

Finding Balance

Considerations in the Treatment
of Post-Deployment
Stress Effects



Guide for Clinicians

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Finding Balance

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Finding Balance

1. Clinical Considerations

Trauma resolved is a great gift, returning us to the natural world of ebb and flow, harmony, love, and compassion. Having spent the last twenty-five years working with people who have been traumatized in almost every conceivable fashion, I believe that we humans have the innate capacity to heal not only ourselves, but our world, from the debilitating effects of trauma.

—Peter Levine (*Walking the Tiger: Healing Trauma*, p. 21)

This Guide tells the story of a significant human strength, our natural, automatic stress and survival system. It is a strength that can save lives, but in so doing can lose its balance and become a source of great suffering. Another essential story is that of recovery—the return to balance and the transformation of human lives—and the role that caring, skilled, and knowledgeable people can play in that transformation.

As our communities welcome the return of veterans from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF, the war in Afghanistan), service systems for substance use disorders (SUD), mental health, homelessness, criminal justice, and other challenges are seeing increasing numbers of returning veterans. In these kinds of insurgency conflicts, exposure to attack is not limited to combat troops, and the sophistication of our military health care system allows many to survive who would have perished in earlier wars (Hoge et al., 2008). There is simply a broader field for war-zone stress injuries to take root.

Evidence also indicates that only a little more than half of the OIF/OEF Service Members and veterans who meet the criteria for posttraumatic stress disorder (PTSD) or major depression have sought help from physicians or mental health providers in the past year, and that roughly the same proportion of people with TBI have been evaluated

for these injuries. And of those who have sought medical care for PTSD, TBI, or depression, only a little more than half have received “minimally adequate treatment” (Tanielian and Jaycox, 2008, p. xxii).

The United States Department of Defense (DoD) and Department of Veterans Affairs (VA) have responded to these service gaps by implementing expanded programs, increasing their service capacity—both at home and in the theater of war—and initiating training in evidence-based practices, but it has become clear that community-based services are needed as well (Tanielian and Jaycox, 2008). In response, the Substance Abuse and Mental Health Services Administration (SAMHSA) has mobilized to help prepare the civilian treatment workforce.

This document is part of that preparation process. Although it is written primarily to address the needs of the Substance Use Disorder (SUD) field, it contains information that may be useful to clinicians in a number of helping professions.

This first chapter has five sections and one pull-out page:

- The Role of the SUD Treatment and Recovery Field
- Overview of Clinical Challenges
- Stigma and Reluctance to Seek Help
- The Need for Veteran-Specific Education and Training
- Effective Treatment Responses
 - Characteristics of Effective Treatment Responses

The Role of the SUD Treatment and Recovery Field

We do not yet know how many veterans with post-combat stress effects will seek substance use disorder (SUD) treatment through civilian rather than military systems in the months to come. We do know that some VA centers already have waiting lists, and that significant numbers of veterans may be avoiding treatment for fear of the stigma associated with post-deployment stress effects (Tanielian and Jaycox, 2008). We know even less about the extent of the challenges that the civilian SUD field will face as veterans begin to return in high numbers from Iraq and Afghanistan, and about the long-term demands on civilian treatment systems.

In general, though, the connection between post-trauma effects and substance use disorders is well known to the treatment field. For example:

- Between one third and one half of people seeking treatment for SUDs may also have posttraumatic stress disorder, with greater prevalence in people with drug dependency.

- Having PTSD has been associated with a more severe course and worse outcomes for substance use disorders.
- Drug dependence is frequent in war veterans with posttraumatic stress disorder (Alcoholism: Clinical & Experimental Research, 2008)

One preliminary study of Department of Defense prevalence surveys shows that “this generation of veterans has been much closer to trauma, has completed or may complete multiple tours of duty, and experience a greater prevalence of mental health issues (40%) and of those upwards of 60% also have an SUD” (Danforth, 2007, p. 11). And our experience with Vietnam veterans has revealed that significant long-term problems can follow the stress of war, including chronic substance use disorders and a host of complicating factors (Kulka et al., 1990; Schnurr et al., 2003).

The role of the substance use disorder (SUD) treatment field in mobilizing to meet these challenges is an essential one, for several reasons:

- When the human stress system responds to intense or unrelenting stress or threat, it often creates chemical imbalances that people instinctively seek to remedy with alcohol, street drugs, or misuse of prescription medications. The risk of abuse and dependence rises.
- Many of the other aftereffects of war—from the neurological effects of trauma to the psychological and spiritual effects of exposure to death and destruction—can be very painful. Veterans who are hesitant to seek professional services for these effects may be drawn to self-medication through alcohol or other drugs.
- If the alcohol and drugs that have “medicated” combat stress effects leave the system, unconscious stored memories and other symptoms of trauma begin to emerge at higher levels of intensity.
- Injured veterans with pain-management needs are often prescribed opioid pain relievers. Even in the absence of combat stress effects or prior histories of substance use problems, their injuries can leave them more vulnerable to dependence on those medicines.
- Young male veterans with traumatic injuries may be more vulnerable to a number of risk-taking behaviors, including the misuse of alcohol, and less likely to seek or accept help (Good et al., 2008).
- Veterans who are successful at hiding or rationalizing their post-trauma effects may be less successful at hiding the effects of their self-medication with alcohol and other drugs and the dependence that often follows. OIF/OEF veterans have begun seeking services from civilian SUD treatment facilities, and their numbers may rise significantly in the years to come. In some cases, SUD clinicians and recovery support staff may be the only sources of help they encounter.

The SUD treatment field has begun to mobilize toward a focus on recovery, recovery management, and recovery-based systems of care. In many cases, the needs that make recovery management so essential for clinical populations with substance dependence disorders are linked to clients' experiences of hardship and trauma (White, 2006). The concept of recovery-based care is in many ways a bridge between our responses to substance use disorders and our responses to trauma. As more and more OIF/OEF veterans return, the needs of those with substance dependence disorders will be important considerations in building new recovery-oriented systems of care.

The standard of care for co-occurring SUDs and post-trauma effects is simultaneous, co-located treatment of both illnesses. In a recovery-based, trauma-informed model of care, SUD clinicians both refer to and coordinate closely with mental health and trauma specialists (White, 2006). That model has not always been possible, but even where it does exist, it will not succeed unless SUD clinicians and recovery support service providers also receive all appropriate training in:

- The nature of trauma
- The circumstances under which trauma has occurred
- The needs and realities of the individuals who have experienced it
- Any issues specific to clients' cultures—including the military culture

The effects of trauma reach throughout the human being. Anyone providing services to someone affected by trauma—even if those services seem unconnected to the post-trauma symptoms—is in effect working with trauma, an often-volatile condition. As the SUD field has learned in its work with survivors of childhood abuse, a failure to understand and respect the complexities of trauma can derail the treatment process and drive the trauma deeper into the human body, mind, and spirit (White, 1998). An understanding of trauma can elevate the safety and effectiveness of SUD treatment and make ongoing recovery far more likely, and far more complete.

Overview of Clinical Challenges

The Stress of War: Many men and women who have served in Iraq and Afghanistan have spent a long time in a very hard part of the world, surrounded by:

- Constant stress
- Blinding heat
- Sudden and violent attacks
- The loss of people they love and respect
- The sights and sounds of injury and death
- The need to make split-second decisions that might have lifelong consequences

The physical and neurological stress and survival systems that have kept them alert and alive were never meant to stay in high gear for days, weeks, or months at a time. Our species was designed for short-term exposure to stress and threat, followed by periods of rest that would let our stress systems return to balance.

Post-deployment stress effects live on a long continuum:

- From acute stress symptoms to chronic posttraumatic stress disorder (PTSD)
- From a mild loss of energy to major depression
- From trouble at work to unemployment
- From a few problems at home to divorce or domestic violence
- From blowing off steam to serious problems with the law
- From a few drinking binges to a fifth-a-day habit

Even strong, brave, intelligent Service Members can bring home significant burdens. For many, their post-deployment stress injuries are triggered or compounded by the traumatic brain injuries (TBI) that have been declared the “signature” wounds of these wars (Emmons, 2006).

As if these complexities were not enough, there is also the fact that the physical changes are taking place in human beings who have belief systems, thoughts, feelings, spirits, and relationships. While their bodies are responding to threat in powerful, primitive ways, people are also coping on many higher levels—and their physiological stress responses are adding intensity to the impact throughout the whole human being.

This new “generation” of veterans also returns home to a nation in which many veterans of the last large conflict, the Vietnam War, still need help for the stress-related wounds of that conflict, including significant levels of substance use disorders (Kulka et al., 1990; Schnurr et al., 2003).

Our ways of welcoming the new veterans home are infinitely better than the devastating homecoming that many Vietnam veterans received (Shay, 1994). But our collective understanding of the military culture, the experience of war, and the true and full nature of post-deployment stress effects still does not do justice to the extreme sacrifice that so many have made, and so many are still making.

Stigma and Reluctance to Seek Help

Service Members and veterans face an array of post-deployment stress-related challenges. Without an understanding of the physical/neurological roots of these challenges, Service Members and veterans can easily see their symptoms as defects,

signs of weakness, or “emotional problems.” Shame, stigma, and fear of jeopardizing their careers can keep people from seeking help, while small problems grow into big ones (Scaer et al., 2008). The stigma connected to substance use disorders is even more potent, and adds an extra level of shame and reluctance to seek help (Woll, 2005).

For many veterans who seek services in the community, fear of being stigmatized and having “mental health problems” or “substance abuse” attached to their service records may contribute to their decision to stay outside of all structures even remotely connected with the military. Experts at all levels—from the Department of Defense to the individuals seeking to heal the effects of these wounds—agree that shame, self-stigma, and fear of military stigma are significant blocks to help-seeking and recovery (Tanielian and Jaycox, 2008).

In the words of one soldier, “Asking for mental health services was like saying ‘I just could not cut it’” (Hutchinson and Banks-Williams, 2006, p. 67). The most common barrier to treatment cited by Service Members is a fear that treatment will not be kept confidential, threatening future job assignments and military career advancement (Tanielian and Jaycox, 2008).

Military leaders have taken important steps to eliminate this stigma within the military culture (e.g., primary care screening programs, training and information campaigns) and to protect the privacy of Service Members who seek help (e.g., the May, 2008 policy that Service Members who apply for security clearances no longer have to disclose any service-related mental health treatment they might have received). But stigmatizing attitudes in a huge and deeply rooted culture are very slow to change, particularly when that culture is surrounded by a larger culture that shares the same attitudes.

Many Service Members, veterans, and their families have been told that acute stress reactions, PTSD, substance use disorders, depression, and other combat stress effects are normal, natural, and nothing to be ashamed of. However, many simply do not believe it (Lighthall, 2008). Human understanding of the effects of trauma is too new, and traditional misconceptions carry too much momentum. Because these conditions have emotional and behavioral symptoms, most people tend to think of them as emotional or behavioral problems, despite their deep roots in our nerves, muscles, and brain chemistry.

Helping professionals can help heal the stigma by communicating that, in the words of Army Col. (Dr.) Tom Burke, “No one comes back unchanged” (Sample, 2004), and that post-deployment stress effects have their roots in natural stress and survival systems. One of the strongest antidotes to self-stigma is an understanding of the specific ways in which stress and threat can affect physical and neurological survival systems—provided these effects are described in measured, matter-of-fact terms that:

- Emphasize strengths, capabilities, and resources

- Affirm that these are normal physical reactions to abnormal stress
- Use neutral and inclusive terms like “post-deployment stress effects” and “substance use disorders” rather than the more stigmatized “mental problems,” “substance abuse,” or even “PTSD”
- Do not “pathologize” people with post-deployment stress effects, including SUDs, or imply that they are somehow helpless, “defective,” or dangerous
- Do not portray the stress-affected or addiction-affected brain or stress system as defective or “diseased”
- Confirm that people can and do recover from many symptoms of combat stress and learn to manage any remaining symptoms
- Confirm that people can and do recover from substance use disorders

The Need for Service Member- or Veteran-Specific Education and Training

One effect of having an all-volunteer military force has been the separation of many Americans from contact with Service Members and the military culture. When media coverage of the wars in Iraq and Afghanistan runs at low ebb, civilians also tend to lose track of information about conditions at war and see few reminders that the war is still in progress.

Although the nation as a whole is welcoming this generation of veterans home in a manner that acknowledges their service and their sacrifice, we tend to lag behind in our education about the realities of Service Members’ and veterans’ lives and experiences. Even families of Service Members are sometimes unprepared for the new people their loved ones have become, and for the new dimensions of their experience (Armstrong, Best, and Domenici, 2006; Henderson, 2006; Lighthall, 2008).

Clinicians in the fields of substance use disorder (SUD) treatment, mental health, and other helping fields are no exception. Those without experience or expertise in post-deployment stress effects, or in the military culture and experience, can bring unintended harm through well intended words, actions, and treatment practices. The well prepared clinician will have sought and received information and training in:

- The neurobiology of stress, resilience, and vulnerability to trauma
- The relationship between trauma and substance use disorders
- Developmental factors that affect resilience and vulnerability
- Military factors that affect resilience and vulnerability
- The experiences of Service Members in Iraq and Afghanistan
- The range of post-deployment stress effects

- Considerations for safety and respect in treating veterans
- Considerations in assessment
- Considerations in treatment planning
- Matching evidence-based and promising practices to symptom clusters
- Helping veterans find meaning and purpose in their experiences
- Providing help for the family
- Recovery and self-care

Civilian providers understand the need to tailor their services to veterans' needs, but many lack more specific information. Even those who are well schooled in trauma, depression, and SUDs may still need knowledge and training on the military culture, veterans' experiences, ways of earning veterans' trust, safe vs. unsafe treatment approaches, the effects of traumatic brain injuries (TBI) on treatment needs, and ways of balancing the pain-management needs of injured veterans with existing or potential dependence on opioid medications.

An added and important benefit of learning more about OIF/OEF veterans' post-deployment stress effects will be increased effectiveness of services to Vietnam-era veterans whose chronic SUDs and other post-combat effects still bring them into civilian treatment systems. When these veterans returned from war, our nation knew very little about post-deployment stress effects and the importance of welcoming veterans home and honoring their service. We can never right that wrong, but we can do our small part to make things better now.

In many ways, the SUD or mental health clinician's training is also a training of trainers. These clinicians must be ready to:

- Educate veterans and families about the neurobiology of resilience, stress, trauma, post-deployment stress effects, substance use disorders, and recovery
- Train veterans in skills that will help them manage their stress systems and successfully negotiate their experiences and relationships
- Train family members in skills that will help them manage their own stress responses and support their loved ones' recovery processes

As returning veterans and their families learn about the development of body's stress and survival responses, it is important that they learn and remember that:

- The body's response to stress and threat is automatic and natural; it is not a matter of choice, and it is not a matter of character.
- People with PTSD and/or substance use disorders are not "going crazy." These are physical conditions with many remedies.

- We are much more than our stress systems. Just as body, mind, spirit, and relationships are all affected by post-deployment effects, so can—and do—resources in all these areas of life contribute to the healing process.
- People really do recover from, and learn to manage, post-deployment stress effects and substance use disorders.

Effective Treatment Responses

No one knows exactly when the bulk of the troops will come home from Iraq or Afghanistan, or how rapidly the level of need will increase, but one thing is certain: Given the many sacrifices they have made, all veterans deserve the best, safest, most appropriate, most seamless care and support that our communities and service systems can provide. It is not enough to offer SUD or mental health “treatment as usual,” and great care will be needed to avoid iatrogenic effects (harm caused by the treatment or the treatment provider). For example, former Army Psychiatric Nurse Alison Lighthall warns that:

- Group therapy with general client populations can set the scene for well intended but devastating questions or comments by civilian group members.
- Psychotherapeutic techniques that fail to lay a firm groundwork in stability—or that probe traumatic wounds for signs of underlying pathology—can destabilize veterans and bring on new wounds and crises.

Instead, appropriate responses to the needs of returning veterans will include:

- A strength- and recovery-based focus
- An empowering, skill-training approach
- Careful, individualized, respectful, veteran-specific assessment and treatment planning
- A primary emphasis on stabilization and development of internal and external resources
- Education for veterans and families on the physical aspects of trauma and substance use disorders, as a method of empowerment and a way of destigmatizing these effects
- Assertive linkage to ongoing support within the community—and in the larger military and veteran community nationwide

As services for returning veterans and their families evolve, significant input from veterans and family members will be needed to ensure that these services are

accessible, respectful, culturally competent, consumer-driven, and effective for this population. These conversations are taking place on a national level and in many regions and states. But it is also the responsibility of individual service systems and treatment organizations to ensure that veterans and families play an active role in shaping local responses to their needs.

Clinicians need to:

- Understand on deeper levels our human survival systems, the effects of war-zone stress on these systems, and the reality of recovery and return to balance
- Communicate with veterans and their families about these matters in strength-based and normalizing terms that remove the stigma and shame from their experiences, their reactions, and their willingness to accept help
- Organize SUD and mental health treatment and recovery responses around the state of the science, knowledge of the military culture, the wisdom and experience of those who have made progress in regaining balance, and the goals and choices of individual veterans and family members
- Offer veterans treatment approaches that are tailored to their symptoms and disorders and have the smallest possible chance of triggering iatrogenic effects.
- Maintain an openness and curiosity about the individual veteran and his or her experiences and realities
- Understand their own experience of trauma, and maintain stability in the conscious process of addressing and resolving any issues attached to that realm of experience
- Keep any agendas they might have about the war or the veteran's participation in it (e.g., feelings or opinions about the war in Iraq, political issues) completely separate from the therapeutic process

Treatment organizations need to:

- Educate staff at all levels on the military culture, the circumstances of returning veterans, the nature of post-deployment stress effects, and the nature of substance use disorders
- Have a plan in place to ensure that all staff treat returning veterans as welcome and valued customers
- Listen to recovering veterans and their families, and understand that they are the experts on their own feelings, symptoms, and treatment goals
- Help them understand their post-deployment effects, including substance-related symptoms, in terms of their automatic physical stress and survival systems, and the natural reactions of those systems to circumstances in the theatre of war

Characteristics of Effective Treatment Responses

Effective responses to the needs of veterans with post-employment stress effects include a consistent approach that:

- Integrates trauma-informed SUD and mental health care
- Maintains and supports a strength-based, recovery-based, consumer-centered, culturally competent, veteran-competent, and safe approach toward treatment
- Begins with knowledge of the military culture and Service Members' experience
- Respects each veteran's right to set goals and choose treatment approaches
- Makes full accommodation for the range of injuries and disabilities, including learning assistance for people whose head injuries have caused cognitive challenges

Staff have mastered the key areas of knowledge and understanding necessary to help veterans return to balance, including:


- The nature of human resiliency and vulnerability to stress, trauma, and substance use disorders
- The neurobiology and physiology of stress, trauma, embodied stress, return to balance, and management of post-deployment stress effects and substance use disorders
- The many levels of human experience that are affected by trauma and involved in the return to balance, and the range of biological, cognitive, emotional, spiritual, and social processes that an individual veteran may need to address
- The difference between acute stress disorder, transient post-deployment stress symptoms, acute PTSD, and chronic PTSD, and the many relationships between these effects and SUDs
- The relationship between trauma and the range of disorders of extreme stress sometimes diagnosed as personality disorders, and the relationships between these effects and substance use disorders
- The effects of TBI learning, emotions, and substance use, and their implications for treatment
- The stages of trauma recovery and appropriate measures at each stage
- The purpose, protocols, and appropriate audiences for the treatment approaches they use
- Their own reasons for wanting to do this work, and any "agendas" they might have
- Self-care measures for those who work with traumatized consumers

Individualized, strength-based, consumer-driven, trauma-informed, and evidence-based assessment and treatment/recovery planning:

- Assesses and builds on the individual's strengths and resources
- Uses respectful assessment tools that match veterans' experience and needs
- Matches safe, appropriate evidence-based and promising practices to the individual veteran's goals, challenges, needs, and circumstances
- Allows the individual veteran to choose among appropriate treatment approaches
- Refers veterans readily to other providers when needed services are not available on site
- Acknowledges and coordinates multidisciplinary treatment and case management for the range of injuries, disorders, and challenges that an individual might have
- Includes the family in the treatment process and provides services (and linkage to services) for family members, including children

The provider's recovery support focus:

- Builds on the SAMHSA-supported national efforts toward recovery-based services
- Assertively links Service Members, veterans, and families with ongoing national, community-based, and veteran/family-specific support structures

- 
- Show veterans and their families the strengths that exist within them in spite of their symptoms, and the transformative power of the recovery process
 - Give veterans and their families meaningful opportunities to influence the development and improvement of services for this population



Finding Balance

2. Resilience and Vulnerability to Traumatic Stress

Every human being has had the experience of powerlessness, and of his or her absolute dependence on beings much larger and more powerful. This is universal and momentous.

—Jonathan Shay, MD, PhD (*Odysseus in America*, p. 248)

This chapter looks at the human stress and survival system:

- How the body naturally responds to stress and threat
- How we first develop our ability to respond to stress in balanced ways
- How our stress systems become more vulnerable to being put off balance and overreacting to stress

Later sections will show how some of these vulnerabilities can leave us open to substance use disorders, post-trauma effects, depression, and anxiety—and how resilience can help us recover.

The concept of resilience—the ability of human beings to “bounce back” and rise above their circumstances—is a source of great hope and wonder. It helps us understand the fact that so many people have survived and succeeded in spite of adversity, yet it always remains a little mysterious. Far less mysterious is the fact that some painful life experiences and circumstances can raise our vulnerability to illness and social challenges.

When we speak of vulnerability to trauma, substance use disorders, and other challenges, we must always remember resiliency. The fact that people develop post-deployment stress effects and SUDs does not mean the same people are not also strong and resilient in many ways. This resilience may have contributed to their survival of these experiences and their effects, and it may tip the scales toward lasting recovery.

Service Members' SUDs and post-deployment stress effects do not begin in childhood. However, in childhood we all have experiences that make us more or less vulnerable to substances and to the effects of stress and threat. We need to understand, not only how the stress and survival system works, but also how it develops, what makes it resilient, and what might have made it more vulnerable.

The enormous stigma directed toward SUDs and post-deployment stress reactions is a direct result of our culture's widespread misunderstanding of the nature of these reactions. Often the best antidote to that stigma—and the only way to back up the claim that “these are normal reactions to abnormal stress”—comes in the form of scientific explanation: “We **know** these are normal reactions because this is how the human stress system works.”

For many returning veterans, an important first step is to learn that the challenges they have attributed to weakness or “going crazy” are instead the very predictable work of some brain structures that have names and shapes and live inside all of us.

War holds many experiences, and the human being naturally responds with many emotions. Human emotions do not cause post-deployment stress effects or substance use disorders, though they are often amplified by these effects. Severe post-trauma reactions might be thought of in many ways, including as the inability of certain higher brain regions to regulate the *amygdala*, the primitive brain structure charged with forming and storing memory associated with emotion—and with keeping us safe and alive (Schoore, 2002).

How We Work Toward Balance

The ideal:
Homeostasis
(Stable Equilibrium)

The compromise:
Allostasis
(Balance Through Change)

How we do that:
The Autonomic Nervous System

<p>Active response response to threat:</p> <p><i>The Sympathetic Nervous System</i> (Fight or Flight)</p>	<p>Passive to helplessness:</p> <p><i>The Parasympathetic Nervous System</i> (Rest, reset, numb)</p>
<p>Combination (Freeze)</p>	

To find out how this happens, it helps to look at how the brain and the rest of the body first learn to handle stress and threat. What follows is a very quick and much-simplified overview of some of the major functions involved in resilient responses to stress, and in the development of resilience.

This chapter has five sections and two pull-out pages:

- How the Body Responds to Stress and Threat
- Promoting Resilient Responses
 - Summary of Balance and Resilience
- Developmental Factors that Increase Vulnerability to Post-Trauma Effects
- Common Sources of Stress in Childhood
- Sustaining Stress and Trauma in the Body
 - Summary of Increased Vulnerability

How the Body Responds to Stress and Threat

Balance and Stress: The human body is designed to stay in balance, in spite of all the sources of stress and threat in the world. When we think of balance, we often think of stability or **homeostasis**, a relatively stable state of equilibrium. But even to approach homeostasis, the body often has to rely on **allostasis**—the use of change to achieve stability—much the way one would spread one’s arms and lean from side to side to balance on a narrow board. In general, the lower or more temporary the stress or threat, the easier it is to use allostasis to regulate and balance the body’s reactions (McEwen and Wingfield, 2003).

The **autonomic nervous system**—whose control of heart rate, breathing, metabolism, energy, perspiration, etc. works toward balance—has two “arms” that rise and fall in turn:

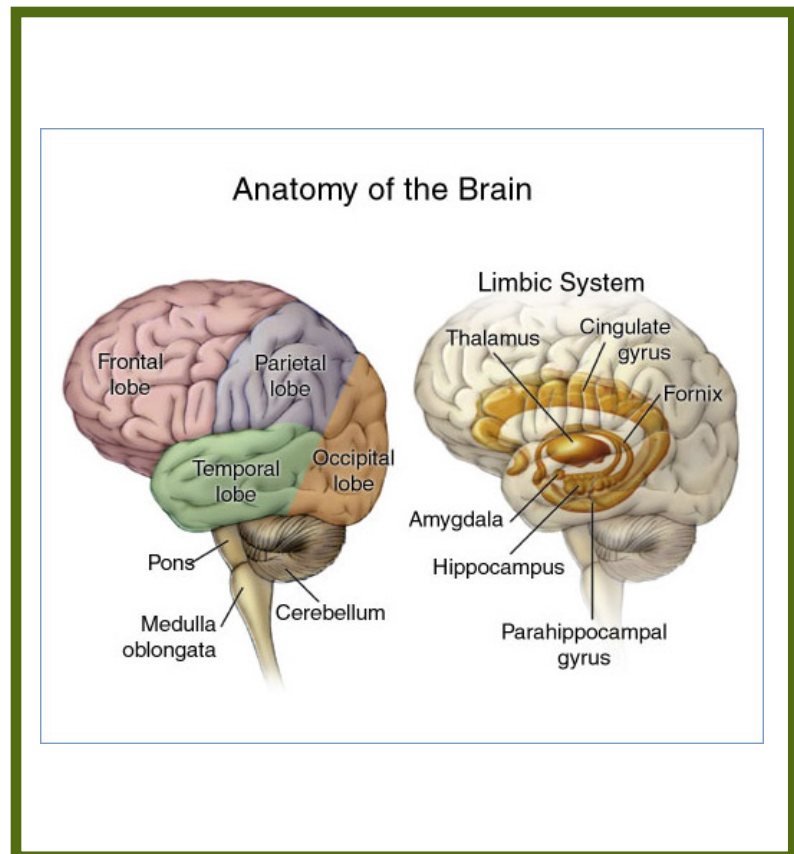
- The **sympathetic** nervous system, the one that speeds up processes (heart rate, breathing, metabolism, energy, etc.) and tightens muscles
- The **parasympathetic** nervous system, the one that slows down these processes and relaxes muscles

The body’s responses to stress and danger tend to fall into these two categories, sympathetic and parasympathetic. They are meant to operate in gentle allostasis, with the sympathetic side rising to fight or flee from temporary threat, and the parasympathetic rising to keep us safe when we are helpless—and to quiet down the sympathetic and return us to homeostasis.

A useful tool for keeping these two terms straight might be to think of the sympathetic nervous system as being “sympathetic” toward our initial need to run from danger, and the parasympathetic as being the opposite and balancing reaction.

Brain Structures That Help Regulate Stress Reactions: It takes the coordinated work of many brain structures, systems, and chemicals to regulate all our stress reactions. These structures live on all levels of the brain, from the very primitive, emotional, “reptilian” **brain stem**; through the more recent **limbic system** or “mammalian brain”; to the higher and most recently developed **cerebral cortex**. And although the brain has two **hemispheres** (each a mirror image of the other), key structures and circuits in the **right hemisphere** are particularly important in responding to stress and threat (Schore, 2001; Siegel, 2001; van der Kolk and Fislser, 1995).

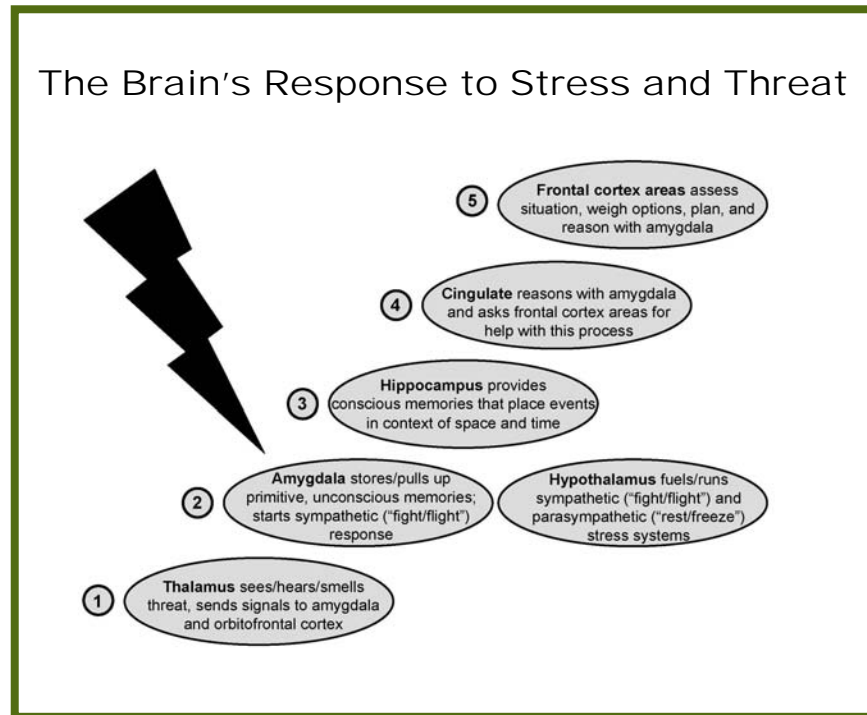
The most powerful player in this drama is the amygdala, a small, almond-shaped structure in the limbic system. Buried deep in the brain, the **amygdala** is an ancient structure designed to keep us alive. It stores unconscious emotional memories and triggers the body’s responses to stress and threat. Under stress, the amygdala contacts the **hypothalamus** (control hub of many of the body’s chemical processes) and sets the autonomic nervous system in motion. Several organs respond by sending out powerful rushes of sympathetic (e.g., **adrenaline, norepinephrine, dopamine**) and parasympathetic (e.g., **cortisol, endorphins, acetylcholine, oxytocin, GABA**) stress chemicals.



Many of these chemicals (particularly adrenaline and norepinephrine) are meant to be used up in vigorous exercise as we take physical action to remove the threat or take care of the source of stress. And one of the brain’s many jobs is to keep these two chemical systems—sympathetic and parasympathetic—in balance. That balance helps keep us “resilient,” able to keep ourselves safe and bounce back after intense experiences (Schore, 2001; Scaer, 2005).

Receiving signals from the **thalamus** (the brain’s relay system) and the **olfactory bulb** (our sense of smell), the amygdala stores unconscious memories that are primitive

fragments—pictures, sounds, scents, feelings. When it receives signals that remind it of past threats—even if these signals are very different from the earlier threats—the amygdala brings up those memories as if they were happening now. Then it sets off all the chemical fight/flight/freeze reactions. Its goal is to keep us alive and functioning (LeDoux, 1996).



Several other, more sophisticated structures are ready to help the primitive amygdala understand what is really happening and decide whether or not to flood our bodies with chemicals—and when to stop. In each case it is the component in the right hemisphere that takes the lead in responding to stress and threat.

- The **hippocampus**, right next to the amygdala, provides conscious, detailed memories that help us remember what has happened in the past and use those memories to understand what is happening now. The hippocampus orients us in time and space—the here and now.
- The **insular cortex**, next to the thalamus, helps us translate our sensory experience into emotions and thoughts about those emotions.
- The **anterior (front) cingulate gyrus**, above the amygdala, is a bridge between attention and emotion. With some help of the insular cortex, the cingulate helps us perceive and understand the world of people, and it is one of the structures that tries to reason with the amygdala. It also asks the nearby orbitofrontal cortex for help when it senses that the amygdala may be overreacting.
- The right **orbitofrontal cortex (OFC)** is an area of the **prefrontal cortex**, the highest, most sophisticated part of the brain, responsible for everything from logic to empathy. Located behind and above the eyes, the OFC helps us assess the threat, weigh all the options and consequences, come up with a plan, and work to calm the amygdala.

The amygdala is a primitive structure, much like a guard dog whose understanding is sketchy but whose mission—our protection—is clear. The amygdala cannot see or hear

subtle differences in the signals it receives from the thalamus, and it lacks the conscious memories that would help it put these signals in context—“Oh, **that’s** what it is!”—and interpret them correctly (LeDoux, 1996). Its memories are unconscious, primitive, and fragmented—Brown and Kulik (1977) called them “flashbulb memories” of sound, image, scent, and emotion. In its zeal to protect us, the amygdala reacts to incoming signals by pulling up whatever memories might be related to these signals. So a gunshot and a champagne cork are all the same to the amygdala.

The orbitofrontal cortex also receives signals from the thalamus, but these are more sophisticated than the ones the amygdala receives, and the OFC is better at decoding them (LeDoux, 1996). So even though it learns of potential threats after the amygdala has set the stress systems in motion, the OFC is still in a good position to provide more information and work toward regulating the amygdala’s ongoing response.

Promoting Resilient Responses

The higher structures that help “talk to” and regulate the amygdala—the hippocampus, insular cortex, cingulate gyrus, and orbitofrontal cortex—are first nurtured and developed during a brain “growth spurt” in infancy (9-12 months through 18-21 months), through:

- Loving touch and bonding with caregivers
- Loving, consistent, responsive face-to-face contact with caregivers, (this is often called “attunement” or “face-to-face attunement”)
- The experience of having our caregivers communicate with us (verbally or non-verbally) in ways that show they notice and understand our needs and feelings (called “contingent communication”) (Siegal, 1999)
- Having our caregivers respond to our stress in soothing ways that teach us how to soothe our own stress and confirm that the world is a fundamentally safe place (Schoore, 2001).

These higher structures develop more fully—and are far better equipped to help the amygdala handle stress—if we have safe, consistent caregiving experiences as babies and children (Schoore, 2001). The orbitofrontal cortex actually learns to send fibers of a chemical called GABA (gamma-aminobutyric acid) down to the amygdala, to soothe it and slow down its reactions to stress (Siegal, 2007).

Summary of Balance and Resilience

What happens in balance and resilience?	
What kind of early nurturing tends to lead to these responses?	Loving caregivers who hold us, gaze into our eyes, and respond appropriately to our needs and feelings tend to foster resilience.
What kinds of life experiences make these responses most likely?	Balance and resilience are most likely to develop when our experiences include short periods of stress or threat followed by periods of calm and rest, so we can return to balance.
How does the autonomic nervous system (ANS) respond?	The two poles of the ANS—sympathetic (fight, flight, arousal) and parasympathetic (rest, dissociation)—are both activated, and they use and obey all the feedback loops that keep them in balance.
Which brain structures are most powerful in these responses?	The orbitofrontal cortex, anterior cingulate cortex, and hippocampus inform and regulate the amygdala, so the other structures (locus coeruleus, hypothalamus, pituitary, vagus nerve, etc.) also behave.
Which chemical messengers carry these responses?	Dopamine, norepinephrine, adrenaline, corticotrophin-releasing hormone (CRH), adrenocorticotrophic hormone (ACTH), cortisol, gamma aminobutyric acid (GABA), acetylcholine (ACh), endorphins, enkephalins, and serotonin keep rising and falling to keep balance.
How do these responses affect heart rate and blood pressure?	Heart rate is strong and variable (rises on inhale, lowers on exhale), and blood pressure is normal.
How about breathing?	Breathing is strong and deep, with a plentiful supply of oxygen.
What effects do these balanced responses have on memory?	We have good access to both explicit (conscious, verbal) and implicit (unconscious, survival-based) memory, and we can clearly tell the difference between the past and the present.
What effects do these balanced responses have on thoughts?	We can think clearly, see all our options, think through the possible consequences, and make reasonable decisions.
What effects do these balanced responses have on feelings?	Pleasant and unpleasant feelings come and go, in response to whatever is happening right now, but we do not have to act on them.
What are the strongest survival impulses?	Our survival impulses are tailored to the level of stress or threat that we are facing at the moment.
What if the stress or threat keeps on coming, or keeps coming back?	Under constant or frequent stress or threat, we tend to go out of balance, unless we can remove ourselves from the stressful or threatening situations in time.

The process of staying in balance under stress is also much easier if the kinds of threats we face during our early years are short lived, temporary, followed by physical activity (to burn off the adrenaline and other stress chemicals), and surrounded by periods of calm and safety. That gives our stress systems time to rest and “reset.”

While our bodies and brain structures are handling stress and threat, so are our minds, emotions, spirits, and ways of relating to others. The processes of attunement and contingent communication may activate **mirror neurons** in the prefrontal cortex that allow us to identify with and imitate the experiences of others (Siegal, 2007). It is also through these processes during this critical growth period that we develop what Janoff-Bulman called the three fundamental core assumptions that allow us to develop a basic sense of trust: “The world is benevolent; The world is meaningful; The self is worthy” (Janoff-Bulman, 1992, p. 6)

And as we continue to develop, our higher brain structures—especially the prefrontal cortex—help us grow in wisdom and maturity, care about others, choose to do the right thing, and figure out what it all means (Siegal, 2007).

Developmental Factors that Increase Vulnerability to Post-Trauma Effects

The human capacity to adapt is the source of our survival, our well being, and much of our pain. When the world is excessive in the stress it applies, our bodies tend to be excessive in their responses. We survive, but at a price we may keep paying for a long time. This chapter discusses a number of factors that may increase a service member’s vulnerability to substance use disorders, post-deployment stress effects, depression, and anxiety long before he or she enters the military.

Increased Vulnerability in Childhood: Although Service Members’ SUDs and post-deployment stress effects do not begin in childhood, increased vulnerability to trauma in war—or in any other environment—may begin in childhood. An understanding of the biological vulnerability that many people grow up with can bring a better understanding of the vulnerability that many people carry into the theater of war.

As earlier pages showed, the factors that best allow children to develop resilient stress response systems include consistent, “attuned” attachment and caregiving, a chance to burn up stress chemicals (e.g., adrenaline, norepinephrine, dopamine) through physical activity, and a chance to rest and “reset” between short, moderate periods of stress and threat (Schoore, 2001).

But in the real world:

- Most threats cannot be fought effectively with the resources that children possess
- Many threats take place in situations in which children cannot burn off excess stress chemicals with physical activity
- Many stressful or threatening circumstances are long lived, recurrent, or chronic
Many children and adults are faced with multiple stressful or threatening circumstances
- Many caregivers are unable to relate consistently in the ways needed to promote healthy development and regulation of children's stress systems, often because of challenges to their own stress systems

Like the autonomic nervous system, children's responses to extreme or chronic stress or threat also have two "arms":

- A sympathetic arm that leans toward anxiety, hyperactivity, and hyperarousal (the fight-or-flight response)
- A parasympathetic arm that leans toward "shutting down," numbing, and dissociation (compartmentalization of traumatic memory and experience)

When children's experiences do not provide the safety and nurturing they need for development, a number of consequences can follow, to greater or lesser degrees:

- Their sympathetic "fight or flight" chemicals (e.g., adrenaline, noradrenaline, dopamine) may be triggered too easily under stress (Schore, 2002; Perry, 2001). Growing up, they may be more vulnerable to levels of anxiety, and alcohol or drugs may seem like the only convenient "remedy"
- Their parasympathetic "slow down," numbing, "freeze" chemicals (e.g., cortisol and the chemicals used to stimulate its release) may be triggered too easily under stress (Weiss, Longhurst, and Mazure, 1999). In adolescence, they may be drawn to substances that elevate their moods.
- Throughout their lives, anxiety may drive them toward situations that are unsafe (because these situations are familiar, and when we are anxious, we seek that which is familiar) (van der Kolk, 1989).
- Children's bodies may develop patterns of responding to stress with high levels of pleasurable (e.g., dopamine) or numbing (e.g., endorphins) chemicals. When stress subsides, withdrawal from these chemicals can leave them with urges to drink, use drugs, or re-enact stressful situations for their chemical effects (van der Kolk, 1989).

- They may have less of the chemical (serotonin) that helps control moods and impulses—including the impulse to do things compulsively, drink, or use drugs (van der Kolk, 1994).
- Some of these chemical reactions (e.g., having too much cortisol or too little serotonin) may weaken their immune systems and their resistance to illness.
- Children may grow more vulnerable to anxiety disorders and PTSD later in life (Schore, 2002; Perry, 1994).
- They may be more vulnerable to diseases that run in their families, including substance dependence, depression, and other mental illnesses (Heim and Nemeroff, 2001; Schore, 2002; Perry, 1994).
- Because of challenges to their orbitofrontal cortex and hippocampus, they may have difficulty thinking things through and remembering details of things that have happened (Schore, 2002; Perry, 1997).
- Children may have a harder time learning who they are in the world (Schore, 2002; van der Kolk, 1989; Herman, 1992), in part because of the “disconnect” between the amygdala’s powerful, unconscious memory fragments and the conscious context provided by the higher brain structures.

Possible Genetic Factors in Chemical Vulnerability: The SUD treatment field is already well aware of the growing body of literature linking genetic factors with vulnerability to substance dependence (Nestler, 2000; McClung and Nestler, 2003; Comings et al., 1994). Now researchers are also finding genetic factors that may make it more likely that children’s and adults’ bodies will respond to stress and trauma with some of the other chemical excesses and deficits described above. Although much more information will be needed, there is evidence that:

- Challenges to a number of genes that influence the transportation of serotonin (e.g., SERTPR, 5-HTTLPR, SLC6A4) may be involved in making serotonin less available, and so may make people more vulnerable to PTSD, depression, suicidal tendencies, and other psychiatric illnesses (Lee et al., 2005; Zalsman et al., 2006; Barr et al., 2004; Gelernter, Pakstis, and Kidd, 1995).
- Different variations in the stress-related gene FKBP5 may make people more or less vulnerable to severe PTSD symptoms by influencing the availability of cortisol (Binder et al., 2008).
- A variation in the dopamine transporter gene SLC6A3 may make people more vulnerable to developing PTSD by increasing the availability of dopamine in response to stress (Segman et al., 2002).
- A variation in the gene APOE may contribute to more difficult reexperiencing symptoms and memory problems in people exposed to trauma (Freeman et al., 2005).

Common Sources of Stress in Childhood

Although we often tend to think of childhood stress and trauma in terms of abuse by a caregiver or another significant adult, many things can be traumatic or challenge children's developing stress and survival systems, for example:

- Anything that threatens the love and care they need from their caregivers
- The serious illness or death of a close friend or family member
- The presence and effects of substance use disorders in the family, particularly dependence disorders
- Serious illness or medical or dental procedures (including anesthesia, surgery, immobilization)
- Accidental injuries or poisoning
- Experiencing or witnessing violence or conflict in the home or community
- Experiencing or witnessing a car crash
- Natural disasters or terrorism
- Violence or bullying at school
- Racial, cultural, or religious prejudice and/or discrimination
- The effects of poverty and hunger

It is easy to see how some parents who were traumatized in childhood have a hard time developing the skills to impart safety and nurturing to their children, and so “pass” vulnerability from generation to generation. But there is also a growing recognition that cultural trauma—the effects of slavery, genocide, racism, subjugation by another culture, etc.—can be passed from one generation to the next (Eyerman, 2001). For example, Eduardo Duran (2006) wrote of the long-term effects of the now-unimaginable treatment of Native American peoples at the hands of the white settlers and their government. “This concept later became known as intergenerational trauma, historical trauma, and the Native American concept of soul wound. These concepts all present the idea that when trauma is not dealt with in previous generations, it has to be dealt with in subsequent generations...there is a process whereby unresolved trauma becomes more severe each time it is passed on to a subsequent generation” (Duran, 2006, p. 16).

Ways of Mitigating Stress and Trauma: Parents can help children by encouraging them to talk about what has happened, teaching them ways of self-soothing and creating safety, and helping them find meaning in events. This would:

- Activate the higher brain structures (e.g., hippocampus, insular cortex, anterior cingulate gyrus, orbitofrontal cortex)
- Provide conscious memories to put the amygdala's unconscious memories in perspective
- Help them soothe and reason with the amygdala (experts in the field of trauma sometimes call this “talking to the amygdala”)

Summary of Increased Vulnerability

	Sympathetic Reactions	Parasympathetic Reactions
What kinds of early nurturing experiences tend to lead to these reactions?	Inconsistent caregiving, lack of face-to-face attunement with caregivers, lack of safety, abuse or neglect	
What kinds of life experiences make this reaction most likely?	Threat with the possibility of successful defense or escape	Threat with helplessness—no perceived chance of defense or escape
How does the autonomic nervous system (ANS) respond?	Sympathetic nervous system is activated, leads to physical arousal	Parasympathetic nervous system is activated, slows down physical arousal
Which brain structures are most powerful in this survival response?	Basolateral nucleus of amygdala, hippocampus, locus coeruleus	Central nucleus of amygdala, dorsal nucleus of vagus nerve
Which chemical messengers carry this survival response?	Norepinephrine, adrenaline, dopamine	ACh, CRH, ACTH, cortisol, ACh, GABA, endorphins, enkephalin, serotonin
How does this reaction affect heart rate and blood pressure?	Heart rate and blood pressure rise, body heats up	Heart rate and blood pressure fall, body cools
How about breathing?	Rapid, shallow breathing	Slow, shallow breathing
What effects does it have on memory?	Intrusive memories, flashbacks, past “invades” the present (Hypermnesia)	Loss of memory of the incident, or generalized memory loss (Amnesia)
What effects does it have on thoughts?	Rapid thinking, impulsive decisions	Confusion, trouble thinking or making decisions
What effects does it have on feelings?	High levels of fear, anxiety, excitement, or aggression; wild, unstable emotions	Numbing, depression, grief, hopelessness, feeling paralyzed or “not there”
What are the strongest survival impulses?	Fight and/or run away	Not move, escape inside, tune out, shut down
What if the stress or threat keeps on coming, or keeps coming back?	All these arousal reactions wear themselves out; the body goes into dissociation	These dissociation reactions are overpowered; the body goes into arousal

As noted in an earlier page, the brain also has two halves or **hemispheres**, each a mirror image of the other, but in charge of different functions. Most of our responses to stress and threat take place in the **right hemisphere**. The right hemisphere focuses on our unconscious memories. It is involved in reward, punishment, and emotion, while the left hemisphere focuses more on logic and linear stories (what happened first, what happened next, etc.).

When we try to make sense of our experiences—or tell the story from start to finish—our unconscious, emotional memories can be combined or “integrated” with the left hemisphere’s conscious memories and reasoning processes. It helps the brain put things into perspective and helps the stress systems return to balance (Siegal, 1999).

Unfortunately, many parents and other significant adults in children’s lives have been raised to believe people are better off if they just forget what has happened. Fear and/or loyalty may also keep children from talking about their experiences—or keep adults from listening and helping children work through their reactions. So children’s memories stay trapped in the unconscious amygdala, which continues to trigger frightening images, strong emotions, and powerful stress chemicals and reactions.

Trauma in the Years that Follow: Although the effects of stress and trauma in childhood often have deeper roots, the experience of trauma at any time before military service can also make people more vulnerable to stress when they deploy to the war zone. For example, one large study that included 5,324 OIF/OEF troops found that the experience of having been assaulted before military service doubled the rates of post-combat PTSD symptoms in both women (22 percent rather than 10 percent) and men (12 percent rather than 6 percent)—even though none of the participants had PTSD before deployment (Smith et al., 2008).

Sustaining Stress and Trauma in the Body

The parasympathetic “slow-down” chemicals that numb us or make us “shut down” under stress play important roles in keeping our memory of intense experiences locked in the unconscious amygdala. If that happens, the stored memory can be triggered later and come back as intense feelings, images, and sounds, as if it is all happening **now** (as it does in flashbacks). This is because:

- The chemical rush (particularly cortisol and endorphins) has shut down the process of recording conscious memory in the hippocampus.
- Norepinephrine has stepped up the amygdala’s recording of unconscious memory fragments (van der Kolk and Fisler, 1995).

Each time these emotional memory fragments are triggered and reexperienced, we can actually be retraumatized by the memories themselves, even if there is no real threat in the present (Scaer et al., 2008). And the chemicals that carry these signals tend to travel over the same **neural pathways** in the brain, over and over. This makes it easier for signals of alarm to travel those pathways in the future, through a learning process called **long-term potentiation**.

In situations in which we are trapped or helpless, the parasympathetic arm of the stress system can send out chemicals (e.g., GABA, acetylcholine) that create a “freeze response.” It does this largely through the work of the **vagus nerve**, a structure deep in the brain stem. The heart rate slows, blood pressure drops, breathing becomes slow and shallow, and energy declines. At the same time, though, all the sympathetic “fight or flight” chemicals are still pumping, so our intense experiences can be stored in our body’s procedural memory system (Scaer, 2005).

This is the same freeze state that animals in the wild enter when their predators are upon them. From a primitive survival standpoint, the freeze is a reasonable response to helplessness, perhaps the most important part of the animal’s survival system (Levine, 1997). In nature, the freeze takes place just before or at the moment the predator catches up with the prey. “The stone-still animal is not pretending to be dead. It has instinctively entered an altered state of consciousness shared by all mammals when death appears imminent” (Levine, 1997, pp. 15-16). In a more familiar realm, it is the tendency of a bird to lie still and apparently stunned after banging into a closed window.

Animals in the wild follow this freeze response with a spontaneous discharge of the energy from these chemicals, often in the form of a rapid shaking or twitching motion. The bird that lies still after crashing into the window eventually starts to shake, then flies away. Animals who go through this discharge process actually become more resilient, while those not allowed to complete the discharge become weaker and more vulnerable (Levine, 1997; Scaer, 2001).

Like other animals in captivity, human beings have lost the art of discharging the freeze response. According to Levine (1997), our traumatic symptoms “stem from the frozen residue of energy that has not been resolved and discharged; this residue remains trapped in the nervous system where it can wreak havoc on our bodies and spirits” (p. 19). According to Levine, “The physiological evidence clearly shows that the ability to go into and come out of this natural response is the key to avoiding the debilitating effects of trauma. It is a gift to us from the wild” (p. 17).



Finding Balance

3. Service Members' Experiences at War

War is the best and the worst that humanity has to offer. It has periods of satisfaction and heroism, and periods of the most grotesque and unimaginable experiences. The trick for the war vet is to be able to negotiate that experience.

—Steve Robinson, Desert Storm Veteran

No matter how many words this chapter might contain, or how carefully they were chosen, they would not be enough to convey the experience of war. The single most important tool for the civilian preparing to help veterans is a sense of humility, an appreciation for the enormity of what we cannot know if we have never experienced combat. And our most important task is to listen.

This chapter has five sections:

- Resilience and Vulnerability in the War Zone
- Service Members' Experiences in Iraq and Afghanistan
- Positive Experiences in the Theater of War
- Military Care for War-Zone Stress
- Challenges in Demobilization, Homecoming, and Reintegration

Resilience and Vulnerability in the War Zone

Although Service Members enter the military with varying levels of vulnerability to stress and trauma, a number of factors in the military experience also contribute to the likelihood that they will develop post-deployment stress injuries and substance use disorders. “While studies of combat veterans in the Second World War have shown that every man had his ‘breaking point,’ some ‘broke’ more easily than others. Only a small minority of exceptional people appear to be relatively invulnerable in extreme situations” (Herman, 1992, p. 58).

Pre-Deployment Experiences: In the *Iraq War Clinician Guide*, the Department of Veterans Affairs (VA, 2004) identified a number of pre-deployment factors that can contribute to increased vulnerability to stress, including:

- Worry and uncertainty
- Routine changes in deployment orders
- Multiple revisions of deadlines and locations
- Worrying about themselves and family members
- Struggling to make all arrangements
- Extra stress on single parents, reserve forces, and military members not previously deployed (VA, 2004)

In general, the level and quality of pre-deployment training is one important predictor of post-deployment stress. The Armed Forces have mobilized to address some of these issues. For example, the Army has developed an extensive resilience training called “Battlemind.” Battlemind is defined as “a Soldier’s inner strength to face adversity, fear, and hardship during combat with confidence and resolution. It is the will to persevere and win.” Its objectives are “to develop those factors that contribute to the Soldier’s will and spirit to fight and win in combat, thereby reducing combat stress reactions” (WRAIR, 2005).

Resilience Factors During Deployment: Perhaps the most important resilience factor, cited in many governmental and non-governmental reports, is cohesion, bonding, and buddy-based support within the military Unit (VA, 2004; MHAT, 2006; Scaer et al., 2008; Lighthall, 2008).

This resonates with what we know about the way human beings develop resiliency to stress. As you may have read in the chapter on “Resilience and Vulnerability to Traumatic Stress,” attunement and bonding with the primary caregiver is often cited as the most important factor in developing children’s ability to balance their stress reactions (through the work of the orbitofrontal cortex and the anterior cingulate gyrus).

Strong, positive, and non-shaming leadership within the Unit, leadership by non-commissioned officers, “R&R,” and mid-tour leaves have also been identified as important protective factors (MHAT, 2006).

Risk Factors During Deployment: The military has cited a number of factors as being pivotal to the risk of post-deployment stress effects, including the severity of exposure to combat and the degree of life threat or perceived life threat (VA, 2004). Investigators in the MHAT IV Survey found that “Deployment length was related to higher rates of mental health problems and marital problems” (MHAT, 2006, p. 3). Overall, risk factors identified in MHAT IV survey included:

- Combat exposure
- Deployment concerns
- Branch of service
- Multiple deployments
- Deployment length
- Pre-existing behavioral health issues
- Anger
- Marital concerns

Just as Unit cohesion serves as a strong resilience factor, so can the loss of cohesion serve as a risk factor. Service members may but lose combat relationships due to the death of close buddies, medical evacuation, emergency leave, and changes in task organization and FOB (Forward Operating Base) locations (WRAIR, 2005). Veterans who have served as National Guard and Reserve troops have often had lower levels of Unit cohesion. Though these troops represent about 28 percent of the U.S. armed forces in Iraq and Afghanistan, VA figures indicate that more than half of the veterans who have suicided after returning home served in the National Guard or the Reserves (Hefling, 2008). The intensity of combat experiences also affects the risk of developing post-deployment stress effects (Lineberry et al., 2006).

The Experience of Killing: Feelings of responsibility and guilt may worsen some veterans’ post-combat stress effects (Kubany et al., 1995). In one study of Vietnam veterans (Hiley-Young et al., 1995), investigators found that participation in war-zone violence predicted post-military violence to self, spouse, or others. Another analysis of Vietnam War veterans found that those who reported that they had killed in combat tended to have higher PTSD scores than those who had not, and scores were even higher for those who said they were directly involved in atrocities (MacNair, 2002). And a study of suicide attempts among Vietnam combat veterans found that, of the five factors significantly related to suicide attempts (guilt about combat actions, survivor guilt, depression, anxiety, and severe PTSD), guilt about actions in combat was the most significant predictor of suicide attempts and preoccupation with suicide (Hendin and Haas, 1992).

Coping Styles in the War Zone: Herman (1992) cited a number of characteristics associated with greater resistance to traumatic stress, including high sociability, thoughtful and active coping styles, and a strong perception of ability to control one's destiny. She also noted that, in survivors of war and disaster, people who escape through cooperation with others (a response that is largely influenced by the chemical serotonin) tend also to escape trauma and post-trauma effects.

On the other hand, more severe post-trauma responses tend to appear among people who freeze and dissociate (influenced by cortisol, acetylcholine, endorphins, and GABA)—and in those who react in a “Rambo” fashion by jumping into isolated, impulsive action (influenced by adrenaline, norepinephrine, and dopamine). In their study of Vietnam veterans, and in their review of multiple studies of people who had lived through war and disaster, van der Kolk and Fisler (1995) also found that people who had higher levels of dissociative symptoms during these experiences tended to have higher incidence of posttraumatic stress disorder (PTSD).

Charney (2005) and Southwick studied 750 Vietnam veterans who had developed neither PTSD nor depression after being held as prisoners of war for a period of six to eight years, during which time they were tortured and/or kept in solitary confinement. The investigators identified ten elements that they considered critical characteristics of resilience: optimism, altruism, a moral compass, spirituality, humor, having a role model, social supports, facing fear, having a mission, and training (Charney, 2005 quoted in Rosenbaum and Covino, 2005)

Cultural and Gender Factors in Vulnerability: Although these factors have yet to be explored in depth, some information is available. For example, data from Vietnam veterans indicate that Service Members of color were more likely to suffer PTSD but less likely to seek or receive services for it (Hutchinson and Banks-Williams, 2006).

The experts disagree on the role of gender in vulnerability to PTSD. Some studies (e.g., Breslau et al., 1999) have found women more likely to develop PTSD from exposure to trauma, even after controlling for history of previous exposure to trauma. However, the Army's Mental Health Advisory Team IV studies of female OIF/OEF Soldiers showed no differences in ability to cope with the stressors and challenges of combat, but did show that women had unique or unmet mental health needs different from those of male Soldiers (MHAT, 2006). According to SoRelle (2004), PTSD among female veterans may be underreported within the military system, with many seeking services in the community rather than in military facilities, and the incidence of PTSD in women returning from Iraq and Afghanistan may be on the rise (SoRelle, 2004).

Service Members' Experiences in Iraq and Afghanistan

The consideration of Service Members' experiences in the theater of war is a far more complex process than one would assume. These experiences are many and varied, depending on a number of factors that might include:

- When they were deployed (with the likelihood of lower exposure to violence among many Service Members who were not deployed until after the troop Surge that began in 2007 was well underway)
- Where they were deployed (with relative peace in some areas and higher levels of violence in others)
- Strength of bonding and leadership within their Units (with stronger bonding and more motivational leadership cited as protective factors for combat stress and post-deployment stress effects)
- How many tours of duty they served, how long those tours lasted, and the length of time between tours (with multiple tours, longer tours, and shorter "reset" time cited as major risk factors for post-deployment effects)
- Their roles in the war zone (from combat to nation building)
- How often those roles took them "outside the wire" that surrounds the relative safety of the forward operating base (FOB)
- Where they happened to be when the mortar sailed in or the improvised explosive device (IED) exploded
- How much time they spent in situations of threat and helplessness, situations in which there truly was no way to predict, control, or take action against enemy attacks

Urban Warfare: Henderson (2006) noted that technological advances now make it possible to fight 24 hours a day, leaving no built-in "down-time" to decompress and return stress systems to balance. He also cited the special nature of urban warfare, which:

- Tends to go on for long periods of time, with no clear front line
- Increases the chance of accidentally killing the wrong people
- Brings attacks in out of anywhere, at any time, from anyone
- Uses up supplies at a faster rate, straining supply lines and leading to shortages
- Makes it difficult to enforce even clear rules of engagement
- Does not leave time to grieve losses
- Makes it more likely that one will accidentally inflict casualties on civilians

In the words of Padin-Rivera (2006), “Much of the violence has no uniform. Any civilians can be dangerous. Everything is a possible weapon” (Padin-Rivera, 2006, p. 10).

Conditions in the War Zone: The Department of Veterans Affairs (2004) provided a comprehensive list of conditions under which Service Members operate, including the following.

Chronic high levels of discomfort:

- Intense heat
- Austere living conditions, unpleasant living quarters
- Heavy physical demands
- Sleep deprivation
- Periods of intense violence followed by unpredictable periods of relative inactivity
- Lack of enjoyable food, lack of privacy
- Cultural difficulties, boredom, inadequate equipment, long workdays
- Separation from loved ones
- Concerns about life at home (family, job, relationships, significant events)
- Sexual or gender harassment
- Racial or cultural prejudice, discrimination, or harassment

Disruption and confusion:

- Operational plans that change constantly
- Unclear knowledge of enemy capabilities
- Equipment that breaks down
- Uncertain supply lines
- Rules of engagement that change regularly as political and tactical requirements change
- The need to make split decisions
- Disruption of the environment

The realities of combat:

- Physical injury
- Threat of death or injury
- Witnessing the death, wounding, and disfigurement of friends, enemies, and civilians (including children)
- The sights, sounds, and smells of dying men, women, and children
- Handling or removing the remains of civilians, enemy combatants, US and allied service members, and animals
- Working with prisoners of war
- Seeing devastated communities and homeless refugees

The realities of an insurgency war:

- Terrorist activities and guerilla warfare (e.g., car bombs, IEDs, mortar attacks) lead to chronic strain and anxiety
- Insurgency may lead Service Members to question the purpose, importance, and need for such sacrifices
- Anyone might be carrying a firearm, explosive, or remote detonation device
- If a vehicle challenges a roadblock or security checkpoint, delay may lead a to loss of friendly forces, but a premature response may kill innocent civilians
- Friendly-fire events are among the most tragic and the most difficult to reconstruct in autobiographical memory, leading to lower levels of integration and greater potential for unchecked activity in procedural memory

Stress system responses to these conditions, including:

- Intense emotion and sensory exposure
- Heightened levels of arousal
- Intrusive recollections
- Symptoms of dissociation
- Fear, rage, or helplessness
- Attempts to avoid emotion (VA, 2004)

Sleep Deprivation and Fatigue: When the Army's Mental Health Advisory Team's 2006 report was written, "...a considerable number of Soldiers and Marines [were] conducting combat operations every day of the week, 10-12 hours per day seven days a week for months on end. At no time in our military history have Soldiers or Marines been required to serve on the front line in any war for a period of 6-7 months, let alone years, without a significant break in order to recover from the physical, psychological, and emotional demands that ensue from combat" (MHAT, 2006, p. 76). Many of those Soldiers and Marines may now be among the veterans seeking help today.

One Iraq war veteran interviewee reported experiencing a lack of restorative sleep, sometimes for days, weeks, or months, with perhaps one hour's shallow sleep each night. Contributors to sleep deprivation can include constant mortar attacks, sleeping (or attempting to sleep) in a truck, "24/7" military duties, and sleeping on high alert (Armstrong, Best, and Domenici, 2006). Sleep deprivation reduces blood flow to the brain, increasing the likelihood of a number of neurological challenges, including depression (Amen, 2008).

According to Scaer and colleagues (2008), the physical fatigue associated with carrying large quantities of supplies and protective gear can also add to the risk of post-deployment stress effects. Carrying 80-100 pounds of body armor and gear often leads to chronic contraction of anterior (front) core muscles (e.g., the psoas muscles that extend from the lower spine over the pelvis and hip—the very muscles involved in the dissociative "freeze" response). This may play a role in storing trauma in the body's procedural memory (Scaer et al., 2008).

The need for rapid redeployment also tends to compound both the fatigue and the risk. According to the Mental Health Advisory Team, “We know from findings from the Walter Reed Army Institute of Research (WRAIR) Land Combat Study that the mental health status of Soldiers has not ‘re-set’ after returning from combat duty in Iraq and before they are applied again to Iraq” (MHAT, 2006, p. 77).

Military Sexual Trauma: The *Iraq War Clinicians Guide* describes military sexual trauma as including both sexual harassment and sexual assault in military settings. It can happen to either gender, and the perpetrator can be of the opposite or the same gender. It generally occurs within the Unit, a closed community in which there is little privacy and the victim and perpetrator must meet on a regular basis (VA, 2004). According to Lighthall (2008), military sexual trauma can have devastating effects throughout the Unit and throughout Service Members’ stress systems, because it shatters the Unit cohesion that is so essential to survival and resilience (Lighthall, 2008).

Effects of the Surge: Given the relative decrease in violence during the troop Surge that began in Iraq in Summer, 2007 (Farrell and Opiel, 2008), one might hope that the level of post-deployment stress effects would have decreased as well during that time. OIF veterans interviewed have expressed both their hope and their doubts that this is true, given that:

- Lower levels of violence can reduce the intense levels of the post-deployment stress responses that tend to follow the worst periods of combat.
- Even though the incidence of violence has decreased, the potential for violence still exists, and it is this potential that activates constant hyperarousal of stress and survival systems.
- Post-deployment stress effects are not “healed” by later reductions in violence or threat, but can remain in the body for years until they are addressed with effective therapy and/or re-balancing measures.

The *Iraq War Clinician Guide* also notes that even light or minimal exposure to violence can engender post-deployment effects: “... clinicians need to be careful not to minimize reports of light or minimal exposure to combat. They should bear in mind that in civilian life, for example, a person could suffer from chronic PTSD as a result of a single, isolated life-threat experience (such as a physical assault or motor vehicle accident)” (VA, 2004, p. 25).

Positive Experiences in the Theater of War

As honest as they are about the harsh conditions at war, many returning veterans also grow frustrated with the American public's lack of knowledge of the significant positive experiences in the theater of war.

- The development of strong familial ties among buddies and within the Unit is the most important strength cited, one that many Service Members believe civilians may never fully understand, because the circumstances in which it develops are so far beyond civilian experience.
- They also note the prevalent sense of humor—much of it a form of “gallows humor” that might seem offensive to some civilians but serves an important role in many service members' efforts to cope with the hardship of war.
- Many service members and veterans mention the strong sense of meaning and purpose they found in their work in the war zone, and especially in their ability to protect their buddies. Many find that they miss this sense of meaning and purpose deeply and intensely when they return home.
- And many cite as positive experiences the thrill of danger and the “rush” of adrenaline and dopamine when they survive under fire.

And by no means is all duty “in country” related to combat. In an insurgency war in a new and developing democracy, a Service Member's role might combine the traditional combat roles of guard and soldier with those of military trainer, “beat cop,” diplomat, relief worker, outreach worker, and community organizer. Mixed in with their memories of battle, many veterans also carry strong and healing memories of playing with children, organizing medical care, rebuilding communities, and the many other humanitarian roles they were able to assume.

Dehghanpisheh and Thomas (2008) wrote of the significant strengths and skills gained by young officers in the Iraq war. “They've learned, often on their own, operating with unprecedented independence, the intricacies of Muslim Cultures faced with ineffective central governments, they have acted as mayors, mediators, cops, civil engineers, usually in appalling surroundings” (Dehghanpisheh and Thomas, 2008, p. 30).

Military Care for War-Zone Stress

According to the Department of Veterans Affairs (2004), the Military's guiding principle in responding to symptoms of war-zone stress is captured in the acronym, PIES: proximity, immediacy, expectancy, and simplicity. Interventions are as brief as possible

and take place as close to the Unit and as soon as possible. The first-tier response to an apparent challenge occurs within the Unit and includes rest; nourishment; and opportunities to discuss one's experiences with medical personnel, chaplains, etc.

The military has developed five echelons of care for Service Members with combat stress effects:

- Echelon I: Intervention by the medical assets within the combat unit
- Echelon II: Care at the Brigade and Division level, by the farthest-forward (toward the place where the Unit is stationed) Combat Stress Control Teams
- Echelon III: Forward deployed Combat Support Hospitals in the Corps Support Area (If the Service Member is not expected to respond to treatment there within seven days, he or she is usually evacuated out of theater. More than 90 percent of Service Members are treated and returned to duty.)
- Echelon IV: Hospital facilities generally outside the combat zone (e.g., in Germany or Spain)
- Echelon V: Continental U.S. Military and VA medical centers.

At each echelon, the Service Member is evaluated for return to duty. With each level of evacuation, the Service Member is more removed from the Unit and tends to be more apprehensive about being re-exposed and less likely to return to combat duty (VA, 2004).

Challenges in Demobilization, Homecoming, and Reintegration

To much of the civilian world, it might seem as if the return home is the solution to all the Service Member's problems. But coming home has its own challenges. As one Iraq War veteran interviewee said, "You never really come home."

Losses and Isolation: Whatever their bodies' stress reactions might be, many returning veterans are also living with the loss of military jobs, careers, and relationships with coworkers (Padin-Rivera, 2006). Hutchinson and Banks-Williams (2006) noted a number of losses, including:

- Profound disappointment at being separated from the military, especially if their separation was due to administrative action or their inability to complete their missions or commitment to the military

- Loss of military structure and lifestyle
- Loss of the military career, problems finding a good job, changes in roles and responsibilities in the family, physical and/or psychiatric injuries, the quality of their reception from civilians, disappointment at the loss of idealized images of the family, and “social isolation due to ambivalence regarding the mission” (p. 68).

Sense of Alienation:

Homecoming for this generation of veterans does not hold the cruelty that many Vietnam veterans experienced at the hands of some civilians. However, the nation’s current widespread support of service members is accompanied by mixed views of the war in Iraq. This sometimes makes it difficult for veterans to know whom to talk to about their experiences, and how people will react (Padin-Rivera, 2006). Hutchinson and Banks-Williams (2006) noted a number of other ways in which this sense of alienation appears:

- Many returning veterans fear negative judgment from loved ones.
- Nearly a fifth of all Soldiers deployed to Iraq reported marital concerns or problems.

A Chaplain’s Experience Coming Home

- For 18 months, I was surrounded by men with guns. When I came home, I felt vulnerable without them, even in church.
- For 18 months, I suffered the indignities and depravities of military life in a combat environment with a core of friends. When I came home I felt lonely without them, even when surrounded by family or other friends.
- For 18 months, I kept a constant watch on my surroundings and the people all around me. When I returned home, I could not break the habit but remained hypervigilant outside the walls of my home.
- For 18 months, I studied every piece of garbage or discarded junk along the road. When I came home, I couldn’t stop. Riding in the passenger seat always made me nervous when someone would drive over a piece of trash.
- For 18 months as a leader of soldiers, I had to keep my emotions in check. When I came home, people told me I was distant and withdrawn.
- For 18 months, I shared common goals and values with others upon whom I depended literally for my life. When I came home, I found dishonesty, hypocrisy and malevolence in people who claimed to be my friends and share common values.
- For 18 months, I had no choice about what to wear, what to eat, what to do or when to sleep. When I came home, I was overwhelmed by choices, sometimes to the point that I was unable to make decisions.
- For 18 months, I dealt with issues that were literally life and death, ones eternal in their scope. When I returned home, I found people worried about matters of no consequence at all.

—Douglas A. Etter, CH (LTC) 28 ID “Panther 39”

Reprinted, with permission, from “A Chaplain’s Reflections on Combat Experience Offers Insights into Returning Veterans’ Needs,” in *Resource Links*, 6(1), Northeast ATTC.

- Civilians sometimes ask Service Members and veterans if they have killed or seen others killed. “On some level, the media sensationalizes the war experience without reporting the day-to-day experiences and concerns that soldiers may have. Being part of human destruction as either warrior or witness is a devastating, emotionally compromising experience. The soldier may experience an inquiry like this as a retraumatizing event” (p. 69).
- “One soldier indicated that he expected the country to rally around the troops and support the mission. He expected the ‘World War II spirit.’ Instead the response was the ‘Vietnam rejection’” (p. 68).

Bringing the Injuries Home: The sophistication of military medical units and personnel has saved the lives of countless Service Members who would have perished in earlier wars. Traumatic brain injuries (TBI) (addressed in greater detail in Post-Deployment Stress Effects) can change personalities and relationships and bring about considerable alienation back home. And many serious injuries are claiming limbs and facial features. “Disfigurement is a physical loss that often can have far-reaching psychological, social, and emotional aftereffects” (Padin-Rivera, 2006, p. 13).

Hutchinson and Banks-Williams also note the special challenges of coming home with only the invisible wounds left by combat stress injuries:

- Guilt at having no visible wounds is a common reaction, including dismissal of or shame about any psychiatric wounds they might carry.
- “Physical damage suggests strength, fearlessness, sacrifice, and honor. Mental damage may suggest weakness and dishonor” (p. 68).
- Guilt at having survived when others did not can make it all the more difficult to express or seek help for the symptoms of their post-deployment stress effects.

Common Thoughts Among Returning Veterans: In *Courage After Fire: Coping Strategies for Troops Returning from Iraq and Afghanistan and Their Families*, Armstrong, Best, and Domenici (2006) catalogued a number of beliefs and automatic thoughts that many veterans reported after returning home. These are reprinted verbatim below:

Common views on self-worth (p. 136):

- I don’t deserve love from my family any more
- I’m incompetent because I didn’t save my buddies
- I failed at war
- I am a bad person for the things I did at war
- I’m not worthy of anybody’s care
- I’m weak for asking for help
- I’m useless, now that I have a physical disability
- If I told you what I did when I served, you would hate me

About relationships (p. 137):

- I can't relate to my civilian friends anymore
- I'd rather be by myself than with my family
- I feel like an outsider even in my own home
- I think something is wrong with me because I don't have any feelings for people I used to care for
- Others will die on me like my military friends, so why should I bother getting close?

About meaning and purpose (p. 138):

- Nothing matters, now that I'm home
- My responsibilities here are nothing compared to those I had in the military
- I don't have any purpose or motivation for living
- I'm not sure the war was worth it
- What is going on here in the US is trivial compared to what's going on in Iraq
- The only satisfaction I get these days is following the news so I can hear how my buddies are doing
- Civilian life is boring and meaningless

About spirituality and faith (pp. 138-139):

- I no longer have faith that God exists
- My higher power betrayed me
- I'm too bad to be loved by a higher power
- How could there be a God, given what I've seen?
- God can't protect anybody
- God isn't fair



Finding Balance

4. Post-deployment Stress Effects

The brain in trauma has lost its ability to distinguish past from present, and as a result it cannot adapt to the future. This confusion of time further immobilizes the trauma victim, who still remains immobilized by a thwarted freeze discharge. Procedural memory is bombarded by environmental and internal cues that represent old, unresolved threat. Declarative memory is assaulted by intrusive thoughts, memories, and dreams that repetitively warn the person of potential danger. Furthermore, the constant activation of brain circuitry related to threat alters and suppresses structure and function in the verbal and thinking brain. Trauma indeed is a state of imprisonment.

—Robert Scaer (*The Trauma Spectrum: Hidden Wounds and Human Resiliency*, p. 58)

This chapter addresses some of the ways in which the human stress and survival system responds to life in the war zone, and its effects on men and women who have served in Iraq and Afghanistan.

The roots of post-deployment stress effects are physical, powerful, and automatic. The systems that react to stress and threat live in all of us. These reactions live on a continuum, from mild to severe, with many resilience and vulnerability factors placing us at different points on that continuum. We can recognize some of these factors, but others we may never know.

In Service Members' reactions to the stress of deployment, none of their vulnerability factors has anything to do with how smart they are, how strong or brave they are, how committed they are to their mission, or how much they love their country. Unfortunately, this is something that many Service Members and veterans do not know—or may know intellectually but still doubt on deeper levels.

We all have within us the strength to overcome many of the effects of traumatic stress, and to learn to manage the others. And we have within our reach all the resources we need to learn how to do this. The first step is to gain a basic understanding of these effects.

This chapter has nine sections and two pull-out pages:

- The Biology of War-Zone Stress Effects
- The Onset of War-Zone Stress Effects
 - DSM-IV Diagnostic Criteria for Acute Stress Disorder
 - DSMIV Diagnostic Criteria for Posttraumatic Stress Disorder
- The Variety of War-Zone Stress Effects
- Posttraumatic Stress Disorder
- Substance Use Disorders
- Depressive Disorders
- Complex PTSD or DESNOS
- Somatic Effects
- Co-Occurring Traumatic Brain Injuries

The Biology of War-Zone Stress Effects

In *Odysseus in America: Combat Trauma and the Trials of Homecoming*, Jonathan Shay wrote that “The symptoms caused by psychological injury that the American Psychiatric Association calls PTSD in its *Diagnostic and Statistical Manual of Mental Disorders* (DSM) can be understood in one clear and simple concept: persistence of *valid adaptations to danger* into a time of safety afterward” (Shay, 2002, p. 149).

In the war zone, the Service Member’s body and brain adapt to danger, remaining on high alert night and day, even when no attack is taking place. As more than one veteran has said in interviews and presentations, “Even when it’s safe, it’s not safe.” The amygdala is in its element, issuing a standing order for the body’s stress systems to pump out sympathetic (“fight or flight”) and parasympathetic (“shut down, numb out, freeze”) chemicals.

Both “real-time” experience and the frequent triggering of the amygdala’s stored fragments of intense memory set off or “kindle” powerful sympathetic chemical reactions, which burn the message of threat into the brain, over and over again. The more intense this process grows, the more it can seal the amygdala’s emotional memory fragments—sights, sounds, smells, feelings—into the unconscious. And the

more anxiety and insomnia this produces, the stronger the urges may be to seek sedation in alcohol, depressants, or marijuana.

On the parasympathetic side, these chemicals can:

- Shut down and “numb off” important emotions
- Create a sense of unreality, separation, and alienation
- Keep the hippocampus from storing conscious memories of intense experiences, including traumatic events
- Create patterns of avoiding any thoughts, feelings, or situations that might set off the chemical stress responses
- Create an overpowering desire for substances that will provide any sort of stimulation or mood elevation

However, at least one parasympathetic chemical, gamma-aminobutyric acid (GABA), may protect people from developing chronic PTSD and help them recover from trauma (Vaiva et al., 2006).

Many service members and veterans have used the metaphor of having “one foot on the gas and the other on the brake.” This makes perfect sense in light of the amygdala’s tendency to trigger and sustain overloads of both the sympathetic and the parasympathetic chemicals.

Of course, these basic survival-related processes and chemical reactions by no means constitute the whole picture. Researchers will probably never even be able to describe, much less to quantify, the role of the many other overwhelmingly powerful emotions of war—exhilaration, satisfaction, love of comrades, love of the mission, empathy, rage, grief, and guilt, to name a few.

To what extent these emotions may “feed into” the human stress system cannot be measured as long as everything is happening all at once, with threats to the organism’s survival living in the same body as the natural and intense responses of the mind, the heart, and the spirit. For example, if you were collecting human remains from a roadside blast, how would your anger, grief, and other emotions mix in with your body’s natural revulsion to death—and the role of this experience in triggering the amygdala’s survival responses? And how would your experience change if your body had developed a lifelong habit of pumping high levels of sympathetic “fight-or-flight” chemicals, numbing parasympathetic chemicals, or both?

A number of things—bonding within the Unit, inspiring leadership, opportunities to talk about experiences, trips away from the war zone where they can “rest and reset”—can in some cases help slow down some of the runaway chemical processes. But intense experiences, vulnerable stress systems, and the many powerful effects of long-term exposure to the war zone can still overwhelm all these mitigating factors.

The Onset of War-Zone Stress Effects

Depending on their experiences and their bodies' responses to stress, some Service Members begin to experience symptoms of anxiety, depression, acute stress reactions, and/or acute stress disorder (ASD) in the theater of war. ASD appears within four weeks of traumatic experience and includes clinically significant distress or the impairment of one's ability to pursue necessary tasks. If the ASD symptoms do not resolve within a four-week period, they meet the criteria for a diagnosis of posttraumatic stress disorder (PTSD).

And depending largely on levels of shame and stigma toward combat stress reactions—stigma embraced by the Service Member and/or the Unit—they may or may not speak of, or even admit to themselves, their acute stress reactions. If they do speak or show their symptoms, they set in motion the multi-level military responses to these symptoms described under “Care for War-Zone Stress in the Theatre of War.” If they do not receive help, their risk of developing posttraumatic stress disorder (PTSD) is increased (VA, 2004).

In other Service Members, as long as they remain in the war zone, the constant rush of stress chemicals creates a sort of false equilibrium—a bit like the forces in the old cartoon that kept the Road Runner afloat until he realized he had run off the cliff and the earth was a long way below him. This relentless state of “hypervigilance” may continue to burden and compromise the Service Member's stress systems more and more, but in some cases it may also delay formation of acute and post-trauma symptoms. For those who choose to “self-medicate” these symptoms, alcohol is also readily available in Iraq, though a standing order prohibits the use of any alcohol or illegal drugs in deployed environments (VA, 2004).

It is after they leave the war zone—with no more constant surge of stress chemicals to “keep them afloat”—that many Service Members and veterans first experience their worst combat stress injuries or post-traumatic stress effects. Depending on their chemical reactions to stress, their experiences in and after the war zone, and the levels of support around them, it might take weeks, months, or even years for the symptoms of post-deployment effects to surface. There may not be enough time between deployments for these symptoms to emerge, or the symptoms may emerge among people who are about to be redeployed. Depending on symptom severity and manageability, and on many decision-making processes, redeployment may or may not take place.

If the diagnosis is PTSD and symptoms last less than three months, it is considered “acute” PTSD. If it lasts three months or more, it is considered “chronic.” If symptoms do not begin until at least six months after the experience of trauma, PTSD is considered to have “delayed onset” (APA, 1994).

In the *Iraq War Clinician Guide*, the Department of Veterans Affairs wrote:

“The chronic phase of adjustment to war is well-known to VA clinicians; it is the burden of war manifested across the life-span. It is important to note that psychosocial adaptation to war, over time, is not linear and continuous. For example, most soldiers are not debilitated in the immediate impact of days, but they are nevertheless at risk for chronic mental health problems implicated by experiences during battle. Also, although ASD is an excellent predictor for chronic PTSD, it is not a necessary precondition for chronic impairment—there is sufficient evidence to support the notion of delayed PTSD. Furthermore, the majority of people who develop PTSD did not meet the full diagnostic criteria for ASD beforehand. It is also important to appreciate that psychosocial and psychiatric disturbance implicated by war-zone exposure waxes and wanes across the life-span (e.g., relative to life-demands, exposure to critical reminders of war experiences, etc.)” (VA, 2004, pp. 23-24).

The Variety of War-Zone Stress Effects

In public and professional discussions, there is a strong temptation to categorize all post-deployment stress effects as posttraumatic stress disorder (PTSD), or to consider diagnosable PTSD the only clinical challenge worth discussing. Both of these temptations are dangerous, because they:

- Apply diagnostic labels in some situations that would be better served by individual human descriptions of individual human experience
- Increase the stigma by over-pathologizing reactions that may be milder, or may simply be different
- Minimize the importance of serious conditions such as anxiety disorders and depressive disorders
- Ignore a number of other serious conditions, such as complex PTSD or DESNOS (Disorders of Extreme Stress Not Otherwise Specified), that deserve attention and treatment
- Ignore the synergistic effects of combining post-deployment stress responses with other physical injuries, especially traumatic brain injuries (TBI) and the mild TBI so often caused by blast concussion

DSM-IV Diagnostic Criteria for Acute Stress Disorder

- A. The person has been exposed to a traumatic event in which both of the following were present:
- (1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
 - (2) the person's response involved intense fear, helplessness, or horror. **Note:** In children, this may be expressed instead by disorganized or agitated behavior.
- B. Either while experiencing or after experiencing the distressing event, the individual has three (or more) of the following dissociative symptoms:
- (1) a subjective sense of numbing, detachment, or absence of emotional responsiveness
 - (2) a reduction in awareness of his or her surroundings (e.g., "being in a daze")
 - (3) derealization
 - (4) depersonalization
 - (5) dissociative amnesia (i.e., inability to recall an important aspect of the trauma)
- C. The traumatic event is persistently reexperienced in at least one of the following ways: recurrent images, thoughts, dreams, illusions, flashback episodes, or a sense of reliving the experience; or distress on exposure to reminders of the traumatic event.
- D. Marked avoidance of stimuli that arouse recollections of the trauma (e.g., thoughts, feelings, conversations, activities, places, people).
- E. Marked symptoms of anxiety or increased arousal (e.g., difficulty sleeping, irritability, poor concentration, hypervigilance, exaggerated startle response, motor restlessness).
- F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or in: the individual's ability to pursue some necessary task, such as obtaining necessary assistance or mobilizing personal resources by telling family members about the traumatic experience.
- E. The disturbance lasts for a minimum of 2 days and a maximum of 4 weeks and occurs within 4 weeks of the traumatic event.
- F. The disturbance is not due to the direct physiological effects substance (e.g., a drug of abuse, a medication) or a general medical condition, is not better accounted for by Brief Psychotic Disorder, and is not merely an exacerbation of a preexisting Axis I or Axis II disorder.

Source: American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*. Washington, DC: American Psychiatric Association.

“Even among those veterans who will need psychological services post-deployment, ASD and PTSD represent only two of a myriad of psychological presentations that are likely. Veterans of the Iraq war are likely to have been exposed to a wide variety of war-zone related stressors that can impact psychological functioning in a number of ways” (VA, 2004, p. 32).

This chapter cannot do justice to the array of combat stress injuries and effects, but a number of conditions deserve at least brief mention as direct effects of the chemical processes discussed in the chapter on resilience and vulnerability to stress. These include:

- Posttraumatic stress disorder
- Substance use disorders (SUD), including substance abuse and substance dependence
- Depressive disorders
- Complex PTSD, Developmental Trauma, or DESNOS
- Somatic effects of stress and trauma
- Traumatic brain injuries

What is the role of emotion in post-deployment stress effects? Opinions range from the traditional misconception that these disorders are merely “emotional problems” to a dismissal of the emotional experience in favor of the mechanics of the body’s survival systems. Certainly the post-deployment physical processes and chemical reactions in the brain are fueling and adding great force to the natural human emotions that people bring home from the war zone.

It may also be necessary to acknowledge that the emotions themselves interact with those physical processes in ways that we do not have the means to map out or measure. For example, some studies of Vietnam veterans have associated higher levels of guilt with stronger PTSD symptoms and suicidal tendencies (Hendin and Haas, 1992; Kubany et al., 2005; Henning and Frueh, 1997). Perhaps the best one can hope to do is to respect all the roles of body, mind, and spirit—and all the things about them that we do not know.

And our most important task—as always—is to keep in mind the strengths, resources, and resiliencies of the individual human beings who struggle with these effects, and the reality of recovery and a return to balance.

Posttraumatic Stress Disorder

When we remember the brain's and body's chemical reactions to stress and threat, the symptoms of PTSD make perfect sense:

- Hyperarousal, hypervigilance, irritability, difficulty concentrating, and difficulty sleeping are all natural functions of a sympathetic stress system that has learned to stay on alert and in “overdrive,” even when there is no immediate sign of threat (LeDoux, 1996).
- Exaggerated startle responses, the “kindling” of strong emotional reactions under minimal stress, inappropriate anger, and rage all seem absolutely necessary to an amygdala that considers itself always in danger and responsible for protection against all threats, seen and unseen (LeDoux, 1996).
- Intrusive memories, nightmares, and flashbacks (experiencing the traumatic event as if it is happening now) are the amygdala's unconscious memory fragments jumping to the surface. At first they may be triggered by sights, sounds, smells, emotions, etc. that remind the primitive amygdala of its own “memory bites.” But over time, they may not need any outside triggers, as the stress system itself becomes a trigger (van der Kolk, 1994).
- Loss of conscious memory of intense past experiences, and problems forming new memories in the present, are natural results of the ways in which the dissociative parasympathetic chemicals (particularly cortisol and endorphins) interfere with the ability of the hippocampus to store and retrieve conscious memories (van der Kolk, 1994).
- The senses of numbing, detachment, shutting down, boredom, loss of hope, loss of energy, and loss of motivation are also functions of the high levels of parasympathetic “slow down, numb out” chemicals (van der Kolk and Fisler, 1995).
- Avoidance of things that remind one of the trauma is both a function of the high levels of parasympathetic chemicals and a logical response to the fact that these things are likely to trigger challenging sympathetic chemical reactions (van der Kolk and Fisler, 1995).

Commonly reported sleep disturbances among people with PTSD include trouble falling asleep, restless sleep, thrashing around, frequent awakening (with trouble falling back asleep), short duration of sleep, daytime fatigue, night terrors (screaming or shaking during sleep), and nightmares and anxiety dreams. Level of combat exposure has also been associated with the frequency of nightmares and mildly associated with difficulty falling asleep (Pillar, Malhotra, and Lavie, 2000).

DSM-IV Diagnostic Criteria for Posttraumatic Stress Disorder

- A. The person has been exposed to a traumatic event in which both of the following were present:
 - (3) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
 - (4) the person's response involved intense fear, helplessness, or horror. **Note:** In children, this may be expressed instead by disorganized or agitated behavior.
- B. The traumatic event is persistently reexperienced in one (or more) of the following ways:
 - (6) recurrent and intrusive distressing recollection of the event, including images, thoughts, or perceptions. **Note:** In young children, repetitive play may occur in which themes or aspects of the trauma are expressed
 - (7) recurrent distressing dreams of the event. **Note:** In children, these may be frightening dreams without recognizable content.
 - (8) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). **Note:** In young children, trauma-specific reenactment may occur
 - (9) Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
 - (10) Physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
- C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
 - (1) efforts to avoid thoughts, feelings, or conversations associated with the trauma
 - (2) efforts to avoid activities, places, or people that arouse recollections of the trauma
 - (3) inability to recall an important aspect of the trauma
 - (4) markedly diminished interest or participation in significant activities
 - (5) feeling of detachment or estrangement from others
 - (6) restricted range of affect (e.g., unable to have loving feelings)
 - (7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)
- D. Persistent symptoms of increased arousal (not present before the trauma, as indicated by two (or more) of the following):
 - (1) difficulty falling or staying asleep
 - (2) irritability or outbursts of anger
 - (3) difficulty concentrating
 - (4) hypervigilance
 - (5) exaggerated startle response
- E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month
- F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Source: American Psychiatric Association (1994). Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington, DC: American Psychiatric Association.

These effects are all products of learning processes that were associated with survival, and so have become “hard wired” into the brain. The orbitofrontal cortex can learn to calm, soothe, reason with, and “turn off” some of these functions—and can learn to understand, accept, and manage the rest (Siegal, 1999). But it is not simply a question of realizing one is wrong and making a decision not to have these symptoms. It takes work, support, and time to “re-program” the stress systems.

Substance Use Disorders

In a study of veterans presenting with “mental health issues,” Danforth (2007) found that more than 60 percent may also have substance use disorders (SUD) (substance abuse or substance dependence).

People with co-occurring SUDs and PTSD tend to have been exposed to more severe trauma and may have more serious PTSD symptoms in several categories (e.g., avoidance, arousal, sleep problems) (Saladin et al., 1995). The presence of PTSD also makes recovery from SUDs more difficult (VA, 2004; Driessen et al., 2008). For example, people with PTSD who are also dependent on alcohol or cocaine are far more likely to use those substances in unpleasant situations than are people who have PTSD alone, and people with cocaine dependence and PTSD are more likely to use even under pleasant situations (Waldrop et al., 2007).

The use or abuse of alcohol or other drugs may in many cases seem like a logical way to self-medicate the pain of post-deployment stress effects, if appropriate professional services are unavailable, or if professionally prescribed medications bring unacceptable side effects (Lighthall, 2008). Alcohol is also easily accessible in Iraq (VA, 2004) and a time-honored element of the military tradition.

Even if Service Members refrained from drinking alcohol or using drugs in the war zone, they may return to previous drinking or drug-use patterns after their return to the United States, to cope with stress-related problems or manage traumatic stress reactions. The presence of PTSD may also complicate their efforts to recover from substance-related problems (VA, 2004).

On a Public Broadcasting Service special called “The Soldier’s Heart,” one veteran described his substance use as a way of continuing the (parasympathetic) numbing process that had begun during deployment in Iraq. “Two months after coming back, it all started hitting me. Being numb over there, you come home, you can’t be numb anymore. So you numb yourself with something.”

Substance use and abuse are in many ways misguided attempts to balance the brain's chemistry (Scaer et al., 2008; Gaty, 2008a). Given the variety in the body's chemical reactions to stress and trauma, it makes sense that different people would choose different substances. For example:

- Alcohol, tranquilizers, sedatives, and marijuana all serve to slow down a body and brain left sleepless and “in overdrive” by an overload of sympathetic stress chemicals.
- Cocaine, methamphetamine, caffeine, and compulsive gambling are often attractive to people whose bodies have overreacted with the numbing, deadening, depressing parasympathetic chemicals, because all these drugs increase levels of adrenaline and dopamine.
- People whose bodies responded to the war zone with high levels of dopamine may feel particularly “let down” after they leave the field of battle, and gravitate toward chemicals and activities that increase dopamine levels.
- People whose bodies responded to war-zone experiences with high levels of the natural opioid pain killers called endorphins may be drawn to heroin and prescription pain relievers when their natural chemicals subside after demobilization.
- The severity of many Service Members' and veterans' injuries has also led to the prescription of opioid pain relievers, with the high risk and reality of dependence that often follows this use.

The tendency of stress and trauma to decrease the availability of serotonin in the brain further complicates these circumstances. Not only do lower levels of serotonin contribute to depression (Neumeister, Young, and Stastny, 2004) and PTSD (Lee et al., 2005; Zalsman et al., 2006; Barr et al., 2004; Gelernter, Pakstis, and Kidd, 1995), but they also might make it more difficult to control impulses, including the impulse to drink or use drugs.

One complicating factor is the presence of traumatic brain and spinal cord injuries in so many veterans. Good and colleagues (2008) found that young men who have been socialized with strong masculine ideas and values—as many young male Service Members tend to be—have special challenges if they receive these or other serious injuries. They become more vulnerable to a number of risk-taking behaviors, including the misuse of alcohol, and less likely to seek or accept help (Good et al., 2008).

The presence of a traumatic brain injury can provide further complication. Depending on the location and severity of the injury, it can increase impulsivity and/or decrease tolerance toward alcohol and other drugs (Rehabilitation Institute of Chicago, 1993).

Depressive Disorders

Depression is a common post-deployment stress effect, and one that often accompanies other post-traumatic effects and substance use disorders. Of the people treated for posttraumatic stress disorder (PTSD), 48% receive a co-occurring diagnosis of depression (Shumake and Gonzalez-Lima, 2003).

Like PTSD and SUDs, depression also reflects challenges in many of the brain structures (e.g., orbitofrontal cortex, anterior cingulate gyrus, insular cortex, hippocampus, amygdala) and chemicals (e.g., dopamine, serotonin, norepinephrine, cortisol) that work to regulate stress responses. There are three types of major depression (APA, 1994):

- *Melancholic Depression* includes a loss of pleasure in most or all activities (called “anhedonia”), an inability to respond to pleasurable stimuli, sadness deeper than that of grief or loss, trouble with sleep, and weight loss. Low levels of dopamine often contribute to the loss of pleasure in melancholic depression.
- *Atypical Depression* is, ironically, the most common type, and includes weight gain or increased appetite, excessive sleep, a feeling of leaden paralysis, and hypersensitivity to perceived rejection by others. High levels of cortisol contribute to the weight gain, increased appetite, and loss of energy in atypical depression. Unlike people with melancholic depression, people with atypical depression can feel pleasure.
- *Depression With Psychotic Features* also includes delusions or (less often) hallucinations that may be consistent with the major themes of the depression.

The larger category of depressive disorders includes both the unipolar depressive disorders (depressive episodes only) and bipolar disorders that involve both depressive episodes and manic episodes (with elevated, or irritable mood, sleeplessness, compulsive speech, distractibility, agitation, etc.).

A number of features of depression make sense as effects of prolonged or intense stress, including:

- Difficulty regulating moods, often due to lower levels of serotonin (Neumeister, Young, and Stastny, 2004)
- Difficulty experiencing pleasure, often due to lower levels of dopamine (Schumake and Gonzalez-Lima, 2003)
- In some women and some people with atypical depression, more extreme responses to stress (e.g., weight gain, prolonged sleep, unstable emotions), possibly due to higher levels of cortisol (Schumake and Gonzalez-Lima, 2003)

- Longer processing of negative and stressful experiences in the prefrontal cortex (Davidson, Pizzagalli, Nitschke, and Putnam, 2002)
- A failure of the anterior cingulate gyrus to call on the prefrontal cortex and other regions for help in resolving the conflicts it perceives in the brain (Davidson, Pizzagalli, Nitschke, and Putnam, 2002)
- Heightened perception of danger and unpleasant experiences, and greater access to unpleasant memories, in the amygdala (Davidson, Pizzagalli, Nitschke, and Putnam, 2002)
- Levels of emotion that are out of context with the outside world, often due to problems with the perception and memory of positive and negative experiences in the hippocampus (Davidson, Pizzagalli, Nitschke, and Putnam, 2002)

Complex PTSD, Developmental Trauma, or DESNOS

Experts in the fields of trauma and human development have identified clusters of symptoms that some call “complex trauma” (Herman, 1992) or “disorders of extreme stress not otherwise specified” (DESNOS) (Ford, 1999; Luxenberg, Spinazzola, and van der Kolk, 2001). These disorders include symptoms that extend beyond the diagnosis of PTSD into a category that includes complex, interrelated problems that interfere with the fundamental ability to trust (van der Kolk and Pelcovitz, 1999).

Ford (1999) described the concept of DESNOS as one that offers a framework for understanding and a clinical framework for assessing several effects often experienced by survivors of extreme trauma:

- Extreme difficulty regulating feelings and impulses (e.g., rage, suicidality, self-destructiveness, uncontrolled sexual activity)
- Dissociative symptoms that cause so many problems as to qualify for the term “pathological”
- Somatic or physical symptoms
- Alexithymia (difficulty understanding, processing, or expressing emotions)
- “...fundamentally altered beliefs concerning self and relationships” (Ford, 1999, p. 3).

According to Ford and Kidd, DESNOS develops when extreme trauma “compromises the fundamental sense of self and relational trust at critical developmental periods.” In studying a sample of veterans in treatment for chronic posttraumatic stress disorder, Ford and Kidd found that a history of early childhood trauma was “prevalent and highly correlated with Disorders of Extreme Stress Not Otherwise Specified” (Ford and Kidd,

1998, p. 743). They also found that veterans who were survivors of childhood trauma tended to have stronger intrusive PTSD symptoms; more problems controlling emotions (rage, shame) and impulses (self-harm, risk taking); more difficulty with relationships (intimacy, trust, assertive communication), self-efficacy, and self-esteem; and pathological dissociation (Ford and Kidd, 1998).

Those who are familiar with the diagnosis of “borderline personality disorder” (APA, 1994) will recognize many elements of that diagnosis in this condition. In many circles, the terms “complex trauma” and “DESNOS” have replaced “borderline,” though the official name of the diagnosis has not changed.

In a world that also includes the full spectrum of childhood and developmental experiences, an understanding of the ways in which severe traumatic experiences interact with developmental factors is essential for understanding post-deployment stress effects. This is not to say that veterans who develop DESNOS after service actually had these disorders before service due to their childhood experiences. No matter what the level of vulnerability might be, the disorder begins when the disorder begins, and that might even be long after deployment and years of conventional PTSD symptoms. But an understanding of DESNOS is an important element in shaping treatment responses for people who present with these more complex challenges.

Somatic Effects

It is difficult to believe that the stress system itself would be the only portion of the body to bear the impact of war-zone trauma. Researchers are finding a number of somatic effects—seemingly unrelated diseases and symptoms—that seem to occur more frequently in people who have been exposed to traumatic stress. In one study, female veterans who screened positive for PTSD also reported more physical health challenges, including obesity, smoking, irritable bowel syndrome, fibromyalgia, chronic pelvic pain, polycystic ovarian disease, asthma, cervical cancer, and stroke (SoRelle, 2004).

Some veterans, after spending months or years in a constant high-adrenaline fight-or-flight state, find their bodies exhausted and unable to summon enough adrenaline to feel excited or respond appropriately to present-day stress. Hypoadrenia is the name for a mild or partial form of Addison’s disease, which includes an underproduction of adrenaline and an overproduction of cortisol, after the adrenal gland has been overused in response to stress and threat. Some effects of this condition include lack of energy and motivation, low levels of both adrenaline and cortisol, hypoglycemia, weakness, confusion, insomnia, dizziness. People with moderate levels of hypoadrenia might become adrenaline junkies, taking risks in order to get any arousal (Tattersall, 1999).

Scaer (2005) divides the somatic effects of trauma into five categories, based on the physical characteristics of the body's response to stress and trauma:

- **Diseases of abnormal autonomic regulation**, the results of having the sympathetic and parasympathetic chemicals surge and clash during hyperarousal, dissociation, and the freeze response. These include diseases of fatigue and weakness (e.g., fibromyalgia and chronic fatigue syndrome), diseases that reflect hyperactive digestive processes (e.g., irritable bowel syndrome, gastroesophageal reflux disease), mitral valve prolapse, and migraine headaches (which have sympathetic and parasympathetic phases, first constricting then dilating the blood vessels in the head and the brain)
- **Syndromes of procedural memory**, in which numbness, spasms, clumsiness, pain, tics, tremors, twitches, dizziness, or other somatic symptoms are often misinterpreted as “psychosomatic” problems, but they actually represent physical changes in the brain areas that stored the traumatic experience in procedural memory
- **Diseases of somatic dissociation**, which may be characterized by pain, numbness, tingling, or a feeling of “differentness” in a region or regions of the body that may have received inadequate blood flow and oxygen during traumatic experiences
- **Disorders of endocrine and immune system regulation** (e.g., hyperthyroidism—chronic overactivity of the thyroid gland—increased vulnerability to diabetes, and increased vulnerability to autoimmune diseases such as lupus or multiple sclerosis), direct results of the involvement of these systems in the body's sympathetic and parasympathetic responses to stress and threat
- **Disorders of cognition and sleep**, including attention deficit/hyperactivity disorder (which is characterized by impaired control by the prefrontal cortex and tends to appear more often in people who have been exposed to trauma), sleep-disordered breathing, sleep apnea, and increased vulnerability to narcolepsy (a complex disorder that disturbs night-time sleep and compels sleep during the day)

One cluster of somatic symptoms is captured under the term “somatoform dissociation,” which refers to the condition traditionally labeled “conversion disorder” or “conversion hysteria.” Its symptoms include a lack of awareness or control of movement or sensation. van der Hart and colleagues (2000) describe somatoform dissociation as “a lack of the normal integration of sensorimotor components of experience, e.g., hearing, seeing, feeling speaking, moving, etc.” (van der Hart et al., 2000, p. 33).

Co-Occurring Traumatic Brain Injuries

Advanced forms of body armor and better immediate care are saving many lives that would have been lost in earlier conflicts. However, if a Service Member is anywhere near an explosion (e.g., in the vehicle behind the vehicle that was destroyed by the blast), even body armor cannot provide much protection against “blast overpressure,” the wave of noise and change in air pressure that follows an explosion. Blast overpressure often damages the auditory system and other organs (particularly hollow organs such as the lungs and digestive system) (Zitnay, 2007).

The consistency of the brain is similar to that of soft butter, and the skull has many ridges (Amen, 2008). The impact of the head against the helmet, and the brain against the skull, can be very damaging. For the Service Member who is busy comparing his lot with that of his buddies who died in the blast, the injury may go unreported and untreated (Lighthall, 2008). In 2005, there were an average of 30 IED attacks a day in Iraq (Zitnay, 2007), and the number is increasing in Afghanistan.

About 75 percent of brain injuries are mild, and 25 percent moderate to severe (Zitnay, 2007). According to former Army Psychiatric Nurse Alison Lighthall, it is likely that the clinician treating veterans will see quite a few who have traumatic brain injuries (TBI) or mild TBI and are unaware of these injuries—or confuse their symptoms with those of PTSD (Lighthall, 2008). Even mild TBI is strongly associated with PTSD and physical health problems 3-4 months after Service Members return home, though TBI may not be the primary driver of PTSD (Hoge et al., 2008).

“Postconcussion syndrome” (PCS) is a term used to describe a collection of somatic, behavioral, memory, and affective symptoms, a syndrome most often associated with mild TBI. However, one study would indicate that postconcussion syndrome is linked with post-trauma effects as often as it is linked with TBI. In that study, PCS was diagnosed in 43 percent of TBI patients, and in 44 percent of controls who had experienced trauma but no brain injury” (Meares et al., 2007).

Given the violence with which many Service Members’ heads hit their helmets if they are anywhere near an exploding IED, it is not surprising that the experience of concussion—combined with exposure to the general carnage that can follow an IED blast—is often in itself traumatic. Many of the symptoms associated with postconcussion syndrome are also identical to symptoms of PTSD. Symptoms of TBI (Tanielian and Jaycox, 2008) may include:

- Constant headache
- Confusion
- Light headedness or dizziness
- Changes in mood or behavior

Traumatic Brain Injury: Effects and Suggestions

Attention: Effects include difficulties in maintaining attention, shifting attention from one activity to another, suppressing one's own preoccupations, and screening out distractions.

Suggestions: Keep sessions short and focused. Cue people when they seem stuck on prior topics or have lost the topic. Gradually lengthen the amount of time as abilities permit. Make eye contact frequently to maintain attention. Make learning fun. Make sure the environment has few distractions.

Memory: Short-term memory problems are common among people with brain injuries. Holding onto several pieces of information while thinking through each item may be difficult. Other common problems include remembering to complete tasks at specific times and recalling recent experiences. The memory of pre-traumatic events is often intact after the initial stages of rehabilitation.

Suggestions: Preview and review information. Use consistent terminology and presentation format. Present material in a way that makes previously presented information easy to recall. Speak concisely. Include in each session some material that was covered in the previous session. Use overheads and flip charts. Print rather than write. Use pictures and symbols for non-readers. Ask participants to use "memory books" or other notebooks during sessions. Point out information they might want to record. Help participants make note cards or signs to cue thoughts and actions. These signs can be placed in conspicuous spots in their rooms. Participants can choose the phrases to be used, then design and make the signs. Make audiotapes or videotapes of sessions for participants.

Language: Often people with brain injuries lose the ability to express ideas or to understand others. Many cannot quickly find the words to express themselves. They may have lost the ability to speak, or may speak in a disorganized fashion. People with cognitive disabilities are often uncomfortable speaking or reading in front of groups.

Suggestions: Speak slowly and clearly, but do not exaggerate inflection. Use concrete terms. Teach the meaning of new words before using them. Use age-appropriate words: Treat adults like adults. Encourage people to ask questions. If you are not sure they understand, ask questions to check comprehension. When you ask questions, begin with those that require short answers. Create an atmosphere where people are comfortable refusing to comment or read aloud. Be patient and encouraging when they need time to express their point. Do not pretend to understand if you cannot follow a person's comment. If you think you understand, ask "Do I have this right?" and paraphrase what they have said.

Reasoning and Judgment: Brain injury often reduces the ability to make inferences. Thinking may be concrete, so that idioms and humor are interpreted incorrectly. This may lead to confusion and misinterpretation. Impulsivity may limit the ability to work on problems. People may find it difficult to picture the consequences of their acts. They will need help in distinguishing appropriate from inappropriate behavior, and some basis for reflecting on the propriety of what they have said or done.

Suggestions: Use simple, concrete terms. Avoid idioms and subtleties. Be clear and direct. Use problem-solving exercises that reflect the situations in which participants encounter "cues" for drinking or drug use. Role-play exercises and discussion of scenarios can be helpful. Avoid confronting people with brain injuries about their substance use, particularly in groups. Build decision-making skills by identifying and weighing short- and long-term consequences of actions. Encourage people to postpone decisions until they have more facts. Reply to their assertions in a concrete, non-judgmental way. Encourage people to read instructions and use cue-cards to strengthen reasoning skills. For example:

- Stop and think.
- What is the problem?
- What can I do to solve the problem?
- Which is the best solution?

Emotions: Emotional problems after brain injury can include irritability, frustration, dependence on others, insensitivity, inflexibility, anxiety when confronted, lack of awareness of one's impact on others, overreacting to stress, and heightened emotionality.

Suggestions: Try to understand what the person may be experiencing. Keep a non-threatening, non-judgmental attitude and approach. Be positive in giving directions. Make sure non-verbal messages do not contradict verbal messages. Meet resistance with empathy and reflection, rather than confrontation.

This material is reprinted from *Alcohol and Other Drug Abuse Prevention for People With Traumatic Brain and Spinal Cord Injuries*. Published by the Rehabilitation Institute of Chicago and the Illinois Prevention Resource Center, 1993.

- Repeated nausea or vomiting
- Problems with seeing or hearing

One challenge in diagnosis is that traditional scanning equipment (e.g., MRIs and CT scans) does not always capture the data needed to explain the deficits that people with TBI—particularly those with mild TBI—experience. However, in two studies, investigators found that, using even older machines such as quantitative MRI and diffusion tensor imaging (DTI) tractography equipment, they were able to capture vital information that traditional CTs and MRIs would not have caught (Levine et al., 2008; Wilde et al., 2008).



Finding Balance

5. Preparing to Work With Service Members and Veterans

First, **civilians need to come closer to our world.** They need to read stories written by veterans who have been there and watch documentaries about the war. Civilians need to learn more about the heart and soul of a warrior. They need to stop asking, “What was the hardest part about being over there?” and start asking, “What’s the hardest part about being home?”

—Alison Lighthall (“U.S. Must Unite to Aid Vets,” *Army Times*)

Given the number of Service Members still deployed and the projected high levels of post-deployment stress effects, it makes sense for civilian providers of substance use disorder and mental health treatment services to become prepared to work effectively with this population.

Some non-military service providers have begun treating veterans for their post-deployment effects through subcontracting arrangements with the VA. However, some veterans also seek help directly from SUD treatment facilities, community-based mental health centers, and other providers. Their reasons are many and varied: Some are referred by family members or friends, some may not have access to the services they need through the military or VA, and some simply prefer to receive services in their communities. Others choose community-based services to avoid the real or perceived possibility of stigma and reprisals.

So the overwhelming question becomes, what will it take for civilian clinicians to become ready to treat veterans in safe, effective ways? This chapter focuses on steps that the civilian clinician can take to work with veterans in ways that respect the

individual, the military culture, and the veteran's experience in the theater of war. It includes four sections and one pull-out page:

- Inside The Effective Clinician
- The Individual and the Military Culture
- Avoiding Assumptions
 - Ten Things You Should Know to Help Bring the OIF/OEF Veteran All the Way Home
 - Army Values, Creed, and Code
- Earning Trust

Some of the considerations in this chapter are taken from written works, but more are based on conversations with or presentations by veterans or therapists who work with trauma survivors. The reader is encouraged, not to take these ideas as absolute or as the only important considerations, but to respond to them with curiosity and a desire to listen, read, and learn much more.

Inside the Effective Clinician

The Clinician's Self-Knowledge: According to Dan Taslitz, OIF veteran and trainer for a Colorado-based organization called ONE Freedom, three of the most important personal qualities that a civilian clinician working with veterans might have are:

- An openness and curiosity about the individual veteran and his or her experiences and realities
- An understanding of the clinician's own experience of trauma, and progress and stability in the conscious process of addressing and resolving any issues attached to that realm of experience
- The ability to keep any agendas the clinician might have about the war or the veteran's participation in it (e.g., political issues, feelings or opinions about war in general or the war in which the veteran was engaged) completely separate from the therapeutic process

Only someone who has lived in the presence of war can truly understand the experience of war. But each of us has had difficult and intense life experiences that can inform and deepen our understanding of trauma and healing and our ability to respond effectively. So although there will be many times when only someone who has "been there" can fill the need, there is still a significant role for civilian clinicians in this effort. As any skilled helper knows, it is possible to find elements of one's own experience that allow for greater identification with the experience of another, without comparing the two

or giving them equal weight. This both normalizes the veteran's experience and respects the ways in which it is different from the civilian's.

In the words of Steve Robinson, another veteran and consultant to ONE Freedom, "Simply be in touch with your own life trauma. Don't share it with them; you're supposed to keep it businesslike. But for clinicians it's very important to connect with your own life experience on a human level while you're connecting on a professional level. They need to know that you know what they've been through."

And the last of the qualities mentioned above—the ability to separate agendas from the therapeutic process—requires a thorough knowledge of one's feelings, opinions, and possible agendas concerning any of the issues connected with the veteran or his or her service. One of the most serious mistakes a clinician can make might be to (consciously or unconsciously) use the veteran to confirm an opinion about the war, its viability, or whether or not it should ever have taken place. If you are not certain that you are ready, willing, and able to keep your own feelings and opinions far away from the therapeutic process and relationship, then you have the right and the duty to decide you are not ready to treat veterans.

Take Care of Yourself: Most trauma specialists emphasize the importance of self-care in working with survivors of any kind of trauma. For example, psychotherapist Lia Gaty (2008) spoke of several self-care practices:

- Keep your self-inventory current, so you know how you are reacting and know your needs.
- Recognize your own limitations, and make sure you have the resources you need to stay healthy.
- Keep the "therapist's ego" out of the way ("I am THE one who can help!"), and remember that you may be only one step in a long process that leads to, and through, recovery.
- It is important to have good supervision and support from others who are doing similar work. If your agency has an atmosphere in which it is not safe to talk about the issues that might arise in your emotional responses to your work, find a group or a set of mentors who can help you gain the perspective and support you need.
- Seek consultation when you feel as if you are out of your depth or sphere of expertise.
- Remain vigilant for the countertransference issues (the clinician's feelings and issues projected into the therapeutic relationship) that are easily triggered in work with trauma survivors, and seek help in resolving those issues.
- If you find that you do not like a client, chances are that his or her "radar" will perceive the dislike, and you are likely to be less effective and possibly harmful in

the therapeutic relationship. In these cases, it is better that the client be assigned to another therapist.

Self-care can be particularly important in working with combat veterans, because of the extreme nature of the experiences they may describe. Even if you are strong and committed, you will want to remain vigilant for:

- Vicarious traumatization or “secondary trauma,” the process by which the listener can develop trauma symptoms from exposure to the traumatic experiences of another
- Compassion fatigue, a state of emotional exhaustion or a loss of interest or empathy following overexposure to traumatic material (Boscarino, Figley, and Adams, 2004).

People who have been through the experience of war—or of any traumatic circumstance—will tell you things that are completely overwhelming, very difficult for your own emotions to bear. But perhaps great difficulty is the only appropriate reaction to deeply traumatic material. As Lia Gaty said, “If it’s not difficult, you’re not listening” (Gaty, 2008b). Here are two things to consider:

- In absorbing the veteran’s narrative, you are bearing a small part of an enormous burden that the veteran has carried and few others have even considered carrying. Even if on a particular day you are shut down and wondering why you feel nothing, you are still helping to carry the load.
- You owe it as much to your client as to yourself and your family to get all the rest, self-care, and support you need to keep your own balance while you do this work.

The Individual and the Military Culture

For the civilian clinician preparing to work with veterans challenged by post-deployment stress effects, the central thing to remember is that you are preparing to work with a very different and clearly defined culture, one of which many civilians have little or no knowledge or experience. This preparation process must be characterized by:

- Cultural humility, the ability to appreciate the limits of one’s own knowledge
- Cultural openness, the willingness to suspend one’s usual assumptions and ways of doing things and learn about the other culture
- Cultural competence, words and actions based on knowledge and understanding of the other culture

One of the clinician's most important tasks is always to find out who the individual client is, regardless of diagnoses and assessment forms. Never is this more important than with a client who has lived through experiences so complex and foreign to civilian experience, and possibly undergone high levels of stress and trauma. As always, the most important tools in this task are the willingness and ability to listen, and the openness that lets it all in without judging or substituting preconceived assumptions.

As van der Kolk and colleagues (1995) noted, no matter how extreme the veteran's experiences at war might have been, it is also important to see those experiences in the larger and longer context of his or her life. This applies both to the many positive and negative experiences that might lie outside the war experience, and to the many strengths and resources the veteran possesses.

Statements from some Service Members and veterans reveal a tendency to feel largely forgotten by the civilian population, and to believe that civilians in general do not really understand their circumstances or appreciate their service. Given the incredible hardships many have experienced, a lack of appreciation by the public they serve may feel like a bitter disappointment, even a betrayal. By offering to help, you will go a long way toward helping to heal some of these wounds, but the second component—understanding—is also of vital importance.

Future drafts of this Guide will provide more information to start the learning process. Meanwhile, a few guidelines for the civilian clinician follow, based on interviews with veterans.

What to Call Service Members and Veterans: Whenever we communicate with someone of another culture, we naturally have questions about language. Learning about military terminology and values is an important step in preparing to serve this population, and one area of language—learning how to refer to service members and veterans—is an important sign of respect to the veteran.

The terms "Service Member" and "Military Member" are used in this Guide because they are the most inclusive, referring to people in all branches of the U.S. Armed Services (Army, Navy, Air Force, Marines) and to both Active and Reserve (e.g., National Guard, Army Reserve) Components. "Soldier" refers to someone in the Army (Active or Reserve), "Sailor" to someone in the Navy, and "Airman" to someone in the Air Force. Using these terms correctly is a sign that you know a bit about the culture, and a sign of respect.

With many cultures, there is a difference between the way we refer to ourselves and the way we are comfortable having others refer to us. The word "warrior" is a good example of a term that is used quite a bit within the military culture, and in a number of materials written about the military experience, but that term would be likely to fall flat if a civilian clinician introduced it in conversation. If the veteran introduced it and you

were responding, that would be a different matter. But according to one veteran interviewee, using “warrior” as a way to show your knowledge of the terminology would not be a good idea.

And a word that is used quite a bit in the media is “hero.” In many venues it is used almost as a synonym for “Service Member.” Its uses may range from an expression of admiration and respect to an attempt to flatter and manipulate. Veterans interviewed have expressed discomfort with the idea of having civilian therapists use it gratuitously, though it would make sense to use it in response if the Service Member has brought up the concept of heroism or told the story of a heroic act.

In “Ten Things You Should Know to Help Bring the OIF/OEF Veteran All the Way Home (Page 61),” former Army Nurse Alison Lighthall provides a number of insightful suggestions for anyone who seeks to help rather than make things worse. Among them is the following suggestion about this word: “Returning Service Members do not think of themselves as heroes, no matter how extraordinary their skills, courage, or actions may be. Their heroes are the ones still over there or coming home in a flag-draped boxes.”

“Thank You For Your Service”: This phrase, stated simply and clearly, is an important message for the Service Member or returning veteran. It has no politics, and it does not probe into the details of the Service Member’s experience. It is something the military culture recognizes as a sign of respect and gratitude for the sacrifices people are making.

Avoiding Assumptions

Steer Clear of Stereotypes: Regardless of how common the stereotypes of Service Members and veterans may or may not be among civilians, veterans themselves are strongly aware of the stereotypes, and this can widen the chasm between the military and civilian cultures. According to veterans interviewed, the stereotypes would say that Service Members are uneducated, less intelligent than civilians (as evidenced by the charge that they “had to” enlist in military service because they could find no other good career options), politically conservative “warmongers,” automatons who simply follow orders without question, and violent individuals who have no moral compass. The strongest expression of these stereotypes is a real or perceived attitude of condescension, and many Service Members and veterans are hyper-aware of that attitude.

Unless you have established a comfortable, trusting relationship, if you say or do anything that is interpreted as reflecting these stereotypes, it is likely to provoke what seems like “resistance” and shut down communication. Just as the amygdala is able to

bring up the whole traumatic experience at a single sound that reminds it of that experience, so is the human being able to bring up the whole tangle of stereotypes at a single condescending or judgmental word, gesture, or expression. Given the difficulty of repairing these misunderstandings, it is far easier to listen and “seek first to understand.”

In reality, many Service Members and veterans are highly educated, intelligent people, with interests, talents, attitudes, and opinions as varied as those in the civilian population. This is a group as diverse as any other—many ages, many races, many reasons for volunteering for military service. Their hopes, dreams, and life plans run the gamut, and so do their politics and their feelings about the wars they have fought (Lighthall, 2008).

They are also very much steeped in the military culture, which is a culture of courage, respect, discipline, loyalty, honor, obedience to authority, and patriotism. And each man and woman among them was willing to travel halfway around the world to live in unbelievably harsh conditions and face the possibility of permanent injury or death. Civilian clinicians owe it to themselves and to their clients to learn as much as possible about this culture and the individuals who have chosen to join it.

Understand The Positive Aspects: For the empathic soul who has not been to war but has heard enough to guess at the depth of its tragedies, it may be difficult to think of the Service Member as having had positive experiences in the war zone. But there are many aspects of the military culture and experience that are positive, reassuring, satisfying, and marked by deep bonds of friendship and mutual protection. It is frustrating to many Service Members and veterans that many civilians think of the experience in Iraq and Afghanistan purely in terms of violence and destruction. Here are just a few of the experiences some veterans have cited as positive:

- The deep friendships they formed within their Unit
- The knowledge that their buddies would be willing to die to protect them, and that they would be willing to die to protect their buddies
- A powerful sense of mission and purpose in their work
- The rush of sympathetic chemicals (e.g., adrenaline, norepinephrine, dopamine) that comes with battle
- A wonderful sort of “gallows humor” that helps them gain perspective and cope with life
- Interactions with children and other friendly civilians within the war zone
- The opportunities to help civilians within the community build a new society and recover from the effects of war

To assume that any particular veteran had experienced any or all of these benefits would be just as inadvisable as it would be to assume the worst about his or her experience. The key is to:

- Listen

- Follow where he or she leads
- Look for strengths, resources, and resilience
- Respect the complexity of his or her experience.

Earning Trust

For many who have lived with the effects of intense stress or trauma, trust does not come easily, and in some cases it may not come at all. Clinicians in the SUD, trauma, and mental health fields are well used to the challenges involved in the process of building trust. For veterans with post-deployment stress effects, with the amygdala always ready to pull up savage bursts of memory and ignite surges of stress chemicals, mistrust may be one of the healthiest and most reasonable self-protective impulses.

High Alert: Many veterans who have served in Iraq and Afghanistan have spent months or years hyper-aware and on high alert. Those who also grew up in homes where substance use disorders or other challenges created “sub-currents” in the family system may have been on alert long before their military service began. Many veterans’ radar is acutely sensitive, so they will miss nothing. And you might not be trusted until you earn their trust.

When some veterans walk into your office, you might perceive an attitude of polite, emotionally controlled wariness. This is not just a reflection of the disciplined military culture and the aftermath of war. It is also a very rational attitude in the midst of a civilian culture that often has little understanding of the Service Member’s experience and sometimes says things that are well meant but insensitive (e.g., “Too bad the war was all for nothing,” or “Did you kill anyone?”).

According to more than one veteran interviewed for this Guide, if you are going to be working with returning veterans who have post-deployment stress effects, you may well be tested. According to one veteran interviewed, clients may begin by saying a few things designed to evoke extreme responses, so they can test your personality, approach, and types of responses. They might tell you stories—accurate or inaccurate—about episodes of extreme violence or “abnormal” reactions in the war zone, and then watch your reactions.

In a sense, this testing process may be an important way for veterans to establish safety: Alison Lighthall (2008) spoke of a Service Member who had poured out his litany of traumatic war experiences to a civilian counselor for a full session. At the end, the counselor had told him, “I still can’t get my head around the fact that you kill people for a living.” The young man experienced considerable trauma and betrayal from this exchange, and a significant setback in his recovery followed that incident.

Ten Things You Should Know to Help Bring the OIF/OEF Veteran All the Way Home By Alison Lighthall, RN, MS

(Former Captain in the US Army Nurse Corps), Founder, HAND2HAND CONTACT

10. OIF stands for Operation Iraqi Freedom, also known as the Iraq War, and it began on March 20th, 2003. OEF stands for Operation Enduring Freedom and is a multinational military operation aimed at dismantling terrorist groups, mostly in Afghanistan. It officially commenced on Oct. 7, 2001 in response to the September 11th terrorist attacks;
9. Returning Service Members do not think of themselves as heroes, no matter how extraordinary their skills, courage, or actions may be. Their heroes are the ones still over there or coming home in a flag-draped boxes;
8. Service Members are as varied in their political beliefs as everyone else in America. Some are adamantly against the war, others staunchly support it, and everyone else falls somewhere in between. Assuming that everyone who joins the military is a card-carrying right-winger will only make you look stupid;
7. No matter what his or her opinions about the war are, every Service Member of every branch of the military takes a solemn oath to support and follow our Commander In Chief, the President of the United States, and therefore *cannot* say anything derogatory about him;
6. No one can describe how hot it was while deployed in a war zone, so don't ask a returning Vet about the heat. Instead, imagine yourself putting on every piece of winter gear you own, in multiple layers, putting a metal bowl over your head, turning your oven on to 120 degrees, climbing inside, and living there for 6 months;
5. Worse still is asking any Veteran, "Did you kill anyone?" It is an unanswerable question. Perhaps she did and wished she hadn't. Perhaps he didn't and wished he had. Perhaps she did, but it wasn't fast enough to prevent a comrade's death. Perhaps it was accidental or perhaps it was so many instances of killing, he lost count. War requires things of us and taps into parts of us that are never otherwise touched—things most people need to work through or want to forget. US military personnel do not take killing lightly, and anyone who has not been there simply cannot discuss it with those who have, much less pass judgment. Listen quietly if they choose to talk about it, but otherwise, leave it alone;
4. OIF/OEF Veterans often want to go back to the war zone. Sometimes it's because they feel called to go in to finish the mission or support their buddies, sometimes it's because they feel they can no longer fit into American society and its frivolous interests and fads. But regardless of reason, it is fairly common, so if they tell you they're planning on redeploying, please don't look at them as if they are insane;
3. They are exhausted when they get home—physically, psychologically, emotionally, and spiritually exhausted. They often do not have the energy or focus to talk for long periods of time. It will take some time for them to adjust, so follow their lead;
2. There is nothing black-and-white about what has happened to them. Almost always, there are good things that come from a deployment experience. Likewise, there are some pretty difficult things that they face once they are back home. Do not make any assumptions about their experiences;

And the # 1 thing you should know about OIF/OEF Veterans is ...

1. They are not the same people they were before they deployed. But do not assume that is a bad thing. The Service Member may come home more confident, with better problem-solving skills. He may return with a deeper sense of gratitude for the comforts that he used to take for granted or she may have found a greater sense of purpose and direction than she ever had before. Yes, there may be many unseen wounds of the soul and spirit. But there are tremendous resources to help heal those wounds, both for the Service Member and the Service Member's family, and an ever growing number of people who truly care and want to help.

If every American understood these 10 important facts about our returning Veterans, life would be a lot easier for them. So pass it on. www.hand2handcontact.org

This material is reprinted (with permission) from Alison Lighthall's web site, www.hand2handcontact.org. That web site provides a wealth of insight, information, and resources.

What is most disturbing is that, if a veteran's first fledgling attempt to reach out for help does not result in a positive, empowering, respectful interaction, he or she may never reach out for help again (Lighthall, 2008).

Clinicians' Own Emotions: Traumatic material can raise strong feelings in those who hear it, particularly in the empathic people who tend to gravitate to the helping professions. According to veterans and clinicians interviewed, a number of forces join to make clinicians' management of their own emotions particularly important—and particularly challenging. For example:

- It makes sense for a military culture to see strong shows of emotion as undisciplined and therefore threatening to the well being of the Unit. Depending on how thoroughly steeped the individual veteran has been in the military culture, a strong show of emotion on the part of the clinician might invoke some feelings of wariness.
- Some people with post-trauma effects are fighting off a number of triggers for their own powerful emotions, emotions they would rather not feel. Strong feelings on the clinician's part might seem like a threat to their own fragile sense of control.
- As mentioned earlier under "Avoiding Assumptions," Service Members and veterans are very much aware of the stereotypes and stigma that color some civilians' attitudes toward them. Veterans interviewed said that a clinician's expressions of shock or horror will often seem like a judgment of the veteran, and levels of sympathy that seem exaggerated will often seem like condescension.
- Veterans' experiences will raise strong emotions in the clinician. It will not be possible—and would not be healthy, authentic, or appropriate—to absorb the pain without showing emotions.
- Even veterans who fear or mistrust emotions will need to know that clinicians connect with their experiences on a human level. Without that connection, veterans are locked in with the trauma—and the stigma—and deprived of the empathic face-to-face communication that draws both the prefrontal cortex and the human spirit into the healing process.

So what does the clinician do? A cool, clinical "detachment" is nearly impossible, and in *War and the Soul* Edward Tick confirms that detachment would not be the answer. "In traditional therapy, the prevalent view is that healing can best occur if the therapist remains emotionally detached from the client's life and material. In working with vets, though, the opposite is true: If the therapist maintains detachment, the story remains solely the burden of the patient. Therapy becomes effective only when the therapist can affirm that he is personally engaged with the veteran's story and accepts the need to help carry the collective responsibility" (Tick, 2005, p. 238).

According to Lia Gaty, it is essential to tailor responses to the individual veteran. The key may also be to remember that it is the veteran's emotions that are the centerpiece of the relationship. The clinician's reactions cannot be allowed to distract from the central context that is the client's experiences. The clinician can and must have and show emotions, because these emotions reflect common human response to human experiences. These feelings should be genuine, ordinary, matter-of-fact responses to the veteran's experience (Gaty, 2008b).

Two words that come to mind are **dignity** and **openness**. Dignity carries both discipline and balance, and openness challenges the isolation and the stigma. If you can find that balance between empathy and unconditional acceptance of the person and the experience, you will not only fit in better with the military culture, but also help the amygdala loosen its grip.

Talking to the Amygdala: Some experts in the field speak of "talking to the amygdala," saying things that are likely to calm that frightened, defensive structure deep in the brain and persuade it to refrain from triggering strong stress reactions. But when we are talking to someone affected by trauma, we are *always* talking to the amygdala. It is merely a question of whether or not we are saying what we would like to say.

The amygdala is always scanning our words, gestures, faces, and tones of voice for signs of threat—and using a fairly inclusive definition of threat. Even an expression of anxiety on the face or in the voice of another can trigger the amygdala's alarm system. The clinician's job is to:

- Learn the language of the amygdala
- Use that language to communicate safety and empowerment
- Teach the veteran to do the same

Army Values, Creed, and Code

U.S. Army Values:

Loyalty—Bear true faith and allegiance to the U.S. Constitution, the Army, your unit and other soldiers.

Duty—Fulfill your obligations.

Respect—Treat people as they should be treated.

Selfless Services—Put the welfare of the nation, the Army, and your subordinates before your own.

Honor—Live up to all the Army values.

Integrity—Do what's right, legally and morally.

Personal Courage—Face fear, danger, and adversity (physical or moral).

The Soldier's Creed:

I am an American Soldier.

I am a Warrior and a member of a team. I serve the people of the United States and live the Army Values.

I will always place the mission first.

I will never accept defeat.

I will never quit.

I will never leave a fallen comrade.

I am disciplined, physically and mentally tough, trained and proficient in my warrior tasks and drills. I always maintain my arms, my equipment and myself.

I am an expert and I am a professional.

I stand ready to deploy, engage, and destroy the enemies of the United States of America in close combat.

I am a guardian of freedom and the American way of life.

I am an American Soldier.

The Soldier's Code:

- I. I am an American Soldier—a protector of the greatest nation on earth—sworn to uphold the Constitution of the United States.
- II. I will treat others with dignity and respect and expect others to do the same.
- III. I will honor my country, the Army, my unit, and my fellow soldiers living by the Army values.
- IV. No matter what the situation I am in, I will never do anything for pleasure, or profit, or personal safety which will disgrace my uniform, my unit, or my Country.
- V. Lastly, I am proud of my Country and its flag. I want to look back and say that I am proud to serve my Country as a soldier.

(From Chapter 4 of the *Operation: Military Kids Ready, Set Go! Training Manual*, posted at http://www.k12.wa.us/OperationMilitaryKids/TrainingManual/Chapter_4_Final.pdf)



Finding Balance

6. Important Considerations in Treatment Delivery

“Combat veterans often hold such an apocalyptic-cathartic idea of healing, but before safety, self-care, and sobriety have been firmly established, active uncovering of trauma history only retraumatizes the survivor. Recovery from severe combat more nearly resembles training to run a marathon than cathartic redemption in faith healing” (p. 187).

—Jonathan Shay (*Achilles in Vietnam*, p. 187)

In the healing of trauma, all the forces that once taught the child to handle stress and threat rise up again. The safe human relationship, the body’s balancing act, the realization of one’s own power as a human being, the search for connection and meaning, these and other strengths are enlisted in service of recovery and well being. The clinician can play a vital role in helping veterans find and believe in these vital resources.

This chapter focuses on considerations for treatment and recovery, providing a very brief, very general overview of some things that civilian clinicians might want to consider in planning or refining their approach toward working with veterans. It includes five sections and one pull-out page:

- Building Safety by Building on Resilience
- Avoiding Iatrogenic Effects
- Empowerment and Destigmatization
 - Framing Services For Empowerment and Destigmatization

- Rituals and Reintegration
- Meaning, Purpose, and Posttraumatic Growth

Some of the considerations in this chapter are taken from written works, but more are based on conversations with or presentations by veterans or therapists who work with trauma survivors. The reader is once again encouraged, not to take these ideas as absolute or as the only important considerations, but to respond to them with curiosity and a desire to listen, read, and learn much more.

Building Safety by Building on Resilience

Like others who have experienced intense and threatening experiences, veterans with post-deployment stress effects are always at risk of having even harmless words and events retrieve vivid, painful experiences and trigger powerful chemical reactions. Many can also dissociate or “shut down” when their bodies sense that these powerful chemical reactions are on the way. And for those with co-occurring substance use disorders, their post-trauma effects may constitute ready triggers for binges or return to use of addictive substances.

Herman (1992) identified the development of safety as the first stage of recovery from trauma. Even if your time with the veteran is limited, and safety is the only element you have time to address, helping veterans build safety into their lives can be a huge contribution to their well being.

One way to approach issues of safety is to remember some of the elements that are critical in developing and maintaining human resilience in the face of stress (see Resilience and Vulnerability to Traumatic Stress, Pages 12-24). Here are some examples:

- **Balance** is the essence of the human stress and survival system’s work, and an important element of safety in recovery from trauma. Though that balance has been disrupted by the experience of war, you can help veterans learn conscious techniques for putting their stress systems back in balance.
 - They can learn to notice when their sympathetic fight-or-flight chemicals are rising and “put on the brake” by pulling back, invoking soothing images or affirmations, or temporarily leaving the situation.
 - They can learn to notice when they are shutting down and their parasympathetic systems are taking over, determine if this is happening because they feel unsafe, and take stock of other resources and safety measures that can help them.

- **The ability to separate past from present** is an important function that helps the hippocampus inform the amygdala and keep it under control. Even if that ability has been severely compromised by trauma, you can help veterans learn to:
 - Become observers of their own situations and reactions
 - Ask themselves questions that will help them distinguish past from present experiences
 - Practice techniques that will help ground them in the “here and now”
- **A sense of control over one’s destiny** is one of the qualities associated with stronger resilience to war-zone stress (Herman, 1992). Although people with strong post-deployment stress effects may feel a decided lack of control over even their basic moods and reactions, you can find many large and small ways of helping them regain a sense of control. A few examples are:
 - Establishing non-verbal “stop” signals they can use when the conversation becomes too intense
 - Letting them make informed choices about therapeutic techniques and the focus of therapy
 - Teaching them about the nature of stress reactions, so these reactions become more predictable
 - Providing and directing them to community-based and web-based resources
 - Teaching them techniques for controlling their stress reactions, and giving them chances to practice these skills
 - Providing information about self-care options they can use, like the ones listed in Chapter Eight, “Ideas for Recovery, Re-Balancing, and Self-Care”)
- **Attuned, responsive face-to-face communication** is essential to the development of resilience in the human brain (Schoore, 2001) and equally important in the development of safety in and through the therapeutic relationship. Simply listening and making genuine and responsive eye contact can help build safety and promote recovery (Scaer et al., 2008; Gaty, 2008a).
- **Collaboration** is an important element of resilience to trauma (Herman, 1992) and an important skill in maintaining emotional safety in the therapeutic relationship, and in the world. By being thoroughly collaborative, you can model and teach collaboration and provide a laboratory for its practice.
- **Strong bonds with fellow Service Members** are important protective factors overseas and equally important in building safety in recovery. If veterans are not in touch with other Iraq/Afghanistan veterans in their community, anything you can do to help them find these connections will be important to their emotional safety and well being.

- **A sense of meaning and purpose** is an important element of resilience and an equally important element of recovery. Although you cannot force or create this meaning for the veteran, you can be a witness to and appreciator of his or her own sense of meaning and purpose as they emerge in the therapeutic process. This focus activates the prefrontal cortex and allows it to exert its calming influence on the amygdala.
- **Hope:** A sense of hope and optimism can be a powerful component of resilience and treatment effectiveness (Hubble, Duncan, and Miller, 1999) and an equally powerful element in creating a sense of basic safety. You can foster hope in many ways, including:
 - Taking care not to judge, stigmatize, or “pathologize” their war-zone experiences or post-deployment stress reactions, either through your reactions or the words you use to describe conditions and options
 - Providing information about the success of the approaches you use and encouraging contact with other veterans who have overcome similar post-deployment stress effects
 - Letting the individual veteran choose treatment practices that he or she believes in, something that automatically raises the level of hope and trust in the success of the therapeutic process
 - While not diminishing their challenges in any way, encouraging veterans to make and continue to add to an “appreciation list” or a “gratitude list,” in which they can note anything and everything that inspires even trace amounts of appreciation or gratitude in them; In many ways, gratitude is to the past what hope is to the future, and it can serve as a sort of “pump primer” for hope

Avoiding Iatrogenic Effects

Iatrogenic effects are problems caused by the treatment itself, or by the words or actions of the person delivering it. Trauma of any sort is fertile soil for these effects, given the great vulnerability and reactivity of people’s stress systems and the fragile state of their self-concept. The following are nowhere near the only important considerations, but they may be a good place to start.

Pacing the Processes of Storytelling and Exposure: The amygdala’s unconscious memories are not accessible to conscious processes. “Severe trauma explodes the cohesion of consciousness,” wrote Jonathan Shay in *Achilles in Vietnam*. “When a survivor creates fully realized narrative that brings together the shattered knowledge of what happened, the emotions that were aroused by the meanings of the events, and the

bodily sensations that the physical events created, the survivor pieces back together the fragmentation of consciousness that trauma has caused” (Shay, 1994, p. 188).

Many therapeutic techniques for working with trauma (e.g., exposure therapy, systematic desensitization) involve repeatedly activating traumatic memories and the associated feelings, and teaching clients to monitor and control their stress reactions. However, if this process is allowed to begin before there is a solid grounding in safety, to accelerate too rapidly, or to accelerate beyond the client’s skills in self-management, it is likely to increase traumatic symptoms and/or drive people toward substance abuse or other self-destructive defenses (Courtois, 2006).

Many experts advocate letting veterans choose when and how to tell the stories of their war-zone experiences. In the words of the Iraq War Clinician Guide, “... the best rule of thumb is to follow the patient’s lead in approaching a discussion of trauma exposure. Clinicians should verbally and non-verbally convey to their patients a sense of safety, security and openness to hearing about painful experiences. However, it is also equally important that clinicians do not urge their patients to talk about traumatic experiences before they are ready to do so” (VA, 2004, p. 27).

van der Kolk (1989) also recommends pacing the storytelling process once it has begun. Progressing too quickly can lead to escalation of traumatic symptoms and increased likelihood that he or she will find some way to reenact the trauma in present life. The point of telling the story is to gain conscious control over it, so it is important first to gain control over the secondary defenses that the veteran has used to defend against trauma (e.g., alcohol and drug use, violence against self or others) and to establish a secure bond within the therapeutic relationship (van der Kolk, 1989).

Courtois (2006) warned against the use of methods that provide prolonged and escalating exposure to traumatic cues (e.g., Implosion Therapy, Flooding), as a way of inducing strong sympathetic or parasympathetic stress reactions and then using therapeutic techniques to bring down these responses. Unless the clinician has great expertise in these methods and the client has a strong grounding in safety and management of stress responses, these practices can harm the client and derail the therapeutic process. These methods can be particularly dangerous with people who have complex trauma or DESNOS (Courtois, 2006).

Avoiding Mixed Groups With General Populations: Several safety issues might arise in treatment systems in which group therapy is the norm. Veterans interviewed unanimously warned against placing veterans in groups with civilian clients, consumers, or patients. A therapist may have good control over what he or she says, but generally has no control over what group members might say. Mixed groups have too strong a potential for damaging questions (e.g., “Did you kill anyone?” “Do you think the war was worth it?”).

Even within all-veterans' groups, Lighthall (2008) also recommends not mixing veterans of different wars, different ages, or different phases of the wars in which they served (e.g., not mixing people who served in the early phases of Operation Iraqi Freedom with those whose service began after the onset of the Surge), if this can be avoided.

Monitoring the Need for, and Use of, Medications: When veterans' post-trauma symptoms are not yet stabilized, appropriate medications may be important safety measures. "A number of medications safely ameliorate one or another symptom of PTSD and assist in the achievement of safety and sobriety by reducing the pressure toward self-medication with alcohol or street drugs and, even more valuably, by reducing explosive rage" (Shay, 1994, p. 187).

For example, medicines such as fluoxetine (Prozac), sertraline (Zoloft), and paroxetine (Paxil) are considered first-line treatment for trauma (Courtois, 2006; Lineberry et al., 2006). Benzodiazepines are used widely to stabilize early hyperarousal symptoms, though they should be avoided with people who have co-occurring substance use disorders or risk of developing these disorders (Courtois, 2006; Lineberry et al., 2006), and they may in some cases make the trauma symptoms grow worse (Scaer et al., 2008; Lineberry et al., 2006).

At this writing, a number of innovative medical remedies for trauma symptoms are also being proposed and tested. For example, a physician in the Chicago area begun to use an injection of the local anesthetic bupivacaine into the sympathetic nerve tissue in the neck (called a **stellate ganglion block**) to treat people with PTSD. This injection, he says, temporarily calms anxiety symptoms by "rebooting" the insular cortex (Hageman, 2008), the structure that assigns emotional meaning to sensory experience.

As the SUD treatment field knows, medication can be both a life-saving tool and—in some cases—a double-edged sword. You can help ensure the safety of your clients' and patients' medical interventions by:

- Keeping up with the growing body of research on psychotropic medicines used in trauma treatment and their use with people who have substance use disorders
- Monitoring reactions to medications and combinations of medications
- Monitoring the potential for dependency on medications (e.g., benzodiazepines given for hyperarousal, pain medications given for injuries)
- Collaborating with the prescribing physicians
- Working with a psychopharmacologist who is well versed in trauma medicine

Friedman (2006) cautioned that, in the clinical trials in which many trauma medications are tested, patients are given a single medication only, while in real life most receive multiple medications.

As important as medication may be to stabilization in some cases, medications can also raise safety issues, especially if:

- The patient becomes dependent on the medication
- The patient is over-medicated
- The wrong medication is used
- Too many medications are used
- The patient is given “competing” medications (e.g., sedatives and stimulants) that trigger different arms of the autonomic nervous system
- The patient is given combinations of medications that cause dangerous interactions in the liver enzyme system (e.g., the cytochrome P450 system)
- The patient is left on medications after they are no longer needed (Scaer et al., 2008)

Former Army Psychiatric Nurse Alison Lighthall reported hearing quite a bit of anecdotal evidence from veterans that some of the medications commonly prescribed have side effects that they cannot or choose not to tolerate. For many of these veterans, marijuana is the medication of choice (Lighthall, 2008).

Empowerment and Destigmatization

Helplessness and powerlessness are vicious components of the traumatic experience, so it is important to look at ways of making your services as empowering as possible and using them to reduce the stigma associated with post-deployment stress effects.

Much of the information in this chapter comes from interviews with individual veterans who not only have served in the wars in Iraq and Afghanistan, but also have worked professionally and/or on a volunteer basis with veterans suffering from combat stress injuries.

Healing the Effects of Stigma in the Military Culture: The military culture has a long history of stigmatizing post-deployment stress effects, in both overt and subtle ways. Many veterans with post-deployment stress effects have deep levels of shame about these effects and fear of having others judge them for their reactions—or for the events that led to those reactions. And the civilian society that now surrounds them holds a strong stigma toward substance use disorders. So the language you use to frame their experiences, their effects, and the work of therapy may have powerful effects on their engagement, participation, and retention in treatment.

Younger Service Members, who often have less experience and grounding in adult civilian life, are in general more likely to be thoroughly steeped in the military culture and the tough, “macho” mind-frame. They are also more likely to:

- Have internalized the stigma toward combat stress injuries
- Resist any knowledge of their own stress reactions
- Have powerful self-stigma and shame about those reactions and their symptoms

Younger veterans will often require the strongest efforts to normalize and destigmatize their experiences, reactions, and symptoms.

A diagnostic label such as “PTSD,” “substance abuse,” “addiction,” or “depression” may or may not be helpful in working a particular veteran. For some, particularly older veterans, the label might be a useful educational tool, putting a name and a knowledge base to an experience that would otherwise have seemed chaotic and menacing. For others, it might be a label of shame that carries with it images of weakness, cowardice, and a life sentence of inferiority.

Words tend to gain toxicity from the negative ways and situations in which they are used (Woll, 2005). Explaining that your words really do not mean all those negative things will not be enough, just as explaining that fireworks are only fireworks does not keep the amygdala from telling the rest of the brain and body to “hit the dirt!”

If you need to use diagnostic labels for reimbursement purposes, you might want to explain them in that context. Then the most empowering approach might be to negotiate with the veteran the words you will both use to describe what is happening.

Empowerment: An important part of empowerment is the right and ability to choose. In the therapeutic process, this includes the ability to make informed choices about treatment approaches and techniques. According to Lighthall (2008), most veterans seeking help for their post-deployment stress effects will be looking for something that is:

- Quick and time limited
- Capable of answering in an empowering way the question that most troubles them: “Am I going crazy?”
- Focused on training and skill building, rather than exploring their traumatic experience
- Likely to provide resources they can seek out and continue to use
- Likely to bring immediate relief to their most troubling challenges
- Capable of giving them the thing they need most—hope

Veterans with these priorities are more likely to seek and accept services that provide education, training, and resources that can give them power over their symptoms. And given the short amount of time many clinicians are able to spend with clients, this may be a safe and rational way to approach treatment. “Framing Services for Empowerment

and Destigmatization (Page 73) offers some ideas for civilian clinicians who want to focus and frame their services in terms of education and training that will help veterans:

- Understand and destigmatize of their post-deployment stress effects
- Learn to prevent, eliminate, and manage symptoms of these effects
- Find internal and external resources for continued empowerment

The military culture is one in which power is of great importance. All forms of helplessness—including all the forms of helplessness that contribute to and spring from the trauma of war—are unwelcome. In general, the more empowering the process is from the start, the sooner veterans will engage and the more likely they are to stay with the process (Lighthall, 2008).

The therapeutic use of images or feelings of helplessness or powerlessness (e.g., metaphors of powerlessness in 12-Step recovery programs) may not be a strong selling point for your approach, at least not at the beginning of treatment. If veterans have co-occurring substance dependence disorders and choose to seek recovery through 12-Step groups, you might want to help them:

- Reframe the concept of powerlessness as something that applies to the ability to drink or use drugs without consequences, rather than the feelings of life-threatening powerlessness associated with trauma
- Focus on the empowerment that comes through reliance on a Higher Power, however they choose to define that Power

No matter how much confidence or pride veterans might bring into your office, they have faced experiences strong enough to jar their stress and survival systems. These experiences—and the violent reactions that arise in their bodies and emotions later—can leave veterans with significant questions and challenges to their sense of:

- Who they are
- What they are worth
- Where they fit in
- Whether or not there is any safety in the world (Herman, 1992).

The better you are at teaching empowerment and removing stigma, the more your efforts will help, no matter what treatment practices you might choose.

Avoiding Confrontive Traditions in SUD Treatment: Although in the past several years most experts have been spreading the message of respectful and empowering treatment, the SUD treatment field had a long early history of harsh, confrontive approaches toward client care. These approaches began in the 1970s, when the early therapeutic communities sought to tear down the addictive ego, believing they could rebuild the human being in more perfect form. This often led to disastrous results (White, 1998).

Framing Services for Empowerment and Destigmatization

A Colorado-based organization called ONE Freedom has been offering some innovative services to returning veterans and service members preparing for deployment, all designed to empower and reduce stigmatization. ONE Freedom offers returning veterans and their families “meaningful education and training on prolonged stress, trauma and personal, self-managed skill-sets for maintaining **strength after service.**” Their education and training programs “re-frame the way warriors and family members experience stress, and provide a normalizing look at why and how we are changed by our experiences and what we can do to positively move forward” (www.onefreedom.org).

In an interview, ONE Freedom Consultant (and Desert Storm veteran) Steve Robinson offered a number of the organization’s ideas and options for framing and shaping the therapeutic process:

- Frame and speak of ideas and practices in terms of training rather than therapy. Service Members “train up” before deployment, so now it is time to “train down” to function effectively in civilian life. This immediately normalizes and destigmatizes both their presenting conditions and the therapeutic process.
- Use a performance optimization model, like the model used in the military. The veteran seeking therapy may be admitting what the military culture defines as a weakness. But the veteran seeking training is becoming a better representative of the Armed Forces by optimizing performance in the home environment, and the peace environment.
- Frame the skills and insights gained as “resources,” a term compatible with the military culture. Help the veteran identify and gain access to resources, within him/herself, within the family, within the community, within the military and veterans’ community, and within the nation.
- ONE Freedom uses the terms “combat brain” or “survival brain” to identify the amygdala’s action in triggering the sympathetic and parasympathetic stress chemicals. The task of “training down,” then, is to down-regulate the combat brain. You are also providing post-combat stress-management training.
- Speak in terms of understanding the brain and the body. Speak of regulating the autonomic nervous system, helping restore it to balance, homeostasis, resiliency, and normal functioning.
- Rather than speaking of the trauma that veterans have experienced, frame these as “intense life experiences.” You are helping them learn better ways of negotiating their present and past experiences—and better ways of identifying and maintaining the boundary between the two.
- The word “balance” is a non-stigmatizing one that has many uses, including a balanced stress system, balanced energy levels, balanced emotional energy, balance in terms of habits (e.g., drugs, alcohol), and balance in sleep cycles.
- You may already use the metaphor of becoming an observer of one’s own thoughts and emotions. This is particularly crucial with veterans who have post-deployment stress effects, because of the suddenness and savagery with which the amygdala’s unconscious feelings and memories will intrude on the present and distort people’s thoughts, words, and actions.
- Avoiding all judgmental words is a good idea. If, for example, a veteran describes an outburst with a family member, it is better to avoid the question of whether his or her words or actions were “good” or “bad.” Instead, the question might be, “Was this choice helpful or not helpful?”
- When a client becomes more comfortable with trauma terminology, it can be gradually introduced. But you will still want to take care to help reframe it from the “defective soldier” model to something that reflects both the realities of the human stress system and the honor of the individual veteran.
- In this collaborative educational process, it is important to remember that the clinician does not “hand the solution to the veteran.” Instead, you negotiate together to work toward a solution, once you both understand the options.

ONE Freedom has developed these approaches based on work with large numbers of returning veterans and pre-deployment Service Members. According to Robinson, they have found that these approaches fit in well with the military culture and promote greater engagement, even among people who would be inclined to avoid anything that looks or sounds like “therapy.”

For SUD treatment practitioners serving veterans with post-deployment stress effects, the warnings against these confrontive approaches are even stronger. Given the easily kindled stress systems and badly shaken self-concept that many veterans bring home with them, it is essential to leave all traces of harsh confrontation behind, replaced with respect and empowerment.

Rituals and Reintegration

For many reasons, and on many levels of human experience, ritual is an important tool in recovery from substance use disorders, post-deployment stress effects, and other conditions related to challenges to the human stress and survival system. Ritual is certainly a strong element in the cultures of addiction and recovery (White, 1996), with a variety of rituals prominent in the many mutual-help recovery options. Clinicians can choose clinical practices that include elements of ritual (e.g., Mindfulness training, visualization, somatosensory practices) and recommend positive rituals (e.g., faith traditions, Mindfulness, yoga) in recovery and self-care. They can also work with veterans, empowering them to establish healing rituals within their lives, families, support networks, and communities.

Ritual and the Brain: Elsewhere in this Guide (see “Resilience and Vulnerability to Traumatic Stress”), several brain structures have revealed themselves as particularly important to the balance of our stress and survival systems. Positive ritual can have strong positive effects on the functioning of many of these structures, particularly the amygdala, the prefrontal cortex, and the anterior cingulate gyrus (Siegal, 2007).

The amygdala is an essentially concrete structure, storing and retrieving bites of sound, scent, images, and raw emotions. It does not understand concepts, but badly needs evidence of basic safety before it will stop throwing out frightening fragments of memory and triggering powerful surges of stress chemicals. Ritual is made up of concrete, symbolic words, silences, sounds, scents, stories, gestures, movement, artifacts, etc. Ritual talks to the amygdala in a language it can understand. And positive rituals speak of safety and comfort (Scaer et al., 2008).

Ritual also reaches the all-important prefrontal cortex (PFC), whose GABA fibers can descend to the amygdala and provide comfort and soothing. Some rituals (e.g., Mindfulness) have been shown both to focus the prefrontal cortex and to promote cell growth in both the PFC and the anterior cingulate gyrus (Siegal, 2007).

Finding Rituals: For the individual veteran, therapist Eduardo Duran recommends a simple approach: “Find a place in your home or yard, and designate it as a sacred space. Give your offerings to the earth or whatever you believe in, trying to correct what

has been done.” According to Duran, rituals and ceremonies are everywhere, but the challenge is to replace the “dysfunctional” ceremonies—like those used in addiction—with healthy ones.

Storytelling can be an important ritual, particularly among people with shared experiences, like groups of veterans.

In *War and the Soul*, Edward Tick wrote that “When we tell our own stories and listen to those of others, we come in touch with all three: life, divinity, and soul. Telling our story is a way of preserving our individual history and at the same time defining our place in the larger flow of events. It reveals patterns and meaning that we might otherwise miss as we go about the mundane activities of living; it invites us to see the universe working through us. Storytelling also knits the community together. It records or re-creates the collective history and transforms actor and listeners alike into communal witnesses” (Tick, 2005, p. 217).

Rituals in Community: Bonding and affiliation are important components of:

- Resilience to stress and trauma
- Recovery from post-deployment effects, substance use disorders, and other common aftereffects of war.

As strong as the bonding within the Unit might have been, the sense of alienation and isolation back home can be equally strong (Armstrong, Best, and Domenici, 2006).

One of the civilian clinician’s challenges is to find ways to encourage veterans to find positive rituals in the family and the community—and to encourage families, communities, and communities of faith to form positive rituals for welcoming veterans home. “We must witness for and initiate each other,” wrote Edward Tick. “Our transformations are not completed in solitude; they are honored in public and integrated into the culture as its shared history” (Tick, 2005, p. 217).

According to veteran and trainer-of-veterans Steve Robinson, the importance of ritual in trauma recovery is something ancient cultures understood, but contemporary American society has largely missed. “We have no traditions in 21st-century culture to deal with traumatic experiences, so we all end up having to deal with them on our own, because we have no cultural ritual. There needs to be a call to action. We as a society need to develop a ritual for negotiating life’s intense experiences that is understood by all. Each culture may do it differently, but it provides a place to go when these things happen.”

Native American Reintegration Rituals: Many who work with traumatized veterans have studied and admired traditional Native American rituals for welcoming and reintegrating warriors back into the tribe. These healing ceremonies generally addressed both body and mind, reflecting a tendency not to make any sharp distinctions between the two (Silver and Wilson, 1996). Although these rituals would not be

accessible to veterans of non-Native cultures, they illustrate some ways in which ritual can be used to address the effects of war.

“The wisdom of such rituals lies in their ability to decondition the intense emotions produced and learned in combat. Ritual purification, embedded in cultural meaning, begins the process of transformation in identity and role expectation. Moreover, ceremonies and rituals for both preparing warriors for battle and reintegrating them into the tribe not only acknowledge combat reactions but also rely heavily on the participation of the family, clan, and tribe” (Silver and Wilson, 1996, p. 303).

Reintegration within the tribe does not mean returning to one's previous state as if nothing had happened, but rather the taking on of a new role that often includes self-discipline, leadership, and generativity (passing knowledge and wisdom on to the next generation). This improvement in the warrior's status reflects this new wisdom, reframes what would otherwise be seen as a negative experience, and addresses survivor's guilt by providing opportunities to make atonement through service and contribution to the tribe (Silver and Wilson, 1996).

Meaning, Purpose, and Posttraumatic Growth

Traumatic Growth: “Traumatic growth” is one term that has been applied to the positive life change that sometimes comes out of trauma or life crisis. While the term “resilience” implies a return to earlier levels of functioning, the terms “thriving” and “post-traumatic growth” both suggest the development of something higher and more desirable (Chesler, 2003). According to Chesler, the development of a coherent narrative is an essential element of post-traumatic growth, allowing people to make sense of their experiences and integrate them into conscious memory (Chesler, 2003).

In his interview, psychologist Eduardo Duran spoke at length about the effects of the experience of killing on the post-deployment lives of veterans. He also spoke of the healing that many veterans in his care—including himself—had experienced. A Vietnam veteran, Duran told the story of a suicide conference a few years ago, in which participants were discussing the act of asking forgiveness from people they had harmed. In a group setting, Duran found himself facing one of the other participants, a Vietnamese man. “I basically looked at him and asked forgiveness for my role in hurting his people. It was really a profound shift, both for me and for him. It was a spiritual moment.”

In one review of 39 empirical studies that reported positive change after trauma and adversity—something that the Linley and Joseph called “adversarial growth”—they found adversarial growth to be associated with:

- Cognitive appraisal variables (the way people's interpretations of events affect their feelings about those events)
- Coping through problem-focused acceptance and reinterpretation
- Optimism
- Religion
- Cognitive processing
- Positive affect (Linley and Joseph, 2004)

Shaw, Joseph, and Linley (2005) found 11 empirical studies that identified connections between religion, spirituality, and post-traumatic growth. Their review showed them that:

- Religion and spirituality can help people address the aftermath of trauma
- Traumatic experiences can affect people's religious or spiritual lives
- Post-traumatic growth is often associated with positive religious coping, religious openness, willingness to face existential questions, religious participation, and intrinsic “religiousness”

Meaning and Purpose: As safety is the foundation of effective treatment of trauma, SUDs, and other challenges, the finding of new meaning and purpose is often its crowning achievement. Although clinicians will have many more concrete tasks to attend to in serving returning veterans, it is also essential to be on the lookout for these moments of grace and transcendence that sometimes arise at unlikely times.

The generation of meaning from adversity has long been a cherished concept in the field of recovery from substance use disorders (Kurtz, 1979; Kurtz and Ketcham, 1992; White, 1998). The history of this field is rooted in partnership with mutual-help recovery groups that:

- Named addiction as a disease long before science was able to provide the evidence that it now possesses
- Have successfully harnessed psychological and spiritual growth as effective tools for recovery from what is essentially a neurological challenge
- Have now become partners with the treatment field in grassroots and nationwide efforts to transform systems of care for people who need recovery (White, Kurtz, and Sanders, 2006; White, 2007)

Ernest Kurtz and Katherine Ketcham characterized a central force in recovery as the “spirituality of imperfection.” In their words, “The spirituality of imperfection speaks to those who seek meaning in the absurd, peace within the chaos, light within darkness, joy within the suffering—without denying the reality and even the necessity of absurdity, chaos, darkness, and suffering. This is not a spirituality for the saints or the gods, but for people who suffer from what the philosopher-psychologist William James called ‘*torn-to-pieces-hood*’” (Kurtz and Ketcham, 1992, p. 2).

Many people in the field of trauma recovery have also recognized the importance of meaning and purpose in the healing of post-trauma effects. Not the first to articulate this concept, but certainly one of the most eloquent, was Viktor Frankl in *Man's Search for Meaning*, the story of his imprisonment in Auschwitz during World War II. For example, Frankl wrote of a breakthrough that a fellow prisoner had experienced in the process of grieving for his wife: He found peace when he realized that by surviving he had protected her from the experience of his death (Frankl, 1984).

According to Frankl, even trauma itself can provide a foundation for meaning and purpose. "The way in which a man accepts his fate and all the suffering it entails, the way in which he takes up his cross, gives him ample opportunity—even under the most difficult circumstances—to add a deeper meaning to his life. It may remain brave, dignified and unselfish" (Frankl, 1984, p. 76).

Silver and Wilson (1996) wrote that "For some veterans, their old view of reality is forever shattered by war trauma, inevitably creating the need to reformulate the existential meaning of life itself as well as their role in it. Thus, war can alter individuals in many ways, depending on events in the postwar recovery environment. Some men never come home from war. Others become more fully human and wiser" (Silver and Wilson, 1996, p. 299).

But to think of new meaning as simply an element in the resolution of the traumatic experience would be to oversimplify the healing from trauma, just as so many tend to oversimplify the experience of trauma. Sometimes the traumatic experience itself "clears the way" for meaning and purpose that we would not have found otherwise.

Trauma has a way of shattering those three fundamental assumptions that Janoff-Bulman identified, "The world is benevolent; The world is meaningful; The self is worthy" (Janoff-Bulman, 1992, p. 6). The healing process forges new meaning, and it is the shattering and reshaping of meaning that can make way for more authentic and sometimes transcendent growth.

According to Janoff-Bulman and Berg (1998), "Survivors commonly experience the terror of a shattered, malevolent world, as well as the gratification of a deeper, more meaningful existence. They move from perceiving a meaningless universe to creating a meaningful life, and this journey involves a potent and disturbing process of disillusionment. It is not simply that some trauma survivors cope well and perceive benefits *in spite of* their losses, but rather that the creation of value and meaning occurs *because of* their losses, particularly the loss of deeply held illusions. In the end, survivors often feel both more vulnerable and more appreciative, two states that are fundamentally linked" (Janoff-Bulman and Berg, 1998, p. 35).



Finding Balance

7. Choosing Treatment Practices

Fully effective treatment may require a strategically staged, multi-modal treatment approach. On the one hand, a treatment approach that emphasizes cognitive reorientation to the present, while disregarding past trauma, may insufficiently address the reliving of the trauma in images, feelings, or behavior. On the other hand, a treatment approach that focuses prematurely on exploration of the past may exacerbate, rather than relieve intrusive affective and somatic symptoms. With appropriate timing, however, different treatment modalities might well be employed in complementary fashion.

—van der Kolk and Pelcovitz (Clinical applications of the Structured Interview for Disorders of Extreme Stress (SIDES). *NC-PTSD Quarterly*, p. 24)

Given that many or most readers of this Guide will be clinicians in the substance use disorder (SUD) treatment field, their need or opportunity for choosing trauma-specific treatment practices is likely to vary widely. In many cases it will be most important to provide trauma-informed services in general, and to choose SUD treatment approaches and practices that respect the complexity that trauma brings to the recovery process. In other cases SUD clinicians will be working closely with trauma specialists. In some cases, SUD professionals may be the only sources of help that veterans see.

It is beyond the current scope of this Guide to describe the treatment interventions available for post-deployment stress effects—and far beyond that scope to recommend one practice over the other. However, this chapter does provide a very brief, very general overview of some things that civilian clinicians might want to consider in planning or refining their approach toward working with veterans. It includes four sections and two pull-out pages:

- Identifying Trauma-Related Assessment Instruments
 - Suicide Risk Assessment With the SAFE-T Card
- Choosing Safe and Appropriate Treatment Interventions
- Using Symptoms and Neurobiology in Considering Treatment Practices
 - Table: Using Symptoms and Neurobiology in Considering Treatment Practices
- Additional Considerations in Treatment Planning

Future updates to this chapter may provide more information on specific practices, including treatment planning practices, and links to sources of further information and training.

Identifying Trauma-Related Assessment Instruments

While the Military has developed systems for evaluating Service Members' readiness for return to duty, the question of readiness for return to civilian life is a bit less clear. The Armed Forces have implemented universal screening processes in their primary care settings to try to reduce stigma and make it easier for veterans who need services to seek them. Civilian clinicians in SUD treatment and mental health can also do their part, by becoming familiar with the instruments used to identify and diagnose the range of post-deployment stress effects.

Begin With an Assessment of Strengths: The weight of contemporary knowledge of trauma is overwhelming. As young as our collective understanding of this subject is, experts have managed to put together exhaustive lists of symptoms, signs, and gut-wrenching experiences in the theater of war. All of this information is essential, but even the most compassionate assessment process can drive the stigma and shame deeper into the veteran's heart, without ever intending that consequence.

The fields of mental health and substance use disorders have learned the hard way that a focus on the problem must be well balanced—and even preceded—by a focus on the individual's strengths, resources, and resilience. In recovery-based approaches toward the care of SUDs, clinicians and recovery mentors alike are learning to begin the assessment process with an inventory of strengths and resources, also called "recovery capital" (Granfield and Cloud, 1999). The collection of this information is then used to feed the treatment planning process, and to help remind clients of the equally overwhelming reality of recovery (White, Kurtz, and Sanders, 2006; White, 2007).

Screening and Assessment Instruments: The Department of Veterans Affairs (VA) National Center for Posttraumatic Stress Disorder (NCPTSD) has on its web site (www.ncptsd.va.gov) a wide variety of trauma screening instruments, trauma exposure

measures (to identify traumatic events experienced), and PTSD measures (to identify symptoms related to those events).

These instruments vary widely in terms of the time it takes to administer them, length, complexity, thoroughness, sophistication, measurement of symptom severity/frequency, reading level, and cost. They also differ in terms of the range of trauma types screened for or assessed. It is important to find a balance between the desire for a manageable assessment process that is acceptable to the client with the need for accurate assessment of people whose symptoms may not always fit neatly into the restrictive diagnostic criteria laid out in the Diagnostic and Statistical Manual of Mental Disorders.

Even if war exposure is the factor that triggers the trauma, the history of earlier childhood trauma can influence the direction and course of post-trauma effects. So along with the traditional PTSD symptoms (fear, avoidance, hyperarousal), it is also important to assess challenges in emotion regulation, consciousness, relationships, and meaning/spirituality (Ford and Kidd, 1998).

If complex PTSD or DESNOS might be an issue, the SIDES scale can be used after a careful, developmentally based trauma history to capture information on the overall effects of trauma. The SIDES scale was developed based on seven categories of clinically relevant issues that were not included in PTSD diagnostic criteria, but were identified during the DSM-IV field trials for PTSD. Most of the symptoms listed in the SIDES are included in other DSM diagnoses, e.g., dissociative disorder, somatization disorder, various Axis II personality disorders, and as “associated features” under PTSD (van der Kolk and Pelcovitz, 1999).

The 27 diagnostic criteria addressed in the SIDES are organized in seven categories:

1. Alteration in regulation of affect and impulses
2. Alterations in attention or consciousness
3. Alteration in self-perception
4. Alterations in perception of the perpetrator
5. Alterations in relationships with others
6. Somatization
7. Alterations in systems of meaning (van der Kolk and Pelcovitz, 1999)

Global Assessment Processes: Friedman (2006) cautions that people diagnosed with PTSD have an 80-percent chance of meeting diagnostic criteria for at least one other psychiatric disorder. He recommends a wide-ranging assessment process that includes all of the following.

Risk and protective factors to assess:

- Risk of suicide
- Danger to others

- ongoing stressors
- Risky behaviors
- Personal characteristics
 - Coping skills
 - Ways of relating to others
 - Attachment
 - Shame
 - Sensitivity to stigma
 - Past trauma history
 - Motivation for treatment
- Social support
- Other psychiatric and medical disorders

Other issues to assess:

- Experience of stigma within the military
- National Guard or military reserve service
- Military sexual trauma
- Survival of serious injury

Choosing Safe and Appropriate Treatment Interventions

In an empowerment model, the client is a well informed partner in choosing treatment practices. However, the clinician first has to do the homework.

For the conscientious clinician, evaluating treatment approaches and practices to offer clients is often a bit of a juggling act—looking at the grounding of the practice in empirical evidence, cultural factors, the cost of the intervention, available training in the intervention, the time the intervention takes vs. the time available for treatment, the client's individual preferences, etc. The one consolation might be the evidence that the quality of the therapeutic relationship is far more important to treatment success than the choice of treatment practices (Hubble, Duncan, and Miller, 1999).

The choice of practices may be quite limited if you have only a limited number of sessions to spend with the veteran—either through the veteran's own preference or because resources are limited. Although post-trauma effects are complex and healing often requires time and effort, Psychotherapist and trauma specialist Lia Gaty reminds clinicians that they are not likely to be the end-point in a particular client's therapeutic journey.

Suicide Risk Assessment with the SAFE-T Card

The National Suicide Prevention Lifeline has developed an assessment card based on the American Psychiatric Association's Practice Guidelines for the Assessment and Treatment of Patients with Suicidal Behaviors. This The SAFE-T (Suicide Assessment Five-Step Evaluation and Triage) card is available from the organization's web site, <http://www.suicidepreventionlifeline.org/>. Its content is reprinted below, with permission:

Risk factors:

- Current or past diagnoses: Mood disorders, psychotic disorders, alcohol or drug problems, personality disorders
- Key symptoms: Anhedonia, impulsivity, hopelessness, anxiety/panic, insomnia, command hallucinations
- suicidal behavior: History of prior suicide attempts, aborted suicide attempts, injury to self
- Family history: Suicide, attempts, Axis I diagnoses requiring hospitalization
- Precipitating factors: Triggering events leading to humiliation, shame, despair; ongoing medical illness
- Access to firearms

Protective factors:

- Internal: Ability to cope with stress, religious beliefs, frustration tolerance, absence of psychosis
- External: Responsibility to children or beloved pets, positive therapeutic relationships, social supports

Likelihood of suicide:

- Ideation: Frequency, intensity, duration (in past 48 hours, past month, and worst ever)
- Plan: Timing, location, lethality, availability, acts in preparation
- Behaviors: Past attempts, aborted attempts, rehearsals (e.g., tying noose, loading gun) as opposed to non-suicidal self injury

The same criteria can be used to assess the possibility of homicide, when this possibility is indicated. This assessment is particularly important with postpartum mothers, and in men with Axis II disorders or paranoia who are dealing with loss or humiliation.

PLEASE NOTE: The Veterans Suicide Prevention Hotline is 1-800-273-8255 (TALK). It is sponsored by the Department of Veterans Affairs and the Substance Abuse and Mental Health Services Administration.

Even if all you have time to do is help veterans establish some sense of empowerment and a few safety skills and resources, that is a significant step in the healing process. If you do it in a way that leaves them feeling good about coming back to you or seeking help elsewhere in the future, you have just improved their chances of recovery significantly.

Criteria for Choosing Approaches: In looking at evidence-based and promising practices to offer people with post-trauma effects, the clinician is often caught between:

- A traditional approach that advises only to use evidence-based practices that have been tested and used extensively with the specific population served and found to be safe and effective
- The growing use and acceptance of a number of promising approaches for which the body of evidence is still under development, including many somatic and somatosensory approaches designed to make it easier to integrate the body's procedural memories with narrative memory

Even a well documented technique like Eye Movement Desensitization and Reprocessing (EMDR, a model that combines cognitive and somatic techniques) is sometimes still the subject of debate, with many clinicians, clients, and studies reporting highly positive results, and detractors still casting doubt on the relevance of the somatic component (bi-lateral eye movement, tapping, or sound). It is necessary for clinicians to learn about the practices they are considering from multiple sources, including (and perhaps most important) a number of people who have been treated with those techniques.

There are also practices, most notably Dialectical Behavioral Therapy (DBT), that have been used and tested most often with complex trauma or DESNOS (Linehan et al., 2006). These practices have been tested on some cohorts of veterans who also present with DESNOS symptoms (David, Simpson, and Cotton, 2006; Koons et al., 2000).

Complicating all this is the fact that some of these practices look and sound simple, but still require extensive training and (in some cases) licensing. EMDR, for example, is not a technique, but an approach that begins with an extensive process of building safety and resources before addressing any traumatic material. A clinician who saw only the hand and eye movement, deciding to skip the costly training and simply use that technique, would be seriously jeopardizing the patient's well being (Ferentz, 2008).

Safety Considerations in Choosing Treatment Practices: Trauma is an area of great danger for the patient, and so an area in which safety is the first and most important consideration. A few safety considerations in choosing treatment practices:

- As mentioned earlier in this Guide, it is important not to mix veterans in with general population (civilian) therapy groups.

- SUD treatment providers need to work closely with trauma specialists to ensure that all steps are taken to stabilize both the trauma symptoms and recovery from substance use. Withdrawal from addictive substances can often trigger trauma symptoms, and trauma symptoms often lead to self-medication with alcohol and drugs.
- Do **not** use techniques that involve the recalling or re-experiencing of traumatic memories unless you are:
 - Well trained, supervised, and experienced in these technique
 - Ready to monitor and lower arousal levels when they start to escalate
 - Working with clients who have strong skills in managing their emotional responses
 - Certain that you will be able to bring to stability and containment before the session ends
- Once again, the emphasis is on building veterans' own skills in creating safety. If you use techniques that involve the recollection of traumatic memories:
 - Establish a firm foundation of safety and resources before you begin
 - Include ample training for the veteran in stopping or shutting down the process
 - Always progress slowly, giving the veteran practice in “togglng” back and forth between arousal and calming (Ferentz, 2008)
- For any work with trauma survivors, spend ample time, both on the establishment of safety before working on traumatic material, and on stabilization and containment of the traumatic material before ending the session.
- Monitor reactions to and effectiveness of any medications prescribed for the veteran, and take these medications' side effects into account in planning and carrying out interventions.

To gauge the level of arousal, an old mainstay in the field of trauma is the SUDS (Subjective Units of Disturbance Scale), designed by Joseph Wolpe, the developer of systematic desensitization. On a scale of zero to 10, (in which zero is neutral, no disturbance, and 10 is the worst level of disturbance the client can imagine), the client “rates” his or her disturbance at any given time.

It is essential that clinicians be trained in all the practices they use, and refer clients out for any other technologies they might need. Courtois (2006) strongly recommends the use of informed consent forms for any practice offered to and chosen by the client. These forms would describe the practice, its purposes, its characteristics, and the extent of the evidence base behind it. She also recommends that clinicians who are considering using practices that do not have a solid evidence base first consult their licensing regulations to see if they might face any challenges there.

Evaluating the Evidence Base: Even within the realm of practices with a solid evidence base, there are several cautions. If you are relying on the evidence, it is important to look at the studies in question and note:

- The sample size upon which the evidence is based
- The fidelity to treatment protocols that took place in that study
- The nature of the control group used (wait list vs. other treatments)
- The appropriateness of the population studied to your proposed use with veterans
- Whether or not these results can be generalized to this population—and to this individual veteran

Using Symptoms and Neurobiology in Considering Treatment Practices

The table on Page 87 lays out:

- Specific challenges (e.g., symptom clusters)
- The neurobiology beneath those challenges
- Strategies to address those neurobiological factors
- Examples of treatment approaches or practices that tend to help you carry out those strategies

Many veterans will have symptoms that appear on more than one line of this chart, and so they might benefit from more than one therapeutic intervention.

Please note: The final column, “A Few Corresponding Practices,” includes both evidence-based and promising practices that are designed to address the symptom clusters and challenges listed to their left. The inclusion of a practice in this column does not constitute a recommendation that this practice be used, in general, or in a specific case. That would be far beyond the scope of this document. By the same token, the omission of a practice from this column is not in any way meant to imply that this practice is not appropriate or effective.

You will notice that the chart does not mention medical interventions. Although medical interventions are sometimes necessary for stabilization, recommending specific medications would be beyond the scope of this site. The general advice is to coordinate with prescribing doctors and help monitor medication side effects and effectiveness.

The chart also does not mention the many self-help and self-care measures that are important for veterans, as they are for all of us. Some of those measures are mentioned in the final chapter, “Promoting Veterans’ Recovery and Self-Care.”

When you look at this chart, please remember that it is centered on the neurobiology of trauma—the brain, the stress systems, and the other parts of the body that carry the stress—and ways of addressing that central driving force. Although the chart does not address any of the other, equally important aspects of the human being—the mind, the heart, the spirit—it is definitely not meant to diminish the importance of these aspects. The aim is to get the body in line so the mind, heart, and spirit will have a more hospitable climate to live in, and a better chance to make their needs and wishes known.

Additional Considerations in Treatment Planning

A Multi-Modal Approach: As the table on Using Symptoms and Neurobiology in Considering Treatment Practices shows, veterans may experience many different “clusters” of symptoms. Clinicians who have the luxury of time will want to consider and use multiple approaches and practices, based on the veteran’s symptoms, stage of recovery, and stage of readiness.

According to van der Kolk and Pelcovitz (1999), “Fully effective treatment may require a strategically staged, multi-modal treatment approach. On the one hand, a treatment approach that emphasizes cognitive reorientation to the present, while disregarding past trauma, may insufficiently address the reliving of the trauma in images, feelings, or behavior. On the other hand, a treatment approach that focuses prematurely on exploration of the past may exacerbate, rather than relieve intrusive affective and somatic symptoms. With appropriate timing, however, different treatment modalities might well be employed in complementary fashion. Thus, recognition of the complex nature of adaptation to traumatic life experiences may lead to further development of a more comprehensive treatment approach to trauma-based psychiatric disorders” (van der Kolk and Pelcovitz, 1999, p. 24).

Treatment Planning Resources from the National Center for PTSD: Although the evaluation and choice of trauma treatment practices is beyond the scope of this Guide, the Department of Veterans Affairs offers a guidelines document called *Management of Traumatic Stress* (2004), Washington, DC: VA/DoD Clinical Practice Guideline Working Group, Veterans Health Administration, Department of Veterans Affairs and Health Affairs, Department of Defense, December, 2003 (update targeted for 2006). It is available from the Department’s Office of Quality and Performance Publication 10Q-CPG/PTSD-04, and available for download at http://www.oqp.med.va.gov/cpg/PTSD/PTSD_Base.htm.

Table: Using Symptoms and Neurobiology in Considering Treatment Practices*

Challenges/Symptom Clusters	The Neurobiology	Strategies	A Few Corresponding Practices*
Post-deployment stress effects (in general)	The amygdala (primitive, unconscious emotional memory) is calling the shots	Learn to contact and enlist the help of the higher brain, including the prefrontal cortex (reason, logic, calm), anterior cingulate gyrus (relationship), insular cortex, and hippocampus (conscious memory)	Grounding in safety, Mindfulness training, cognitive/ behavioral skill training, affirmations (Siegel, 2007)
	Key higher brain structures (e.g., prefrontal cortex) are nurtured and activated through bonding and face-to-face contact (Schore, 2001)	Constructive face-to-face contact with trustworthy people	Building the therapeutic relationship, connecting with other veterans, harmonizing relationships with family and friends
	The amygdala is primarily concrete, and unable to grasp the more abstract kinds of thoughts and instructions that our logic would have us use in the healing process	Add concrete elements (images of shapes, sizes, sounds, smells, motion, etc.) to calming and safety instructions, and to skill building around stress and memories (always monitored and controlled)	Guided imagery (using the veteran's own chosen images), building a "safe place" in the imagination, placing traumatic information in a visualized "container" to maintain control, EMDR, careful use of somatic practices (Ferenz, 2008), art therapy, music therapy, dance (Scaer et al, 2008)
Fear, anxiety, irritation, anger, rage, sleeplessness, racing thoughts	The body has learned to respond to stress with hyperarousal of sympathetic processes and chemicals, and lacks enough GABA to promote calm or serotonin to help control impulses	Learn/practice ways of recognizing and labeling emotions, calming emotions, and slowing down in a controlled setting; clinician monitors arousal and provides coaching and support for the calming process	Grounding in safety, EMDR, self-soothing, Mindfulness, anger management, cognitive/behavioral therapy, careful use of exposure (great care in cases of DESNOS) (van der Kolk & Pelkovitz, 1999)
Responding to stress by "shutting down," numbing, avoidance, dissociation	The body has learned to respond to rising stress with parasympathetic chemicals, to avoid hyperarousal and maintain safety	Recognize this as a safety measure, improve motivation, develop concrete grounding in safety that will allow the veteran to take gradual steps toward recognizing and breaking out of dissociative patterns	Motivational interviewing, self-monitoring skills training, Mindfulness, careful use of somatic practices, great care in considering exposure therapy (which might bring on hyperarousal) (Danenburg, 1999)
Exhaustion, hopelessness, sense of helplessness, lack of arousal, depression, risk taking just to get some stimulation	Sympathetic arousal processes are worn out, both sympathetic chemical levels and serotonin levels are too low	Balance the stress system to gradually reintroduce sympathetic chemicals, promote clear thinking and higher serotonin levels, promote impulse control	Somatic practices, cognitive/behavioral therapy, Mindfulness, art therapy, music therapy, affirmations; focus on building appreciation, gratitude, and hope
Intrusive memories (images, sounds, smells, feelings, etc.), flashbacks, confusion between past and present events	Amygdala is bringing up fragments of unconscious traumatic memory, without any grounding in time or space from conscious narrative memories in the hippocampus	Safety measures and reminders for use during flashbacks and intrusive memories	Cue cards, self-soothing skills training, visualization, establishing a "safe place"
		Skills for distinguishing past from present and re-grounding in the "here and now"	Mindfulness, Focusing, cognitive skills training, visualization, art therapy
		Learn to integrate those memories with conscious narrative memories in the hippocampus	EMDR, narrative (with grounding in safety), careful use of exposure therapy (Ferenz, 2008)
Substance abuse or dependence	Alcohol or other drugs have served as self-medication, and (if dependent) convinced the brain they are necessary for survival	Keep trauma symptoms in mind in decisions to withdraw from alcohol/drugs. Allow the brain to stabilize in the absence of these substances	Motivational interviewing, motivational incentives, cognitive/behavioral therapy, SUD recovery-based approaches
Self-defeating thoughts	Prefrontal cortex is underactive, amygdala is influencing thoughts	Learn to question and replace self-defeating thoughts with constructive ones	Cognitive skills training, Mindfulness training, affirmations (Siegal, 2007)
Somatic conditions (e.g., unexplained tics, pains, numbness, tremors, etc.)	Energy of the freeze response is trapped in procedural memory in the brain	Release the stored energy through attention to the body, particularly in affected areas	Firm establishment of safety, followed by carefully used somatosensory practices
DESNOS symptoms (e.g., impulsivity, dependency, suicidal thoughts, delusions, rage, paranoia)	Amygdala is running the show, prefrontal cortex is underactive, development has been compromised	Provide safety, structure, clear boundaries, education/training in management of thoughts and emotions, focus on the present	Dialectical Behavioral Therapy (DBT), using EMDR only in later stages of recovery

These are practices you might look into. Their inclusion on this page does not constitute a recommendation of their use, in general, or with specific clients. No one should use any of these practices without: 1) a clear understanding of their uses and the evidence behind them and 2) ample training and (if required) licensing in the specific practice.

According to the National Center for PTSD's web site (www.ncptsd.va.gov), "the goal of that document is to promote effective management of acute stress responses (ASR) and acute stress disorder (ASD), early identification of probability of developing PTSD, and effective management of PTSD in primary care and mental health settings. It is presented in an algorithmic format that leads the reader through recognition of these conditions, makes recommendations for treatment and treatment objectives. The document also provides guidelines for determining whether or not recommendations and recommended treatment approaches are supported by the evidence." Among the resources in this document are guidelines for looking at the evidence behind the practices that are available.

The Importance of Strengths and Resources: One important hope is that the SUD treatment field's focus on recovery and strength-based treatment planning will inform and inspire treatment planning processes in services for veterans with post-deployment stress effects. Strength-based approaches are important for most people, but particularly important for veterans, who come from a culture that traditionally emphasizes strength and stigmatizes people with combat stress injuries.

Treatment plans should:

- Be custom-built for the individual veteran
- Be developed in a collaborative process between the veteran and the clinician
- Use language that the veteran finds relevant to his or her journey toward and through recovery
- List important strengths and resources—in the individual, the family, the community, and beyond—first identified in the assessment process, then updated as treatment progresses
- Center on the veteran's own goals for his or her treatment and recovery
- Detail approaches that use the identified strengths and resources to pursue the identified goals
- Include or intersect with the veteran's plans for ongoing recovery, re-balancing, and self-care (see [Ideas for Recovery, Re-Balancing, and Self-Care](#))
- Be continually re-evaluated and improved as the veteran progresses through treatment, refining goals and finding new sources of strength, resilience, and resources



Finding Balance

8. Ideas for Recovery, Re-balancing, and Self-care

Veterans returning from Iraq and Afghanistan often show amazing courage and survival skills, not only in war but also at home.

—Armstrong, Best, and Domenici (*Courage After Fire*, p. 34)

If helplessness is the hallmark of trauma, and empowerment is the antidote to helplessness, then the fact that so many sources offer suggestions for self-care and ongoing recovery is certainly a neon sign of hope. This chapter focuses on things that veterans can do to re-balance their stress systems. These suggestions reflect the helping professions' growing awareness of:

- The unbreakable connection between body, mind, spirit, and relationships
- The role that all of these play in trauma and recovery from trauma

A good clinician can enhance motivation, but the primary motivation for wellness and self-care will come from the veteran's own decision to take responsibility for putting his or her stress systems back in balance.

In the words of Jonathan Shay, "The essential first step that a veteran needs to take, which is a precondition of healing, is to establish his own safety, sobriety, and self-care. This is often a protracted struggle, and various means of assistance are available to support the veteran in accomplishing these things for himself" (Shay, 1994, p. 187).

The ideas presented on the following pages represent just a sample of ideas from a few of the many people who are addressing issues of trauma, trauma recovery, and self-care. Many of these ideas—breathing deeply, movement, relaxation, spiritual practices, and keeping in contact with other veterans, to name a few—seem to make each expert's short list.

These suggestions are organized according to their sources, to allow credit where credit is due—though these sources would undoubtedly pass the credit on to others, and particularly to those who have worked so hard to bring their lives back in balance.

This chapter includes two main pages and two pull-out pages:

- Suggestions From Three Presentations on Post-Deployment Stress Effects
- Suggestions From Books and Pamphlets for Veterans
 - Medea’s Tips for Controlling Flooding
 - The Power of Common Responses to Combat Stress—and Suggestions for Getting Back in Balance

Suggestions From Three Presentations on Post-deployment Stress Effects

From ONE Freedom: These suggestions come from staff and consultants of ONE Freedom (Scaer et al., 2008), the Colorado-based not-for-profit organization (<http://www.onefreedom.org>) that provides education and training to veterans and their families.

- Deep, slow breathing, paying attention to the breath:
 - It is a way to “talk to the amygdala” and undo the effects of the freeze response (because deep breathing brings oxygen into the body, and awareness of breath brings us into an awareness of the body).
 - Breath is also something we can control.
 - Deep breathing helps regulate the heartbeat and heart rate variability (healthy differences in the heart rate between inhaling and exhaling).
 - Deep breathing is particularly important because we get most of our oxygen from the bottom of our lungs.
 - Controlling the “exhale” helps to regulate the stress system and slow down the arousal process.
- Attention-control exercises are important. We need to cultivate the inner observer, so we can observe our own thoughts, actions, and reactions. The observer (based in the higher brain) is an antidote to the automatic “reactor” driven by the amygdala.
- Mindfulness training/meditation helps cultivate the inner observer and activate the higher portions of the brain, so we have better control of the amygdala.
- Create a list of your top 10 peak experiences and visualize them in your mind.

- Generate an emotion, name it, and observe how you feel. Naming an emotion helps “downregulate” the amygdala, to bring it under control. “Name it and tame it.”
- Think of appreciation as investment in your own strength. Appreciation changes the heart rate. Making a list of things you appreciate smoothes “heart rate variability.”
- Rest is a lost art, and it brings us closer to where the memories are.
- Doing slow, deliberate exercises can help discharge some of the energy trapped in the body by the freeze response.
- Writing about our experiences helps us integrate our memories and understand the journey.

From Alison Lighthall: In a 2008 presentation, former Army Psychiatric Nurse Alison Lighthall offered a number of suggestions for self-care and re-balancing, including cutting down on (or quitting) caffeine. She has worked with many veterans whose anxiety problems vanished or grew much easier after they stopped having large quantities of caffeine. Lighthall also outlined a stress-management program she developed, called “Dynamic Stress Management.” Components of that program include:

- Improving mental resiliency, so that fewer experiences in life trigger negative stress reactions
- Changing our thinking, so we are more likely to respond in constructive ways and less likely to respond in destructive ways
- Replacing the word “stress” with the more positive and empowering word “challenge”
- Remembering the positive impacts of stress, including:
 - Increased endurance
 - Enhanced physical strength
 - Alertness
 - Vigilance
 - Team cohesion
 - Increased faith in a higher power
 - A sense of purpose
 - Indifference to aches and pains
 - Heroism
 - Loyalty
- Remembering that balancing of the stress system requires “oscillation” (going back and forth) between stress (expenditure of energy) and rest (restoration of energy)
- Working toward balance by “changing it up”—following stillness with movement, noise with quiet, etc.

From Lia Gaty: In a 2008 presentation, psychotherapist and trauma specialist Lia Gaty offered the following suggestions for recovery and re-balancing:

- Face-to-face contact with someone you trust
- Yoga
- Meditation
- Breathing exercises (breathing deeply and slowly)
- Dancing vigorously and often (when you move in rhythmic ways that involve both the left and right sides of the body in turn, it helps balance the brain and integrate memories and experiences)
- Exercising vigorously, swimming
- Laughing hard with someone else
- Acupuncture, massage, tai chi
- Gardening
- Theatre
- Sports
- Visualization
- Focusing (a body-based self-therapy technique developed by Eugene T. Gendlin, PhD)
- Heart math (use of a device that helps in heart rate variability training)

Suggestions From Books and Pamphlets for Veterans

From *Courage After Fire:* In *Courage After Fire: Coping Strategies for Troops Returning from Iraq and Afghanistan and Their Families*, Armstrong, Best, and Domenici (2006) provide an entire book full of suggestions. A few are shown below:

Strength based exercises:

- Make a list of challenging experiences you've overcome in your life, and how you handle them
- Do the same for difficult situations during the war
- Make a lesson of moments of satisfaction, thrill, or humor during the war

Relaxation drills:

- Smooth breathing
- Imagining safety
- Muscle relaxation
- Simple outlets (what can I look at, listen to, smell, taste, touch and, think about that will make me feel more peace at this moment?)

Sleeping better:

1. Maintaining a regular sleep schedule

2. Having a comfortable sleep environment
3. Using the bed only for sleep or sex
4. Having a wind-down routine before you go to bed
5. Not having food or drinks with caffeine (e.g., coffee, sodas, chocolate) within six hours of bedtime
6. Not using alcohol or drugs to help you fall asleep
7. Not having regular or extended use of over-the-counter or prescribed sleep aids
8. Regular exercise
9. Staying active
10. Avoiding heavy food before bed
11. Quitting smoking or chewing tobacco
12. Avoiding or limiting naps during the day
13. Not watching the clock as you try to fall asleep
14. Getting up if you can't sleep
15. Trying not to worry at bedtime (make a worry list for tomorrow)
16. Making sleep a top priority
17. Including your partner in this process
18. Talking to a doctor
19. Talking to a therapist

Coping with redeployment anxiety:

- Understanding that anxiety is reasonable and normal
- Talking to families and other servicemen and women
- Talking to a therapist or counselor
- Being prepared for redeployment
- Considering all options regarding contract with the military
- Getting help from military and civilian doctors and the VA

From “Post-Deployment Stress”: In a booklet (based on extensive PTSD studies) called “Post-Deployment Stress: What You Should Know, What You Can Do,” the Rand Corporation offered a comprehensive list of suggestions, including:

- Keep in contact with other veterans
- Be patient with yourself: increase activity slowly, and don't expect improvement overnight; you're more likely to feel a little better every day
- Exercise and eat well (stay away from junk food)
- Get enough sleep and by keeping a regular sleep schedule and avoiding vigorous exercise before bed
- Stay away from alcohol, tobacco, and caffeine
- Think about the things you like to do, and do them
- Set realistic goals, and don't take on more than you can handle
- Break large problems into smaller ones
- Start with the tasks that are most important
- If you're having trouble remembering things, carry a notebook or set a regular routine for what you do

- If you have a flashback, remind yourself where you are and that you're safe; get up, move around, and talk to someone; tell your doctor or someone close to you
- Manage your anger by walking away from situations that make you angry or by talking things over with people who have made you angry
- Use the military resources available to you
- If you feel depressed and you're thinking of hurting about yourself, ask a family member or health care provider for help, or call the National Suicide Prevention Lifeline (1-800-273-8255 or 1-800-273-TALK); if you need immediate help, call 911

If you have a brain injury:

- Avoid physical activities that would lead to further injury
- Avoid alcohol, caffeine, pseudoephedrine (Sudafed), and heavy use of sleep aids that can put more stress on your brain

Some signs that alcohol or drug use is becoming a problem:

- You feel guilty about your alcohol or drug use
- Your family or friends comment on how much you are drinking
- Your drinking or drug use makes it hard to live up to your responsibilities at home or at work
- You need more alcohol or drugs to get the same effect
- You've tried to cut down on your use but you can't

With your family:

- Sometimes the best thing you can do for your family is to talk openly about your thoughts, feelings, and actions
- Talk to them about your concerns related to post-deployment stress; you might want to set a time every day to check in with the people you care about
- Understand that it's normal for children to feel uncomfortable at first if things are different when you come home
- If they ask you about your symptoms, you can explain some of how you're feeling in a way that they will understand

From *Conflict Unraveled: Fixing Problems at Work and in Families*: Although *Conflict Unraveled* is not specific to veterans or people with post-trauma effects, author Andra Medea provides an extensive list of tips for controlling "flooding," that surge of adrenaline and other chemicals you get when your stress system is triggered. Those chemicals cut off communication with the higher portions of your brain, making it hard to:

- Think of the words you want to say
- Think of options you have, and weigh their risks and benefits
- Anticipate the consequences of your actions

Instead, they leave you alone with the amygdala or “survival brain,” whose main instructions are usually, “fight, flight, or freeze.” Flooding is contagious, with each person’s amygdala “picking up on” the other’s anger or panic. If two people are flooding, each one’s symptoms are likely to escalate the other’s symptoms.

Suggestions for Getting Back in Balance: The final “pull out” page is a table from *Finding Balance After the War Zone*, developed by Pamela Woll for the Great Lakes Addiction Technology Transfer Center and Human Priorities. This table looks at:

- Common automatic responses to combat stress
- Power of these responses
- Possible impact afterwards
- Suggestions for getting back in balance

Each of these elements is considered on each of seven levels:

- The body
- The brain
- Thoughts
- Feelings
- The Spirit
- The Unit
- Home

Medea's Tips for Controlling Flooding

From *Conflict Unraveled: Fixing Problems at Work and in Families*, by Andra Medea

Flooding is that "Fight or flight" adrenaline overload that everyone gets now and then, but it may happen more often if you have post-deployment stress effects. In *Conflict Unraveled*, Andra Medea describes flooding and gives a number of concrete, practical strategies for dealing with it.

What to Remember

Flooding happens to everyone. It happens in different ways, with different styles, but no one is immune to it. We're hard wired for this. When it hits—when, not if—you have got to be prepared to bring yourself out. Only then do you have any chance of getting back to problem-solving and a sane, functioning life.

To Control Flooding in Yourself

- **Watch for physical symptoms first:** Pounding head, racing heart, short breath, sweaty palms, dry mouth. Make a list of your personal signs. Check the list when you're under stress. Checking the list is more important than yelling at someone.
- **Watch for mental symptoms:** Jumbled thoughts; rotary thinking; or an inability to see options, to sequence, or handle math. Also watch for sudden inarticulation, disjointed speech, or suggestibility.
- **Use large muscles:** Go for a walk. Close the door and do jumping-jacks or swing your arms in windmills. Use isometrics if you're stuck in a meeting.
- **Reverse symptoms:** If your breathing goes short, breathe deep and slow. If your fists are clenched, open your hands and stretch your fingers.
- **Focus on specifics:** List facts and read them back to keep your mind focused. Slow the pace.
- **If you can't break free of flooding at the time:** Recognize that you can't think and stop arguing. State clearly that you'd like to talk later, then leave and re-group. Try again after you have repeated the earlier steps.
- **Prepare in advance:** If a tough situation is approaching, practice taking yourself out of flooding. Your mind learned flooding; it can unlearn it. You can develop a resistance to flooding or train yourself to snap out of it.
- **Get it out of your system:** Go smash something, just not people or living things.

To Handle Flooding in Others

- **Watch for symptoms**, such as flushed face, pulsing veins, or disjointed sentences.
- **Don't talk at them since they can't hear you.** Instead, let them talk; give them time to vent. Ask sequence questions: What happened first? What happened next? Use a low, calm tone of voice.
- **Don't crowd them, don't touch them, and don't make fast movements.** If they want to leave, let them.
- **Be prepared for thinking problems.** Don't demand math from someone who is flooding, and don't give complicated directions. Keep it simple, or wait until they calm down.
- **Avoid jargon.** Use short, clear sentences.
- **With chronic cases talk pain control, not anger control.** High levels of adrenaline are toxic; this isn't a comfortable feeling. But the process will take time. They didn't learn flooding in a day, and they won't unlearn in a day.
- **Work on yourself first.** Flooding is contagious, but so is calm. You can't hope to stop someone else's flooding unless you can stop your own.

From Medea, A. (2004). *Conflict Unraveled: Fixing Problems at Work and in Families*. Chicago: Pivot Point Press. Reprinted with permission.

The Power of Common Responses to Combat Stress—and Suggestions for Getting Back in Balance

	1. Common Automatic Responses	2. Power of These Responses	3. Possible Impact Afterwards	4. Suggestions for Restoring Balance
The Body	Powerful chemicals go into “overdrive”—heart racing, “super-human” strength, “freeze” responses, tensing protective front core muscles.	In combat, speed and strength help you feel confident, react quickly and decisively, fight, save lives, escape harm. “Freezing” can save lives.	After these chemicals go into overdrive, the body has some unfinished business. It may be shaky, “jumpy,” or very tired or weak (feeling “paralyzed”) for a while.	Patience with the time it takes to “normalize.” Exercises to relax front core muscles. Good diet, rest, exercise, vitamins/minerals/herbs. Medical care so the body can learn to handle stress and make stress chemicals again. Counseling to help you learn to regulate your stress systems.
	In constant threat, these systems can stay on overdrive for a long time.	You can stay ready for battle at all times, for long periods of time.	Constant stress makes the body jumpy, weak, vulnerable to chronic illness.	
The Brain	Some chemicals speed up thoughts, raise feelings of alarm and fear.	Speedy thoughts help you take action. Alarm and fear help you judge threat.	“Speedy” chemicals cause jittery nerves, anger, feeling threatened, sleep trouble.	Understand that these are normal chemical reactions to sometimes unimaginable events. Become an observer of your own reactions. Watch your reactions to things that seem like threats or insults, and question whether they really are, or if it’s just your brain chemicals talking. Avoid alcohol, drugs, and caffeine, and get medical advice if you think you might need help. Get help for depression and any other reactions that last more than a month.
	Some chemicals calm you down, help you control your actions/reactions, and keep your moods stable, even in unstable situations like combat.	These calming chemicals help you think more clearly, make better decisions, react in more effective ways, cooperate better, be a better leader.	Calming chemicals can “wear out” after they’ve been needed too much, causing anxiety, depression, urges to drink or use drugs, higher risk of getting addicted.	
	Some chemicals relieve pain and sometimes help you forget what you experienced under intense stress.	Pain relief during the crisis—and forgetting the pain afterwards—helps you keep going in spite of the pain.	You might lose important memories later, or memories might “come at you out of nowhere,” even long after combat is over.	
Thoughts	“This isn’t happening. It isn’t so bad.”	Makes it easier to cope and function.	You might neglect signs you need help.	Talk about what happened, how it really was. Balance helping others with getting the support or professional help you need. Let trust grow back slowly. Question blame, and put it in context. Talk about responsibility.
	“I’m strong; other people need me.”	Brings more hope, courage, action.	You might see needs as weaknesses.	
	“I can’t trust anyone outside the Unit.”	Helps you spot danger and react to it.	You might not trust anyone outside Unit.	
	“This is all happening for a reason.”	Helps you accept pain and move on.	You might blame yourself or others.	
Feelings	Not feeling emotions (numbing them).	Less pain/fear, more decisive action.	You might not grieve important losses.	Let the grieving happen in whatever form or timetable it seems to want to take. Practice feeling whatever you feel. Remember: It takes great courage to feel. Learn and practice skills in managing your feelings.
	Feeling only “safe” emotions (anger).	Helps you focus on fighting and winning.	You might take feelings for weakness.	
	“Projecting” your feelings onto others.	Helps you not notice/feel your feelings.	You might resent, damage relationships.	
	Giving in to just feeling overwhelmed.	Lets people know you need help.	You might ignore real strength/courage.	
The Spirit	Connecting with your spiritual beliefs.	Strength in safety, connection, meaning.	You might reject others’ help or beliefs.	Know that there’s plenty of room for your beliefs, others’ beliefs, and human help. Use questioning to strengthen your beliefs and get closer to what you really believe. Balance acceptance with need for action.
	Questioning or rejecting your beliefs.	Helps explain painful and unfair things.	You might lose connection, meaning.	
	Finding new spiritual feelings/beliefs.	Brings in new spiritual strength/hope.	You might lose beliefs when crisis is over.	
	Accepting and transcending events.	More clarity, calm, sense of purpose.	You might accept things you should change.	
The Unit	Military discipline, high expectations.	Standards promote strength, discipline	You might be ashamed of reactions to stress.	Know that it’s not weak or disloyal to get help for the body’s and brain’s reactions to war-zone stress. Make and keep deep friendships with others who have served.
	Staying alert for danger at all times.	You’re ready to react to any emergency.	Toll on body and brain (see above).	
	Sense of unity within the Unit.	Cooperation saves lives, wins battles.	You might feel lost/alone after deployment.	
Home	Keeping in contact (emails, phone).	Sense of connection brings strength.	Stronger feelings of loss, homesickness.	Accept that you’ve changed, and those at home have changed, too. Learn who you all are now. Use resources for re-learning trust, communication, and relationships.
	Not talking about bad experiences.	Protects loved ones from pain and fear.	You might feel disconnected from home.	
	Remembering your home as ideal.	Reminds you what you’re fighting for.	Nobody can live up to an ideal in real life.	

From *Finding Balance After the War Zone*, developed by Pamela Woll, MA, CADP for the Great Lakes Addiction Technology Transfer Center and Human Priorities.



Finding Balance

References and Other Resources

The following pages contain:

- A list of References
- A beginning list of books beyond these references that might be useful to people who want more information on veterans, post-deployment stress effects, the neuroscience of stress and trauma, or the treatment of trauma
- A few web-based resources that offer more information on these subjects

References

Alcoholism: Clinical & Experimental Research (2008, March 4). PTSD Can Lead To A More Severe Course And Worse Outcomes For A Substance-abuse Disorder.

ScienceDaily. Retrieved July 29, 2008, from <http://www.sciencedaily.com/releases/2008/03/080304214437.htm>

Amen, D. (2008). Change your brain, change your life. Presentation at the Ben Franklin Institute, April 12, 2008, Chicago, IL.

American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders, Fourth Edition, DSM-IV*. Washington, DC: Author.

Armstrong, K., Best, S., and Domenici, P. (2006). *Courage after fire: Coping strategies for troops returning from Iraq and Afghanistan and their families*. Berkeley, CA: Ulysses Press.

Barr, C.S., Newman, T.K., Schwandt, M., Shannon, C., Dvoskin, R.L., Lindell, S.G., Taubman, J., Thompson, B., Champoux, M., Lesch, K.P., Goldman, D., Suomi, S.J.,

and Highley, J.D. (2004). Sexual dichotomy of an interaction between early adversity and the serotonin transporter gene promoter variant in rhesus macaques. *Proceedings of the National Academy of Sciences*, 2004.

Binder, E.B., Bradley, R.G., Liu, W., Epstein, M.P., Deveau, T.C., Mercer, K.B., Tang, Y., Gillespie, C.F., Heim, C.M., Nemeroff, C.B., Schwartz, A.C., Cubelis, J.F., and Ressler, K.J. (2008). Association of FKBP5 polymorphisms and childhood abuse with risk of posttraumatic stress disorder symptoms in adults. *Journal of the American Medical Association*, 299(11), 1291-305.

Boscarino, J.A., Figley, C.R., and Adams, R.E. (2004). Compassion fatigue following the September 11 terrorist attacks: A study of secondary trauma among New York social workers. *International Journal of Emergency Mental Health*, 6(2), 57-66.

Breslau, N., Chilcoat, H.D., Kessler, R.C., and Davis, G.C. Previous exposure to trauma and PTSD effects of subsequent trauma: Results from the Detroit area survey of trauma. *American Journal of Psychiatry*, (156), 902-907.

Brown, R., and Kulik, J. (1977). "Flashbulb memories." *Cognition*, 5, 73–99

Charney, D. (2005). The psychobiology of resilience to extreme stress: Implications for the prevention and treatment of mood and anxiety disorders. (Grand rounds presentation.) New York: Mt. Sinai School of Medicine.

Chesler, M. and Ungerleider, S. (2003). Post-traumatic growth: Understanding a new field of research. *The Prevention Researcher*, 10, Suppl., December, 2003.

Comings, D.E., Muhleman, D., Ahn, C., Gysin, R., and Flanagan, S.D. (1994). The dopamine D2 receptor gene: A genetic risk factor in substance abuse. *Drug and Alcohol Dependency*, 34(3), 175-180.

Corbett, S. (2007). The women's war. *The New York Times*, March 18, 2007. (Retrieved 8/4/08 from <http://www.nytimes.com/2007/03/18/magazine/18cover.html>.)

Courtois, C. (2006). Effective trauma treatment: What the latest evidence tells us. Presentation at the Psychotherapy Networker Symposium, October, 2008.

Dalenberg, C.J. (1999). The management of dissociative symptoms in PTSD patients. *NC-PTSD Quarterly*, 8(2), 27-29.

Danforth, K.I. (2007). Change in mindset brings veterans care into a new era. *Resource Links*, 6(1), 11. Northeast Addiction Technology Transfer Center.

David, W., Simpson, T.L., and Cotton, A.J. (2006). Taking charge: A pilot curriculum of self-defense and personal safety training for female veterans with PTSD because of military sexual trauma. *Journal of Interpersonal Violence*, 21(4), 555-565.

Davidson, R.J., Pizzagalli, D., Nitschke, J.B., and Putnam, K. (2002). Depression: Perspectives from affective neuroscience. *Annual Review of Psychology*, 53, 545-574.

Dehghanpisheh, B. and Thomas, E. (2008). Scions of the surge. *Newsweek*, March 24, 2008.

Driessen, M., Schulte, S., Luedecke, C., Schaefer, I., Sutmann, F., Ohlmeier, M., Kemper, U., Koesters, G., Chodzinski, C., Schneider, U., Broese, T., Dette, C., and Havemann-Reinicke, U. (2008). Trauma and PTSD in patients with alcohol, drug, or dual dependence: A multi-center study. *Alcoholism: Clinical and Experimental Research*, 32(3), 481-488.

Duran, E. (2006). *Healing the soul wound: Counseling with American Indians and other Native Peoples*. New York: Teachers College Press.

Emmons, M. (2006). The signature wound of the war on terror. *Mercury News Online*, December 14, 2006. (Retrieved 5/18/08 from www.mercurynews.com/franksfight/ci_4839081.)

Etter, D.A. (2007). A Chaplain's reflections on combat experience offers insights into returning veterans' needs. *Resource Links*, 6(1), 5-8. Published by the Northeast Addiction Technology Transfer Center.

Eyerman, R. (2001). *Cultural trauma: Slavery and the formation of African American identity*. Cambridge, UK: Cambridge University Press.

Farrell, S. and Opper, R.A. (2008). Big gains for Iraq security, but questions linger. *The New York Times*, June 21, 2008. (Retrieved 6/22/08 from <http://www.nytimes.com/2008/06/21/world/middleeast/21security.html>.)

Ferentz, L. (2007). Working with trauma survivors: Keeping them present as they heal their past. Presentation at the Psychotherapy Networker Symposium, March, 2007, Washington, DC.

Ford, J.D. (1999). Disorders of extreme stress following warzone military trauma: Associated features of post-traumatic stress disorder (PTSD) or comorbid but distinct syndromes?

Ford, J.D. and Kid, P. (1998). Early childhood trauma and disorders of extreme stress as predictors of treatment outcome with chronic posttraumatic stress disorder. *Journal of Traumatic Stress*, 11(4), 743-761.

Frankl, V.E. (1984). *Man's search for meaning: An introduction to Logotherapy* (Third Edition). New York: Simon and Schuster.

Freeman, T., Roca, V., Guggenheim, F., Kimbrell, T., Griffin, W.S.T. (2005). Neuropsychiatric associations of apolipoprotein E alleles in subjects with combat stress-related posttraumatic stress disorder. *Journal of Neuropsychiatry and Clinical Neuroscience*, 17(4), 541-543.

Friedman, M.J. (2006). Acknowledging the psychiatric cost of war. *New England Journal of Medicine*, 351(1), 75-77.

Gaty, L. (2008a). Treating traumatized women in recovery. Presentation at the IAODAPCA Spring Conference, Itasca, IL, March 26, 2008.

Gaty, L. (2008b). Personal communication.

Gelernter, J., Pakstis, A.J., and Kidd, K.K. (1995). Linkage mapping of serotonin transporter protein gene SLC6A4 on chromosome 17. *Human Genetics*, 95(6), 677-680.

Good, G.E., Schopp, L.H., Thomson, D., Hathaway, S.L., Mazurek, M.O., and Sanford-Martens, T.C. (2008). Men with serious injuries: Relations among masculinity, age, and alcohol use. *Rehabilitation Psychology*, 53(1), 39-45.

Granfield, R. and Cloud, W. (1999). *Coming clean: Overcoming addiction without treatment*. New York: New York University Press.

Hefling, K. (2008). Data: More reservist suicides than other vets. *Army Times*, February 13, 2008. (Retrieved 5/17/08 from www.armytimes.com/news/2008/02/ap_reservesuicide_080212.)

Heim, C. and Nemeroff, C.B. (2001). The role of childhood trauma in the neurobiology of mood and anxiety disorders: preclinical and clinical studies. *Biological Psychiatry*, 49(12), 1023-1039.

Henderson, K. (2006). *While they're at war: The true story of American families on the homefront*. Boston: Houghton Mifflin Company.

Hendin, H. and Haas, A.P. (1992). Suicide and guilt as manifestations of PTSD in Vietnam combat veterans. *American Journal of Psychiatry*, 149(1), 142-143.

Henning, K.R. and Frueh, B.C. (1997). Combat guilt and its relationship to PTSD symptoms. *Journal of Clinical Psychology*, 53(8), 801-808.

Herman, J. (1992). *Trauma and recovery: The aftermath of violence—From domestic abuse to political terror*. New York: Basic Books.

Hiley-Young, B., Blake, D.D., Abueg, F.R., Rozytko, V., and Gusman, F.D. (1995). Warzone violence in Vietnam: An examination of premilitary, military, and postmilitary factors in PTSD in-patients. *Journal of Traumatic Stress*, 8(1), 125-141/

Hoge, C.W., Castro, C.A., Messner, S.C., McGurk, D., Cotting, D.I., and Koffman, R.L., (2004). Combat duty in Iraq and Afghanistan: Mental health problems and barriers to care. *New England Journal of Medicine*, 351(1), 13-22.

Hoge, C.W., McGurk, D., Thomas, J.L., Cox, A.L., Engel, C.C., Castro, C.A. (2008). Mild traumatic brain injury in U.S. Soldiers returning from Iraq. *New England Journal of Medicine*, 358, 453-463.

Hubble, M.A., Duncan, B.L., and Miller, S.D. (1999). *The heart and soul of change: What works in therapy*. Washington, DC: American Psychological Association.

Hutchinson, J. and Banks-Williams, L. (2006). Clinical issues and treatment considerations for new veterans: Soldiers of the wars in Iraq and Afghanistan. *Primary Psychiatry*, 13(3), 66-71.

Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York: The Free Press.

- Janoff-Bulman, R., & Berg, M. (1998). Disillusionment and the creation of value: From traumatic losses to existential gains. In J. Harvey (Ed.), *Perspectives on Loss: A sourcebook*. Washington, DC: Taylor & Francis.
- Koons, C.R., Robins, C.J., Tweed, J.L., Lynch, T.R., Gonzalez, A.M., Morse, J.Q., Bishop, G.K., Butterfield, M.I., and Bastian, L.A. (2001). Efficacy of Dialectical Behavioral Therapy in women veterans with borderline personality disorder. *Behavior Therapy, 32*(2), 371-390.
- Kubany, E.S., Abueg, F.R., Owens, J.A., Brennan, J.M., Kaplan, A.S., and Watson, S.B. (1995). Initial examination of a multidimensional model of trauma-related guilt: Applications to combat veterans and battered women. *Journal of Psychopathology and Behavioral Assessment, 17*(4), 353-376.
- Kulka, R. A., Schlenger, W. E., Fairbank, J. A., Hough, R. L., Jordan, B. K., Marmar, C. R., et al. (1990). *Trauma and the Vietnam War generation: Report of findings from the National Vietnam Veterans Readjustment Study*. New York: Brunner/Mazel.
- Kurtz, E. (1979). *Not-God: A history of Alcoholics Anonymous*. Center City, MN: Hazelden.
- Kurtz, E. and Ketcham, K. (1992). *The spirituality of imperfection: Storytelling and the search for meaning*. New York: Bantam Books.
- Ledoux, J. (1996). *The emotional brain: The mysterious underpinnings of emotional life*. New York: Simon and Schuster.
- Lee, H.J., Lee, M.S., Kang, R.H., Kim, H., Kim, S.D., Kee, B.S., Kim, Y.H., Kim, Y.K., Kim, J.B., Yeon, B.K., Oh, K.S., Oh, B.H., Yoon, J.S., Lee, C., Jung, H.Y., Chee, I.S., and Paik, I.H. (2005). Influence of the serotonin transporter gene promoter gene polymorphism on susceptibility to posttraumatic stress disorder. *Depression and Anxiety, 21*(3), 135-139.
- Levine, B., Kovacevic, N., Nica, E.I., Cheung, G., Gao, F., Schwartz, M.L., and Black, S.E. (2008). The Toronto traumatic brain injury study: Injury severity and quantified MRI. *Neurology, 70*, 771-778.
- Levine, P.A. (1997). *Waking the tiger: Healing trauma*. (with Frederick, A.) Berkeley, CA: North Atlantic Books.
- Lighthall (2008). Coming home: Combat stress and trauma in returning war veterans and their families. PESI Seminar Series presentation, July 8, 2008, Chicago, IL.
- Lineberry, T.W., Ramaswamy, S., Bostwick, J.M., and Rundell, J.R. (2006). Traumatized troops: How to treat combat-related PTSD. *Journal of Family Practice, 5*(5), 39-52.
- Linehan, M.M., Comtois, K.A., Murray, A.M., Brown, M.Z., Gallop, R.J., Heard, H.L., Korslund, K.E., Tutek, D.A., Reynolds, S.K., and Lindenboim, N. (2006). Two-year randomized controlled trial and follow-up of Dialectical Behavior Therapy vs. therapy by

experts for suicidal behaviors and borderline personality disorder. *Archives of General Psychiatry*, 63, 757-766.

Linley, P.A. and Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, 17(1), 11-21.

Luxenberg, T., Spinazzola, J., and van der Kolk, B.A. (2001). Complex trauma and disorders of extreme stress (DESNOS) diagnosis. *Directions in Psychiatry*, 21, 373-414.

MacNair, R.M. (2002). Brief reports: Perpetration-induced traumatic stress in combat veterans. *Peace and Conflict: Journal of Peace Psychology*, 8(1), 63-72.

Mansfield, S. (1982). *The gestalts of war: An inquiry into its origins and meanings as a social institution*. New York: The Dial Press.

McClung, C.A. and Nestler, J. (2003). Regulation of gene expression and cocaine reward by CREB and AFosB. *Nature Neuroscience*, 6, 1208-1215.

McEwen, B.S. and Wingfield, J.C. (2003). The concept of allostasis in biology and biomedicine. *Hormones and Behavior*, 43(1), 2-15.

Meares, S., Shores, E.A., Taylor, A.J., Batchelor, J., Bryant, R.A., Baguley, I.J., Chapman, J., Gurka, J., Dawson, K., Capon, L., and Marosszeky, J.E. (2007). Mild traumatic brain injury does not predict acute postconcussion syndrome. *Journal of Neurology, Neurosurgery, and Psychiatry, JNNP Online*, August, 2007. (Retrieved 5.22.08 from <http://jnnp.bmj.com/cgi/content/abstract/jnnp.2007.126565v1>.)

Medea, A. (2004). *Conflict unraveled: Fixing problems at work and in families*. Chicago, IL: Pivot Point Press.

MHAT (2006). *Mental Health Advisory Team (MHAT) IV, Operation Iraqi Freedom 05-07: Final report*. Washington, DC: Office of the Surgeon, Multinational Force-Iraq and Office of the Surgeon General, United States Army Medical Command.

Nestler, E.J. (2000). Genes and addiction. *Nature Genetics*, 26, 277-281.

Neumeister, A., Young, T., and Stastny, J. (2004). Implications of genetic research on the role of serotonin in depression: Emphasis on the serotonin type 1_A receptor and the serotonin transporter. *Psychopharmacology*, 174: 512-524.

Padin-Rivera, E. (2006). A soldier comes home: Trauma, combat stress and readjustment. Presentation at "The Road Home: National Conference on Returning Veterans and Their Families," SAMHSA, Washington, DC, March 16-17, 2006.

Perry, B.D. (1994). Neurobiological sequelae of childhood trauma: Post-traumatic stress disorders in children. In *Catecholamine function in post traumatic stress disorder: Emerging concepts*. (M. Murburg, Ed.) (253-276.) Washington, DC: American Psychiatric Press.

Perry, B.D. (1997). Incubated in terror: Neurodevelopmental factors in the "cycle of violence." In *Children, youth and violence: The search for solutions* (J. Osofsky, Ed.). (124-148.) New York: Guilford Press.

- Perry, B.D. (2001). The neurodevelopmental impact of violence in childhood. In *Textbook of child and adolescent forensic psychiatry*, Schetky, D. and Benedek, E. (Eds). Washington, DC: American Psychiatric Press.
- Pillar, G., Malhotra, A., and Lavie, P. (2000). Post-traumatic stress disorder and sleep—What a nightmare! *Sleep Medicine Reviews*, 4(2), 183-200.
- Rand (2008a). Post-deployment stress: What you should know, what you can do. The Rand Corporation.
- Rand (2008b). Post-deployment stress: What families should know, what families can do. The Rand Corporation.
- Rehabilitation Institute of Chicago (1993). *Alcohol and other drug abuse prevention for people with traumatic brain and spinal cord injuries*. Chicago, IL: Author.
- Rosenbaum, J.F. and Covino, J.M. (2006). Advances in the treatment of depression. Medscape. (Retrieved 1/10/07 from www.medscape.com/viewarticle/507417)
- Sample, D. (2004). Treatment available to troops suffering from combat stress. *American Forces Press Service News Articles*, July 15, 2004. U.S. Department of Defense. (Retrieved 7/23/08 from <http://www.defenselink.mil/news/newsarticle.aspx?id=25705>).
- Scaer, R. (2005). *The trauma spectrum: Hidden wounds and human resiliency*. New York: W.W. Norton & Company.
- Scaer, R., Hawkins, E., Robinson, S., and Taslitz, D. (2008). The coming storm: Iraq war veterans and PTSD. Presentation at the Psychotherapy Networker Symposium, March 14, 2008, Washington, DC.
- Scaer, R.C. (2001). The neurophysiology of dissociation and chronic disease. *Applied Psychophysiology and Biofeedback*, 26(1), 73-91.
- Schnurr, P.P., Lunney, C.A., Sengupta, A., and Waelde, L.C. (2003). A descriptive analysis of PTSD chronicity in Vietnam veterans. *Journal of Traumatic Stress*, 16, 545-553.
- Schore, A.N. (2001). The effects of a secure attachment relationship on right brain development, affect regulation, and infant mental health. *Infant Mental Health Journal*, 22, 7-66.
- Schore, A.N. (2002). Dysregulation of the right brain: A fundamental mechanism of traumatic attachment and the psychopathogenesis of posttraumatic stress disorder. *Australian and New Zealand Journal of Psychiatry*, 36, 9-30.
- Segman, R.H., Cooper-Kazaz, R., Macciardi, F., Goltser, T., Halfon, Y., Dobroborski, T., and Shalev, A.Y. (2002). Association between the dopamine transporter gene and posttraumatic stress disorder. *Molecular Psychiatry*, 7(8), 903-907.
- Shaw, A., Joseph, S., and Linley, P.A. (2005). Religion, spirituality, and posttraumatic growth: A systematic review. *Mental Health, Religion, and Culture*, 8(1), 1-11.

- Shay, J. (1994). *Achilles in Vietnam: Combat trauma and the undoing of character*. New York: Scribner.
- Shay, J. (2002). *Odysseus in America: Combat trauma and the trials of homecoming*. New York: Scribner.
- Shumake, J. and Gonzalez-Lima, F. (2003). Brain systems underling susceptibility to helplessness and depression. *Behavioral and Cognitive Neuroscience Reviews*, 2(3), 198-221.
- Siegel, D.J. (1999). *The developing mind: How relationships and the brain interact to shape who we are*. New York: The Guilford Press.
- Siegel, D.J. (2007). *The mindful brain: Reflection and attunement in the cultivation of well-being*. New York: W.W. Norton & Company.
- Siegel, H.A., Rapp, R.C., Kelliherm C.W., Fisher, J.H., Wagner, J.H., & Cole, P.A. (1995). The strengths perspective of case management: A promising inpatient substance abuse treatment enhancement. *Journal of Psychoactive Drugs*, 27(1), 67-72.
- Silver, S.M. and Wilson, J.P. (1996). Native American healing and purification rituals for war stress. In *Ethnicity and Psychology* (Monteiro, K.P., Ed.). Dubuque, IA: Kendall/Hunt.
- Silver, S.M. and Wilson, J.P. (1996). Native American healing and purification rituals for war stress. In *Ethnicity and psychology: African-, Asian-, Latino- and Native-American psychologies*. Monteiro, K.P. (Ed.). Dubuque, IA: Kendall/Hunt.
- Smith, T.C., Wingard, D.L., Ryan, M.A.K., Kritz-Silverstein, D., Slymen, D.J., and Sallis, J.F. (2008). Prior assault and posttraumatic stress disorder after combat deployment. *Epidemiology*, 19(3), 505-512.
- SoRelle, R. (2004). Female veterans increasingly diagnosed with PTSD. *Emergency Medicine News*, 26(6), 46-48.
- Tanielian, T. and Jaycox, L.H., Eds. (2008). *Invisible wounds of war: Psychological and cognitive injuries, their consequences, and services to assist recovery*. Santa Monica, CA: The Rand Corporation.
- Tattersall, R.B. (1999). Hypoadrenia or "a bit of Addison's disease." *Medical History*, 43, 450-467.
- Tick, W. (2005). *War and the soul: Healing our nation's veterans from post-traumatic stress disorder*. Wheaton, IL: Quest Books.
- VA (2004). *Iraq war clinician guide (2nd Edition)*. Washington, DC: National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center, Department of Veterans Affairs.
- Vaiva, G., Boss, V., Ducrocq, F., Fontaine, M., Devos, P., Brunet, A., Laffargue, P., Goudemand, M., and Thomas, P. (2006). Relationship between posttrauma GABA

plasma levels and PTSD at 1-year follow-up. *American Journal of Psychiatry*, 163, 1446-1448.

van der Hart, O. van Dijke, A., van Son, M., and Steele, K. (2000). Somatoform dissociation in traumatized World War I combat soldiers: A neglected clinical heritage.

van der Kolk, B. and Pelcovitz, D. (1999). Clinical applications of the Structured Interview for Disorders of Extreme Stress (SIDES). *NC-PTSD Quarterly*, 8(2), 21-24.

van der Kolk, B.A. (1989). The compulsion to repeat the trauma: Re-enactment, revictimization, and masochism. *Psychiatric Clinics of North America*, 12(2), 389-411.

van der Kolk, B.A. (1994). The body keeps the score: Memory and the evolving psychobiology of post traumatic stress. *Harvard Review of Psychiatry*, 1(5), 253-265.

van der Kolk, B.A. and Fisler, R. (1995). Dissociation and the fragmentary nature of traumatic memories: Overview and exploratory study. *Journal of Traumatic Stress*, 8(4), 505-525.

Waldrop, A.E., Black, S.E., Verduin, M.L., and Brady, K.T. (2007). Triggers for cocaine and alcohol use in the presence and absence of posttraumatic stress disorder. *Addictive Behaviors*, 32(3), 634-639.

Weiss, E. L., Longhurst, J. G., and Mazure, C. M. (1999). Childhood sexual abuse as a risk factor for depression in women: Psychosocial and neurobiological correlates. *American Journal of Psychiatry*, 156(6), 816-828.

White, W., Woll, P., & Webber, R. (2003). *Project SAFE: Best Practices Resource Manual*. Chicago, IL: Illinois Department of Human Service, Office of Alcoholism and Substance Abuse.

White, W.L. (1996). *Pathways from the culture of addiction to the culture of recovery: A travel guide for addiction professionals*. Center City, MN: Hazelden.

White, W.L. (1998). *Slaying the dragon: The history of addiction treatment and recovery in America*. Bloomington, IL: Chestnut Health Systems.

White, W.L. (2006). *Recovery management*. Chicago: Great Lakes Addiction Technology Transfer Center.

White, W.L. (2007). *Perspectives on system transformation: How visionary leaders are shifting addiction treatment toward a recovery-oriented system of care*. Chicago: Great Lakes Addiction Technology Transfer Center.

White, W.L. and Ketcham, K. (1992). *The spirituality of imperfection: Storytelling and the search for meaning*. New York: Bantam Books.

White, W.L., Kurtz, E., and Sanders, M. (2007). *Recovery Management*. Chicago, IL: Great Lakes Addiction Technology Transfer Center.

Wilde, E.A., McCauley, S.R., Hunter, J.V., Bigler, E.D., Chu, Z., Wang, Z.J., Hanten, G.R., Troyanskaya, M., Yallampalli, R., Li, X., Chia, J., and Levin, H.S. (2008). Diffusion

tensor imaging of acute mild traumatic brain injury in adolescents. *Neurology*, 70, 948-955.

Woll, P. (2005). *Healing the stigma of addiction: A guide for treatment professionals*. Chicago, IL: Great Lakes Addiction Technology Transfer Center.

WRAIR (2005). 8 tough facts about combat, and what soldiers can do to help themselves and their buddies. Washington, DC: Walter Reed Army Institute of Research (WRAIR).

Zalsman, G., Huang, Y.Y., Oquendo, M.A., Burke, A.K., Hu, X.Z., Brent, D.A., Ellis, S.P., Goldman, D., and Mann, J.J. (2006). Association of a triallelic serotonin transporter gene promoter region (5-HTTLPR) polymorphism with stressful life events and severity of depression. *American Journal of Psychiatry*, 163(9), 1588-1593.

Zitnay, G. (2007). Traumatic brain injury. *Resource Links*, 6(1), 12-13. Northeast Addiction Technology Transfer Center.

A Few More Books on These Topics

Amen, D.G. (2002). *Healing the hardware of the soul*. New York: The Free Press.

Eyerman, R. (2001). *Cultural trauma: Slavery and the formation of African American identity*. Cambridge, England: Cambridge University Press.

Grossman, D. (1995). *On killing: The psychological cost of learning to kill in war and society*. New York: Back Bay Books.

Hart, A.R. (2000). *An operators manual for combat PTSD: Essays for coping*. San Jose: Writer's Showcase.

Hoge, C.

Janoff-Bulman, R. (2002). *Shattered assumptions: Towards a new psychology of trauma*. New York: The Free Press.

Miller, W.R. and C'de Baca, J. *Quantum change: When epiphanies and sudden insights transform ordinary lives*. New York: The Guilford Press.

Rothschild, B. (2000). *The body remembers: The psychophysiology of trauma and trauma treatment*. New York: W.W. Norton & Company.

Rothschild, B. (2003). *The body remembers casebook: Unifying methods and models in the treatment of trauma and PTSD*. New York: W.W. Norton & Company.

Scurfield, R.M. (2006). *War trauma: Lessons unlearned from Vietnam to Iraq*. New York: Agora Publishing.

Shapiro, F. (1995). *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures*. New York: The Guilford Press.

van der Kolk, B.A., McFarlane, A.C., and Weisaeth, L. (1996). *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. New York: The Guilford Press.

Wolin, S.J. and Wolin, S. (1993). *The resilient self: How survivors of troubled families rise above adversity*. New York: Villard Books.

Wood, T. (2006). *What was asked of us: An oral history of the Iraq War by the soldiers who fought it*. New York: Back Bay Books.

A Few Resource Web Sites

For information and free HTML texts of scholarly articles on trauma and post-trauma effects, David Baldwin's Trauma Pages is a valuable resource.

The VA's National Center for Posttraumatic Stress Disorder has a wide range of materials for clinicians, veterans, and families on its web site, <http://www.ncptsd.va.gov/ncmain/index.jsp>. (This site also has materials relevant to disasters and other sources of extreme stress.)

You can download a PDF file of the Second Edition of the VA's *Iraq War Clinician Guide* (VA, 2004) at http://www.psychceu.com/war/iraq_clinician_guide_v2.pdf

You can download the Rand Corporation report, *Invisible Wounds of War* (Tanielian and Jaycox, 2008) and accompanying materials for veterans and families at <http://www.rand.org/multi/military/veterans/>

You can download the Expert Consensus Guidelines on the Treatment of PTSD from the *Journal of Clinical Psychiatry* (Foa, Davidson, and Frances, 1999) from <http://www.psychguides.com/ptsdgl.pdf>

You can get ongoing information and news updates by subscribing to *PTSD Combat: Winning the War Within*, the free e-journal at <http://www.ptsdcombat.blogspot.com/>.

Alison Lighthall's "Hand 2 Hand Contact" web site has a number of valuable resources and links, at <http://www.hand2handcontact.org/>