Posttraumatic Stress Disorder (PTSD) for West Virginia Nurses
Mental Health Conditions Common to Veterans

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

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

- Define posttraumatic stress disorder (PTSD).
- Summarize the epidemiology of posttraumatic stress disorder in the United States and West Virginia.
- Explain the etiology.
- Identify risk factors for developing PTSD.
- Discuss the impact that caring for a person with PTSD has on family, friends, and healthcare providers.
- Identify the symptoms and diagnostic criteria.
- Discuss medical and nursing procedures to screen patients when PTSD is suspected.
- Describe current PTSD treatment modalities.
- Recognize the principal outcome goals for patients and support persons dealing with PTSD.
INTRODUCTION

The Encyclopedia of Mental Disorders (EMD, 2017) 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 (APA, 2013; Mayo Clinic, 2017).

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 was and 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” (NCPTSD, 2011).

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 refuge, kidnapped, or civilian in a war zone

- **Participation in organized violence:** Military combat exposure, 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

EPIDEMIOLOGY

Prevalence and Vulnerability

In the United States, 7.7 million Americans age 18 and older have PTSD. Lifetime prevalence of PTSD ranges from 6.8% to 12.3% in the general adult population, with women (10.4%) twice as likely as men (5%) to have PTSD at some point in their lives. According to a study of 368 individuals, 65% reported a history of being exposed to potential or actual severe traumatic events, and of these 12% went on to develop PTSD (Sareen, 2017).

Sixty-seven percent of people exposed to mass violence (human-caused tragedies) have been shown to develop PTSD, a higher rate than those exposed to natural disasters or other types of traumatic events (Gradus, 2017).

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. The rates of PTSD among men and women are similar following such events as accidents, natural disasters, and the sudden death of a loved one. Men develop PTSD at a higher rate than women following an incidence of rape, even though women experience rape 10 times more often than men. PTSD development, however, is higher in women following events such as molestation and physical assault.

Sexual assault is the most frequent type of traumatic event among women with PTSD. Among women who have a history of PTSD, 32% had been raped and 31% were sexually assaulted but not raped (Sareen, 2017).

PTSD and Military Personnel

Among veterans of the Iraq and Afghanistan wars, PTSD has been reported at 20%—with a range of 9% shortly after returning from deployment to 31% a year after deployment (Veterans and PTSD, 2015).

The occurrence of PTSD following combat injury has been correlated strongly with the extent of the injury and with the occurrence and severity of a traumatic brain injury. Almost 50% of soldiers with traumatic brain injury meet the criteria for a diagnosis of PTSD (Sareen, 2017).

Among female veterans, the prevalence of PTSD keeps pace with male veterans (20%). However, because only 11% to 17% of female veterans get their care through the VA, where prevalence data is often obtained, as compared to 26% of male veterans, the full effects of PTSD in female veterans is still unknown (NVF, 2015).

West Virginia ranks 36th among the 50 states for veteran population. In the fiscal year 2015, there were 165,709 veterans, approximately 10,000 of them female. The greatest number of veterans in the state are 65 to 69 years old (VA, 2016a).
PTSD and Suicide

Suicide risk is higher in trauma survivors, and studies show that suicide risk is also higher in persons with PTSD (Hudenko et al., 2017). Among people who have had a diagnosis of PTSD at some point in their lifetime, approximately 27% have also attempted suicide (Tull, 2017).

Among United States veterans, current analysis indicates an average of 20 veterans a day die from suicide (VA, 2016b). According to the National Association of Veterans Serving Organizations, 9% of West Virginians were military veterans, and from 2010 to 2013 veterans made up about 23% of state suicides (Beck, 2015).

ETIOLOGY

Although PTSD is always triggered by an external event, it may have roots in one’s biology as much as experience. Studies have shown there are biochemical, physiologic, and sociocultural causes as well as occupational factors and personal variables involved in the development of PTSD.

Neurological Basis of Memory and Trauma

When an individual is experiencing a traumatic event, there is a heightened emotional status and an elevated signal for storage of the event in the memory in an interconnected neural network, and a trauma network is established. This trauma network includes the sensory, cognitive, physiological, and emotional experience and also includes the action or response the person made to it (“fight or flight”).

Environmental stimuli (such as a noise or a smell) or an internal stimulus (such as a thought) can activate this trauma network later at any given time. At some point, the activation of only a few elements in the network is enough to activate the whole structure, and the activation of the whole structure is thought to be a flashback, one of the cardinal symptoms of PTSD (Czeh & Fuchs, 2016).

Pathophysiology

Stress is an essential and normal physiological response to the environment and greatly influences memory. Stress is the number one risk factor in the development of PTSD, and prominent memory disturbances are a central feature of this disorder.

Pathophysiological research to date has focused on areas of the brain associated with processing fear and memory. These areas are the hippocampus, the amygdala, and the medial prefrontal cortex, including the anterior cingulate gyrus (which is a part of the limbic system involved with the processing of emotions and the regulation of behavior as well as regulating autonomic motor function).
Both the hippocampus and amygdala are key elements in human memory. The hippocampus is responsible for the processing and storage of short-term memory, and the amygdala is responsible for activities that include emotion and moods and appears to modulate all reactions to events that are important to survival.

Neurobiological researchers currently are focused on:

- **Structural changes in the brain.** The reduction in the size of the hippocampus visible on brain imaging has been found to occur in individuals with chronic or complicated PTSD and is believed to be caused by an overproduction of cortisol.

- **Regulation of the amygdala.** The failure of the medial prefrontal-anterior cingulated networks to regulate amygdala activity has been found to result in a hyperactive response to threat. An over-reactive amygdala can tell the person that what is in reality a safe situation is threatening.

- **Hypothalamic-pituitary-adrenal (HPA) axis.** The HPA is the major mechanism by which the body responds to stress. Those with PTSD have abnormal levels of stress hormone (lower levels of cortisol, higher levels of epinephrine and norepinephrine).

- **Neurochemical pathways.** What has not been understood to this point is the neurochemical pathways that lead to impaired hippocampal-dependent memory (BMJ, 2017; Nursey & Phelps, 2016; Matosin & Cruceanu, 2017).

- **Genetics and inflammation.** More recently, researchers have implicated immune genes as biomarkers in risk for PTSD. Such studies are addressing the molecular mechanism that could be underlying the immune system tipping toward a dysregulated inflammatory state in PTSD (Wang & Young, 2016).

**Risk Factors**

Numerous causes beyond the precipitating trauma can increase the risk for development of PTSD.

**Pretraumatic Risk Factors**

- An earlier life-threatening event or trauma such as child abuse
- Childhood emotional problems before age 6 years
- Having another mental health problem
- Having a family member with mental health problems
- Recent loss of a loved one, especially if not expected
- Recent stressful life changes
- Choice of occupation (e.g., firefighter, police, EMS, military)
• Heavy use of alcohol
• Being female
• Being poorly educated
• Lower intelligence
• Lower socioeconomic status
• Minority racial/ethnic status
• Genetic factors (however, no specific genes associated with PTSD risk have as yet been identified)

**Peritraumatic Risk Factors**

• Greater the severity of the trauma, greater the risk for PTSD
• Greater perceived threat to life
• Feeling helpless
• Uncontrollability of the event
• Whether the traumatic event was intentional (disaster or accident) or deliberate (combat, assault, abuse)

**Posttraumatic Risk Factors or Recovery Environment**

• Little or no support from family and friends
• Life stressors following trauma
• New trauma
• Resilience
• Being male
• Younger age
• Heavy use of alcohol

(Hamblen, 2017)

**Resilience**

It is important to note that not everyone who experiences a traumatic event goes on to develop PTSD. In fact, most people do not, as resilience factors can help reduce the risk of the disorder (NIMH, 2016).

People respond to trauma in remarkably different ways. When a group of unrelated individuals is exposed to the same traumatic event, one person may develop a full-blown stress disorder lasting for months or years; one may become depressed and suicidal; and another may experience only mild, transient symptoms.
Resilience is thought of as “bouncing back” from harm. It is the process of adapting well in the face of adversity, tragedy, trauma, or other significant threats or stress. Resilience involves behaviors, thoughts, and actions that can be learned and developed.

A combination of factors contributes to resilience, primary of which is having caring and supportive relationships within and outside the family. Other factors include:

- The capacity to make realistic plans and take steps to carry them out
- A positive self-image and confidence in strengths and abilities
- Communication and problem-solving skills
- A capacity to manage strong feelings and impulses

(APA, 2017a)

**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 is a core symptom of PTSD and 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 to avoid distressing trauma-related stimuli may persist, including:

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

NEGATIVE ALTERATIONS IN COGNITIONS 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.

Individuals who have an immediate onset of symptoms have been found to have a better response to treatment, less severe symptoms, fewer associated symptoms or complaints, and symptom resolution within six months.

Approximately 25% experience a delayed onset after six months or more. These individuals go on to develop associated symptoms and conditions, and PTSD is more likely to become chronic. Delayed onset has a worse prognosis for recovery. One third of patients with delayed onset recover after one year, but one third remain symptomatic 10 years following exposure (APA, 2017b).

CASE

Alex, Age 29

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 six years ago 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

Persons with PTSD very commonly have other mental health problems or disorders. Having a mental disorder prior to exposure to trauma appears to increase the chance of the development of PTSD; but having PTSD also seems to increase the risk for the development of other mental health disorders (NCPTSD, 2017a).

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 (Sareen, 2017).

Common comorbidities among patients with PTSD include:

- Depression, which often occurs after exposure to trauma
- Higher rates of borderline personality disorder (BPD) and antisocial personality disorder
- Substance use disorder (SUD), which often occur together
- Chronic pain, which elevates the prevalence of PTSD
- Neurocognitive disorders, which may increase PTSD symptom severity
  - Dementia
  - General cognitive impairment
  - Mild traumatic brain injury

Among its consequences, PTSD may lead to poor health outcomes, such as:

- Cardiovascular disease
- Thyroid or other hormone problems
- Increased risk for infections
- Increased risk for immunological disorders
- Increased risk for gastrointestinal and musculoskeletal disorders

Suicide ideation or attempts also significantly increase in those with PTSD.

(NCPTSD, 2015a; Sareen, 2017; NCPTSD, 2017a; DeCarvalho, 2016; Yoder & Normal, 2016; Jankowski, 2016; Hudenko et al., 2017)
IMPACTS OF PTSD

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

Impact on Intimate Partners

There is a strong association between PTSD and intimate relationship problems: a higher rate of divorce, greater impairment in emotional expressiveness, more verbal and physical aggression against partners and children, and more sexual dysfunction. Partners of individuals with PTSD also report a greater incidence of individual difficulties such as depression, anxiety, and caregiver burden (Pukay-Martin et al., 2016).

Impact on Family Members

PTSD can cause major difficulties within the family. PTSD symptoms make it difficult for family members to cope with and get along with the sufferer. Reactions of many family members can include:

- **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 some 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, 2016)

**Impact on Healthcare Professionals**

One of the special characteristics of healthcare professionals is the ability to share the emotions of someone who is suffering. This is referred to as *empathy* and can be extremely beneficial to a patient’s well-being. A step beyond empathy is compassion. Compassion is more engaged than simple empathy and is related to an active desire to alleviate another’s pain.

Research has shown that health professionals working with trauma patients may experience PTSD symptoms as an indirect response to their patients’ suffering. This has been referred to as *compassion fatigue* or *vicarious traumatization*, which describes the profound emotional and physical erosion that occurs when persons in the helping professions are unable to replenish and rejuvenate.

Compassion fatigue and vicarious traumatization develop over time, sometimes taking weeks or even years to emerge. It is a low-level, chronic clouding of caring and concern for others. An erosion of the ability to feel and care for others occurs through the overuse of the skills of compassion. Emotional blunting may occur, and the individual may react to situations differentially than would normally be expected (Oshberg, 2017).

**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 family environment is improved.

- **Avoid 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. They 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 he/she 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 him or her 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.

Source: NCPTSD, 2015b.
ASSESSING PATIENTS WITH KNOWN OR SUSPECTED PTSD

There is a wide range of professionals who interact with people at risk for developing PTSD and those who have PTSD whether or not they have already been diagnosed. Healthcare professionals are critical in facilitating the recovery process if they routinely incorporate the following into practice:

- Being alert to recognize and identify PTSD symptoms
- Utilizing screening tools for PTSD as part of a general health assessment (e.g., Primary Care PTSD Screen, Trauma Screening Questionnaire, SPAN)
- Exploring the possibility of PTSD as an underlying problem when appropriate
- Being familiar with local referral options for further assessment and directing patients to appropriate referrals when necessary
- Offering support to patients and families

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:

- **Clinician-Administered PTSD Scale for DSM-5 (CAPS-5).** This is the “gold standard” in PTSD assessment. It is a 30-item structured interview designed to be administered by clinicians and appropriately trained paraprofessionals. The interview is used 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, 2017).

- **PTSD Checklist for DSM-5 (PCL-5).** This is 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, 2017).
• **Life Events Checklist for DSM-5 (LEC-5).** This is a self-report measure that screens for potentially traumatic events in a patient’s lifetime. It assesses exposure to 16 events known to have the potential to result in PTSD and includes one additional item to assess for any other extraordinarily stressful event not captured in the first 16 items. 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 worse event if more than one, and the interview to establish if Criterion A stressor has been met. (NCPTSD, 2017b)

**ASSESSING THE OLDER ADULT**

The recommendations for assessment of an older adult include a full Mental Status Examination, including a cognitive screening. 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.

The same “gold standard” assessment tool, CAPS-5, is recommended for the older adult. When interviewing older adults, it should be understood that older patients may talk about problems or respond differently to questions 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.

Veterans, for example, may attribute problems to more current issues and the aging process, and may not relate symptoms that occurred long ago. PTSD stress symptoms were often overlooked in older adults because PTSD is a fairly recent identified disorder, and older adults who were exposed to traumatic events earlier in life and had symptoms following them were not identified.

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 (Hermann, 2017; Kaiser et al., 2017).

**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.
# DIAGNOSIS

## 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.

<table>
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<tr>
<th>MEDICAL DIAGNOSIS OF PTSD</th>
<th>Requirement</th>
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| **A. Stressor**           | Must be exposed to death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence. Must have one of the following:  
• 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

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<th>Specify whether the person experiences dissociative symptoms</th>
<th>Disturbance not due to medication, substance use, or other illness</th>
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<tr>
<td>Specify if with delayed expression</td>
<td>Diagnostic criteria not met until at least 6 months after the event</td>
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**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 was involved in 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 is 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 (2014) defines a nursing diagnosis as “a clinical judgment about individual, family, or community responses to actual or potential health problems or life processes which provide the basis for selection of nursing interventions to achieve outcomes for which the nurse has accountability.”

Nursing diagnoses that are appropriate to the patient suffering from PTSD include, but are not limited to:

- Hopelessness/powerlessness
- Ineffective coping
- Sleep pattern disturbance
- Dysfunctional grieving
- Impaired social interaction
- Ineffective relationships
- Impaired individual resilience
- Risk for suicide and/or self-destructive behavior

**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 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
CARE PLAN

Planning care 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.

Goals and Outcomes

The following are the optimal goals and outcomes for a patient diagnosed with PTSD. The patient will:

- 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 addiction, depression, anxiety disorders, and panic attacks
- Recognize ineffective coping strategies and 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 for factors contributing to fear
- Demonstrate effective anxiety-reducing techniques, either cognitive or behavioral (Varcarolis, 2015)
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.

INTERVENTIONS

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. The goal for patients with PTSD is to regain a sense of control over life.

Psychotherapy

The most effective types of psychotherapy for treatment of PTSD are various forms of trauma-focused cognitive-behavioral therapy (CBT), which most often include elements of cognitive therapy, exposure, and coping skills training.

COGNITIVE APPROACHES

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.
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 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 (Hamblen et al., 2017)

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 (NCPTSD, 2017c). Assignments often include hand writing impact statements that address topics such as why the traumatic event occurred and what it means to the patient.

Couples therapy is a conjoint therapy for individuals with PTSD and their partners that has components of both cognitive-behavioral therapy and couples therapy. This intervention, provided in 15 sessions, has been shown to greatly reduce PTSD symptom severity and improve intimate relationship satisfaction (Rothbaum, 2017).

EXPOSURE-BASED TREATMENTS

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) therapy usually incorporates the patient’s recall of the traumatic event and confrontation with real-life, safe situations that remind the person of the event. PE treatment is given in 90-minute sessions over a 9- to 12-week once- or twice-weekly course. It can be shorter or longer depending upon the person’s needs and response (Rothbaum, 2017).

In some cases, trauma memories or reminders can be confronted all at once, which is referred to as flooding. In other cases, it is preferable to gradually build up tolerance, which is referred to as desensitization. However, prior to exposure, the patient first must learn accompanying coping techniques such as relaxation, mindfulness, or imagery exercises. PE consists of four main elements:

- **Education** about treatment symptoms to assist the person to understand the goals of treatment
- **Breathing retraining** to aid in relaxation and help in the short-term management of distress
• **In vivo exposure** to real-world situations that are safe but have been avoided due to their relationship to the trauma, which over time lessens trauma-related stress

• **Imaginal exposure**, involving the repetitive talking through of the trauma, revisiting it over and over aloud and in detail. The narrative is recorded and the patient listens to it between sessions to maximize its therapeutic effect. Talking through the trauma helps gain control of thoughts and emotions about the trauma, make sense of it, and have fewer negative thoughts about it.
  
  (Rothbaum, 2017; Hamblen, 2017)

Following the exposure part of the session, the patient’s response to the exposure is discussed and maladaptive thoughts are challenged, such as beliefs related to guilt, blame, and responsibility. Homework exercises are often included. This may involve a tape recording made during a session of the patient describing the event. In between sessions, the patient practices exposure at home by listening to the tape and further processing the traumatic material.

A more recently developed method for providing PE is via **virtual reality**. This form of therapy uses a head-mounted computer display to present the patient with visual, auditory, tactile, and other sensory material that stimulate traumatic memories and affective response. It currently is used to treat veterans exposed to combat, survivors of catastrophic disasters, and in the aftermath of serious motor vehicle accidents (Rothbaum, 2017).

**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 a fairly new and still-debated form of therapy, and the theories behind it continue to be developed. 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. Hypotheses put forth for research are that EMDR works by:

• Recalling aversive memories in a safe environment, and eye movements do not contribute anything

• Stimulating interhemispheric communication

• Taxing working memory during recall
  
  (Hout & Engelhard, 2012)

EMDR is an individual therapy that involves a course of 4 to 12 sessions, 90 minutes each, focusing on hand movements or tapping while talking about the traumatic event(s). The idea is that rapid eye movements make it easier for the brain to work through traumatic memories.

EMDR has four main parts:

1. Identification of a target memory, image, and belief about the trauma

2. Desensitization and reprocessing by focusing on mental images while doing guided eye movements taught by the therapist
3. Installing positive thoughts and images by focusing on a new and positive thought while doing guided eye movements until it replaces the negative thoughts or images

4. Body scan, focusing on tension or unusual sensation in the body to identify additional issues that need to be addressed in later sessions

(Hamblen, 2017)

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, he 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 Prolonged Exposure 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 day and told that they would repeat the session again the following morning.

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)
Alternative and Complementary Medicine (CAM) Treatments

The use of CAM is widespread for treatment and management of mental health problems, including PTSD. Alternative and complementary medicine refers to treatments not considered standard in current practice. Alternative treatments are those used instead of conventional practices. Complementary treatments refer to the use of these techniques in combination with conventional practices.

Based on currently available evidence, there is no support for the use of CAM interventions as an alternative to currently empirically established approaches for PTSD or as first-line interventions. CAM may be best utilized as an adjunct to other PTSD treatments or as a gateway to additional services for individuals who refuse other approaches.

The Veterans Administration is currently conducting studies in the following:

- **Acupuncture**, which appears to have benefit but needs to be evaluated relative to sham acupuncture in order to control for the nonspecific benefits of treatment
- **Mindfulness-based meditation**, which appears to have modest benefit
- **Relaxation**, which appears to have modest benefit
- **Yoga**
- **CAM mind-body practices** such as Emotional Freedom Techniques and adjunctive healing touch and guided imagery (Strauss et al., 2017)

Psychopharmacology

Studies indicate that cognitive-behavioral therapies have greater effects in improving PTSD symptoms than medications. Some individuals, however, may prefer medications or may benefit from receiving a medication in addition to psychotherapy. The medications prescribed for treating PTSD symptoms act on neurotransmitters related to the fear and anxiety circuitry of the brain, including serotonin, norepinephrine, GABA, and dopamine, among many others (Jeffreys, 2016).

Drug therapies have been generally most effective in decreasing the symptoms of hyperarousal and mood (irritability, anger, depression) and somewhat less effective for the symptoms of re-experiencing, emotional numbing, and behavioral avoidance (Stein, 2017).

**ANTIDEPRESSANTS**

The two FDA-approved medications for PTSD are sertraline (Zoloft) and paroxetine (Paxil). They 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.

Besides the two FDA-approved SSRIs, there is strong evidence to support the use of two other antidepressants: the SSRI fluoxetine (Prozac) and the serotonin norepinephrine reuptake inhibitor (SNRI) venlafaxine (Effexor ER), used in the treatment of depression and anxiety (Jeffreys, 2016; Stein, 2017).

Currently there is insufficient evidence of the effectiveness of other antidepressants such as tricyclics, monoamine oxidase inhibitors, serotonin modulators (e.g., trazodone) or atypical antidepressants (e.g., mitazapine) for PTSD (Stein, 2017).

**PTSD AND OFF-LABEL USE OF MEDICATIONS**

Currently there are only two medications approved by the FDA for treatment of PTSD. All other uses of medications prescribed for treatment of PTSD are “off label,” which means the medication is being used in a manner not specified in the FDA’s approved packaging label or insert. This label includes a written report that provides detailed instructions regarding approved uses and doses, which are based on the results of clinical studies that the drug maker submitted to the FDA (Jeffreys, 2016).

**SECOND-GENERATION ANTIPSYCHOTICS (SGAs)**

SGAs are used only in patients who experienced a minimal or partial response to an SSRI or SNRI. Atypical antipsychotics are not recommended as monotherapy for PTSD. If other medications are ineffective, adjunctive treatment with quetiapine (Seroquel) or risperidone (Risperdal) may be prescribed (Stein, 2017). At this time, SGAs are recommended as treatment for co-occurring psychotic symptoms and mood disorders in PTSD (Jeffreys, 2016).

**ALPHA-ADRENERGIC RECEPTOR BLOCKERS**

The alpha-adrenergic receptor blocker prazosin (Minipres) has been found to reduce nightmares and improve sleep by reducing the level of activating neurochemicals in the brain. It is believed to depress neurological pathways that are overstimulated in persons with PTSD (Jeffreys, 2016).

**BENZODIAZEPINES**

Benzodiazepines are frequently used but have rarely been studied for use in patients with PTSD. Drugs such as clonazepam (Klonopin) and alprazolam (Xanax) are used in PTSD patients for the short-term to relieve anxiety or insomnia. They do not work on the core symptoms of PTSD. Careful use is recommended, as these drugs can cause disinhibition, difficulty integrating the traumatic experience, and interference with the mental processes required to benefit from psychotherapy. They also have the potential for misuse and addiction (Jeffreys, 2016).
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 created the PTSD diagnosis 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 important, 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.

RESOURCES

West Virginia PTSD Program (U.S. Department of Veterans Affairs)  
https://www.va.gov/directory/guide/state_PTSD.cfm?STATE=WV

West Virginia Department of Veterans Assistance  
http://www.veterans.wv.gov

REFERENCES


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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. Complex disorder involving fear, stress, and anxiety.

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 PTSD?
   a. It involves the medula and the pons.
   b. It is caused by an excess of cortisol secretion.
   c. It involves the hippocampus and the amygdala.
   d. It is caused by lower levels of epinephrine and norepinephrine.

4. A factor that increases the risk for developing PTSD is:
   a. Being of a younger age.
   b. Being highly intelligent.
   c. Having a higher socioeconomic status.
   d. Belonging to the white race.

5. Which PTSD symptom cluster in the *DSM-5* includes dissociative flashbacks?
   a. Intrusion
   b. Avoidance
   c. Negative alterations in cognitions and mood
   d. Alterations in arousal and reactivity
6. Health professionals who work with trauma patients and are unable to replenish and rejuvenate may experience what is often called:
   a. Compassion fatigue.
   b. Unconscious empathy.
   c. Fundamental trauma.
   d. Acute stress disorder.

7. What is the optimal method of assessment to determine a PTSD diagnosis?
   a. Use of a self-report screening tool
   b. Administering a formal assessment tool
   c. Conducting a face-to-face clinical interview
   d. Administering the Life Events Checklist for DSM-5

8. The duration criterion for PTSD diagnosis states that symptoms must have persisted for:
   a. At least 6 months after the event.
   b. Less than 2 weeks after the event.
   c. Longer than 1 month.
   d. Less than 1 year.

9. “Flooding” a patient with memories or reminders of a trauma is a component of a treatment modality known as:
   b. Eye Movement Desensitization and Reprocessing.
   c. Prolonged Exposure.
   d. Mindfulness-Based Cognitive Therapy.

10. The only two medications approved by the FDA for use in the treatment of PTSD, sertraline (Zoloft) and paroxetine (Paxil), belong to a class of drugs called:
    a. Antidepressants.
    b. Mood stabilizers (anticonvulsives).
    c. Antihypertensives.
    d. Benzodiazepines.

11. The primary outcome for effective intervention for PTSD is:
    a. Absence of comorbid conditions.
    b. Remission of all symptoms.
    c. Symptom reduction.
    d. Return to work and normal activities.