings



Source: *Journal of the American Medical Association*

movements or follow hand taps, for instance, at the same time they are recounting traumatic events. It's not clear how EMDR works, and, for that reason, it's somewhat controversial, though the therapy is supported by research, notes Dartmouth University psychologist Paula P. Schnurr, PhD, deputy executive director of the National Center for PTSD.

• **Medications,** specifically selective serotonin reuptake inhibitors. Two in particular—paroxetine (Paxil) and sertaline (Zoloft)—have been approved by the Food and Drug Administration for use in PTSD. Other medications may be useful in treating PTSD as well, particularly when the person has additional disorders such as depression, anxiety or psychosis, the guidelines note.

Spreading the word

So promising does the VA consider two of the "A" treatments—prolonged exposure therapy and cognitive-processing therapy—that it is doing national rollouts of them within the VA, notes psychologist Antonette Zeiss, PhD, deputy chief consultant for mental health at the agency.

"Enhancing our ability to provide veterans with the psychotherapies for PTSD that have the strongest evidence base is one of our highest priorities," Zeiss says. In fact, the VA began training psychologists to provide the two approaches more than a year before the Institute of Medicine released its report of successful treatments, she says. "We're pleased that the report confirms our emphasis on this training."

The VA system's structure and philosophy make it possible to test the results of treatments in large, realistic samples—a clinical researcher's dream, notes Schnurr, who has conducted a number of such studies, most recently in a study of female veterans that led to the rollout out of prolonged exposure therapy. That study was reported in the Feb. 28, 2007, issue of *The Journal of the American Medical Association* (Vol. 297, No. 8, pages 820–830).

"The VA was able to support the

PTSD treatments demand more study, independent panel finds

Inserting a cautionary note in the enthusiasm about effective treatments for post-traumatic stress disorders (PTSD), an Institute of Medicine (IoM) panel concluded in October that only exposure therapies such as prolonged exposure and cognitive-processing therapy have enough evidence to recommend them for treatment. The independent review was requested by the Department of Veterans Affairs (VA).

"At this time, we can make no judgment about the effectiveness of most psychotherapies or about any medications in helping patients with PTSD," states Alfred O. Berg, MD, the University of Washington professor of family medicine who chaired the IoM committee. "These therapies may or may not be effective—we just don't know in the absence of good data."

In a review of 53 drug studies and 37 psychotherapy studies, the seven-member panel concluded that many PTSD studies are flawed in terms of design and high dropout rates, which limit their generalizablity. Moreover, most drug studies were funded by pharmaceutical companies, and many psychotherapy studies were conducted by people who developed the techniques or by their close collaborators, the report finds.

Besides listing a number of drugs that need more independent investigation, the panel asserted that the following psychotherapies need better evaluation:

- Eye-movement desensitization and reprocessing.
- Cognitive restructuring.
- Coping-skills training.
- Group psychotherapy.

This said, the findings shouldn't be interpreted to mean that exposure therapies are the only treatments that should be used to treat the condition, the report adds. The reports' authors do suggest, however, that Congress should provide resources to the VA and other federal agencies to fund high-quality PTSD research that includes veterans and other affected groups in research planning, it states.

Psychologists expert in PTSD commended the committee for its critical review and the VA for commissioning the independent study. However, many believe the report is flawed in several ways, including that it fails to address the difficulties in conducting PTSD research and to take into account existing reviews and guidelines conducted by other independent bodies.

"I think [the IoM panel] raised the bar too high and they're not realistic about what PTSD is and how hard it is to study and to keep people in treatment," says PTSD expert Barbara O. Rothbaum, PhD, director of the Trauma and Anxiety Recovery Program at Emory University. "High dropout is endemic in PTSD."

Dartmouth Medical School psychologist Paula P. Schnurr, PhD, well-known for her rigorous, large-scale studies of PTSD populations, says that in her view, the literature "differs from the conclusions of the report, in that there's good evidence that a wider range of cognitive behavioral therapies are effective."

In addition, the panel's findings are at odds with many reviews already done in the field, Rothbaum says. As one example, the committee did not support the evidence base on any drug at all, even though the Food and Drug Administration has approved the selective serotonin reuptake inhibitors paroxetine (Paxil) and sertaline (Zoloft) to treat PTSD. "There have been a number of reviews out there, and none has concluded that only one intervention works," she says.

—T. DeANGELIS

science, so the research didn't just sit around in a journal and get discussed," Zeiss says. "They put money toward it, and they asked us to help them do a major rollout of the treatment."

Boosting effectiveness

Meanwhile, other researchers are experimenting with add-ons to these proven treatments to increase their effectiveness. Some are looking at how virtual reality might enhance the effects of prolonged-exposure therapy. By adding virtual reality, whereby clients experience 3-D imagery, sounds and sometimes smells that correspond with a traumatic event, "we think it might be a good alternative for people who are too avoidant to do standard exposure therapy, because it puts them right there," says Emory University's Rothbaum.

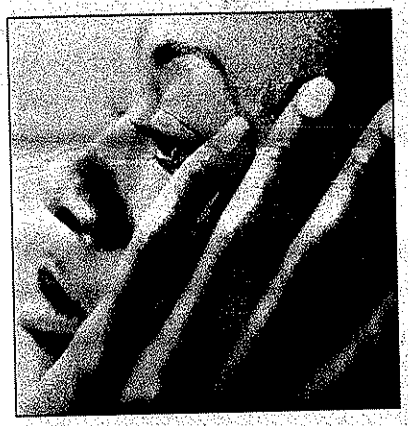
Other researchers are adding a small dose of an old tuberculosis drug, D-cycloserine, or DCS, to treatment to see if it can mitigate people's fear reactions. Rothbaum's team, which includes psychologist Mike Davis, PhD, and psychiatrist Kerry Ressler, MD, PhD, have recently shown that the drug helps to extinguish fear in animals, so they're hoping for a similar effect in people.

In one study with veterans of the current Iraq war, Rothbaum's team is giving all participants a type of virtual reality that simulates combat conditions in Iraq, then randomizing them into a drug condition where they get DCS, a placebo, or the anti-anxiety drug alprazolam (Xanax).

In a similar vein, researchers at the Program for Anxiety and Traumatic Stress Studies at Weill Cornell Medical College are using virtual reality and DCS to treat those directly affected by the 2001 World Trade Center attacks, including civilians who were in the towers or nearby buildings, witnesses, and firefighters and police officers who were first responders.

Participants receive standard cognitive behavioral treatment enhanced with virtual reality, where they see graded versions of a Twin Towers scenario, starting with simple images of the buildings on a sunny day, and progressing gradually to include the horrific sights and sounds of that day. They also randomly receive either a small dose of DCS or a placebo pill before each session.

While neither study is complete, the researchers say the treatments appear to significantly reduce participants' PTSD symptoms. Rothbaum has recently submitted a grant proposal for a study where she plans to compare traditional and virtual-reality exposure therapies—which hasn't yet been done—in combination with DCS or a placebo.



Addressing comorbidity

Other psychologists are starting to think about ways to treat PTSD when it is accompanied by other psychiatric and health conditions. Psychologist John Otis, PhD, of Boston University and VA Boston, for instance, is testing an integrated treatment that aims to alleviate symptoms of both PTSD and chronic pain in Vietnam veterans and veterans of Operation Iraqi Freedom and Operation Enduring Freedom. The treatment combines aspects of cognitive processing therapy for trauma and cognitive behavioral therapy for chronic pain.

"We think these two conditions may interact in some [psychological] way that makes them more severe and challenging to treat," Otis says. In particular, he and others posit that "anxiety sensitivity"—fear of experiencing one's anxiety-related symptoms—may increase the odds that certain PTSD sufferers have more problems than others.

Again, while the study is not yet finished, results are encouraging, reports Otis. "Many of the veterans who are getting the integrated treatment are experiencing partial or complete remission of both kinds of symptoms," he says.

On a broader scale, the National Center for PTSD's Keane believes that much more research is needed on treating PTSD and psychiatric comorbidities such as depression, anxiety, substance abuse, personality disorders and psychosis—a common situation that escalates the more severe a person's PTSD symptoms are, he says.

He, for one, would like to examine possible applications to PTSD of the concept of a "unified protocol," a theory and methodology being developed by Boston University psychotherapy researcher David Barlow, PhD, to treat concurrent problems such as panic attacks, anxiety and phobias.

That said, the recent advances promise to help many more people suffering from a condition they did not bring on themselves, says Zeiss.

"While there is still more to learn, we have taken significant steps in developing treatments that have been shown to be effective and that will be increasingly provided both in VA and other mental health care settings," says Zeiss. "Those affected by combat stress and other traumas will be able to reach out for care without feeling ashamed or hopeless."Ψ

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Post-traumatic stress disorder and trauma in children and adolescents is one of the priorities of APA's 2008 President Alan E. Kazdin, PhD. He is forming a task force on the topic, which will be chaired by Annette LaGreca, PhD. The scope of the committee's work will be covered in an upcoming issue of the *Monitor*.