

# Post-Traumatic Stress Disorder

**Post-Traumatic Stress Disorder  
is a normal reaction to seriously disturbing events.  
This booklet examines the signs, symptoms  
and steps you can take to treat PTSD.**

**Have you lived through a scary or dangerous event? Please put a check in the box next to any statements that sound like you.**

- Sometimes, all of a sudden, I feel like the event is happening over again. I never know when this will occur.
- I have nightmares and bad memories of the terrifying event.
- I stay away from places that remind me of the event.
- I jump and feel very upset when something happens without warning. I feel like I'm constantly on guard.
- I have a hard time trusting or feeling close to other people.
- I sometimes feel emotionally numb.
- I get mad very easily.
- I feel guilty because others died and I lived.
- I have trouble sleeping and my muscles are tense.

**PTSD is a real illness that needs to be treated.**

**Many people who have been through a frightening experience have this illness.**

**It's not your fault and you don't have to suffer.**

**Read this booklet and learn how to get help.  
You can feel better and get your life back!**

## What is Post-Traumatic Stress Disorder (PTSD)?

PTSD is a real illness. People may get PTSD after living through a disturbing or frightening experience. It can be treated with medicine and therapy.

You can get PTSD after you have been:

- Raped or sexually abused
- A victim of emotional or physical abuse by someone in your family
- A victim of a violent crime
- In an airplane or car crash
- In a hurricane, tornado, or fire
- In a war
- In an event where you thought you might be killed, or
- After you have seen any of these events

If you have PTSD, you often have nightmares or scary thoughts about the experience you went through. You try to stay away from anything that reminds you of your experience.

You may feel angry and unable to trust or care about other people. You may always be on the lookout for danger. You can feel very upset when something happens suddenly or without warning.

### When does PTSD start and how long does it last?

For most people, PTSD starts within three months of the event. For some people, signs of PTSD don't show up until years later. PTSD can happen to anyone at any age. Even children can have it.

Some people get better within six months, while others may have the illness for much longer.

### Am I the only person with this illness?

No. You are not alone. In any year, 5.2 million Americans have PTSD.

Women are more than two and a half times as likely as men to develop PTSD. The traumatic events most often associated with PTSD for men are rape, combat exposure, childhood neglect, and childhood physical abuse. The most traumatic events for women are rape, sexual molestation, physical attack, being threatened with a weapon, and childhood physical abuse.

### Do Other Illnesses Tend to Accompany PTSD?

Co-occurring depression, alcohol or other substance abuse, or another anxiety disorder are not uncommon. The likelihood of treatment success is increased when these other conditions are appropriately identified and treated as well.

Headaches, gastrointestinal complaints, immune system problems, dizziness, chest pain, or discomfort in other parts of the body are common. Often, doctors treat the symptoms without being aware that they stem from PTSD. The National Institute of Mental Health (NIMH) encourages primary care providers to ask patients about experiences with violence, recent losses, and

traumatic events, especially if symptoms keep recurring. When PTSD is diagnosed, referral to a mental health professional who has had experience treating people with the disorder is recommended.

### **What can I do to help myself?**

Talk to your doctor about the experience that upset you and your feelings about it. Tell your doctor if you have scary memories, if you feel sad, if you have trouble sleeping, or if you are angry all the time. Tell your doctor if these problems keep you from doing everyday things and living your life. You may want to show your doctor this booklet. It can help explain how you feel. Ask your doctor for a checkup to make sure you don't have some other illness.

Ask your doctor if he or she has helped people with PTSD. Special training helps doctors treat people with PTSD. If your doctor doesn't have special training, ask for the name of a doctor or counselor who does.

### **What can a doctor or counselor do to help me?**

A doctor may give you medicine to help you feel less afraid and tense. It may take a few weeks for the medicine to work.

Talking to a specially trained doctor or counselor, or with other people who went through experiences like yours, helps many people with PTSD. This is called "therapy." Therapy can help you work through your terrible experience.

### **One person's story:**

"After I was attacked, I felt afraid, depressed, and angry all the time. I couldn't sleep or eat much. Even when I tried to stop thinking about it, I still had awful nightmares and memories."

"I was confused and didn't know where to go for help. A friend told me to call the doctor. My doctor helped me find a special doctor who knows about PTSD."

"I had to work hard, but after some helpful medication and therapy, I am starting to feel like myself again. I'm glad I made that first call to my doctor."

## PTSD and the Military

If you are in the military, you may have seen combat. You may have been on missions that exposed you to horrible and life-threatening experiences. You may have been shot at, seen a buddy shot, or seen death. These are types of events that can lead to PTSD.

Experts think PTSD occurs:

- In about 30% of Vietnam veterans
- In as many as 10% of Gulf War (Desert Storm) veterans
- In about 25% of veterans of the Afghanistan war (Enduring Freedom), and veterans of the Iraq war (Iraqi Freedom)

Other factors in a combat situation can add more stress to an already stressful situation and may contribute to PTSD and other mental health problems. These factors include what you do in the war, the politics around the war, where it's fought, and the type of enemy you face.

Another cause of PTSD in the military can be military sexual trauma (MST). This is any sexual harassment or sexual assault that occurs while you are in the military. MST can happen to men and women and can occur during peacetime, training, or war.

Among veterans using Veterans Affairs (VA) health care, about:

- 23 out of 100 women (23%) reported sexual assault when in the military
- 55 out of 100 women (55%) and 38 out of 100 men (38%) have experienced sexual harassment when in the military

Even though military sexual trauma is far more common in women, over half of all veterans with military sexual trauma are men.

### **Remember you can get help now:**

Talk to your doctor about the event and your feelings about it. If your doctor doesn't have special training to treat people with PTSD, ask for the name of a doctor or counselor who does.

## Post-Traumatic Stress Disorder Research

To aid those who suffer with PTSD, NIMH is supporting PTSD-focused research, and related studies on anxiety and fear, to find better ways of helping people cope with trauma, as well as better ways to treat and ultimately prevent the disorder.

### Research on Possible Risk Factors for PTSD

Currently, many scientists are focusing on genes that play a role in creating fear memories. Understanding how fear memories are created may help to refine or find new interventions for reducing the symptoms of PTSD. For example, PTSD researchers have pinpointed genes that make:

**Stathmin**, a protein needed to form fear memories. In one study, mice that did not make stathmin were less likely than normal mice to “freeze,” a natural, protective response to danger, after being exposed to a fearful experience. They also showed less innate fear by exploring open spaces more willingly than normal mice.<sup>1</sup>

**GRP (gastrin-releasing peptide)**, a signaling chemical in the brain released during emotional events. In mice, GRP seems to help control the fear response, and lack of GRP may lead to the creation of greater and more lasting memories of fear.<sup>2</sup>

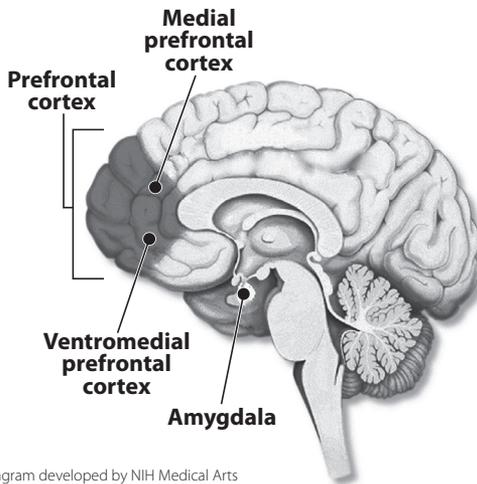
Researchers have also found a version of the 5-HTTLPR gene, which controls levels of serotonin—a brain chemical related to mood—that appears to fuel the fear response.<sup>3</sup> Like other mental disorders, it is likely that many genes with small effects are at work in PTSD.

Studying parts of the brain involved in dealing with fear and stress also helps researchers to better understand possible causes of PTSD. One such brain structure is the amygdala, known for its role in emotion, learning, and memory. The amygdala appears to be active in fear acquisition, or learning to fear an event (such as touching a hot stove), as well as in the early stages of fear extinction, or learning not to fear.<sup>4</sup>

Storing extinction memories and dampening the original fear response appears to involve the prefrontal cortex (PFC) area of the brain,<sup>4</sup> involved in tasks such as decision-making, problem-solving, and judgment. Certain areas of the PFC play slightly different roles. For example, when it deems a source of stress controllable, the medial PFC suppresses an alarm center deep in the brainstem and controls the stress response.<sup>5</sup> The ventromedial PFC helps sustain long-term extinction of fearful memories, and the size of this brain area may affect its ability to do so.<sup>6</sup>

Individual differences in these genes or brain areas may only set the stage for PTSD without actually causing symptoms. Environmental factors, such as childhood trauma, head injury, or a history of mental illness, may further increase a person’s risk by affecting the early growth of the brain.<sup>7</sup> Also, personality and cognitive factors, such as optimism and the tendency to view

## Brain structures involved in dealing with fear and stress



challenges in a positive or negative way, as well as social factors, such as the availability and use of social support, appear to influence how people adjust to trauma.<sup>8</sup> More research may show what combinations of these or perhaps other factors could be used someday to predict who will develop PTSD following a traumatic event.

### Research on Treating PTSD

Currently, people with PTSD may be treated with psychotherapy (“talk” therapy), medications, or a combination of the two.

### Psychotherapy

Cognitive behavioral therapy (CBT) teaches different ways of thinking and reacting to the frightening events that trigger PTSD symptoms and can help bring those symptoms under control. There are several types of CBT, including:

**Exposure therapy** – uses mental imagery, writing, or visiting the scene of a trauma to help survivors face and gain control of overwhelming fear and distress.

**Cognitive restructuring** – encourages survivors to talk about upsetting (often incorrect) thoughts about the trauma, question those thoughts, and replace them with more balanced and correct ones.

**Stress inoculation training** – teaches anxiety reduction techniques and coping skills to reduce PTSD symptoms, and helps correct inaccurate thoughts related to the trauma.

NIMH is currently studying how the brain responds to CBT compared to sertraline (Zoloft), one of the two medications recommended and approved by the U.S. Food and Drug Administration (FDA) for treating PTSD. This research may help clarify why some people respond well to medication and others to psychotherapy.

## **Medications**

In a small study, NIMH researchers recently found that for people already taking a bedtime dose of the medication prazosin (Minipress), adding a daytime dose helped to reduce overall PTSD symptom severity, as well as stressful responses to trauma reminders.<sup>9</sup>

Another medication of interest is D-cycloserine (Seromycin), which boosts the activity of a brain chemical called NMDA, which is needed for fear extinction. In a study of 28 people with a fear of heights, scientists found that those treated with D-cycloserine before exposure therapy showed reduced fear during the therapy sessions compared to those who did not receive the drug.<sup>10</sup> Researchers are currently studying the effects of using D-cycloserine with therapy to treat PTSD.

Propranolol (Inderal), a type of medicine called a beta-blocker, is also being studied to see if it may help reduce stress following a traumatic event and interrupt the creation of fearful memories. Early studies have successfully reduced or seemingly prevented PTSD in small numbers of trauma victims.<sup>11</sup>

## **Treatment After Mass Trauma**

NIMH researchers are testing creative approaches to making CBT widely available, such as with Internet-based self-help therapy and telephone-assisted therapy. Less formal treatments for those experiencing acute stress reactions are also being explored to reduce chances of developing full blown PTSD.

For example, in one preliminary study, researchers created a self-help website using concepts of stress inoculation training. People with PTSD first met face-to-face with a therapist. After this meeting, participants could log onto the website to find more information about PTSD and ways to cope, and their therapists could also log on to give advice or coaching as needed. Overall, the scientists found delivering therapy this way to be a promising method for reaching a large number of people suffering with PTSD symptoms.<sup>12</sup>

Researchers are also working to improve methods of screening, providing early treatment, and tracking mass trauma survivors; and approaches for guiding survivors through self-evaluation/screening and prompting referral to mental health care providers based on need.

## **The Next Steps for PTSD Research**

In the last decade, rapid progress in research on the mental and biological foundations of PTSD has lead scientists to focus on prevention as a realistic and important goal.

For example, NIMH-funded researchers are exploring new and orphan medications thought to target underlying causes of PTSD in an effort to prevent the disorder. Other research is attempting to enhance cognitive, personality, and social protective factors and to minimize risk factors to ward off full-blown PTSD after trauma. Still other research is attempting to identify what factors determine whether someone with PTSD will respond well to one type of intervention or another, aiming to develop more personalized, effective, and efficient treatments.

## **Where Can I Get More Information?**

MedlinePlus, a service of the U.S. National Library of Medicine and the National Institutes of Health, provides updated information and resource lists for many health topics. Find out more about PTSD at:

<http://www.nlm.nih.gov/medlineplus/posttraumaticstressdisorder.html>.

## **En Español:**

<http://www.nlm.nih.gov/medlineplus/spanish/posttraumaticstressdisorder.html>.

Information from NIMH is available online, in PDF, or as paper brochures sent through the mail. If you would like to have NIMH publications, you can order them at <http://www.nimh.nih.gov> or contact NIMH at the numbers listed below.

### **National Institute of Mental Health**

Office of Science Policy, Planning, and Communications

6001 Executive Boulevard

Room 8184, MSC 9663

Bethesda, MD 20892-9663

Phone: 301-443- 4513

Toll-free Voice: 1-866-615-NIMH (6464)

TTY: 1-866-415-8051 toll free

Fax: 301-443-4279

E-mail: [nimhinfo@nih.gov](mailto:nimhinfo@nih.gov)

### **National Center for Post-traumatic Stress Disorder**

VA Medical Center (116D)

215 North Main Street

White River Junction, VT 05009

802-296-6300

[www.ncptsd.va.gov](http://www.ncptsd.va.gov)

## **References**

- 1 Shumyatsky GP, Malleret G, Shin RM, et al. *Stathmin, a Gene Enriched in the Amygdala, Controls Both Learned and Innate Fear*. Cell. Nov 18 2005;123(4):697-709.
- 2 Shumyatsky GP, Tsvetkov E, Malleret G, et al. *Identification of a signaling network in lateral nucleus of amygdala important for inhibiting memory specifically related to learned fear*. Cell. Dec 13 2002;111(6):905-918.
- 3 Hariri AR, Mattay VS, Tessitore A, et al. Serotonin transporter genetic variation and the response of the human amygdala. Science. Jul 19 2002;297(5580):400-403.
- 4 Milad MR, Quirk GJ. *Neurons in medial prefrontal cortex signal memory for fear extinction*. Nature. Nov 7 2002;420(6911):70-74.
- 5 Amat J, Baratta MV, Paul E, Bland ST, Watkins LR, Maier SF. *Medial prefrontal cortex determines how stressor controllability affects behavior and dorsal raphe nucleus*. Nat Neurosci. Mar 2005;8(3):365-371.
- 6 Milad MR, Quinn BT, Pitman RK, Orr SP, Fischl B, Rauch SL. *Thickness of ventromedial prefrontal cortex in humans is correlated with extinction memory*. Proc Natl Acad Sci U S A. Jul 26 2005;102(30):10706-10711.
- 7 Gurvits TV, Gilbertson MW, Lasko NB, et al. *Neurologic soft signs in chronic post-traumatic stress disorder*. Arch Gen Psychiatry. Feb 2000;57(2):181-186.
- 8 Brewin CR. Risk factor effect sizes in PTSD: what this means for intervention. J Trauma Dissociation. 2005;6(2):123-130.
- 9 Taylor FB, Lowe K, Thompson C, et al. *Daytime Prazosin Reduces Psychological Distress to Trauma Specific Cues in Civilian Trauma Posttraumatic Stress Disorder*. Biol Psychiatry. Feb 3 2006.
- 10 Ressler KJ, Rothbaum BO, Tannenbaum L, et al. *Cognitive enhancers as adjuncts to psychotherapy: use of D-cycloserine in phobic individuals to facilitate extinction of fear*. Arch Gen Psychiatry. Nov 2004;61(11):1136-1144.
- 11 Pitman RK, Sanders KM, Zusman RM, et al. *Pilot study of secondary prevention of posttraumatic stress disorder with propranolol*. Biol Psychiatry. Jan 15 2002;51(2):189-192.
- 12 Litz BT, Wang J, Bryant R, Engel CC. *A therapist-assisted Internet self-help program for traumatic stress*. Prof Psychol Res Pr. December 2004;35(6):628-634.

---

The New York State Office of Mental Health thanks the National Institute of Mental Health and the National Center for Posttraumatic Stress Disorder for providing the information contained in this booklet.

Printed by the New York State Office of Mental health in July 2008.

New York State  
David A. Paterson, Governor

Office of Mental Health  
Michael F. Hogan, Ph.D., Commissioner

For additional information regarding this publication:

**New York State Office of Mental Health  
Community Outreach and Public Education Office**

44 Holland Avenue  
Albany, NY 12229  
866-270-9857 (toll free)  
[www.omh.state.ny.us](http://www.omh.state.ny.us)

For questions or complaints regarding mental health services in New York:

**New York State Office of Mental Health**

Customer Relations  
44 Holland Avenue  
Albany, NY 12229  
800-597-8481 (toll free)

For information about mental health services in your community,  
contact the NYSOMH regional office nearest you:

**Western New York Field Office**

737 Delaware Avenue, Suite 200  
Buffalo, NY 14209  
(716) 885-4219

**Central New York Field Office**

545 Cedar Street, 2nd Floor  
Syracuse, NY 13210-2319  
(315) 426-3930

**Hudson River Field Office**

4 Jefferson Plaza, 3rd Floor  
Poughkeepsie, NY 12601  
(845) 454-8229

**Long Island Field Office**

998 Crooked Hill Road, Building #45-3  
West Brentwood, NY 11717-1087  
(631) 761-2508

**New York City Field Office**

330 Fifth Avenue, 9th Floor  
New York, NY 10001-3101  
(212) 330-1671

