WHOLE HEALTH: CHANGE THE CONVERSATION
Advancing Skills in the Delivery of Personalized, Proactive, Patient-Driven Care

Posttraumatic Stress Disorder (PTSD): Proactive Strategies Educational Overview

This document has been written for clinicians. The content was developed by the Integrative Medicine Program, Department of Family Medicine, University of Wisconsin-Madison School of Medicine and Public Health in cooperation with Pacific Institute for Research and Evaluation, under contract to the Office of Patient Centered Care and Cultural Transformation, Veterans Health Administration.

Information is organized according to the diagram above, the Components of Proactive Health and Well-Being. While conventional treatments may be covered to some degree, the focus is on other areas of Whole Health that are less likely to be covered elsewhere and may be less familiar to most readers. There is no intention to dismiss what conventional care has to offer. Rather, you are encouraged to learn more about other approaches and how they may be used to complement conventional care. The ultimate decision to use a given approach should be based on many factors, including patient preferences, clinician comfort level, efficacy data, safety, and accessibility. No one approach is right for everyone; personalizing care is of fundamental importance.
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Posttraumatic Stress Disorder (PTSD): Proactive Strategies
Educational Overview

Todd is a 28-year-old Veteran of Operation Iraqi Freedom (OIF). He “saw a lot go down” during his time in Iraq, but he felt like he was doing fairly well when he completed his tour and returned to the United States in 2009. Six months after his return, however, he developed a number of troubling symptoms.

- He began to have flashbacks, focused on when his teammate, Hal, lost his leg in an explosion.
- He finds himself wanting to avoid crowded areas or places where there is a lot of noise. He tells you he “can’t set foot in a mall or other crowded place like that.”
- He finds it is “impossible to trust anyone” now, and he hasn’t felt relaxed or happy in years. He gets into fights easily. He is haunted by the thought that he should have been the one to lose a leg, not Hal.
- He finds it difficult to maintain romantic relationships or friendships. His concentration is poor, and he is frustrated that he is not able to do well in college courses he has tried taking.

To cope, Todd drinks, sometimes as much as a case of beer daily, but on good days, he doesn’t drink at all. He does not own a gun or have plans for harming himself, but it has occurred to him that his life “has been so hard that I am not sure that I want it.” He was initially diagnosed with anxiety, until he sought out the advice of a psychiatrist who made the diagnosis of posttraumatic stress disorder (PTSD). He takes his medications as prescribed by his psychiatrist, but wants to do “everything I can” to improve his quality of life.

Erica is a 34-year-old woman who is a Veteran of Operation Enduring Freedom. During her deployment, she was sexually assaulted. Various circumstances made it so that she could not press charges. Since her return to the United States, Erica has found it difficult to find work, primarily because she wants to minimize direct interactions with men. For a year she worked out of her home. However, she developed progressively worsening depression and attempted suicide via overdose of one of her sleep medications in 2012. In the wake of that, her worsening concentration, sleep problems, and periodic anxiety attacks caused her to lose her home-based job a few months ago. She has been homeless since that time and currently lives in a shelter.

Melissa is a 46 year-old Veteran of both the Gulf War and Operation Iraqi Freedom. In her role as a medic, she was often one of the first to respond when explosions or other events generated casualties. While she states she made it out with no specific physical
injuries herself, she often feels “like something broke inside me.” She currently works as an EMT. She has some good days and some bad days, but it is increasingly difficult for her to go to work due to the fear that she will see physical trauma and become “a basket case.”

**Background**

_These are men whose minds the Dead have ravished._  
_Memory fingers in their hair of murders_  
_Multitudinous murders they once witnessed._  
_Wading sloughs of flesh these helpless wander, _  
_Treading blood from lungs that had loved laughter._  
—Wilfred Owen, English poet and WWI soldier, 1893-1918

The purpose of this educational overview is to discuss how posttraumatic stress disorder can be approached from a Whole Health perspective. PTSD affects 7-8% of all Americans at some point during their lifetimes.\(^1\) Prevalence is as high as 14-16% in deployed military personnel and the risk of developing PTSD seems to increase for many Veterans over time, especially in the first three to six months after return from combat.\(^2\) Among Operation Enduring Freedom and Operation Iraqi Freedom Veterans who sought VA care between 2002 and 2008, 22% were diagnosed with PTSD.\(^3\) Furthermore, 1 out of every 10 Gulf War Veterans and 3 out of every 10 Vietnam Veterans are thought to have PTSD.\(^4\)

PTSD is associated with poorer functioning, lower quality of life, and earlier onset of physical illness. It is often accompanied by major depression, substance use disorder, chronic pain, traumatic brain injury, and other comorbidities.\(^5\) Of particular concern, as noted in a 2013 systematic review of 16 studies, Veterans with PTSD are much more likely to be suicidal.\(^6\) The United States National Comorbidity Study found people with PTSD are six times more likely to attempt suicide than their peers.\(^7\) The reasons for this are complex, as noted in a recent factsheet published by the National Center for PTSD (NCPTSD). There is a link between suicide and combat guilt, and risk is greater in combat trauma survivors who were wounded more than once or hospitalized for a wound. Risk is also higher with more distressing trauma memories, poor impulse control, and anger. Fortunately, a landmark 2013 review by Gradus and colleagues indicated that the reverse is also true; successful treatment of PTSD significantly lowers suicide risk.\(^8\)

<table>
<thead>
<tr>
<th>Suicide risk is significantly higher in people with PTSD for many reasons. Clinicians should ensure the following numbers are easily accessed by all Veterans:</th>
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<tbody>
<tr>
<td>• National Suicide Prevention Lifeline: 1-800-273-8255</td>
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<tr>
<td>• Veterans Crisis Line: 1-800-273-8255, then press “1”</td>
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The Veterans Health Administration currently mandates routine screening for PTSD in ambulatory settings and supports access to treatment through comprehensive mental health services, including PTSD specialty teams, primary care-mental health integration programs, and the newly-created behavioral health interdisciplinary program teams located in general mental health clinics. VA policy set forth in the Uniform Mental Health

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Services Handbook requires that every Veteran diagnosed with PTSD be offered one of two evidence-based psychotherapies, prolonged exposure or cognitive processing therapy, when clinically appropriate. These therapies are discussed in greater detail below.

The three vignettes at the beginning of this educational overview offer a snapshot of the varied ways PTSD can present. A traumatic event can involve an actual or perceived threat to life, personal safety and security, or physical integrity. It can be directly experienced, witnessed in person, or heard about (in cases of family members or close friends). As in the case of Melissa, PTSD can also arise after repeated exposures to details of traumatic events, as can occur with medical personnel or police officers.

Unfortunately, Erica’s situation of PTSD secondary to sexual assault is not uncommon. One in six civilian women experience sexual assault, and for military women the number climbs to an estimated one in three. Forty percent of homeless women Veterans report a history of sexual trauma in the military. Military sexual trauma is the main causal factor of PTSD in women, as opposed to combat experience being the strongest predictor in men. That said, clinicians should bear in mind that men can also experience military sexual trauma. Combat trauma, as experienced by Todd in the vignettes above, is perhaps the more familiar traumatic precursor to PTSD for most clinicians, but PTSD has different causes—and effects—for each person who suffers with it.

Diagnosing PTSD

After it is established that a person has experienced trauma, there are four main criteria for a PTSD diagnosis outlined in the Diagnostic and Statistics Manual of Mental Disorders, 5th edition. Symptoms within each category must be present for more than a month for PTSD to be diagnosed. Otherwise, the diagnosis of “Acute Stress Disorder” is made instead. The four general classes of symptoms that help to confirm the diagnosis of PTSD include:

1. **Intrusion symptoms.** These can include recurrent, involuntary, or intrusive memories or dreams. Distress may be triggered by events that have something in common with the traumatic experience(s). Flashbacks can occur.
2. **Avoidance.** People with PTSD typically attempt to avoid memories, thoughts, feelings, or external reminders related to traumatic experiences.
3. **Negative alteration in thinking or mood** tied to the traumatic event(s). A person may have impaired memory, exaggerated negative beliefs, inappropriate blame, persistent negative emotions, and other similar symptoms.
4. **Hyperarousal and reactivity.** This can manifest as irritable behavior, reckless behavior, hypervigilance, exaggerated startle, or sleep problems, among other symptoms.

For more information about the diagnosis of PTSD, see the National PTSD website, which is an excellent resource for clinicians and patients alike. The link is [http://www.ptsd.va.gov/professional/PTSD-overview/dsm5_criteria_ptsd.asp](http://www.ptsd.va.gov/professional/PTSD-overview/dsm5_criteria_ptsd.asp). In addition to the resources and lectures available through the website, it is also possible to access the PTSD Consultation program by emailing PTSDconsult@va.gov.
Inner Circle Components of Proactive Health and Well-Being and PTSD

Me (the Veteran at the center of the Circle of Health)

An estimated 60% of men and 51% of women experience trauma at some point in their lives; however, only 8% of men and 20% of women develop PTSD. Why do some people develop PTSD and others do not? It is a fundamental question to consider in thinking about PTSD in the context of Whole Health. The answer is not entirely clear, but genetics seems to play only a small role relative to environment and life experiences.

PTSD is associated with multiple mental and somatic comorbidities, and it is vital to account for these in the Personal Health Plan, since they strongly influence overall patient outcomes. Just as the Whole Health approach and the Circle of Health can help you account for each individual’s unique array of PTSD symptoms, it can also help you organize the plan with respect to a person’s multiple comorbid conditions.

- **Comorbidities**
  
  Veterans with PTSD have more somatic symptoms, health care visits, and work absenteeism. Specific comorbidities to address include the following:
  
  - **Sleep disorders** are reported by 70-87% of people with PTSD and have a significant impact on quality of life and overall outcomes.
  - **Anxiety**, though it should be noted that what often may first seem to be anxiety could actually be part of the hyperarousal symptom cluster that defines PTSD.
  - **Depression**, which is four to seven times more likely in people with PTSD, particularly in women.
  - **Personality disorders**, such as borderline, bipolar and narcissistic personalities.
  - **Substance use disorders**.
  - **Pain disorders**, including chronic pain, fibromyalgia, chronic musculoskeletal disorders, and osteoarthritis.
  - Disorders predisposing to **cardiovascular disease**, including obesity, hypertension, dyslipidemia, vascular disease, metabolic syndrome, and diabetes. This is thought to be in part due to higher cortisol levels that predispose to inflammation. PTSD may be considered an independent heart disease risk factor (pooled hazard ratio was 1.55 with 95% CI of 1.34-1.79).
  - **Impaired immunity** with increased infections, gastric ulcers, and risk of HIV positivity.
  - **Autoimmune disorders**, including thyroid disease and rheumatoid arthritis.
  - **Grief**. Grief and traumatic stress are closely connected. Veterans with PTSD who have unresolved loss from trauma may have limited ability to grieve more recent losses, resulting in challenging emotions or behaviors. They may experience depression, low self-esteem, isolation, and an increase in nightmares. A study of 114 Vietnam-era combat Veterans admitted to a VHA Office of Patient Centered Care and Cultural transformation
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PTSD inpatient rehabilitation unit identified that 70% scored higher (i.e. worse) on standardized measures of grief symptoms related to friends lost in combat 30 years previous than did spouses who were bereaved in the past six months. The investigators concluded that treating the symptoms of unresolved grief may be as important as treating fear-related symptoms of PTSD.

Fortunately, the Axis I and II disorders that frequently co-occur with PTSD often resolve or show improvement when PTSD is successfully treated. For additional information on PTSD and comorbidities, along with a helpful list of resources related to various comorbid conditions, see the National Center for PTSD website at http://www.ptsd.va.gov/professional/co-occurring/index.asp. See also the various modules in the Whole Health curriculum, which focus on many of these issues. These include the educational overviews and tools related to depression, anxiety, chronic pain, substance use disorders, recharge, and grief.

The symptoms of PTSD seldom exist in isolation. Always keep comorbidities in mind when working with people with PTSD. Pain, substance use disorders, affective disorders, autoimmune issues, and sleep problems are among the many comorbidities that may be present.

- **Education**
  The Veterans Administration/Department of Defense PTSD Clinical Practice Guideline recommends patient education as part of the treatment for all patients with PTSD and their family members. Following are specific educational recommendations for what clinicians should offer:

  1. Describe to anyone with PTSD the range of available and effective therapeutic options, emphasizing that PTSD is a highly treatable disorder.
  2. Inform the patient about evidence-based psychotherapy and/or evidence-based pharmacotherapy as first line treatments, allowing patient and provider preferences to drive the selection of therapies. Psychotherapies should be offered by practitioners with adequate training in the preferred treatment methods. These are described more in the conventional approaches section below.
  3. Enhance self-care. There are a number of excellent educational products developed by the NCPTSD for Veterans and their family members. These are available at www.ptsd.va.gov and include “Understanding PTSD” and “Understanding PTSD Treatment,” as well as a broad range of smart phone apps and online products. Pamphlets, brochures, self-help books, and other online materials may be used. Educational content typically involves normalizing post-trauma reactions and breathing retraining. Some resources also address problem-solving skills and specific symptoms. Clinicians can recommend smart phone apps and online tools that allow Veterans to self-monitor symptoms. These include:
Collaborative treatment planning
A collaborative care approach to therapy administration, including care management, may be considered; however, supportive evidence for this specifically for PTSD is currently lacking. Given that the average dropout rate in trials of exposure-based and cognitive interventions for PTSD is 20-25%, and given that it is often difficult to convince those with PTSD to seek any form of treatment,30 it is vital that clinicians carefully match individual Veterans with the therapies and practitioners most appropriate for them. This can be accomplished through a collaborative process between Veterans with PTSD and their health care teams that includes the following steps:

1. Identify realistic, stepwise functional goals including a list of key activities/domains.
2. Choose specific treatment goals and patient-centered indicators of progress that include self-care strategies across the Personal Health Inventory (PHI) domains. Treatment preferences and self-care strategies should be specific, promote recovery, and be strength-based.
3. Problem-solve around barriers to getting care, such as transportation and availability to attend day-time appointments.

Tailored follow-up
As part of ongoing care, it is important for clinicians and patients to

- Monitor patient-centered progress indicators.
- Adjust the treatment plan accordingly over time based on monitoring.
- Re-evaluate and re-negotiate treatment focus and components.
- Provide support surrounding barriers and challenges.

Mindful Awareness
A 2012 review summarizes recent developments in the research surrounding mindfulness-based programs for Veterans with PTSD.31 The use of mindfulness-based stress reduction for those with PTSD is in its early stages. Potential benefit is suggested by findings related to the use of mindfulness to address anxiety and other mental health issues, and promising PTSD-related studies that are beginning to emerge. For example, in a study by Kearney and colleagues of 92 Veterans with PTSD who were taken through a nine-session mindfulness course, 47% showed statistically significant improvements in depression and behavioral activation scores.32 A 2012 study found mindfulness training to be superior to psycho-education when both were delivered by telehealth, but it noted that the improvements were not sustained.33
Lang suggests, based on a review of the current literature, that the mechanisms of action of mindfulness as they relate to PTSD could include the following:\(^\text{34}\)

1. Mindfulness increases ability to shift attention, so that those with PTSD can reframe how they focus on trauma-related stimuli.
2. It allows one to modify maladaptive cognitive styles, allowing one to move away from worry and rumination.
3. It enables one to adopt a nonjudgmental stance, changing the way that interpretations and negative attributions are done out of habit. This can help to counteract avoidance.
4. Additional research is needed to confirm that Lang’s theories bear out at the level of clinical care.

To cultivate mindful awareness, clinicians can recommend smart phone apps that allow Veterans to self-monitor symptoms. These are listed in the education section above.

**Proactive Self-Care and PTSD**

Thus far, few studies have investigated interventions to *prevent* PTSD.\(^\text{35}\) However, self-care strategies can complement treatments specifically aimed at PTSD symptoms. For example the NCPTSD recommends that people do the following:\(^\text{36}\)

- Have more contact with other trauma survivors
- Start exercising
- Change neighborhoods if you live in a high-crime area
- Volunteer
- Avoid alcohol and drugs
- Invest more in personal relationships

Healthy eating, adequate physical activity, minimization of substance use including tobacco and caffeine, and other proactive behaviors are known to be diminished in people with PTSD, and supporting Veterans in all these areas may have therapeutic benefit.\(^\text{37}\)

Many of the psychotherapeutic approaches that have been found to be beneficial in treating PTSD draw in proactive strategies, such as goal setting, increasing problem-solving or coping skills, clarifying values, and broadening social support.

Considerations specifically related to PTSD for each of the eight components of proactive self-care are listed below. These are framed as specific steps a clinician can follow when advising self-care practices for someone with PTSD. Of course, which steps are taken will vary according to individual patient needs.
Power of the Mind

Traumatic events, by definition, overwhelm our ability to cope. When the mind becomes flooded with emotion, a circuit breaker is thrown that allows us to survive the experience fairly intact, that is, without becoming psychotic or frying out one of the brain centers. The cost of this blown circuit is emotion frozen within the body. In other words, we often unconsciously stop feeling our trauma partway into it, like a movie that is still going after the sound has been turned off. We cannot heal until we move fully through that trauma, including all the feelings of the event.

—Susan Pease Banitt, The Trauma Tool Kit: Healing PTSD from the Inside Out

- Explore how the mind-body relationship manifests in daily life, noting what triggers lead to increased tension and hypervigilance.
- Teach relaxation techniques to combat hypervigilance and tension. Although evidence is still preliminary, mindfulness-based and other related approaches, such as acceptance and commitment therapy and dialectical behavioral therapy show promise for helping patients with PTSD. Many mind-body therapies are used frequently enough in the VA that they can be considered conventional therapies. All of these therapies and the state of the evidence regarding their use are described in the conventional therapies section below. For additional information about mind-body therapies, see the Power of the Mind module.

Spirit and Soul

Spirituality may be defined, generally, as what brings meaning, purpose, and connection to a person’s life. Each of us has a unique definition of what matters most. This can become the focus a Whole Health mission, the reason why a Personal Health Plan (PHP) is written in the first place. Traumatic experiences affect people deeply; there is a reason people refer to them as “soul wounds.” Spirit and soul are important to explore with people with PTSD, and there are many ways of doing so.

- Consider moral injury. Moral injury is defined as pain and suffering that arise because as person has been damaged at the level of their moral foundation—the level of their core values. As one research study puts it, “Moral injury is an emerging construct to more fully capture the many possible psychological, ethical, and spiritual/existential challenges among persons who served in modern wars and other trauma-exposed professional groups.” Moral injury and PTSD have been described as overlapping in terms of many of the symptoms they cause, such as anger, affective disorders, substance misuse, and insomnia. However, they are different in some respects. Moral injury is more commonly associated with feelings of alienation, shame, and regret; PTSD, in contrast, is more likely to be linked to fear, flashbacks, and memory loss. While research related to working with moral injury is in its early stages, it is clear that healing often relies on lessening the pain of these injuries, just as one would ease any other cause of suffering.

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• Explore how faith affects one’s understanding of traumatic experiences. Edward Tick, who among other things has trained over 2,000 Army Chaplains, holds that PTSD is, at its core, a “soul wound” that must be addressed as such. Drawing in chaplains, clergy, and others who can offer spiritual support, based on a patient’s personal beliefs, is appropriate.\footnote{See the Collaborating with Chaplains: Frequently Asked Questions clinical tool for more information, and see also the Myhealthevet information on spirituality.}

• A 2005 (non-systematic) review of 11 studies found that typically, religion and spirituality are beneficial to people in the aftermath of trauma and that traumatic experiences often lead to a deepening of religion or spirituality.\footnote{Spirituality is closely linked to posttraumatic growth, which is described in the personal development section below.} See the Spirit and Soul module for additional information regarding this important area.

**Family, Friends and Co-Workers**

A sense of community and community support are extremely important to many Veterans. Often, Veterans with PTSD have a sense that they are best understood by other Veterans. For more information about PTSD and community, see http://www.ptsd.va.gov/public/community/ptsd-work-and-community.asp.

• Ascertain how PTSD symptoms affect close relationships. There is some data supporting family-focused therapies,\footnote{Ascertain how PTSD symptoms affect close relationships. There is some data supporting family-focused therapies, and the VA is emphasizing more therapeutic approaches that include family members.} and the VA is emphasizing more therapeutic approaches that include family members.\footnote{Discuss the extent to which family and friends are knowledgeable of one’s diagnosis and whether or not further disclosure would be of benefit.}

**Working Your Body**

Explore whether exercise is beneficial for a person’s PTSD symptoms and if so, how. Institute an exercise program as appropriate. Study findings specific to PTSD and exercise include:

• In a small group of adults, PTSD symptoms were reduced after 12 exercise sessions of 40 minutes each. Improvements were maintained at one-month followup.\footnote{In a small group of adults, PTSD symptoms were reduced after 12 exercise sessions of 40 minutes each. Improvements were maintained at one-month followup.}

• An eight-week program that included three weekly 40-minute aerobic exercise sessions led to reduced PTSD, anxiety, and depression symptoms in adolescent females with PTSD.\footnote{An eight-week program that included three weekly 40-minute aerobic exercise sessions led to reduced PTSD, anxiety, and depression symptoms in adolescent females with PTSD.}

• 90% of adolescents who exercised three times weekly for 60-90 minutes had significant reductions in PTSD symptoms.\footnote{90% of adolescents who exercised three times weekly for 60-90 minutes had significant reductions in PTSD symptoms.}

• A Cochrane Review did not find any research that met inclusion criteria addressing whether or not sports and games decreased PTSD symptoms.\footnote{A Cochrane Review did not find any research that met inclusion criteria addressing whether or not sports and games decreased PTSD symptoms.}

Unfortunately, studies of exercise for PTSD are small and lack good control groups. However, given that exercise can have overall benefits for anxiety disorders, and given that exercise tends to offer many other health benefits as well, it is reasonable to add it as an
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adjunct to first-line therapies. There is a growing recognition that running or walking groups can be a helpful component to the PTSD specialty clinics’ treatment programs.

Surroundings
• Discuss how surroundings are easing or exacerbating symptoms of avoidance, arousal, or re-experiencing trauma. The clinical tool, Taking Stock: Assessing Your Surroundings, might be helpful to use.

Recharge
• Explore the relationship between sleep and PTSD symptoms.
• Offer suggestions for improving sleep quality, falling asleep, or enhancing sleep hygiene, as appropriate.
• Cognitive-behavioral treatments for insomnia (CBTI), along with new CBTI smartphone applications can be tremendously helpful in improving sleep symptoms in patients with PTSD. CBTI can often prove more effective than medications. See the Recharge educational overview for more information on CBTI and other psychotherapeutic approaches for improving sleep.

Food and Drink
• Address alcohol use. Excessive alcohol use often is done to try to blunt PTSD symptoms but ultimately worsens overall symptoms and interferes with treatment.
• Explore whether dietary patterns influence symptoms.

Personal Development
• Discuss whether any activities, hobbies, or creative pursuits ease symptoms, and whether or not the patient has insights about this.
• Explore post-traumatic growth, which is “...the development of positive changes and outlook following trauma, including increased personal strength, identification of new possibilities, increased appreciation of life, improved relationships with others, and positive spiritual changes.” A survey of 272 primarily “older” Veterans of OEF and OIF found that:
  o 72% endorsed a significant degree of post-traumatic growth.
  o 52% reported having changed priorities about what is important in life.
  o 51% reported a greater appreciation for each day.
  o 49% reported being better able to handle difficulties.

Of note, those with higher PTSD scores scored higher for these measures as well. It may be of use to attempt to foster this growth with Veterans as part of their self-care.
Prevention and Treatment: Conventional and CAM Approaches

Conventional approaches
In terms of prevention and treatment, it is extremely important that known, evidence-based PTSD therapies be offered to all Veterans. Thus far, research most strongly supports psychotherapeutic\(^52\) and pharmacotherapeutic\(^53\) approaches. Rather than dividing psychotherapeutic approaches up into the power of mind and other sections, they are all listed here. All are being used with increasing frequency in the VA, depending on the availability of clinicians trained to use them. As the NCPTSD puts it in their overview on CAM for PTSD, “Some conventional therapies for PTSD (e.g., cognitive behavioral therapies) include elements that are consistent with CAM approaches. They are not considered to be CAM herein because CBT has a separate and well-developed basis in cognitive and behavioral theories. The CAM techniques that are used in CBT (relaxation, mindfulness) are conceptualized as supporting cognitive behavioral mechanisms as opposed to operating on their own to create change...\(^54\)

As is noted in the Introduction to Complementary Approaches module, there is a fine line between what is complementary and what is deemed conventional, because, as a therapeutic approach gathers support in terms of research and clinician experience, it gains greater acceptance and is adopted into the mainstream.

Psychotherapy
According to the 2010 revised Clinical Practice Guideline for PTSD,\(^29\) the evidence-based psychotherapeutic interventions for PTSD that are most strongly supported are in the trauma-focused psychotherapy category, including prolonged exposure therapy (PET), cognitive processing therapy (CPT) eye movement desensitization and reprocessing (EMDR) and stress inoculation training (SIT). These therapies are considered first-line therapies for PTSD.\(^55\)

The National Center for PTSD rates psychotherapies for PTSD as follows:\(^38\)

- **Strength of Recommendation A, with strong evidence of benefit:**
  - **Trauma-focused psychotherapy, including:**
    - Prolonged exposure therapy (PET) is built around the idea that repeated exposure to thoughts, situations, and feelings can reduce their power to cause a person distress. It has four main parts, which include education, breathing retraining, practice in real-world situations, and talking through trauma.\(^56\) A 2013 study of 1931 Veterans found that PET significantly\(^57\) decreased PTSD-related symptoms, as well as depression.
    - Cognitive processing therapy (CPT). The primary goal of CPT is to improve moods and behaviors by making efforts to change thoughts, beliefs, and expectations that are irrational or dysfunctional. Its four main parts include learning about symptoms, enhancing awareness about thoughts and feelings, learning skills to help challenge these thoughts and
feelings, and understanding how trauma changes beliefs. Through these steps a person is able to deal with trauma in new ways.58

- **Cognitive restructuring therapies (some sources class these as trauma-focused psychotherapies along with PET and CPT):**
  - **Eye movement desensitization and reprocessing (EMDR):** involves an eight-phase approach for addressing experiences that contribute to PTSD. After taking an elaborate history and helping patients identify a target for the therapy, clinicians have them focus on a particular image, thought or sensation while their eyes follow the clinician’s finger through a series of prescribed movements. Other stimuli might also be used.59 A 2006 review found trauma-focused cognitive-behavioral therapies and EMDR to be equally efficacious.60 An August 2014 meta-analysis concluded that EMDR therapy significantly reduces symptoms of PTSD, anxiety, depression, and overall distress in people with PTSD.61
  - **Stress inoculation training (SIT):** takes people through three stages.62 In the first, stressors and responses are identified, as are patterns of self-defeating dialog. The second stage, skill acquisition and rehearsal, allows a person to practice new, more rational thought patterns. In the third stage, the person practices applying what they have learned in real-life situations.

- **Strength of Recommendation B – no therapies listed**

- **Strength of Recommendation C, with some evidence of benefit:**
  - **Patient education.** Approaches to this are described in the education section above.
  - **Imagery rehearsal therapy (IRT):** involves reducing nightmares by changing the end of remembered nightmares while awake.63
  - **Psychodynamic therapy (PT):** is defined differently in various studies. Also known as insight-oriented therapy, it focuses on gaining insight into unconscious processes and how they manifest in the way a person behaves.64 PT has been used widely in clinical practice for the treatment of depressive disorders, and it is preferred by many patients over other approaches.65 Recent meta-analyses suggest that both short-term and long-term psychodynamic psychotherapy have benefit for depressed patients.66,67 For more information, see the GoodTherapy.org website: [http://www.goodtherapy.org/psychodynamic.html](http://www.goodtherapy.org/psychodynamic.html).
  - **Hypnosis.** See the Clinical Hypnosis clinical tool.
  - **Relaxation techniques**
  - **Group therapy**

- **Strength of Recommendation I (Inconclusive), currently limited evidence of benefit**
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- **Dialectical behavior therapy (DBT).** Based on cognitive behavioral therapy, DBT emphasizes validation, a tool a patient can use to more effectively work with uncomfortable behaviors, feelings, and thoughts as opposed to struggling with them. This makes change easier. Coping skills are also developed, and patients may be given homework to do between sessions. For more information, see the National Alliance for Mental Illness website.

- **Acceptance and commitment therapy (ACT).** This approach incorporates mindful awareness to prevent depression relapse. ACT invokes mindfulness techniques, acceptance, and commitment/behavior change strategies to enhance a person's psychological flexibility. A person learns to focus effectively in the present moment to address any given situation that arises. People are encouraged to “make healthy contact” with thoughts, memories, feelings, and sensations they have avoided in the past. To learn more, see [http://contextualscience.org/act](http://contextualscience.org/act). Research has shown that ACT has powerful positive effects on depression, as well as many other illnesses.68 The VA has developed an ACT Coach Mobile App which features mindfulness exercises, tools, educational materials, and tracking logs to help them practice on a daily basis what they learn in ACT sessions. It is to be used with clinical supervision. For more information, see [http://mobilehealth.va.gov/app/act-coach](http://mobilehealth.va.gov/app/act-coach).

- **Family Therapy**
- **Web-Based CBT**

For more information about each individual therapy, see individual PTSD 101 courses on the NCPTSD website, available at [http://www.ptsd.va.gov/professional/continuing_ed/index.asp](http://www.ptsd.va.gov/professional/continuing_ed/index.asp).

**Pharmaceuticals**

Antidepressants, particularly serotonin-specific reuptake inhibitors (SSRIs)69,70 and venlafaxine, a serotonin-norepinephrine reuptake inhibitor (SNRI)71 have proven to be effective in treating PTSD and are recommended as first-line agents in the VA/DOD and other treatment guidelines.72 Sertraline and paroxetine have FDA approval for PTSD. Prazosin, an inexpensive alpha-1 antagonist, is recommended for PTSD-related nightmares.73

Mental health services have supported the rollout training and dissemination of evidence-based PTSD treatments (CPT and PE) to large numbers of VA clinicians. Additional rollout trainings in the past year in cognitive-behavioral treatments for insomnia and pain, as well as problem-solving skills therapy assist PTSD patients with recovery. These efforts are supported by didactic lectures in both psychotherapy and pharmacotherapy of PTSD organized by the National Center for PTSD, as well as a broad array of educational courses and products available on their website at [www.ptsd.va.gov](http://www.ptsd.va.gov).

Currently, as concluded by a recent Cochrane Review,29 there is not yet enough evidence available to support or refute that there is greater effect to be seen in...
combining pharmacotherapies and psychological therapies versus using either category of intervention alone in PTSD treatment.

**Complementary approaches**

The 2011 VA Complementary and Alternative Medicine Survey (the HAIG Report) surveyed 141 VA facilities regarding incorporation of CAM. In the 125 sites that reported incorporating CAM treatments, PTSD was the third most common reason (after stress management and anxiety) for CAM to be used. Most frequently used therapies (by number of facilities that offered them) included:

- Stress management and relaxation therapy (71 VA facilities)
- Guided imagery (70 facilities)
- Mindfulness (64 facilities)
- Progressive muscle relaxation (55 facilities)
- Biofeedback (45 VA facilities)

In 2010, 39% of Americans with PTSD reported using CAM in the past year, with mind-body therapies, relaxation/meditation, exercise, herbal remedies, massage, and chiropractic listed among the most popular. A 2012 survey of 125 Veterans Hospitals revealed that 96% used at least one of a list of 32 CAM therapies in their PTSD treatment programs. The majority of systematic reviews and meta-analyses conclude that “more research is needed” regarding treating PTSD with various complementary medicine modalities. Considerable research to investigate various CAM treatments for PTSD is now underway in the VA.

For an excellent summary of CAM research in PTSD, see the NCPTSD website’s factsheet, [Complementary and Alternative Medicine (CAM) for PTSD](https://www.ncptsd.va.gov/ncposttraumadinications) The information below summarizes many of the key research findings of this and other reviews of the literature.

In 2011, Strauss and colleagues performed a comprehensive systematic review of the literature surrounding CAM use in PTSD. The review gathered data from 1,776 articles, with seven randomized controlled trials and two non-randomized controlled trials meeting selection criteria. The study ran comparisons of eight different therapeutic approaches. Findings are summarized in Table 1.
### Table 1. 2011 Summary of the Strength of Evidence for PTSD and CAM*

<table>
<thead>
<tr>
<th>Treatments Compared</th>
<th>Number of Studies</th>
<th>Number of Subjects</th>
<th>Study Quality</th>
<th>Strength of Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Meditation versus usual care</td>
<td>1</td>
<td>29</td>
<td>Fair</td>
<td>Low</td>
</tr>
<tr>
<td>2 Meditation versus active treatment</td>
<td>1</td>
<td>25</td>
<td>Poor</td>
<td>Insufficient</td>
</tr>
<tr>
<td>3 Acupuncture versus control</td>
<td>1</td>
<td>84</td>
<td>Good</td>
<td>Moderate</td>
</tr>
<tr>
<td>4 Acupuncture versus group cognitive-behavioral therapy</td>
<td>1</td>
<td>84</td>
<td>Good</td>
<td>Low</td>
</tr>
<tr>
<td>5 Relaxation versus control</td>
<td>1</td>
<td>90</td>
<td>Poor</td>
<td>Insufficient</td>
</tr>
<tr>
<td>6 Relaxation versus other active treatment</td>
<td>2</td>
<td>56</td>
<td>Fair to Poor</td>
<td>Low</td>
</tr>
<tr>
<td>7 Massage versus control</td>
<td>1</td>
<td>8</td>
<td>Fair</td>
<td>Insufficient</td>
</tr>
<tr>
<td>8 Movement-based and energy therapies versus control</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>Insufficient</td>
</tr>
</tbody>
</table>


In a subsequent 2012 review, Strauss and Lang conclude, “Preliminary findings, albeit mixed, suggest that CAM treatments merit consideration. At this point, there is very limited empirical evidence of their effectiveness, so they may be best applied as an adjunct to other PTSD treatments or as a gateway to additional services for patients who initially refuse other approaches. Overall, the current evidence base does not support the use of CAM interventions as an alternative to current empirically-established approaches for PTSD, or as first-line interventions recommended within evidence-based clinical guidelines.”

- **Biological therapies (dietary supplements)**
  There is currently no research support the use of dietary supplements for PTSD at this time, but there is interest in the use of omega-3 supplements.

- **Mind-body approaches**
  A systematic review of the literature found 16 of 92 articles that met review criteria. Studies were usually small, but there was an association between an array of mind-body practices and PTSD symptoms. A 1997 study found minimal impact on PTSD...
variables when 90 male Vietnam Veterans with PTSD were asked to follow relaxation instructions versus relaxation and deep breathing versus relaxation, deep breathing, and biofeedback.\(^7^8\) See the information on psychotherapy in the conventional care section above.

- **Biofeedback** that decreases somatic arousal has historically been helpful for PTSD. More recently, neurofeedback that promotes relaxed states has also shown modest success.

- **Relaxation and various meditation approaches** have considerable support in modestly improving PTSD symptoms. (They are often included as part of cognitive behavioral therapy treatments, and the combination leads to more pronounced improvements. See Table 1, above.) As noted in the mindful awareness section above, mindfulness meditation has shown great promise.

- Writing therapy was found in a 2013 meta-analysis of six studies that met inclusion criteria to have significant benefit in posttraumatic stress.\(^7^9\)

- **Hypnotherapy** is another approach that holds great promise in PTSD care, but more research is needed.\(^8^0,^8^1\)

- **Mantram meditation**, the repetitive use of a sacred word or phrase throughout the day, was found to be feasible, associated with moderate to high satisfaction, and had a promising effect size in a cadre of 15 Veterans.\(^8^2\) A 2012 study by the same lead authors found, in a group of 146 Veterans (66 in the intervention group), that 24% of the intervention group versus 12% of controls showed improvements in PTSD symptom severity.\(^8^3\) This mind-body approach shows increasing promise as research continues.\(^8^4\)

- **Mind-body approaches for regulating the autonomic nervous system.** In 2011, the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury published a review of 13 different mind-body techniques.\(^8^5\) These were classed in the following categories:
  - Breath
  - Body-based tension modulation practices, including yoga
  - Mental focused practices, such as mindfulness, meditation, guided imagery, and iRest
  - Mind-body programs, that offered multiple techniques in the form of taught skills courses
  - Biofeedback

The report concluded that “...integrative practices designed to regulate the autonomic nervous system and improve mood stress regulation and arousal are promising. However, in order for these and other related practices to achieve greater recognition and be used in the mainstream military health community, there is a need to compare the relative effectiveness of techniques...to each other, as well as to other more mainstream stress and energy management practices, such as exercise, counseling, and psychopharmacology.”\(^1^9\)

- **Movement-based therapies**
  *Yoga* was evaluated as a PTSD treatment in a 2011 meta-analysis, but at that point only one study was found that met inclusion criteria. This study was of limited
However, a 2014 trial involving 64 women with PTSD found marked improvement in PTSD symptoms in the intervention group. In fact, 16 of the 31 participants in the yoga group no longer met criteria for PTSD at the end of the study.

**Manipulative therapies**

Limited research is available. A small cross-sectional analysis conducted in 2009 with a group of 130 Veterans with neck or low back pain found that the 21 people with PTSD were much less likely to benefit from chiropractic than those without PTSD.

**Energy medicine (biofield therapies)**

One small randomized controlled trials RCT of Healing Touch involving 123 returning active duty military personnel found statistically significant improvements ($p<0.0005$) in PTSD and depression symptoms.

**Systems of healing**

- **Acupuncture** is one complementary approach that shows particular promise and is recommended by the PTSD clinical practice guideline. It was found superior to waitlist and comparable to group cognitive-behavioral therapy (CBT) in a non-Veteran sample in a recent systematic review of CAM therapies for PTSD. It was the only therapy found to have a moderate effect size (See Table 1, above). A frequently-cited study of acupuncture for PTSD found improvement in a cohort of non-Veteran males who received a series of 24 acupuncture sessions (one hour each) over 12 weeks. In a separate paper, for those interested in acupuncture’s mechanism of action, Hollifield offers detailed explanations of how acupuncture might affect PTSD at the biochemical level.

A 2013 systematic review and meta-analysis searched 23 electronic databases and found 126 trials. Of these, four RCTs and two uncontrolled clinical trials (UCTs) met inclusion criteria. Results of the meta-analysis included the following:

- One high-quality RCT found that acupuncture was superior to control and equivalent to CBT based on effect sizes.
- One RCT reported that acupuncture augmented the effects of CBT.
- One RCT showed no difference between acupuncture and SSRI medications, and meta-analysis favored acupuncture plus moxibustion (the burning of a dried herb over acupuncture points) over SSRI's.

The study concluded that evidence for acupuncture “...is encouraging, but not cogent.”

- **Emotional freedom technique (EFT)**, classed as a form of energy psychology, was found, in an uncontrolled 2014 trial, to be of significant benefit based on PTSD checklist scores for a group of 218 couples. The couples included Veterans
Educational Overview: Posttraumatic Stress Disorder (PTSD) and their spouses. EFT uses a combination of statements and tapping on various acupuncture points. More research is needed to confirm its utility.

- **Homeopathy** has not been specifically studied thus far as a therapy for PTSD.

Overall, research does not support using complementary approaches as replacements for interventions for PTSD that are considered first-line. However, there is room, especially with regards to acupuncture and mindfulness-based meditation, for these approaches to be used adjunctively. For more information on deciding whether or not to recommend a given complementary approach, see the clinical tool, **Deciding if an Approach Is Worth Using: The ECHO Mnemonic**. Table 2 offers an overall summary of the current state of the evidence regarding complementary approaches and their efficacy and safety in the management of PTSD.

<table>
<thead>
<tr>
<th>Table 2. Summary of Evidence for Various PTSD Therapies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modality</strong></td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Recognize comorbidities</td>
</tr>
<tr>
<td>Mindfulness-based stress reduction</td>
</tr>
<tr>
<td>Proactive behaviors in general</td>
</tr>
<tr>
<td>Spirituality</td>
</tr>
<tr>
<td>Family-based therapies</td>
</tr>
<tr>
<td>Exercise</td>
</tr>
<tr>
<td>Fostering post-traumatic growth</td>
</tr>
</tbody>
</table>
## Pharmacotherapies
- SSRI's
- Venlafaxine
- Prazosin (for nightmares)

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Level</th>
<th>Evidence</th>
<th>Main Points</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential for adverse effects of medications</td>
<td>A,2</td>
<td>71,73,75</td>
<td></td>
<td>Cost can be high but will be covered for many</td>
</tr>
<tr>
<td>First line therapies—solid evidence base</td>
<td>A,1</td>
<td>38,52,69</td>
<td></td>
<td>Must have access to therapists offering these techniques</td>
</tr>
<tr>
<td>First line therapy—solid evidence</td>
<td>A,1</td>
<td>38</td>
<td></td>
<td>Must have access to therapists offering these techniques</td>
</tr>
<tr>
<td>Less research available, but show promise and are safe</td>
<td>C,1</td>
<td>38,70,82</td>
<td></td>
<td>Availability a key issue</td>
</tr>
<tr>
<td>Safe, data with PTSD limited</td>
<td>C,1</td>
<td>80</td>
<td></td>
<td>Depends on accessibility within the VA</td>
</tr>
<tr>
<td>Safe, benefits yet to be determined</td>
<td>A,1</td>
<td>87</td>
<td></td>
<td>Depends on availability</td>
</tr>
<tr>
<td>Safe, may be of less interest to some Veterans</td>
<td>B,1</td>
<td>43,88</td>
<td></td>
<td>Minimal cost but requires trained teacher</td>
</tr>
</tbody>
</table>

### Trauma-focused psychotherapies:
- Prolonged exposure therapy
- Restructuring
- Eye movement desensitization and reprocessing (EMDR)

### Stress Inoculation Training

### Other psychotherapies:
- Imagery rehearsal therapy
- Psychodynamic therapy
- Group therapy
- Hypnosis
- Relaxation Techniques web-based cognitive-behavioral therapy
- Dialectical behavior therapy
- Acceptance and commitment therapy

### Biofeedback

### Yoga

### Mantram meditation
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<table>
<thead>
<tr>
<th>Therapeutic Approach</th>
<th>Efficacy</th>
<th>Harm</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acupuncture</td>
<td>B,1</td>
<td>72,91</td>
<td>Very safe, mechanism of action controversial, but data promising</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Can be costly unless covered within VA system</td>
</tr>
<tr>
<td>Emotional freedom technique</td>
<td>B,1</td>
<td>92</td>
<td>Unclear how it works; controversial for some</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Requires access to trained therapist</td>
</tr>
<tr>
<td>Writing therapy</td>
<td>B,1</td>
<td>81</td>
<td>Safe, easy to recommend by any clinician</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Minimal costs</td>
</tr>
<tr>
<td>Healing touch</td>
<td>B,1</td>
<td>90</td>
<td>Safe, easy, but mechanism of action not well understood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Depends on accessibility to practitioner; study included guided imagery as well</td>
</tr>
</tbody>
</table>

*This table summarizes the quality of research regarding various therapeutic approaches based on two criteria, efficacy and harm.

1. **Efficacy is given a letter rating, based on the following categories:**
   A. Based on consistent, good quality, patient oriented evidence. (Systematic review or meta-analysis showing benefit, Cochrane review with clear recommendation, high quality patient-oriented randomized controlled trial.
   B. Based on inconsistent or limited quality patient oriented evidence.
   C. Based on consensus, usual practice, opinion, disease oriented evidence or case series.

2. **Harm is given a number rating, using the following criteria:**
   1. **(Minimal harm).** This therapy poses little if any risk of harm.
   2. **(Moderate harm).** This therapy has the potential to cause reversible side effects or interacts in a negative way with other therapies.
   3. **(Most harm).** This therapy has the potential to result in death or permanent disability.


**Back to Our Three Vignettes**

Each of the three patients with PTSD—Todd, Erica, and Melissa—completed a Personal Health Inventory (PHI). *In every case, clinicians were careful to assess their suicide risk as a first priority and then to assess for current life stressors.* Todd reviewed his PHI with his health psychologist, who coordinated the plan with the patient-aligned care team (PACT) that had previously been assigned to him. Erica went over hers with her primary care practitioner, who specializes in women’s health. An important member of her team ultimately ended up being a social worker who could help her with the homelessness. Melissa reviewed her PHI with a nurse practitioner she often sees, then followed up on her Personalized Health Plan (PHP) with both her psychologist and her Whole Health coach.
Todd decided that his mission, his reason for wanting his health, was so that he could go back to school to study to be a counselor, because “I want to help people like me, and it will help if they have someone who really knows what all this is like.” He also intends to get into a steady relationship.

Todd’s health plan outlined the following priorities:

1. Continue with his medications, as per his psychiatrist.
2. Work with a mental health expert who is skilled at offering trauma-based psychotherapies, which he has not yet tried.
3. Begin the Mindfulness for Vets course, which is offered at his local VA Hospital.
4. Try acupuncture, not only for his PTSD, but also for his chronic low back pain.
5. Ramp up his exercise to 150 minutes weekly and develop a plan to ensure that this happens.
6. Reduce alcohol consumption and explore other healthier ways to ease his stress levels.

Erica received help navigating the system from a social worker (LCSW) recommended by her primary care clinician. Once her basic needs of safety and shelter were more reliably met, she and health coach worked together on the following PHP:

1. Erica was evaluated by a psychiatrist skilled in the management of PTSD (she had not been established in the health care system previously). The social worker on her care team ensured she was able to get her medications, including prazosin for her nightmares.
2. She began to receive regular psychotherapy. Prolonged exposure therapy was difficult for her, but ultimately quite helpful. She also received cognitive behavioral therapy for insomnia (CBTI), and her sleep gradually improved.
3. Erica found a support group for women victims of sexual trauma and cultivated a support network. She ultimately chose to attend church services with some of her new-found friends/supporters.
4. Erica “isn’t quite ready” to focus on diet and exercise, but her health mission is ultimately “To love my body again and really be in it.” She says she’ll just take it “day by day.”

Melissa appreciated the psychotherapy she received for her PTSD, and with time, she was able to return to work. EMDR was especially helpful to her. One thing that completing the PHI brought to her attention was that, as someone who works in health care, she wanted to do much more as far as “practicing what I preach.” For her health mission, she noted, “I want to enhance my ability to be a healer, understanding that it starts with me.”
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Her PHP includes several steps:

1. She will cut down to, at most, a 40-hour work week (she was working 60 hours) and go back to school to do her pre-med coursework.
2. She realized that she wants to be more “reassuring and present” with the people she rides with in the back of the ambulance as an EMT. She understands that starting a mindfulness-based practice (she prefers tai chi) can help with this and also shows promise to help some of her PTSD symptoms.
3. She is actively exercising and paying attention to calories as part of her plan to model healthy living.

Whole Health: Change the Conversation Website

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Browse our website for information on personal and professional care.

http://projects.hsl.wisc.edu/SERVICE/index.php

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References

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