

# MINDSCAPES

MGH DEPARTMENT OF PSYCHIATRY NEWSLETTER FOR FRIENDS AND SUPPORTERS • FALL 2007

In the Fall 2007 issue of *Mindscales*, we are pleased to introduce our Addiction Recovery Management Service (ARMS), which provides support and care to young people and families dealing with substance abuse and addiction. One of the first major programs

of the department's new Center for Addiction Medicine, ARMS was funded by a couple who tragically lost their young son to a drug overdose. We are grateful for their support, which helped initiate this new and vitally important service.

You also will read about Dr. Roger Pitman's research of a novel treatment for PTSD (post-traumatic stress disorder). This innovative work has implications not only for returning combat veterans, but also innumerable civilian victims of trauma.



Jerrold F. Rosenbaum, MD

Also included in this issue is a feature about our Psychiatry Consultation Service, which provides diagnosis and compassionate, state-of-the-art treatment to thousands of patients each year on medical and surgical units at the hospital.

Our effort to advance the department's work through philanthropy is driven, in large part, by several volunteer groups, or councils. In this issue, we share with you some photographs from the newest of these groups, the MGH Leadership Council for Psychiatry, which was launched in Palm Beach, Florida, earlier this year. We look forward to telling you more about these councils and their important efforts in the next issue of *Mindscales*.

On behalf of the faculty of the Department of Psychiatry, thank you for your interest in and support of the department's innovations in patient care, research and teaching.

A handwritten signature in white ink on a dark blue background.

Jerrold F. Rosenbaum, MD  
Psychiatrist-in-Chief, Massachusetts General Hospital  
Stanley Cobb Professor of Psychiatry, Harvard Medical School

## Putting Trauma in the Past *Study evaluates novel treatment for post-traumatic stress disorder*

**A 12-year-old boy** watched in horror as two gunmen robbed his family's music store, beat him, shot his father and then escaped. Their violence haunted him in frequent unwanted recollections and repeated nightmares that conjured the same heart-pounding fear and cold sweats that he had experienced witnessing the crime. It persisted until the victim, now 45, took part in a recent study by Massachusetts General Hospital psychiatrist Roger K. Pitman, MD, on treatment for post-traumatic stress disorder, or PTSD. His nightmares have finally stopped.

Dr. Pitman is cautious, but hopeful, that the same experimental treatment can help firefighters, police officers, disaster survivors, returning soldiers and others tormented by a traumatic experience.

With colleagues at MGH and Harvard Medical  
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Roger K. Pitman, MD, oversees a simulated test to evaluate how the body responds to stress.

# —Putting Trauma in the Past

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School, he is studying how the human body responds to stress by producing adrenaline, a memory-inducing hormone. Under normal circumstances, our bodies adapt to moderate increases in adrenaline, he explains. Dr. Pitman believes that trauma, however, produces exceptionally high levels that cause the memory to become too strong. It is why we remember so vividly September 11 or the day President Kennedy was shot. The most intense reactions occur in those affected first-hand.

## RE-OPENING THE WINDOW FOR TREATMENT

Propranolol, an “anti-adrenaline drug,” may help victims cope. If given within a few hours, Dr. Pitman says it may reduce the ability of adrenaline to consolidate the traumatic memory and thereby diminish the flashbacks and nightmares typical of PTSD.

Unfortunately, intervening within this narrow window of

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opportunity is not always possible. During combat, for example, staying alert is vital; suppressing adrenalin costs lives.

But what if, years later, the window of opportunity could be re-opened by re-activating the memory of the experience?

To find out, Dr. Pitman and his colleagues tape-recorded PTSD patients’ detailed descriptions of what they saw and felt at the time of

their traumatic event. Then the patients were given propranolol or a placebo. A week later, as their tape was replayed to them, the patients’ reactions were recorded. To date, Dr. Pitman says this experimental treatment, which attempts to block “reconsolidation” of the traumatic memory, suggests that propranolol users are better able to put their trauma in the past. Similar results were

reported in his study of patients in the MGH Emergency Department after life-threatening automobile accidents.

Dr. Pitman’s interest in this area began in 1983 when, as a research investigator for the Veterans Administration (VA), he was among the first to address “post-Vietnam syndrome,” before PTSD entered the lexicon and the news media began widely reporting symptoms among combat returnees. Yet PTSD is nothing new; medical records reveal high rates of mental illnesses among returning soldiers as far back as the Civil War, when PTSD was known as “soldier’s heart.”

In other work over the past decade Dr. Pitman has led a project funded by the National Institute of Mental Health that is following 120 pairs of Vietnam veterans whose identical twins did not go to Vietnam. Investigators are examining whether non-veteran siblings have an abnormal, or overactive, susceptibility to fear, indicating that their twin may have been more vulnerable to PTSD when exposed to combat.

## HELPING COMBAT VETERANS

This summer, the U.S. Army approved funding for the largest study to date on propranolol, memory and PTSD. The \$750,000 grant to MGH will support a three-year project, led by Dr. Pitman and coordinated with the VA, involving combat veterans returning from Iraq and Afghanistan. A 2004 study at the Army’s Walter Reed Medical Center found that one in six Iraq returnees suffers from mental health problems.

Propranolol currently is prescribed for high blood pressure and has been used “off label” for stage fright, but Dr. Pitman says wider testing is necessary before FDA approval is sought for treatment of PTSD. “Some believe it may obliterate the memory. But propranolol does not appear to cause patients to forget what happened. Rather, it may make it easier for them to live with the memory by reducing its emotional intensity.

“What we have here is a reason for hope but it is not yet proven,” notes Dr. Pitman. “Government funding for research is dwindling. Unless we can find donors to support this work, there is a real possibility that this research will have to stop.”



MASSACHUSETTS  
GENERAL HOSPITAL

Development Office  
165 Cambridge Street, Suite 600  
Boston, Massachusetts 02114

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