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Contact Hours: **2**

Posttraumatic Stress Disorder (PTSD)

Symptoms and Treatment in Veterans

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BY Judith Swan, MSN, BSN, ADN; Persis Mary Hamilton, EdD, MSN, BSN, PHN, PMHN

LEARNING OUTCOME AND OBJECTIVES: Upon completion of this course, you will have increased your understanding of posttraumatic stress disorder and your ability to intervene appropriately in the assessment, diagnosis, treatment, and prevention of the disorder, especially with patients who are military veterans. Specific learning objectives include:

- Define posttraumatic stress disorder (PTSD).
- Summarize the epidemiology and etiology of PTSD.
- Identify risk factors for developing PTSD.
- Identify the symptoms and diagnostic criteria.
- Discuss the impact that caring for a person with PTSD has on family and caregivers.
- Discuss appropriate assessment and diagnosis of patients with suspected PTSD.
- Describe current interventions and outcome goals for patients.

INTRODUCTION

The Encyclopedia of Mental Disorders (EMD, 2020) defines posttraumatic stress disorder as “a complex disorder in which the affected person’s memory, emotional responses, intellectual processes, and nervous system have been disrupted by one or more traumatic experiences. It is sometimes summarized as a normal reaction to abnormal events.”

PTSD is classified in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* as a “trauma and stressor-related disorder” and is the only psychiatric diagnosis (along with acute stress disorder) that depends on a factor outside the person—namely, a traumatic stressor that is outside the range of usual experience involving actual or threatened death or serious injury or

assault to self or others. In addition, it is now recognized that repeated traumas or such traumas of long duration (e.g., child abuse, domestic violence, stalking, cult membership, hostage situations) may produce the symptoms of PTSD in survivors (APA, 2013; EMD, 2020).

In 1989, because of a recognized need, the National Center for Posttraumatic Stress Disorder was established within the U.S. Department of Veterans Affairs. Its mission is “to advance the clinical care and social welfare of America’s veterans through research, education, and training in the science, diagnosis, and treatment of PTSD and stress-related disorders” (VA, 2020).

TYPES OF EVENTS LEADING TO PTSD

Posttraumatic stress disorder occurs following exposure to a terrifying, stressful, or frightening event or after prolonged traumatic experience. Types of events that can lead to the development of PTSD include:

- **Interpersonal violence:** childhood physical abuse, witnessing interpersonal violence, physical assault, or being threatened by violence
- **Sexual relationship violence:** rape, childhood sexual abuse, intimate partner violence
- **Interpersonal-network traumatic experiences:** unexpected death of a loved one, life-threatening illness of a child, other traumatic event of a loved one
- **Exposure to organized violence:** being a refugee, kidnapping victim, or civilian in a war zone
- **Participation in organized violence:** military combat exposure or exposure to gang violence, witnessing death or serious injury, discovering dead bodies, accidentally or purposefully causing death or serious injury to others
- **Other life-threatening traumatic events:** life-threatening motor vehicle accidents, gas explosions, fires, infectious disease epidemics, radiation, mass casualties, or natural disasters

(Sareen, 2020)

EPIDEMIOLOGY

Prevalence and Vulnerability in the General Population

About 7 or 8 of every 100 people in the United States will have PTSD at some point in their lives, and about 8 million adults have PTSD during a given year. However, this number represents only a small portion of those who have gone through a trauma.

About 10 of every 100 women develop PTSD sometime in their lives compared with about 4 of every 100 men (Sareen, 2020; NCPTSD, 2019). The rates of PTSD for men and women are similar after events such as accidents, natural disasters, and sudden death of a loved one, but the



incidence of PTSD after rape is higher in men compared to women despite the fact that women are more than 10 times more likely to be raped. The rate of PTSD, however, is lower in men after events such as molestation and physical assault.

Sexual assault is the most frequent type of traumatic event among women with PTSD. Among a representative sample of women in the United States, the lifetime prevalence of PTSD was 12.3%. Of the women who have a history of PTSD, 32% had been raped and 31% were sexually assaulted but not raped (Sareen, 2020).

To date, there have been no population-based epidemiological studies done that examine the prevalence of PTSD among children; however, research indicates that children exposed to traumatic events may have a higher prevalence of PTSD than adults in the general population.

Vulnerability is influenced both by the characteristics of the individual as well as those of the event. Traumas that are intentional have been found to be more closely associated with PTSD than those that are unintentional or nonassaultive (Sareen, 2020).

PTSD and Military Personnel

The number of veterans with PTSD varies by service era. About 20 of every 100 veterans who served during the Iraq and Afghanistan wars have PTSD in a given year. Those who served during the Gulf War have a prevalence of 12 out of every 100 veterans, and those who served during the Vietnam War have a prevalence of 15 out of every 100 veterans. It is estimated that about 30 out of every 100 Vietnam veterans have had PTSD in their lifetime (NCPTSD, 2018a).

PTSD occurring after combat injury develops over several months and correlates with the extent of injury and the occurrence and severity of traumatic brain injury. Nearly 50% of soldiers with combat-related traumatic brain injury met criteria for PTSD (Sareen, 2020).

Another cause of PTSD in the military is military sexual trauma (MST). This includes any sexual harassment or assault, which can happen to both men and women. Among veterans who use Department of Veterans Affairs healthcare services:

- 23 of every 200 women reported sexual assault when in the military
- 55 of every 100 women and 38 of every 100 men have experienced sexual harassment
- Over half of all veterans with military sexual trauma are men
(VA, 2018)

PTSD and Suicide

PTSD is a common risk factor for suicide. Depression, internalized anger, self-hatred, and perceived burdensomeness have been identified as mediating factors between PTSD and suicide risk.



Veterans have a 21% higher suicide rate compared with the nonveteran population. Among those with the highest risk are soldiers recently discharged from inpatient psychiatric hospitalizations. Rates are higher in junior enlisted soldiers deployed either in their first year of service or in those with less than expected promotion for their rank. Rates were also higher among women than men during deployment, and marriage had a protective effect only during deployment (Roy & Perkins, 2020; Giacomoni, 2018).

ETIOLOGY

Although PTSD is always triggered by an external event, it may have roots in one's biology as much as experience. Researchers suspect that genetics may contribute to a person's susceptibility to PTSD through an interaction with environmental factors.

Pathophysiology

The pathophysiology of PTSD is unclear, but some studies have found that PTSD frequently leads to changes in the anatomy and neurophysiology of the brain. These changes include:

- Reduced size of the **hippocampus**, which is probably both a predisposing factor and result of trauma
- Overly reactive **amygdala**, which is involved in processing emotions and modulating the fear response
- Smaller and less responsive **medial prefrontal cortex**, which exhibits inhibitory control over the stress response and emotional reactivity of the amygdala

Alterations in neurohormonal and neurotransmitter functioning have also been found:

- Normal to low circulating levels of **cortisol** despite ongoing stress and elevated levels of corticotropin releasing factor (CRF)
- Hyperactivity of the **sympathetic branch of the autonomic nervous system** causing changes in heart rate, blood pressure, skin conductance level, and other psychophysiological measures
- Elevated **noradrenergic reactivity** to pharmacological challenges
- Altered functioning of other **neurotransmitter systems**, including serotonin, gamma aminobutyric acid (GABA), glutamate, neuropeptide Y, and endogenous opioids



Another theory, the Dual Representation Theory, highlights the presence of two separate systems for memory:

- **Verbally accessible** memory is recorded in the hippocampus and later in general brain memory storage and is able to be modified by reflection. This is characteristic of most nontraumatic memories.
- **Situationally accessible** memory is nonverbal and associated with very strong emotions that engage the amygdala. This is where traumatic memories tend to be stored. They are harder to process, are readily triggered by associations, and more likely to cause emotional distress when activated.

(Sareen, 2020; Gore, 2018)

Risk Factors

Factors that make individuals more likely to develop PTSD after a traumatic event may include:

- Female gender
- Younger age at time of trauma
- Lower education
- Lower socioeconomic status
- Being separated, divorced, or widowed
- Lack of a good support system
- Previous trauma
- Experiencing intense or long-lasting trauma
- Initial severity of reaction to the trauma
- Drug, alcohol, and other substance misuse
- General childhood adversity
- Personal and family psychiatric problems, including anxiety or depression
- Reported childhood abuse
- Occupation choice (e.g., firefighter, EMS, military, police)
- Sleep disorders such as insomnia or sleep apnea

(Sareen, 2020; PTSD Alliance, 2020)



Resilience

Many people are affected by traumatic events, but a majority of them recover from stress reactions and do not go on to develop PTSD. The ability to recover quickly from or adjust easily to traumatic events involves a degree of resilience.

Resilience is the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress. Resilience involves “bouncing back” from difficult experiences, but it can also involve profound personal growth, allowing an individual to grow and improve life.

Resilience involves behaviors, thoughts, and actions that can be learned and developed. Increasing resilience takes time and intention, focusing on four major components: connection, wellness, healthy thinking, and meaning. These include:

- Building connections with others
- Fostering wellness of body and mind
- Finding purpose and meaning
- Learning healthy ways of thinking (e.g., keeping things in perspective)
- Seeking professional help when needed
(APA, 2020)

SYMPTOMS, ONSET, AND COURSE

Symptoms

The *DSM-5* divides PTSD symptoms into four clusters: intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity (APA, 2013).

INTRUSION

Intrusion, one of the core symptom clusters of PTSD, can take the form of unwanted and obsessive thoughts, feelings, sensory experiences, or any combination of the three relating to the experienced trauma. These can include:

- Involuntary, recurrent, and intrusive memories
- Traumatic distressing dreams or nightmares
- Dissociative reactions (flashbacks) in which the person feels or acts as if the traumatic event(s) were recurring
- Intense or prolonged distress postexposure to internal or external cues symbolizing the event(s)



- Marked physiological reactivity postexposure to internal or external cues

AVOIDANCE

Efforts persist to avoid distressing trauma-related stimuli , including:

- Trauma-related thoughts or feelings
- Trauma-related external reminders, such as persons, places, activities, situations, or objects

NEGATIVE ALTERATIONS IN COGNITION AND MOOD

Such alterations in cognitions and mood begin or worsen after the traumatic event and include:

- Inability to recall important feature(s) of the event (dissociative amnesia)
- Persistent and often distorted negative beliefs and expectations about self or others
- Persistent blaming of self or others for the cause of the traumatic event or the consequences following the event
- Persistent negative emotions related to the trauma, such as fear, anger, guilt, shame, or horror
- Greatly reduced interest in normal activities
- Feeling detached or estranged from others
- Persistent inability to experience positive emotions

ALTERATIONS IN AROUSAL AND REACTIVITY

Alterations in arousal and reactivity begin or worsen after the traumatic event and include:

- Irritability or aggressive behavior
- Self-destructive or reckless behavior
- Hypervigilance
- Exaggerated startle response
- Problems concentrating
- Sleep disturbance



Onset and Course

The onset and course of PTSD is unpredictable, and the severity and timing of symptoms are different for each individual. Symptoms may appear immediately but generally present themselves within the first three months following exposure to trauma. There may, however, be a delay of months or even years before criteria are met for the establishment of a PTSD diagnosis.

The course of the illness also varies. Some people recover within 6 months, while others have symptoms that last for months or years. In some people, the condition becomes chronic (NIMH, 2019).

The prognosis of PTSD varies based on a number of factors, including resilience, secondary stresses, the level of support the person has, prior traumatic experiences, ongoing injury, and severity of the stress (Gore, 2018).

CASE

Alex

Alex Moore, age 29, was brought to the emergency department (ED) by his sister. She awoke in the night and found him writing a suicide note at the kitchen table. The smell of alcohol was on his breath, and there were bottles of both pain and sleeping pills beside him. Five weeks earlier, Alex had left his wife in Texas and driven to his sister's home in California. Three weeks after that he got drunk, wrecked his truck, and became dependent on his sister for transportation. When she confronted him at the kitchen table, he said, "I'm no damn good to anyone. You'll all be better off without me." After much pleading, his sister talked Alex into going with her to the local hospital's ED.

In the ED Alex's manner was subdued but somewhat hostile, especially when the staff decided to admit him to the hospital as a "danger to self." His sister gave further history: Alex and his best friend, Loren, joined the Marines together and were stationed in Iraq. They were both trained as medics. Alex and Loren were on patrol one night when a roadside bomb exploded and their vehicle blew up. Loren was engulfed in flames and did not survive, while Alex was thrown free and survived, blaming himself for being unable to save his friend.

Six months later, Alex was discharged from the military and has been functioning poorly ever since. He has not been able to "settle down" or keep a job and has had frequent outbursts of anger, difficulties in his marriage, trouble sleeping, nightmares that he refuses to discuss, difficulty concentrating, and chronic fatigue.

In the hospital Alex was passive, withdrawn, and irritable. He sat stone-faced in group meetings, refusing to participate. He was easily startled by sounds, avoided news programs and movies containing violence, and wandered around the ward checking doors and windows.

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Comorbidities and Consequences

Psychiatric comorbidity is high in patients with PTSD. Data from the National Comorbidity Survey suggests that 16% of patients with PTSD have one coexisting psychiatric disorder, 17% have two disorders, and 50% have three or more. Depressive disorders, anxiety disorders, and substance abuse are two to four times more prevalent in those with PTSD. Approximately 20% have reported use of alcohol or other substances in attempts to self-medicate and relieve tension.

People with PTSD also have increased rates of borderline personality disorder and antisocial personality disorder. These individuals have increased risk of suicide attempts and high levels of traumatic events in childhood.

Traumatic events and PTSD are also associated with physical health problems that include:

- Bone and joint diseases
- Neurologic, cardiovascular, respiratory, and metabolic diseases
- Cardiovascular and pulmonary risk factors, including obesity, dyslipidemia, tobacco use, hypertension, and type 2 diabetes in women
- Autoimmune and vascular dementia
- Traumatic brain injury (TBI) among both civilians and military personnel (Sareen, 2020)

PTSD AND TBI

Among American soldiers returning from combat in Iraq and Afghanistan, 11% screened positive for PTSD, but among those with mild TBI, 62% screened positive. Deployment-related TBI by itself is associated with an increased risk for PTSD during the year following injury (Sareen, 2020).

IMPACTS OF PTSD ON FAMILY

Living with survivors of trauma who are suffering with PTSD symptoms can have profound effects on those closest to them.

Research has found that combat veterans with PTSD have more marital problems and family violence, their partners have more distress, and their children have more behavior problems than those of veterans without PTSD. Veterans with the most severe symptoms have families with the worst functioning. It is believed these veterans have difficulty feeling emotions and may feel detached from others. They experience lower satisfaction in parenting because of the numbing and avoidance that occurs with PTSD. Family members may experience:



- **Sympathy.** Family members may feel sorry for the person, which can be helpful initially. It can have a negative effect, however, when it leads to low expectations of the sufferer, eroding his or her confidence in the ability to recover from the trauma.
- **Depression.** Changes in how the family functions because of the effects of PTSD symptoms on the sufferer can lead to feelings of pain or loss, increasing the risk for the development of depression. If PTSD lasts for a long time, family members may lose hope that the family will ever be “back to normal.”
- **Fear and worry.** When a PTSD sufferer is worried, fearful, and preoccupied with trying to feel safe, it can make others in the family feel unsafe also. Fear is also experienced when the PTSD sufferer is angry or aggressive.
- **Avoidance.** Family members may avoid talking about the traumatic event and avoid the same things the PTSD sufferer does because they do not want to cause further pain or are fearful of the person’s reactions.
- **Guilt and shame.** A family member may feel guilt or shame for many reasons, but especially if he or she feels responsible in same way for the trauma, for example, being unable to protect the person from the trauma.
- **Anger.** Family members may feel angry about the trauma, its effect on their lives, and with whomever is believed to be responsible for the event. They also may feel anger toward the PTSD sufferer who cannot “get beyond the trauma and move forward in life.” Family members may also feel angry and irritable in response to the anger and irritability the trauma survivor directs toward them.
- **Negative feelings.** Family members may begin to feel the person is no longer the same one they knew before the trauma. They may feel negatively about behavior exhibited by the sufferer both during and following the traumatic event. Sometimes family members have these negative feelings even when they know that their assessment of the situation is unfair.
- **Drug and alcohol use.** Family members may attempt to escape from bad feelings by using drugs or alcohol. A child or a spouse might spend time drinking with friends to avoid having to go home. In other situations, spouses may abuse drugs or alcohol to keep the trauma survivor company when the person is drinking or using drugs to avoid trauma-related feelings.
- **Sleep problems.** When the person with PTSD cannot sleep, it may be difficult for family members to sleep as well. Sleep problems may also be due to depression.
- **Health problems.** Bad habits (e.g., drinking, smoking, not exercising) may worsen among family members, and with extended stress, they may become more likely to develop stomach or bowel problems, headaches, muscle pain, and other health problems. (Carlson & Ruzek, 2019; NCPTSD, 2020a)



ASSISTING SUPPORT PERSONS

Primary support persons are family members or close friends who play the roles of advocate, confidant, and “cheerleader.” Healthcare workers are often involved with primary support persons, assisting them to help with treatment and cope with the patient’s symptoms as well as to take care of themselves. It is beneficial if support persons are assisted to:

- **Become educated about PTSD.** The more support persons know about the symptoms, effects, and the treatment options for PTSD, the better they can understand what the patient is going through and keep things in perspective. When support persons are involved in the treatment process, patients experience a reduction in symptoms and the family environment is improved.
- **Avoid exerting pressure but be willing to listen.** Do not try to force the person with PTSD to talk. Support persons should understand that patients may have difficulty talking about their traumatic experiences, and in some cases, talking can make things worse. Support persons can be encouraged to be ready to listen when the patient is ready to speak.
- **Be patient.** It is important for support persons to understand that the process of recovery takes time and that there are often setbacks; the important thing is to remain positive and be patient.
- **Recognize that withdrawal is part of the disorder.** Often the patient may resist help. When this occurs, support persons should allow “breathing room” and let the patient know they are available when the patient is ready to accept help.
- **Offer to attend medical appointments.** When a support person attends appointments along with the patient, it can increase understanding and assistance with treatment.
- **Encourage participation.** Even though it may be difficult for the patient, it is important that support persons encourage the patient to return to a normal routine that includes socialization and celebrating with friends and family.
- **Encourage contact with family and friends.** A support system can help the person get through difficult changes and stressful times.
- **Encourage physical activity.** Exercise provides both physical and psychological benefits. It is important for health and helps clear the mind.
- **Make personal health a priority.** By eating a healthy diet, getting enough exercise and rest, taking time to be alone or with others involved in activities that are rejuvenating, it is easier for support persons to maintain a positive attitude.



- **Seek help if needed.** Support persons who are having difficulty coping can seek help from family, support groups, or healthcare providers, who may refer them to a counselor or therapist.
- **Stay safe.** Recognizing that safety may become an issue, a plan should be in place for the support person and other vulnerable members of the family in the event the patient becomes violent or abusive.
(NCPTSD, 2020b)

ASSESSING AND DIAGNOSING PATIENTS WITH KNOWN OR SUSPECTED PTSD

Soldiers, veterans, and civilians injured by trauma should be screened systematically for PTSD and connected to high-quality mental health services. Primary care patients with new anxiety, fear, or insomnia should be asked about a history of trauma and also screened for PTSD. Others in which PTSD may be a factor are those with anxiety symptoms, social isolation, and increased substance use.

Clinical Interview

Individuals who screen positive for PTSD are referred for additional evaluation, which is typically a face-to-face interview by a health professional trained in diagnosing psychiatric disorders. A face-to-face interview is the **optimal method** of assessment to determine a PTSD diagnosis. Clinical interviews can be structured, semi-structured, or unstructured.

Formal Assessment Tools

Structured and semi-structured interviews are most often conducted utilizing a formal assessment tool. The following are used in the assessment of PTSD in adults:

- **Primary Care for PTSD Screen (PC-PTSD).** A 4-item, self-administered screening tool for use in primary care settings.
- **Clinician-Administered PTSD Scale for DSM-5 (CAPS-5).** A 30-item, structured interview administered by clinicians and appropriately trained paraprofessionals to make a current or lifetime diagnosis of PTSD and to assess PTSD symptoms over the previous week. The full interview takes 45 to 60 minutes to administer (Sareen, 2020).
- **PTSD Checklist for DSM-5 (PCL-5).** A 20-item self-report measure that assesses the 20 *DSM-5* symptoms of PTSD. It is used to monitor symptom change during and after treatment, screen for PTSD, and make a provisional PTSD diagnosis. This tool takes 5 to 10 minutes to complete and can be completed by patients in a waiting room (Sareen, 2020).



- **Life Events Checklist for DSM-5 (LEC-5).** A self-report measure that screens for potentially traumatic events in a patient’s lifetime. It is often used in combination with other tools. There are three formats for LEC-5, including the standard self-report that establishes whether an event has occurred, the extended self-report that establishes the worst event if more than one, and the interview to establish if Criterion A stressor has been met (NCPTSD, 2018b).

ASSESSING THE OLDER ADULT

Assessment of trauma and related symptoms should be routine. Older adults may not readily report traumatic experience or they may minimize their importance, especially if the event(s) occurred a long time in the past.

The recommendations for assessment of an older adult include a full mental status examination, including a cognitive screening. The same “gold standard” assessment tool, CAPS-5, is recommended for the older adult. If dementia is suspected, the patient should be referred for a comprehensive diagnostic evaluation. If delirium or possible medication interaction is suspected, the patient should be referred for medical evaluation.

When interviewing older adults, it should be understood that older patients may talk about problems or respond to questions differently than younger people. They may be less likely to identify problems from a psychological point of view and be more likely to report physical concerns or pain, sleep difficulties, cognitive problems, or gastrointestinal issues. In addition, the older adult is likely to have more medical problems, co-occurring psychiatric problems, and cognitive problems that can complicate the assessment and treatment of PTSD.

Suicide assessment is particularly important in older patients. Older veterans are at greater risk for completed suicide than are middle-aged veterans (Hermann, 2019).

Physical Examination

Any patient presenting with symptoms of PTSD should have a complete history and physical examination to rule out any other causes for symptomatology, such as endocrine, cardiovascular, and neurological disorders. A review of systems and social history should also address the use of over-the-counter medications and mood-altering substances such as prescribed medications, alcohol, marijuana, or other substances of abuse.

Medical Diagnosis

A medical diagnosis is the naming of a disorder based on an assessment of physical signs and symptoms, medical history, and results of diagnostic tests and procedures. The *DSM-5* establishes the criteria required in order to make the medical diagnosis of PTSD, as described in the table below.



MEDICAL DIAGNOSIS OF PTSD	
Criterion	Requirement
A. Stressor	<p>Must be exposed to death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence. Must have one of the following:</p> <ul style="list-style-type: none"> • Direct exposure • Witnessing, in person • Indirect exposure, by learning that someone close was exposed to trauma, and if involved, actual or threatened death must be violent or accidental • Repeated or extreme indirect exposure to details of traumatic event(s) such as experienced in the course of occupation (e.g., EMS personnel, police, firefighters); does not include indirect nonprofessional exposure through electronic media, television, movies, or pictures
B. Intrusion	Must have one of the symptoms in this symptom cluster (see “Symptoms” earlier in this course)
C. Avoidance	Must have one of the symptoms in this symptom cluster (see “Symptoms” earlier in this course)
D. Negative alterations in cognitions and mood that worsened after the traumatic event	Must have two of the symptoms in this cluster (see “Symptoms” earlier in this course)
E. Alterations in arousal and reactivity that began or worsened after the traumatic event	Must have two of the symptoms in this cluster (see “Symptoms” earlier in this course)
F. Duration	Symptoms having persisted for more than one month
G. Functional	Must be significant symptom-related distress or functional impairment in activities of daily living such as socialization and occupation
H. Exclusion	Disturbance not due to medication, substance use, or other illness
<i>Specify</i> whether the person experiences dissociative symptoms	<ul style="list-style-type: none"> • Depersonalization: Recurrent experiences of feeling detached from one’s mental processes or body • Derealization: Persistent or recurrent experiences of unreality of surroundings
<i>Specify</i> if with delayed expression	Diagnostic criteria not met until at least 6 months after the event
(APA, 2013)	



CASE**Alex** (*continued*)

The mental health team evaluated Alex. His physical examination was within normal limits, and a structured interview was conducted using the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5).

An assessment for PTSD diagnostic criteria revealed that Alex was **directly exposed to a stressor** when he experienced the bombing of his vehicle that took the life of his fellow Marine and friend. He was found to have:

- One **intrusive** symptom (nightmares that he refused to discuss)
- One **avoidance** symptom (not watching news programs and violent movies)
- Three **negative alterations in cognitions and mood** that have worsened after the traumatic event (increasing negative thoughts about himself and his self-worth, passivity and withdrawal, and refusing to participate in group meetings)
- More than two symptoms of **alteration in arousal and reactivity** (contemplating self-destruction, irritability and outbursts of anger, trouble sleeping, inability to concentrate, startles easily, hypervigilance in checking doors and windows)
- **Duration** of symptoms persisting for longer than one month

After review of his history it was determined that Alex did not meet the criteria for PTSD until six months after exposure, resulting in the specifier **delayed expression**. Alex also met the criteria for **functional difficulties**, as he describes himself as unable to “settle down” or keep a job and has relationship problems.

A medical diagnosis of “posttraumatic stress disorder with delayed expression” was given to Alex after determining that his symptoms met the criteria as set forth in *DSM-5*.

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Nursing Diagnosis

NANDA International (2018) defines a nursing diagnosis as “a clinical judgment concerning a human response to health conditions/life processes, or vulnerability for that response, by an individual, family, group, or community.”

PTSD is classified as an anxiety disorder, and nursing diagnoses that are appropriate to the patient suffering from PTSD include, but are not limited to:

- Hopelessness/powerlessness
- Fear
- Deficit knowledge



- Ineffective coping
- Sleep pattern disturbance
- Dysfunctional grieving
- Impaired social interaction
- Ineffective relationships
- Social isolation
- Impaired individual resilience
- Risk for suicide and/or self-destructive behavior
(Vera, 2019)

CASE

Alex (continued)

On admission to the hospital, a nursing assessment was completed, which included information obtained by interviewing both Alex and his sister, by observations of his behaviors, and by consultation with other members of the team. A nursing care plan was developed for Alex, including the following nursing diagnoses:

- **Risk for suicide** related to his feelings of helplessness, hopelessness, and worthlessness, as evidenced by his written suicide note and verbal statements to his sister about her being better off without him
- **Ineffective coping** related to PTSD, as evidenced by his inability to keep a job, abruptly leaving his wife, drinking, wrecking his vehicle, and dependence on his sister
- **Sleep pattern disturbance** related to his recurring and distressing dreams of the bombing and explosion as evidenced by verbal statements about having nightmares he refuses to discuss, irritability, and chronic fatigue
- **Dysfunctional grieving** related to the death of his friend in a traumatic event as evidenced by his inability to resume normal activities and responsibilities beyond six months of bereavement
- **Ineffective relationships** related to cognitive and mood alterations as evidenced by irritability, outbursts of anger, marital problems, and leaving his wife

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INTERVENTIONS

Caring for the patient diagnosed with PTSD involves establishing client-centered goals and expected outcomes, setting priorities, and choosing interventions according to the urgency of each problem. Urgency is measured by client safety, client desires, and nature of the treatment.



Interventions for PTSD are generally divided into psychotherapy and pharmacology, with psychotherapy being the primary choice. There are a number of treatment modalities. Some patients respond well to one treatment modality, while others may require a combination of modalities.

Goals and Outcomes

The overall goal for patients with PTSD is to regain a sense of control over life. Following are examples of specific goals and outcomes for a patient diagnosed with PTSD:

- Maintain safety of self and others
- Demonstrate control
- Distinguish between the present and memories
- Recognize triggers
- Receive treatment for comorbid conditions, such as alcohol/drug misuse, depression, anxiety disorders, and panic attacks
- Recognize ineffective coping strategies that correlate to negative outcomes
- Attend support group meetings
- Expand social support network
- Have increased restful sleep periods
- Have fewer nightmares and flashbacks
- Express decreased irritability
- Report feeling control over factors likely contributing to fear
- Demonstrate effective anxiety-reducing techniques, either cognitive or behavioral (Varcarolis, 2018)

CASE

Alex (*continued*)

In planning for Alex's treatment, the most urgent problem is his risk for suicide, followed by a disturbed sleep pattern that impairs thinking. His dysfunctional grieving and ineffective coping should be addressed as he works through and resolves the distressing feelings and memories of the explosion, fire, and death of his friend.

The goals and outcomes for each of Alex's nursing diagnoses are as follows:

- Risk for suicide: Alex will refrain from attempting suicide.



- Ineffective coping: Alex will begin to identify available resources and support systems, describe and initiate alternative coping strategies, and describe positive results from new behaviors.
- Disturbed sleep pattern: Alex will sleep at least seven hours per night without nightmares.
- Dysfunctional grieving: Alex will be able to talk about his lost friend in a therapy group.
- Ineffective relationships: Alex will exhibit appropriate affect and decreased lability.

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Psychotherapy

Psychotherapy is clearly more effective than medication, and the most effective types of psychotherapy for treatment of PTSD are various forms of trauma-focused cognitive behavioral therapy (TF-CBT), with the strongest evidence for prolonged exposure (PE) and eye movement desensitization and reprocessing (EMDR).

Cognitive approaches assist patients to correct false perceptions. They are based on the theory that the meanings we impose on events contribute to our emotional states. Therefore, changing how we think about them can reduce PTSD symptoms and promote a sense of well-being.

Trauma-focused psychotherapies use cognitive, emotional, or behavior techniques to assist in processing the traumatic event, with the trauma focus being the central component of the therapeutic process and including both image exposure and live exposure to safe situations that have been avoided because they elicit reminders of the trauma (Hamblen et al., 2020).

Cognitive Processing Therapy

Cognitive processing therapy (CPT) is one of the most widely researched cognitive approaches, with a primary focus on challenging and modifying maladaptive beliefs related to a trauma. CPT has four main elements and includes a written exposure component:

- Education about PTSD symptoms and how treatment can help
- Developing awareness of thoughts and feelings
- Learning new skills for challenging thoughts and feelings (cognitive restructuring)
- Learning and developing an understanding about the common changes in beliefs that occur after going through trauma

This form of therapy requires 12 regular sessions of 60 to 90 minutes each with a therapist as well as completing practice assignments at home outside of therapy to help improve skills. CPT can be done individually or in a group. Assignments often include hand writing impact



statements that address topics such as why the traumatic event occurred and what it means to the patient (NCPTSD, 2020).

PROLONGED EXPOSURE

Exposure-based treatments involve having patients repeatedly re-experience the traumatic event. They are intended to help patients face and gain control of overwhelming fear and distress following the traumatic experience.

Prolonged exposure (PE) is delivered in 8 to 15, 90-minute sessions, usually on a weekly basis. The key components of PE are:

- **Psychoeducation** about treatment, common reactions to trauma, and breathing retraining
- **Imaginal exposure**, requiring using the imagination to repeatedly retell the trauma memory out loud in present tense with eyes closed, and having the patient listen to an audio recording of the narrative between treatment sessions
- **Live exposure** to places, things, and situations that are being avoided because they cause distress and anxiety, in some cases using virtual reality technology when live exposure is not practical
- **Emotional processing**, focusing on reviewing the experience of exposure and the impact on thoughts related to the self, the world, and the trauma

(Sweeney et al., 2019)

EYE MOVEMENT DESENSITIZATION AND REPROCESSING (EMDR)

EMDR is another form of cognitive-behavioral therapy that can help change how a person reacts to memories of a traumatic event. It is fairly new, and guidelines have been issued by more than one professional organization, boosting its credibility. No one yet knows how this process works, but the mechanisms of EMDR are likely similar to that of other trauma-focused exposure and cognitive therapies, allowing the patient to better control upsetting thoughts.

EMDR does not rely on talk therapy or medications. Instead, it uses a patient's own rapid, rhythmic eye movements. These eye movements dampen the power of emotionally charged memories of past traumatic events. A session can last up to 90 minutes and involves the therapist moving his/her fingers back and forth in front of the patient's face and asking the patient to follow the movement with the eyes. At the same time, the patient is asked to recall the disturbing events, which will include emotions and body sensations that accompany it. Gradually, the therapist guides the patient to shift thoughts to more pleasant ones (Bhandara, 2019).

CASE

Alex *(continued)*

Several times during his hospitalization, Alex met with a social worker, who provided education about the PTSD symptoms he was experiencing and explained how treatment could



help him restore control over his life. During his sessions with the social worker, Alex began to develop an awareness of thoughts and feelings that he had not previously understood were related to his trauma.

The multidisciplinary team's plan of care involved Alex in cognitive-behavioral therapy. Two forms of therapy were felt to be good choices for Alex—cognitive processing therapy and prolonged exposure therapy, which are two of the most common CBT methods used to treat PTSD. A psychologist met with Alex and discussed the theory behind PE therapy to help him understand why he would be asked to do something as scary as reliving his trauma. He was told he would be talking about and reacting to the memories of his traumatic experience, but in the absence of any danger.

During the next session, Alex struggled at first, but with the psychologist's promptings and urgings began talking about the bombing and explosion and how his best friend, Loren, had been killed. He remembered his frantic efforts to try to reach his friend through the flames and smoke. He remembered screaming Loren's name over and over as he watched his friend go up in flames. Again, he felt the fear and frustration of being trapped and helpless as he tried to reach his friend.

During the telling of the event, Alex experienced intense distress and fear and responded physiologically as if he were actually living through the trauma again. He cried softly as he described the death of his friend and repeatedly said, "I'm sorry, I'm so sorry, Loren! I should have saved you. I wish it had been me." During this session the psychologist recorded his description of the trauma and emotional response. Alex was instructed to listen to this recording sometime during the remainder of the day and told that they would repeat the session again the following morning.

Alex also began attending group sessions with an occupational therapist. He learned about the struggles other patients with posttraumatic stress were having trying to move forward to assume normal activities of daily living and responsibilities. He began opening up and talking more freely. The occupational therapist made an appointment with Alex to complete an assessment of the effects PTSD has had on his ability to work.

With continued treatment, Alex gradually experienced less and less fear, anger, and guilt. He was able to remember his experience without reacting to it negatively and began the slow process of incorporating the event into his other lifetime memories.

(continues)

Psychopharmacology

Studies indicate that cognitive-behavioral therapies have greater effects in improving PTSD symptoms than medications, and while a number of medications have been tried, few have been shown to have any efficacy.

The therapeutic goals of pharmacologic therapy are to decrease intrusive thoughts and images, phobic avoidance, pathological hyperarousal, hypervigilance, irritability and anger, and



depression. Drug therapies have been most beneficial in decreasing hyperarousal and mood symptoms (e.g., irritability, anger, depression), but are somewhat less effective for symptoms of re-experiencing, emotional numbing, and behavior avoidance (Stein, 2019).

ANTIDEPRESSANTS

These medications can help reduce symptoms of depression and anxiety. They can also help improve sleep problems and concentration. There are only two FDA-approved medications for treatment of PTSD, sertraline (Zoloft) and paroxetine (Paxil). Sertraline may be particularly useful in women who have experienced sexual or physical assaults.

These medications belong to the class of antidepressants known as selective serotonin reuptake inhibitors (SSRIs). (Serotonin is important in regulating mood, anxiety, appetite, sleep, as well as other bodily functions.) SSRIs are the first-line medications for treatment of PTSD. They do, however, have significant side effects and carry a “black box” warning for suicidal ideation (Gore, 2018).

ANTI-ANXIETY MEDICATIONS

These drugs can relieve severe anxiety and related problems; however, they are **not recommended** for use in PTSD, as they can worsen symptom outcome. They also have potential for abuse. If benzodiazepines are used, it should be short term (e.g., no more than five days), with frequent re-evaluation for side effects. These medications include:

- Lorazepam (Ativan)
 - Clonazepam (Klonopin)
 - Alprazolam (Xanax)
 - Diazepam (Valium)
- (Jeffreys, 2019)

Occupational Therapy

PTSD can be debilitating, with negative impacts in many areas of a person’s life, making it difficult to carry out the normal activities of daily living. Broad areas affected can include health and safety, money management, self-care, transportation, work, relationship duties, and community participation. PTSD also affects a person’s executive planning abilities such as time management and concentration or paying attention.

Occupational therapists work with patients who have PTSD across the lifespan and in all phases of recovery. Following a comprehensive and collaborative evaluation to identify the individual’s strengths and barriers to occupational performance and their causes, OTs provide individual and group therapy sessions that are often done in collaboration with other professionals.



Occupational therapy interventions include, but are not limited to:

- Providing individual and/or group sessions that focus on:
 - Trauma triggers and warning signs
 - Developmental issues related to early childhood trauma
 - Symptom stabilization
 - New coping, health, and wellness strategies such as stress management, relaxation techniques, and sensory processing-related techniques
- Training clients, caregivers, and interdisciplinary staff in:
 - Adaptive or modified self- and home care, work, or school-based strategies to avoid inadvertent triggering of hypersensitivity patterns, dissociation, flooding, or flashbacks
- Assisting patients to increase participation in meaningful roles and activities, such as:
 - Creating and using a daily schedule to identify triggers and helpful strategies
 - Identifying and obtaining the type and amount of supports necessary for successful participation
 - Creating and using a sensory diet (a plan of specific activities and experiences used to help balance the nervous system and sensory processing)
 - Implementing exposure techniques
- Assisting patients and caregivers in determining needs and resources for home modification for those with physical barriers to participation
- Promoting veterans' awareness of the impact of wartime driving experiences on PTSD and assisting them in addressing reactions to civilian driving situations (AOTA, 2015)

OCCUPATIONAL THERAPISTS AS QMHPs

Occupational therapists are considered qualified mental health providers (QMHPs) in many states. Occupational therapists in these states and many others are qualified to address mental health needs of individuals and receive reimbursement. In some cases, a state may use a term other than *QMHP*, such as, *mental health professional*, *mental health practitioner*, or *other qualified persons* under the definition of a QMHP, which would also mean that in these instances, OTs are qualified mental health practitioners in these states. Additionally, some states do not have a definition within their state's statutes or regulations, however this definition may be included within the Medicaid manual of the state.



CASE

Mickey

Mickey, an Army veteran, returned home from Iraq, where he drove trucks in combat zones. He was diagnosed with PTSD as a result of this combat experience. Since his return, he has been involved in two minor automobile accidents and received a citation for “inattentive” driving when he was straddling two lanes on the highway.

His psychiatrist was aware that many returning combat veterans have difficulty returning to civilian driving, and their behaviors often were viewed as “road rage” or thrill-seeking. Increasingly, however, these driving behaviors have been identified as symptoms of either a traumatic brain injury or PTSD. For this reason, the psychiatrist referred Mickey to the North Central Rehabilitation Center for assessment and assistance with driving in a civilian setting.

Carlos, an occupational therapist who is also a certified driving rehabilitation specialist, received the referral and met Mickey for the first time a few days later. At this initial meeting, Mickey learned that the goal of the following sessions would be to conduct a routine assessment and a comprehensive driving evaluation, which was expected to take approximately three hours to complete.

The first part of the evaluation was done in the office. During the initial session, Carlos conducted an examination of Mickey’s physical, visual, and mental abilities required for safe driving, including his reaction time, basic visual acuity, and decision-making.

At the following session, Carlos introduced Mickey to the driving simulator, a technology that provides the illusion of driving an actual vehicle. PTSD response triggers were programmed into two driving scenarios designed to elicit a reaction from the driver. In this instance, nine triggers were included in a simulated rural/suburban drive and ten triggers included in a city/highway drive. The triggers were combat-related and included disabled vehicles, trash at the side of the road, dead animals, unexpected maneuvers made by other drivers, loud helicopter sounds, and engines backfiring.

In the following session during the simulated driving experience, Carlos recorded the number and types of errors Mickey made as well as the verbal responses he made in reaction to the triggers. Mickey’s most common errors were in lane maintenance and vehicle positioning. Following the session, Carlos and Mickey developed a plan of intervention strategies to help overcome Mickey’s combat mindset and improve the skills that are demanded by civilian driving.

Physical Therapy

Physical therapists are not involved in the primary treatment of PTSD but may work with those patients who have experienced an injury sustained during a trauma event that requires physical therapy interventions. Additionally, those with PTSD often experience chronic pain as a result of the complexity of the disorder, in which case the role of the physical therapist in PTSD management is one of mitigating chronic pain.



Chronic pain often occurs concurrently with PTSD, and the occurrence of both disorders tends to negatively affect the treatment outcome for each. Because of the high incidence of comorbidity of PTSD and chronic pain, physical therapists should evaluate patients with PTSD for the presence of chronic pain using a pain measure instrument, such as:

- West Haven-Yale Multi-dimensional Pain Inventory (WHYMPI), a self-report questionnaire that may be administered by a qualified therapist or research assistant and takes 20 minutes to complete
- McGill Pain Questionnaire (MPQ), a self-report questionnaire and one of the most widely used pain scales, which allows patients to describe the quality and intensity of their pain and is divided into three categories: sensory, affective and evaluative

Physical therapists are able to help patients build positive self-efficacy. This is accomplished through cognitive restructuring, development of healthy coping skills, and learning to use relaxation responses. Techniques such as situational exposure exercises and interoceptive exposure exercises are used to help decrease catastrophizing and avoidance.

Exposure therapy involves creating a safe environment in which the patient can be exposed to the things feared and avoided. The exposure to these feared objects, activities, or situations helps reduce fear and decrease avoidance.

Interoceptive exposure is a cognitive behavioral technique that can test the expectation that the physical sensations being experienced by a patient with a disorder such as PTSD are intolerable. By triggering feared sensations, patients can gain greater tolerance to distressful feelings and can learn to refute the validity of incorrect beliefs about those sensations, resulting in reduced sensitivity to them.

Physical therapists also provide patient education regarding how PTSD and pain can facilitate each other and result in avoidance. As the individual increases participation in healthy activities, co-occurring disorders such as depression, anxiety, panic, and substance abuse may decrease, resulting in a higher quality of life (O'Sullivan et al., 2019).

Complementary and Integrative Approaches

There is a growing body of research supporting the use of complementary and integrative treatment modalities for PTSD. Clinicians can use modalities such as mindfulness-based interventions and yoga when treating patients with PTSD.

MINDFULNESS-BASED INTERVENTIONS

Mindfulness-based interventions (MBIs) involve paying attention in a particular manner, on purpose, in the present without making any judgments. Present-centered awareness and nonjudgmental acceptance may function as indirect exposure to trauma-related stimuli, both internal and external, resulting in a reduction of behavioral avoidance and physiological arousal.



Present-centered awareness diminishes worry and catastrophic thinking, and through this training, the patient is able to gain an understanding that cognitions and beliefs are mental phenomena rather than facts. Hyperarousal and the behavioral elements of PTSD are also affected positively or lessened by MBIs.

Several benefits may result from using MBIs to strengthen evidence-based, trauma-focused psychotherapies that do not already emphasize mindfulness. These interventions can assist with engagement, facilitate preparation for involvement in trauma-focused psychotherapies, and foster adherence to treatment. MBIs can also help maintain the patient's commitment to the further development of the skills learned in treatment (Sornborger et al., 2017).

YOGA

Yoga involves a combination of physical postures, controlled breathing, meditation, and yogic ethics and philosophy. Yoga has been associated with improvement in depression, anxiety, and stress, with few to no side effects.

Yoga is believed to restore balance in the autonomic nervous system and enhance interoceptive awareness. Its effects may also be mediated by increased mindfulness and self-compassion. This can assist trauma survivors to approach symptoms with acceptance and potentially decrease reactivity and avoidance behaviors.

Clinicians should be aware that it is important that yoga be considered a possible adjunctive intervention for PTSD and not a foundational or stand-alone treatment (Gallegos et al., 2017; Sornborger et al., 2017).

Evaluation of Interventions

Identified goals and outcomes serve as a basis for evaluating the effectiveness of interventions for survivors of PTSD. The **primary outcome is symptom reduction**. This is evaluated using clinician-rated and self-reported measures that address the symptoms the patient presented with, and asks if they have lessened, remained the same, or increased. Other goals to be evaluated include:

- Have comorbid medical or psychiatric conditions been prevented or reduced?
- Has there been a remission of all symptoms?
- Has the patient's quality of life improved?
- Has the patient effectively dealt with disability/functional impairment?
- Has the patient returned to work or to active duty?



CASE**Alex** *(continued)*

Six months after he began treatment, Alex meets with his healthcare provider. In evaluating his treatment, she determines that he has achieved the following goals:

- He no longer has thoughts of suicide.
- His symptoms have lessened to a great extent, and most days he is functioning well.
- He has not reported any signs or symptoms of depression or anxiety.
- His sleep has improved, and most nights he sleeps undisturbed for 6 to 7 hours.
- He no longer feels angry and has not had any outbursts for over 3 months.
- Alex has returned to his wife, and they are now involved in family counseling.
- He is able to talk about the loss of his friend and recognizes he was not to blame for his death.
- Although he continues to have a drink now and then, he has refrained from abusing alcohol or other substances.
- Alex reports he still has memories of the trauma, but he no longer responds physiologically to them. Emotionally he says that he “just feels sad” when he remembers.
- Last month he began part-time employment with the local ambulance service in the role of EMT dispatcher, where he is able to utilize the knowledge he gained as a medic in the Marines.

CONCLUSION

The American Psychiatric Association first introduced the diagnosis of PTSD in 1980, and since then it has been the subject of much ongoing study and research. Evidence shows that there are numerous and variable situations that can lead to the development of PTSD as well as a variable time span in which the disorder may make itself known. There is yet much to be learned about this complex disorder and how best to treat it. It is necessary, however, that healthcare professionals, regardless of the specialty or clinical situation in which they work, have a baseline understanding of how this disorder presents and the most current interventions available to both patients and support persons.

Healthcare professionals should make veterans under their care aware that specialists provide regular outpatient care to veterans with PTSD symptoms in each VA medical center in the United States, even if there it has no specific PTSD program. Special residential or inpatient care programs can be found in each region of the country, and providers offer added PTSD care in



some of the VA's large community-based outpatient clinics. VA medical centers or clinics can also provide counseling via telemental healthcare.



RESOURCES

National Center for PTSD (U.S. Dept. of Veterans Affairs)
<https://www.ptsd.va.gov/>

Posttraumatic stress disorder (National Alliance on Mental Illness)
<https://www.nami.org/About-Mental-Illness/Mental-Health-Conditions/Posttraumatic-Stress-Disorder>

PTSD Alliance
<http://www.ptsdalliance.org/professionals/>

PTSD treatment (U.S. Dept. of Veterans Affairs)
<https://www.va.gov/health-care/health-needs-conditions/mental-health/ptsd/>

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1. The diagnosis of posttraumatic stress disorder is classified in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* as a:
 - a. Mental disorder occurring among veterans with combat-related trauma.
 - b. Mental disorder dependent upon internal factors.
 - c. Trauma and stressor-related disorder.
 - d. Anxiety and depressive disorder.

2. Which is a **correct** statement regarding the epidemiology of PTSD?
 - a. Men are twice as likely to be diagnosed with PTSD as women.
 - b. Suicide risk is higher among persons with PTSD.
 - c. Female veterans are rarely diagnosed with PTSD.
 - d. Veterans with traumatic brain injury are less likely to be diagnosed with PTSD.

3. Which is a **correct** statement regarding the etiology of posttraumatic stress disorder?
 - a. It involves the medulla and the pons.
 - b. It is caused by an excess of cortisol secretion.
 - c. It has an unclear pathophysiology.
 - d. It is caused by lower levels of epinephrine and norepinephrine.

4. A factor that increases a person's risk for developing PTSD is:
 - a. Being female.
 - b. Being highly intelligent.
 - c. Having a higher socioeconomic status.
 - d. Belonging to the White race.

5. Which is a core symptom of PTSD that involves experiencing recurrent, unwanted distressing memories of the traumatic event?
 - a. Intrusion
 - b. Avoidance
 - c. Negative alterations in cognitions and mood
 - d. Alterations in arousal and reactivity



- 6.** Which is a **correct** statement about the impact of PTSD on the family?
- It does not affect the children.
 - It contributes to family unity.
 - It causes sympathy, which has a long-term positive effect.
 - It increases the risk for depression in family members.
- 7.** Which is a **correct** statement concerning a clinical interview when assessing a patient for PTSD?
- Clinical interviews are optimally highly structured.
 - Interviews should be conducted only by primary care providers.
 - A face-to-face clinical interview is the optimal method for assessment.
 - A formal assessment tool is typically not used for suspected PTSD.
- 8.** The duration criterion for a posttraumatic stress disorder diagnosis states that patient symptoms must have persisted for:
- At least one year after the event.
 - Less than one week after the event.
 - Longer than one month after the event.
 - Two years or more after the event.
- 9.** A fairly new cognitive therapy approach that can help change how a person reacts to memories of a traumatic event is called:
- Eye movement desensitization and reprocessing.
 - Exposure avoidance therapy.
 - Psychopharmacology.
 - Cognitive processing therapy.
- 10.** The primary outcome of effective intervention for patients with PTSD is the:
- Absence of comorbid conditions.
 - Remission of all symptoms.
 - Reduction of symptoms.
 - Resumption of work or active duty.