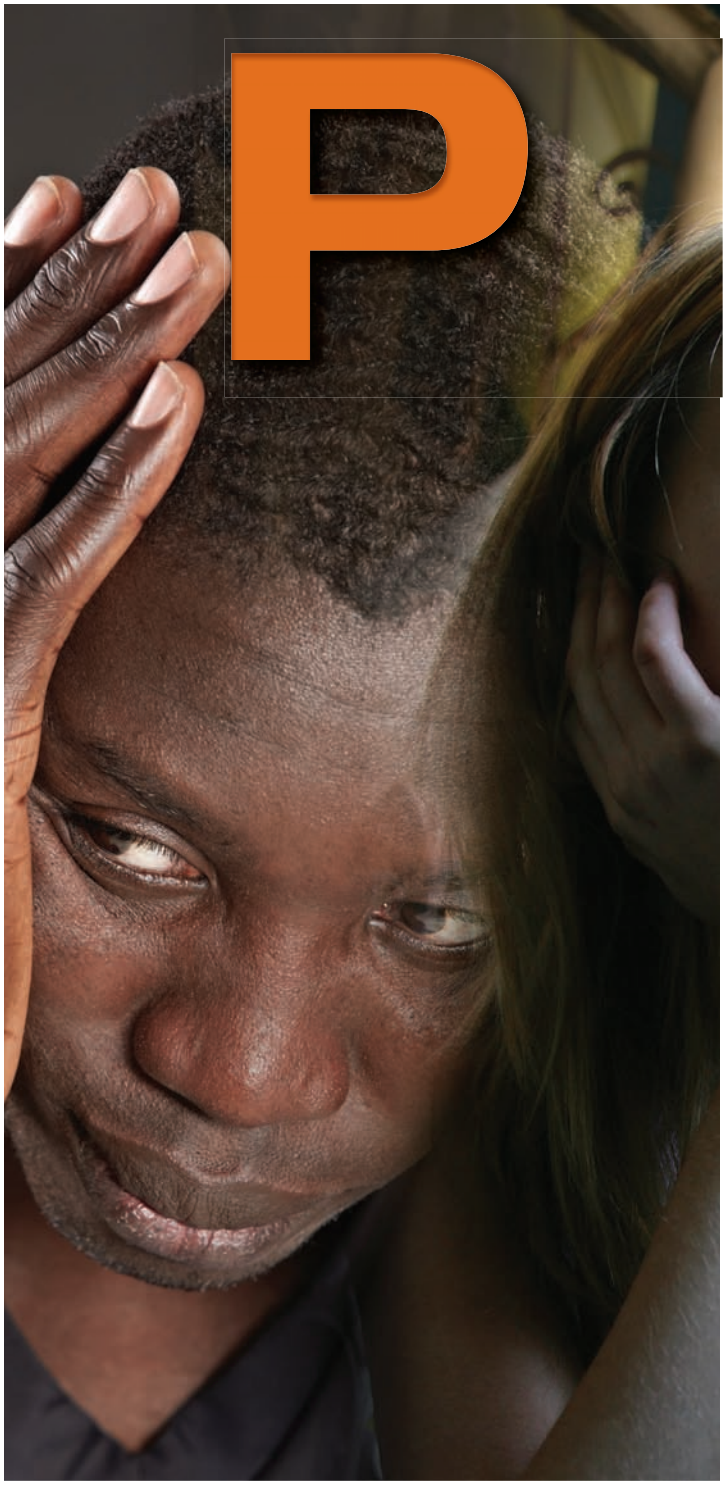
Getting to the bottom of PTSD

Although widely known as a disorder affecting veterans, PTSD can occur in any individual who has experienced a traumatic event. Find out more about this often debilitating condition.

By Kathryn Murphy, DNSc, NP



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Posttraumatic stress disorder (PTSD) is often associated with soldiers returning from the trauma of combat; however, any traumatic event—from sexual assault, child abuse, and elder abuse to extreme weather events and urban violence—can place an individual at risk for PTSD, regardless of age, biological sex, or cultural background.

In the United States, PTSD affects 5 million people each year. Sixty percent of men and 50% of women have experienced at least one traumatic event, but not everyone who experiences a traumatic event develops PTSD. Lifetime prevalence of PTSD is 8%, although it increases in at-risk individuals such as veterans, victims of violence, and child abuse survivors. There's also an increased risk of PTSD in people with occupations such as firefighting, law enforcement, and emergency medical services, and those experiencing a critical medical event, such as cancer survivors, cardiac arrest survivors, and mothers who've experienced perinatal death.

Five diagnostic criteria

In the new *Diagnostic and Statistical Manual of Mental Disorders, 5th edition* (DSM-5), PTSD is no longer considered an anxiety disorder; it's now listed under the new

Diagnosis of PTSD *cheat sheet*

- Exposure to a traumatic event
- Presence of intrusive symptoms
- Avoidance of associated stimuli
- Cognitive and mood dysfunction
- Alterations in arousal

category of trauma and stress-related disorders. There are two related disorders under this new category: PTSD and acute stress disorder. Symptoms are similar in both disorders, but acute stress disorder is time-limited, usually up to 1 month following the traumatic event. If the symptoms continue, then the person is diagnosed with PTSD if five diagnostic criteria are met.

Exposure to a traumatic event

The first criterion is the exposure to a traumatic event in one or more of the following ways: direct experience of the event, in-person witnessing of an event that occurs to others, learning that a close friend or family member experienced the trauma, and repeated exposure to the details of a traumatic event such as with first responders or police officers. This is a change in the diagnosis of PTSD; it isn't necessary for the person to have an intense emotional response at the time of the traumatic event, a criterion that has excluded many veterans and sexual assault survivors in the past.

Presence of intrusive symptoms

The second criterion is the presence of one or more intrusion symptoms, including recurrent involuntary memories of the distressing event, nightmares related to the traumatic event, dissociative reactions or flashbacks that involve feeling the event is happening again, intense psychological distress at exposure to any internal or external triggers that symbolize an aspect of the traumatic event, and marked physiologic reactions to these triggers.

Avoidance of associated stimuli

The third criterion is the continued avoidance of stimuli associated with the traumatic event and includes any behaviors that are used to avoid memories of the event. This avoidance can include people, objects, places, things, and activities that arouse the distressing memories.

Cognitive and mood dysfunction

The fourth criterion is the presence of dysfunction in cognition and mood associated with the trauma. This can include an inability to remember important aspects of the traumatic event; persistent negative expectations of self, others, and/or the world; distorted recollections about the cause or consequence of the event; persistent negative emotional states; feeling isolated or detached from others; and being stuck in the severe emotions related to the trauma.

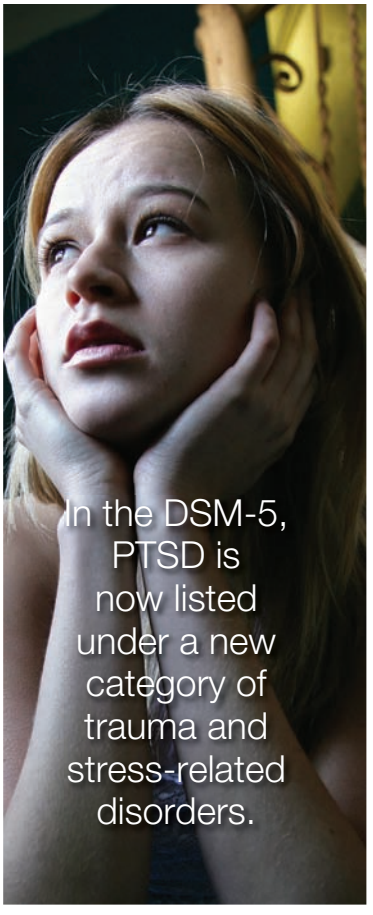
Alterations in arousal

The fifth criterion includes marked alterations in arousal associated with the traumatic event. These symptoms may include difficulty sleeping, increased anger, recklessness or self-destructive behaviors, hypervigilance, and startling easily. All of these criteria are rated for severity and have to be present for at least 1 month, seriously affecting the individual's ability to perform activities of daily living and not due to substance abuse or medical illness.

Children may present with different symptoms after a significant trauma, including bedwetting, forgetting to talk or walk, acting out the trauma during play, and increased dependency on adults. Adolescents may exhibit more aggression, increased conflict with adults, and destructive behaviors.

What's going on in the brain?

Stress normally initiates the autonomic nervous system and limbic system.



Activation of these systems results in an increased release of norepinephrine, flooding the neuronal synapse. Norepinephrine then elicits the physical symptoms of increased heart rate, respirations, and alertness to help the person deal with the perceived stressor. Stimulation of these systems is necessary for a healthy response to stressors, but it's thought that PTSD causes overuse of this system and results in damage to a person's physical and mental well-being.

There have been some studies that point to an endogenous opioid peptide response in the maintenance of PTSD symptoms. This hypothesis suggests the development of a type of addiction to the trauma. Trauma events can enhance production of endogenous opioids in an effort to decrease anxiety and increase feelings of comfort. When the event is over, the person's system may experience opioid withdrawal and the system reacts by trying to reproduce the event so more opioids can be released.

Nonpharmacologic treatment

Because the severity of PTSD symptoms varies from person to person, so does response to treatment. Nonpharmacologic treatment options include exposure therapy, meditation and mindfulness exercises, eye movement desensitization and reprocessing (EMDR), cognitive behavioral therapy, and group therapy.

Exposure therapy

Exposure therapy is a form of behavioral therapy that utilizes relaxation techniques to assist patients to systematically tolerate increased exposure to the memories that trigger the symptoms of PTSD. The goal of exposure therapy is to reduce the fear associated with the traumatic event, helping the patient face and control it. It exposes the patient to the trauma he or she experienced in a safe way using mental imagery, writing, or visits to the place where the event happened.

The therapist uses these tools to help patients with PTSD cope with their feelings and look at their memories in a healthy way. By using exposure therapy, the patient learns to desensitize to small increases in exposure to the memories associated with the traumatic event. The patient can use relaxation techniques to neutralize anxiety that's experienced during this process.

Meditation and mindfulness exercises

Meditation and mindfulness exercises may also be helpful in treating the symptoms of PTSD. This type of therapy can decrease the stress symptoms associated with PTSD, allowing the patient to return to daily life.

Mindfulness exercises include mindful movement, such as stretching, and deep breathing. Mindfulness is hypothesized to better regulate cortisol levels in people with PTSD. Cortisol is a hormone in the body that's released in response to stress. People experiencing PTSD have an exaggerated response to stress, which can deplete cortisol levels. By balancing the cortisol levels, the stress-related symptoms can be decreased. Research with a group of nurses experiencing PTSD symptoms demonstrated that mindful stretching and deep-breathing exercises increased blood levels of cortisol in 67% of the nurses and improved PTSD symptoms in 41%.

EMDR

EMDR helps change how the patient reacts to the memories of the traumatic event. It combines elements of cognitive behavioral therapy with bilateral eye movements. The main idea behind EMDR is dual stimulation. When the trauma occurs, the strong emotions can interfere with the patient's ability to process the event, causing his or her memory to be "frozen" at that time. When the patient

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recalls the event, it results in him or her reliving it as initially experienced with all of the intense emotions and distortions of the time. These memories can have a negative impact on the patient's ability to function normally and interfere with how the person sees him or herself and how he or she relates to others.

The therapist discusses the event with the patient while he or she simultaneously learns to focus on eye movements in an effort to "unfreeze" the brain's processing system (see *EMDR therapy steps*). EMDR is thought to decrease anxiety associated with the event and allow the patient to process the entire event to resolve the trauma.

Research has demonstrated that this form of therapy is successful in reducing the symptoms of PTSD. In an EMDR session, the therapist begins by gently guiding the patient to identify a problem that will be the focus of the traumatic event. As the thoughts and feelings associated with the event emerge, the therapist and patient work together to "redirect" the eye movements that accompany the briefly recalled experience. As the eye movements are redirected, the accompanying emotions can be released. This technique is continued until the dysfunctional emotions are neutralized and positive feelings or thoughts replace them.

For example, a veteran with PTSD may experience negative feelings from a war experience during simple daily activities. During EMDR therapy, the patient will attempt to redirect those negative feelings and decrease the symptoms of the disorder, thus increasing quality of life. EMDR is contraindicated in patients who are suicidal or psychotic, who have substance abuse disorder, and those with a detached retina or glaucoma.

EMDR therapy steps

- With the patient, the therapist discusses the traumatic event that caused the brain to "freeze."
- Simultaneously, the patient is taught to focus on specific eye movements.
- The discussion of the event coupled with the eye movements helps the traumatic memory unfreeze.
- The patient can then process the entire event and resolve the trauma.

Cognitive behavioral therapy

Cognitive behavioral therapy is effective in treating PTSD. In this therapy, the goal is to change the patient's automatic thoughts, which occur spontaneously and lead to dysfunctional thinking. According to this type of therapy, psychological pain is due not to what happens to a person, but what that person thinks the event means. The therapist uses cognitive restructuring to help the patient identify the habitual ways in which he or she reacts to the memories of the traumatic event. The therapist then assists the patient to change his or her thinking about the event and, thus, the emotional response. The patient can then use relaxation techniques to neutralize the anxiety that's experienced during this process.

The cognitive restructuring that occurs with this form of therapy helps patients make sense of the bad memories. Sometimes people remember the event differently than how it happened; they may feel guilt or

shame about what isn't their fault. The therapist helps individuals with PTSD look at what happened in a realistic way.

Group therapy

Group treatment can be an important part of recovery for the patient with PTSD. By listening to each other's stories and sharing problems and effective ways to cope, groups can increase motivation and instill hope. Including family members in group therapy may also be beneficial because the patient's symptoms affect them.

The Internet can be helpful in supporting interventions for patients with PTSD. Virtual self-help groups provide hope and advice for dealing with the effect of the trauma on the patient's life. Web-based cameras can allow family members who live far away to be supportive and involved with treatment. Also, virtual face-to face therapy can be done through sites such as iChat or Skype.

Pharmacologic treatments

Medications that are useful in the treatment of PTSD include selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants (TCAs), benzodiazepines, alpha- and beta-blockers, and medical marijuana (where legal).

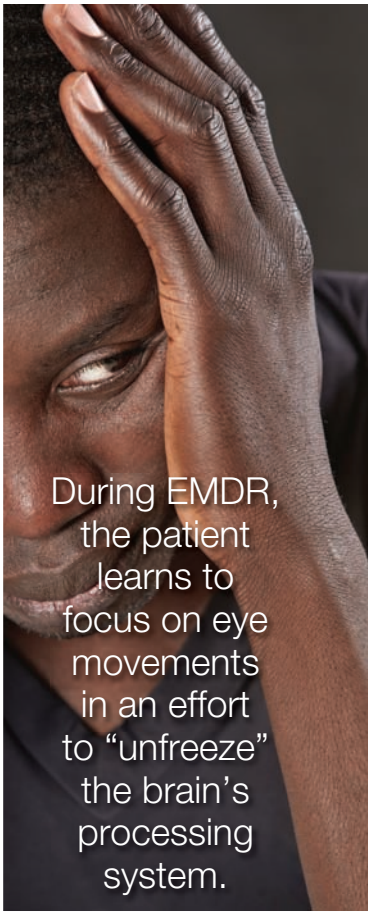
SSRIs

SSRIs, such as sertraline and paroxetine, are FDA approved to treat the symptoms of PTSD. If the symptoms of depression and anxiety that often accompany PTSD are treated, the patient may be more successful in engaging in other forms of psychotherapy.

Potential adverse reactions of SSRIs include sexual dysfunction, gastrointestinal upset, mild sedation, and restlessness. For many patients, these adverse reactions diminish after 2 to 4 weeks of taking the medication. Patients shouldn't abruptly stop taking an SSRI; if they do, they may develop discontinuation syndrome. Symptoms may include dizziness, headache, diarrhea, insomnia, irritability, nausea, and lowered mood.

SSRIs use the same drug-metabolizing enzyme pathway in the liver as other medications, such as anticoagulants, cardiac drugs, and drugs used to treat diabetes. When these drugs get together, it can be a problem: the levels of both drugs may increase or decrease or one drug level may decrease while the other increases. Be aware of this potential problem and be prepared to intervene if the patient is showing signs of a drug-drug interaction with an SSRI. For example, if an SSRI is ordered for a patient taking warfarin, his or her international normalized ratio will need to be closely monitored to ensure adequate anticoagulation. The warfarin dosage may have to be adjusted up or down, depending on how the patient reacts.

Serotonin syndrome is a potentially life-threatening drug interaction. It can occur when two medications that increase the serotonin level are combined, potentiating serotonin neurotransmission. The increased serotonin level throws off the body's autonomic regulation. Symptoms of serotonin syndrome include hyperthermia, restlessness, tachycardia, labile BP, diaphoresis, tremors, and changes in mental status.

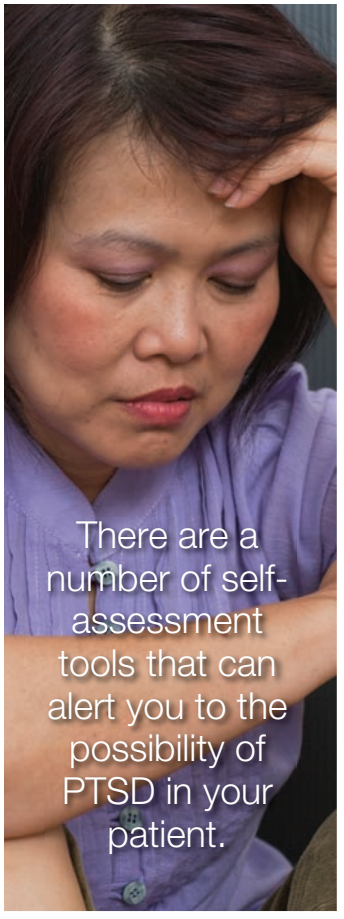


During EMDR, the patient learns to focus on eye movements in an effort to "unfreeze" the brain's processing system.

The PC-PTSD

In your life, have you ever had any experience that was so frightening, horrible, or upsetting that in the past month you:

1. have had nightmares about it or thoughts about it when you didn't want to?
2. tried hard not to think about it or went out of your way to avoid situations that reminded you of it?
3. were constantly on guard, watchful, or easily startled?
4. felt numb or detached from others, activities, or your surroundings?



Serotonin syndrome progresses rapidly; if the early signs aren't promptly recognized, the patient can experience seizures, respiratory failure, and, eventually, a coma. If your patient develops serotonin syndrome, immediately discontinue all medications, notify the healthcare provider, and treat the symptoms.

TCAs

TCAs that can be used to treat PTSD include clomipramine, desipramine, and imipramine. These older antidepressants are less expensive than the newer agents, yet have more unpleasant adverse reactions, including dry mouth, dry eyes, constipation, weight gain, and sedation. Teach your patient to drink plenty of fluids and increase dietary fiber for constipation. TCAs can also cause fatal cardiac arrhythmias, especially when taken as an overdose in suicidal patients. These patients need to be closely monitored when taking TCAs to prevent fatality.

Benzodiazepines

Benzodiazepines that can be used to treat the anxiety that may accompany PTSD include alprazolam, lorazepam, and clonazepam. Common adverse reactions include somnolence, slowed cognition, and abuse or dependency issues. Withdrawal symptoms can occur, so it's important to discontinue these medications slowly. Caution patients about slowed cognition and instruct them not to drink alcohol, operate heavy machinery, or drive while taking a benzodiazepine.

Alpha- and beta-blockers

Alpha-blockers, such as prazosin, and beta-blockers, such as propranolol, can be used to treat the nightmares that may occur with PTSD and hamper good sleep. These medications block the alpha- and beta-adrenergic receptors in the sympathetic nervous system, causing a relaxation response. They're also prescribed to manage hypertension by relaxing the blood vessels, causing vasodilation and a drop in BP. Because of the possibility of hypotension, instruct the patient to rise slowly when changing positions.

Medical marijuana

When a person has PTSD, the memories are recorded and then played back (flashbacks) repeatedly, causing distress and lack of sleep. Throughout time, soldiers have returned from combat unable to put the experience behind them. In today's Iraq and Afghanistan wars, many veterans believe that marijuana not only assists them with the psychological pain, but also helps control flashback memories to allow for restful sleep. Some research hypothesizes that marijuana acts as modulator of emotional response, allowing the painful memory to decrease in severity or actually be forgotten. This allows many veterans to successfully participate in their family and community roles.

Screening tools for PTSD

Screens	Number of items	Minutes to administer
PC-PTSD	4	2
Short Form of the PTSD Checklist	6	2
Short Screening Scale for PTSD	7	3
Trauma Screening Questionnaire	10	4
PTSD Checklist	17	5 to 10

on the web

- **American Psychiatric Association:** http://www.psychiatry.org/ptsd
- **American Psychological Association:** http://www.apa.org/topics/ptsd
- **Anxiety and Depression Association of America:** http://www.adaa.org/understanding-anxiety/posttraumatic-stress-disorder-ptsd
- **National Alliance on Mental Illness:** http://www.nami.org/Template.cfm?Section=Posttraumatic_Stress_Disorder
- **National Institute of Mental Health:** http://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd/index.shtml
- **U.S. Department of Veterans Affairs National Center for PTSD:** http://www.ptsd.va.gov/index.asp

Your role

Nurses are in a unique position in the healthcare setting to actively screen patients for symptoms of PTSD. There are a number of self-assessment tools that you can give the patient to fill out (see *Screening tools for PTSD*). With these tools, the patient answers questions about trauma that can alert you to the possibility of PTSD.

You can also perform a quick screen of four questions called the Primary Care PTSD Screen (PC-PTSD). An answer of yes to three out of the four questions indicates a person is at risk for PTSD (see *The PC-PTSD*).

The patient's health history should include questions about the onset, duration, and severity of PTSD symptoms. Include any complaints of physiologic symptoms, such as lack of sleep, so the patient gets treatment for these symptoms immediately.

After identification of PTSD, the first step is to build trust with a caring attitude and nonjudgmental approach that demonstrates respect for the patient. Encourage the patient to talk about the effects of the PTSD. To provide this open communication, first examine your own feelings about traumatic events, especially if you're a trauma survivor yourself.

Next, talk with the patient about the consequences of PTSD, such as substance abuse, dysfunctional relationships, and job loss. Then talk about the benefits of changing the behaviors, such as reuniting with loved ones and increasing occupational skills. Review with the patient the types of treatment that are available for PTSD and help the patient pick a modality that will work best for him or her. It's important to encourage the patient to engage in and continue with treatment because the process of healing can be a lengthy one.

You can also help the patient identify ways to develop coping skills to deal with trauma triggers that increase symptoms when socializing or working with others. Develop outcomes that indicate healing, such as better sleep patterns, fewer flashbacks, less anxiety, better relationships with loved ones, and a more positive outlook on the future.

Positive outcomes ahead

PTSD is not a new disorder, but it's now classified under a new category of trauma and stress-related disorders in the DSM-5. This change in classification allows more individuals to be diagnosed with PTSD and receive treatment aimed at reducing the symptoms of the disorder. By identifying patients with PTSD and assisting them to engage in therapy, you can help improve their quality of life. ■

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