

Communities of Healing:  
How Yoga is Used to Treat Post-Traumatic Stress Disorder Among Combat-War  
Veterans

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AN HONORS THESIS

Presented to  
The Department of Anthropology  
The Colorado College

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By  
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March 2013

Approved: \_\_\_\_\_

Date: \_\_\_\_\_

**HONOR PLEDGE**

On my honor, I have neither given, nor received, any unauthorized aid on this honors thesis. Honor Code upheld.

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Emily Faxon

## Acknowledgements

One of my favorite affirmations of thanksgiving in yoga is “blessings and gratitude.” I would like to offer the deepest blessings and gratitude to the communities and people who made this thesis possible. My yoga communities: Pranava Yoga Center, Corepower Yoga, Raffa Yoga, and Yoga Warriors International; for teaching me everything I know about yoga. In particular, my teachers Mike and Charlotte Matsumura, Jessica Patterson, Lucy Cimini and Jon Greuel, and Christine Raffa; for continuous wisdom, support, and grounding. To Ana Forest, Eva Gremmert, and Charlotte Speller for allowing a wandering yogini to reach out and tap into a well of knowledge. I offer blessings and gratitude to my interviewees, without your wisdom, I would have no content: Geri Wagner, John Madden, Gloria Jones, and Mark Perna; your words still resonate within my heart. To my community at Ft. Carson including Sabine Clark, who allowed a stranger to walk in off the street and teach physical training. To the women at the USO, Linda, Katie, Leslie, and Kandi, and the soldiers I have the privilege to serve. To Jeff Rogers for teaching me what it means to fight for something I believe in, against all odds. To Lisa Woodruff and the men and women of the 4<sup>th</sup> Engineers who have the grace to laugh through my early morning yoga classes. And to Sarah Hautzinger, my thesis advisor, for guiding this piece and reminding me that hard work pays off.

The light within me sees and honors the light within each, and every one of you.  
*Namaste.*

## Preface

Yoga has been a part of my life for three years. In the grand scheme of things, three years is not very long, but ever since I first stepped onto my mat, I knew I had found something. In the beginning, I was not able to recognize the calming sensations, the inner peace, and the ability to let go of anger, sadness, or grief that yoga provided. I did not realize that these capabilities came from my daily practice until I was challenged by the combined grief of three friends' untimely deaths. On December 2, 2006, I received a phone call from a summer camp friend telling me that Lacey, our friend who was in a car accident the week before, was taken off life support. She was 16 and I did not understand how people that young could die. On December 1, 2007, already in tears because of Lacey's one-year anniversary, I received another phone call from a camp friend. This time it was to tell me that my favorite camp counselor Mikey had died from cerebral meningitis – he was 22. This first week of December became a black week for me, a week that I dreaded going through each year.

In 2009, as a freshman at Colorado College, I decided that I would be active throughout my grief week and practice yoga every day to honor the spirits of my friends. I was also practicing fervently, sending positive energy to my friend Lillian, on life support in the hospital with complications for swine flu. On the 17th of December, she passed away. I was in a yoga class when I found out that she was no longer with us. Yoga was the only activity – other than crying all the time – that allowed me to reconcile the early passing of my three friends. December is still a terrible month. When I remember that Lillian came home for Christmas in a box, I empathize with others that cannot hold their loved ones again. When I put the pieces of my grief and healing together, I recognized that yoga, the union between my mind, body, breath, and spirit, was the catalyst to my emotional contentment and control. It was at this defining moment that yoga became a mechanism of healing for me. I understood the innate ability yoga has to mend, heal, or release emotions trapped within the body. Sometimes the body has to experience something before the mind will believe the same thing.

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## Abstract

Post-traumatic stress disorder and traumatic brain injuries are the hallmark war wounds of Operation Iraqi Freedom and Operation Enduring Freedom, affecting anywhere from 18.5 percent to 43 percent of combat veterans. If not released in a timely manner, the trauma of war can store in the muscles of the body and begin to affect daily functioning of the soldier. This research examines how yoga functions as a holistic, body-based, community oriented treatment option for veterans with PTSD and TBIs. This paper draws from literature on PTSD symptoms and treatment, yoga class sequencing, and interviews with therapists and yoga teachers to insert yoga within a wider landscape of Complementary and Alternative Medicines being used to treat veterans. After going through Yoga Warriors International teacher training, observing a yoga class for veterans with PTSD, teaching yoga at Ft. Carson, Colorado, and conducting interviews, it is evident that yoga may be a viable treatment option for some veterans. Individuals should be empowered to choose the treatment method that resonates the most within their healing process. Research shows yoga can be a singular grief and stress management tool; *pranayama*, (yogic breathing) stimulates the parasympathetic nervous system and calms the body. This thesis considers the physical aspects of yoga in the context of communities of yogic practice, which together create productive environments for healing.

## **Dedication**

To the men and women of America's Armed Forces especially those Missing, Wounded, or Killed in Action. May your deeds never be forgotten and may you find healing wherever you turn.

*“Guru Brahma, Guru Vishnu, Guru devo Maheshwara,  
Guru sakshat, param Brahma, tasmai shri guravay namah”*

The invisible wounds of war are not being fixed by traditional treatments for depression like talk therapy and medication. Operation Iraqi Freedom and Operation Enduring Freedom (OIF/OEF) have caused the highest rates of post-traumatic stress disorder (PTSD), traumatic brain injuries (TBIs) and combat-related stress that the country has seen. A study in the February 2010 *Journal of Traumatic Stress* by Karen Seal et.al, suggests that anywhere between 18.5% to 43.7% of soldiers and veterans that served in OIF and OEF have a mental health disorder; and out of the 1.6 million men and women who have served, those numbers are startling. The men and women in America's military are fully aware of the risks of war (death, dismemberment, PTSD, depression, emotional trauma, etc.). However, they are not actively seeking a traumatic brain injury or PTSD when they join. Any percentage of combat related mental injuries should create a dialogue about military health care and mental health stigma. PTSD as a diagnosis first appeared in the 1980 *Diagnostic and Statistical Manual of Mental Disorders*, yet it is not a new phenomenon directly linked to guerrilla war tactics, suicide bombers, or IEDs (improvised explosive devices); it has a long history in war, with many different names like soul loss and shell shock (Scott 1990; Cimini 2010). Treatment for PTSD and TBIs, both of which are signature injuries of OIF/OEF, is still evolving. The ultimate goal for this paper is to examine the role of yoga as a treatment option for PTSD within the landscape of Complementary and Alternative Medicines (CAM). Yoga is by no means the only nontraditional therapy and for some veterans it may not be effective. However, yoga's ability to calm the parasympathetic nervous system and generate mindfulness habits may be beneficial for many veterans.



In order to fully examine the healing potential that yoga provides this paper incorporates personal interviews with literature on the topic. The communities of practice in the military and yoga communities point to why community is a crucial element to healing. The third section of this paper covers the biology behind PTSD and the diagnostic requirements as well as social issues regarding the injury. The fourth section briefly covers alternative methods of treatment to traditional cognitive therapy labeled as CAMs by government agencies. The fifth section presents yoga as a CAM, specifically exploring why yoga should be considered a primary treatment for PTSD. In the sixth section I introduce a program called Yoga Warriors International (YWI) and the use of proprioception to encourage body awareness and healing through yoga. The final section of the paper addresses specific symptoms of PTSD and discusses how yoga helps to alleviate them. While this work is important to the field of anthropology and to the military, the yogic concept of *seva* is foremost in my mind. *Seva* is the idea of selfless service in our actions. We do for the good of the community, not for the boosting of the ego. The concept of service is pervasive and inherent within our military structure. It may not be founded on the principles of *seva*, but the men and women who serve give all, no questions asked. If I can in some way help to alleviate the pain that the wounds of war cause, then I have completed an important act of *seva*.

### **Why Yoga? Grounding Interests and Interviews**

Why yoga for veterans? People ask me this all the time and there are a couple reasons why I feel so strongly that the practice has the potential to benefit some veterans. The first, as explained in the preface, is because yoga helped me with my grief. I did not

watch my friends die and I do not have PTSD, but I have an innate understanding that living to past high school or college graduation is not a given. Death at any age is a possibility that service members inherently understand. Secondly, I have a great respect for our Armed Services. I grew up this way, praying for my community's soldiers and my family members who were overseas, seeing my parents' philanthropy benefiting causes like the Folds of Honor Foundation, and reading newspaper articles taped to our refrigerator about Major Dan Rooney. Thirdly, I believe the military is a community that can benefit from the mindfulness and awareness that yoga instills. I recognize that being enrolled in a small liberal-arts college puts me in a very different community from the soldiers and veterans at Fort Carson that I spent time teaching and serving. At times the differences in community were exceptionally apparent; there are stresses these men and women go through that I will never understand. However, I did my best to understand these communities in my short time with them. The community that I inhabit is very much so different from the community of Fort Carson. While conducting research, I began volunteering at the USO, an organization with the mission to "lift the spirits of America's troops and their families" and teaching yoga as an option for PT (physical training) in the mornings at Waller Fitness Center on post and to a platoon in the 4<sup>th</sup> Engineers. I went through Yoga Warriors International teacher training, certifying me to teach yoga to veterans with PTSD, mTBI<sup>1</sup>, and amputations, and participated in a Yoga Warriors International class at the headquarters in Worcester, Massachusetts. Both the

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<sup>1</sup> There is a spectrum of head injuries that may occur in a war zone. An mTBI is a mild traumatic brain injury similar to a concussion that does not actually damage the structure of the brain.

teacher training and class observations gave me a sense of the power of these yoga classes.

For this project, I interviewed two therapists who work with active duty Army and veterans, and two yoga teachers, one a civilian and the other a former Marine. I also attended a lecture at the Outward Bound School on “Staying Strong in the Field: Tools to manage Anxiety and Stress.”

Geri Wagner works at Haven Behavioral Hospital in Pueblo, Colorado in their in-patient program. She completed her yoga teacher training in 2011 at Pranava Yoga Center in Colorado Springs, CO. Occasionally Wagner and Jones will collaborate on treatment programs.

Gloria Jones has been teaching yoga for 13 years; she is an E-RYT 200 and has been working at the Mountain Post (Fort Carson) Behavioral Health Center since 2010. She uses yoga in her group therapy classes as well as cognitive processing therapy.

John Madden teaches yoga at the Department of Defense in Denver, Colorado and has been a teacher for four years. In addition to his RYT-200, he has a 40-hour certification on trauma sensitive training with Bessel van der Kolk, founder and director of the Trauma Center at Justice Resource Institute in Boston, MA.

Mark Perna is a former Marine who was deployed in both OIF and OEF from 2005-2007. He has been teaching Forrest yoga to veterans for two years and credits yoga for saving his life.

I attended “Staying Strong in the Field: Tools to manage Anxiety and Stress” a presentation given by Dan Taslitz at Outward Bound School of Colorado. In addition to

leading backpacking courses for veterans, Dan is a former Marine and a member of the Magis Group, an organization that provides pre- and post-deployment stress training. While this talk was primarily for outdoor educators dealing with clients undergoing a traumatic experience in the wilderness, “Staying Strong in the Field: Tools to Manage Anxiety and Stress” was the first practical application of exercise to heal trauma that I learned about.

### **Communities of Practice and the Art of Healing**

While yoga can be practiced individually, it is often taught in a community setting – a teacher and a group of students who are all peers regardless of skill level. Yoga as a treatment for PTSD is no different. In fact, many therapists use yoga in a group setting in conjunction with their preferred method of talk therapy. Jones finds that soldiers are more comfortable when surrounded by their peers who are going through the same or similar experiences and can be hesitant to allow new therapists into their sessions. Yoga therapy becomes a community of practice complementary to the training and maintenance of a soldier and the Armed Forces, if the veterans choose to utilize it. Veterans will search for a community in which to heal where they feel at ease, and for some, the amount of CAM options can prove overwhelming (Scandlyn and Hautzinger 2014). A community of practice is a term coined by anthropologists Jean Lave and Etienne Wenger to describe “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger 2007, Lave and Wenger 1991). When writing about communities of practice, I chose the Army due to my location in Colorado Springs, just north of Fort Carson, known as the

Mountain Post. Both of my therapy contacts, Geri Wagner and Gloria Jones, work with active duty Army soldiers and Army veterans. Teaching yoga on post and volunteering at the USO provided me with greater familiarity with the Army's community of practice than any other branch. In addition, most studies about PTSD and TBIs have been conducted with the Army and Marines (Golding et.al. 2009).

Both the Army and yogic communities fit into the description of a community of practice. The Army creates groups throughout basic training, skill schools, officer training, and unit cohesion drills. Consistency is taught and mandated at all levels of organization. The members of these groups are often changed, but the Army prides itself on training each member to the same skill level so that rotating one member does not interrupt the performance of the group (Shay 2002).<sup>2</sup> Yoga studios create a community of practice because groups of people come together at a specific time and place to practice or learn a specific style of yoga. Studios may also offer other events that are not fitness classes that students may attend. By offering a space for the development of specific skill sets, vibrant yoga studios ignite the passion of members and foster the creation of a community of practice.

A community of practice serves to bring people with similar interests together to further their understanding of a topic. A community of practice can also serve to heal. Community "begins with the addition of the third person" who can then foster social trust between the members (Shay 2002:175). Soldiers train with other soldiers; they learn, live, work, and function with a group mentality, proving vital for survival in war zones (Shay 2002). The size of the group may change and the members will most definitely

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<sup>2</sup> There are arguments, however, that changing members of the group upsets the personal trust levels learned and practiced by former group members which may then alter performance or adversely effect rates of PTSD (Shay 2002).

change, but Wegner's three requirements – domain, community, and practice – are still met (2007).

Domain means that the group of people has a shared identity that distinguishes them from other people. In the broadest sense, we have service member versus civilian. More narrowly, there is the distinction between Army, Navy, Air Force, Marines, Coast Guard, and National Guard. Within the Army (and other branches) there is further separation of Divisions: the 10<sup>th</sup> Mountain Division is at Fort Drum while the 4<sup>th</sup> ID (infantry division) is at Fort Carson, and within the 4<sup>th</sup> ID there is, for example, the 10<sup>th</sup> Cavalry, the 4<sup>th</sup> Engineers, and the 212<sup>th</sup> Infantry. There is the distinction between Commissioned Officers, the Non-Commissioned Officers, and the Enlisted soldiers. Within different units there also exists differentiation of job specialties. Infantry, snipers, gunners, machine gun operators, logisticians and medics all create different communities of practice. The Army provides the overarching community of practice that all these smaller groups fit into and offers the same basic level of training and cohesion.

The second requirement for a community of practice is the community itself. Members must build relationships between each other, share information that is important to the group, and offer to aid other members of the group. Using yoga studios as a base, we see students becoming friends through yoga classes, workshops, and events. We see teachers teaching both in the classroom and outside of the classroom. And we see both teachers and students offering resources, like nutritional advice, massage therapy, or other exercise opportunities, to other members of the community. Yoga studios also offer teacher trainings, and other classes to deepen the knowledge existing within of the yoga community.

The third requirement of a community of practice is the actual practice. The practice, in this case, is yoga. A set of learned postures, theory, and lessons that have been taught for centuries to various men, women, gurus, and children, yoga is the ultimate practice. It is not purely a physical activity, but offers a sharpening tool for the mind and a guideline for the way we live. The practice of yoga and the theory behind the practice are learned behaviors, taught in community. What makes yoga a practice unique unto itself is the fact that it is specific, with elements inherent to the practice. Yoga comes from the Sanskrit verb “to yoke.” Yogis are literally yoking the body to the mind through this practice. The *pranayama* (breath control), called *ujjayi* breathing that is performed from the beginning of the class until the final *svasana* is only found in a yoga class. Depending on the style of yoga being practiced, there is a specific order to the sequencing – when to do standing poses versus seated poses, for example. Some styles change which foot to begin with; others change the room temperature or have a specific set of 26 poses. Regardless of which type of yoga attended, you have placed yourself into a community of practice that will offer more than just physical exercise over time. The military has a distinct set of practices that differ depending on the branch, but revolve around training for a mission and successfully completing the mission, while supporting the members of the unit and keeping them safe.

To help illustrate the sense of community that accompanies a yoga practice – I do not have enough experience with the military community to demonstrate that population – I will present two stories. The first is of the outreach from one community to another and the second is of networking across the greater yoga community. The Colorado College Yoga program has been in existence for over eight years and until recently was

an independent group of student teachers. This past year the club expanded its community of practice by inviting lululemon athletica, Corepower Yoga, and Buttercup's Frozen Yogurt to share in the CC yoga community. The four organizations joined forces to host an event called Yoga and Yogurt where free frozen yogurt was provided after a prize giveaway from lululemon and an hour of yoga provided by Sarah Martin, a teacher at Corepower. This occasion brought together three yoga communities and a local business that wanted to expand its outreach. Offering the Yoga and Yogurt event was not only a successful business strategy to increase turnout at Buttercup's, Corepower, and lululemon; it also showed the CC students that there are organizations outside of the college campus that are willing to be involved in and share their community. This event was so successful the first time that we are hosting another one to maintain the sense of community we fostered.

While Corepower is a business located downtown, about twelve miles from Fort Carson, it is still within the community of some soldiers. Corepower, like many other studios in the area, offers a discount to active duty military and their families. However, the Colorado College and Fort Carson communities do not often interact. That being said, I have invited soldiers to come take the classes I teach on campus, allowing a merging of the two communities.

The second story is an example of the yoga community pulling through for its members. This story exemplifies a characteristic of the yoga community that can also be seen in the Armed Forces' warrior ethos and creed: I will never leave a fallen comrade and I am a warrior and a member of a team. The first time I practiced yoga with my father was at a studio in Cranston, Rhode Island called Raffa Yoga. The teacher was



Christine Raffa, who is still a favorite of mine. Her classes combine satisfaction and challenge in a way that I can only hope to one day express in my own teaching. Over Thanksgiving break this year my father mentioned my thesis to Christine to see if she had any advantageous contacts. Raffa has studied extensively with Ana Forrest, a world-renowned yoga teacher who has conveniently done a great deal of work with the military. We were given the email address of Eve, Forrest's assistant, to get in touch with Ana. Through this connection, I was introduced to Mark Perna, one of my interviewees. For *yogis* it is not a question of whether we will help those in our community, but rather a question of how can we best address the needs of our community. I am not a Forrest trained yoga teacher, but I am grateful for the assistance that Eve, Charlotte, Christine and ultimately Ana have provided.

Communities of practice come in various shapes and sizes. They perform different acts and affect different people but nonetheless provide an avenue of support and grounding of identity. The Fort Carson community looks and feels very different from the Colorado College community – both are enclosed in their own social spheres, Fort Carson literally due to gates and CC figuratively because all social events happen with other CC students – yet each contain places of comfort for the members. Both Perna and Shay speak to the importance of healing within a community. Perna states that for his recovery process, “community is the greatest thing.” People will never fully understand another person's suffering or their wartime experiences, but when given community support, it is safer to release the fear of the trauma. Veterans tend to isolate when they do not know how to deal with trauma, yet community creates the space for openness (Shay 2002, Scandlyn and Hautzinger 2014). An intentional yoga community

may provide the safe space needed for some veterans to release their grief. There is this idea of pain that stems from various experiences with trauma, “but people suffer the same way, no matter what the trauma is,” Perna informed me. Soldiers, who have been physically honed in a community, need the community to heal. “The physicality of yoga is very intense and creates a physical challenge,” states Perna. When he first started his teacher training, he kept flashing back to boot camp, to the whole unit going through a challenging task all at the same time, just like his fellow yoga trainees. Similarly, Jonathan Shay’s work at the VA in Boston brings Vietnam veterans on a field trip to The Vietnam Veterans Memorial (the Wall) in Washington, D.C. so they can mourn as a community. The “core” idea of group therapy is ““you are not alone; you don’t have to go through it alone”” (Shay 2002:168). There are so many other men and women who went through similar trauma. Creating a community to grieve and process is creating a community of support.

### **The Biology of PTSD and its Diagnostic Requirements**

War is not a simple affair. It is a complex engagement of two or more sides, often countries or other definitive groups, fighting for their own reasons. War is messy and provokes casualties and accidents. Men and women die from decisions made by officers who are more powerful and believe they are making the most strategic choice. Soldiers get hurt; lose arms, legs, an eye, and become marked by the physical wounds of war. However, the physical wounds of war, the amputations and scars, are not the only way our soldiers suffer. Psychological wounds and physical brain injuries are becoming more a more prevalent with each passing year of OIF and OEF. In fact, PTSD and TBIs are the

hallmark and most commonly treated wounds of OIF and OEF (Fischer 2012). But just because they are the most common war wounds for this generation of warriors does not make PTSD and TBI new to the mental health profession or to the military. Cases of conditions similar to PTSD have been diagnosed in veterans “with government pensions” as early as the Civil War (Finley 2011:89). Yet the injury has only been recognized within the American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders* (DSM) since 1980 (Scott 1990; Finley 2011). The significance behind this addition lies in the understanding “that the etiological agent was outside the individual (i.e., a traumatic event) rather than an inherent individual weakness (i.e., a traumatic neurosis)” (Friedman 2007). Cultural conceptions of war are slowly changing as these wounds present themselves more frequently. “Psychiatrists now say it is “normal” to be traumatized by the horrors of war” rather than adhering to Sigmund Freud’s theory that “war neurosis” was due to common childhood neurosis (Scott 1990:295, 296).

Creating an understanding of trauma and how the body responds to a traumatic event is crucial to fully grasp the power of PTSD. I will begin with a basic outline of the brain, its systems, and how those areas respond in the face of trauma. Then I will move toward a more in-depth explanation of trauma, its effects, and causes. Lastly, I will evaluate what PTSD is according to the DSM-IV and the signs and symptoms resulting in a PTSD diagnosis.

There are three main sections of the brain affected by trauma: the brain stem, the limbic brain, and the frontal lobe. The brain stem controls survival responses, core functions, and the transfer of information to and from the body. The limbic brain

controls our emotional responses, some memory function, and regulates our hormones. The frontal lobe controls cognition, higher thinking, emotions, as well as social and sexual behavior.<sup>3</sup> While many of the brain's jobs overlap, each section moving forward is more advanced than the last. The brain stem is often referred to as our reptilian brain, the part of the brain that holds skills for basic functioning – skills that allow each animal to exist at the most basic level, including eating, sleeping, and reproducing (Taslitz 2012). The limbic system, the control center for “emotions, emotional responses, hormonal secretions, mood, motivation, ‘fight-flight’ response, and sensations of pain and pleasure” has been a part of the mammalian brain for 150 million years and is automatic (Cimini, 2010). This part of the brain, along with the brain stem, stays activated during stressful situations because it controls so many of the body's motor functions. The frontal lobe is divided into the right and left hemisphere, each side controlling different actions or tasks. This is the most advanced part of our brain, the part that deals with cognition, planning, reasoning, and some motor control.<sup>4</sup> The frontal lobe makes us human. It controls humor, wit, irony, sympathy and empathy. It is also the section of the brain that shuts down during the body's response to fear, hyper-arousal, trauma, and danger. When the “fight or flight” response of the limbic system is triggered, the emotional connection and other social functions of the frontal cortex are no longer necessary for survival and therefore shut off.

My Yoga Warriors International teacher Jon Greuel explained that we revert to the reptilian brain in time of high stress or danger because the survival function becomes supreme and the other brain tasks that are not automatic are shut down until we have

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<sup>3</sup> <http://www.neuroskills.com/brain-injury/frontal-lobes.php>

<sup>4</sup> <http://www.neuroskills.com/brain-injury/frontal-lobes.php>

moved past the danger. An example, he said, was of the saber tooth tiger – “our ‘caveman’ ancestors had the same response to danger that we do. If a very large and hungry saber tooth tiger is chasing you, the brain will not allow you to stop to converse with a neighbor about the cave party the night before.” The fight or flight response has been activated to escape this threat; any brain activity not necessary for survival will not be activated.

The manual given to YWI teachers explains the nervous system in six comprehensive pages (Cimini 2010). The fight or flight (sometimes fight, flight, or freeze) response is activated by the sympathetic nervous system (SNS). The SNS is controlled by the automatic nervous system (ANS), the part of the peripheral nervous system that controls involuntary actions like the heart rate, digestion, respiration, etc. The parasympathetic nervous system (PsNS) makes up the other half of the ANS, and if the PsNS is activated the SNS is not. Likewise, if the SNS is activated, the PsNS is inhibited. During the fight or flight response the SNS is activated (PsNS inhibited); the heart rate increases and blood pressure rises. In addition, there is an increased level of glucose to provide energy, and epinephrine and norepinephrine (adrenal stress hormones) are secreted (Emerson and Hopper 2011). The fight or flight response is activated by the hypothalamus, the portion of the brain that controls automatic functions, hormones, and homeostasis. The activation of the SNS stimulates production of adrenal stress hormones, which are located within the hypothalamus, pituitary, and adrenal (HPA) axis (Taslitz 2012). This axis acts within a three-step process; (1) the hypothalamus releases a hormone that triggers the pituitary gland to (2) release another hormone that travels through the bloodstream until it (3) reaches the adrenal glands on top of the kidneys.

Once the adrenal glands are triggered, cortisol is released into the bloodstream (Cimini 2010). The job of cortisol is to raise the level of blood sugar to provide a quick burst of energy, which helps us to escape danger. Cortisol helps the body to return to a homeostatic state, however, “prolonged exposure [to cortisol] can be potentially harmful” especially if the HPA axis becomes self-activating; producing levels of cortisol that are too much for the body to handle productively (Craig 2007:228, Taslitz 2012).

This is a *normal* response that the body undergoes in the face of trauma. It is how the human nervous system has evolved over the course of thousands of years to keep us safe. A nervous system that only contained the PsNS would not pass tests in Darwin’s survival of the fittest. The body has a system in place that injects hormones like adrenaline and cortisol into our bloodstream to keep us safe, to aid us in responding to danger, and to shut down the parts of the brain that will not be useful at that moment. A “to-do” list popping into your head or an argument that you had over coffee that morning is not beneficial in a life or death situation; therefore, when the SNS takes over, these kinds of thoughts dissipate. How does the body’s normal and effective response to trauma evolve into a chronic problem of hyper-arousal and overstimulation?

According to doctors, it varies depending on the situation. While a war zone, rape, genocide, or torture is universally recognized as traumatic events that will leave a long-standing impression on the person experiencing that trauma, each person handles trauma differently (Shay 2002). Not every soldier in OIF and OEF will come home with PTSD. But, as explained to me by Mark Perna, “every soldier will come home wholly changed from war and cannot fit into the pre-deployment hole.” PTSD occurs when the body is continually producing the fight or flight hormones, even when danger is not

imminent (Emerson and Hopper 2011). When the hypothalamus continually releases cortisol into the body – either because the person is living in a constant state of high stress or because the PsNS has not inhibited the SNS – the body will be in a constant state of fear, terror, and anxiety (Nauman 2009).<sup>5</sup> This state of hyper-arousal caused by either living in a constant state of terror or experiencing a traumatic event is a diagnostic requirement of PTSD; traumatic events include rape, the death of a child as a direct cause of your actions, or watching a buddy die in your arms after your Humvee explodes. “Most guys shut down and try not to deal with it, but trauma is so deep and conditioning comes before conscious thought,” Perna said. Marines move without thinking. “We move instinctively and society thinks that as soon as we remove them [from danger], they should let it go. But it [trauma] is worked out like a muscle and we need to recondition soldiers to regular society,” said Perna. He points out that most guys do not rush to recondition themselves for regular society, because the hyper-vigilance is what kept them alive. It is important to note, however, that not everyone who experiences trauma will develop PTSD. Each person has a different level of resiliency defined as how quickly one recovers from a problem or traumatic event. Doctors like Charles Hoge believe that factors such as genetics, previous experience with trauma, experiencing neglect or abuse as a child, and a family history of mental illness or disease such as alcoholism may be tied to the level of resiliency someone can muster (2010). Dr. Hoge, in his book *Once a Warrior – Always a Warrior*, suggests that resiliency has more to do with the level of responsibility and friendship when dealing with watching a friend’s death or injury and the intensity of the combat than with genetic variables or previous traumas (2010).

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<sup>5</sup> <http://www.medicinegarden.com/2011/02/19/high-cortisol-ptsd-1/>.

Finley's ethnography tells of men who were forced to shoot children while deployed because, "it was either them or you..." citing the enemy's use of child subterfuges, and the amount of guilt from that trauma (Finley 2011: 41). Hoge points out that soldiers who feel directly responsible for the safety of a buddy who was injured or killed under their watch are "most at risk to develop serious PTSD symptoms" because of the warrior ethos and soldier's creed (2010:27). "I will never accept defeat. /I will never quit. /I will never leave a fallen comrade" are the elements of the creed that prove most difficult to reconcile after the loss of a friend. The creed and the ethos exist as promises that warriors take very seriously. Unfortunately, PTSD can potentially be seen as a failure of the creed if the diagnosed is considered mentally weak. Hoge points out that there also exists a correlation between trust, betrayal, and PTSD. Soldiers are more likely to develop PTSD if they feel that they have been betrayed by their commanding officers, given faulty intelligence, or given orders that were decidedly unsafe when there was a safer option. Betrayal-based PTSD can also come from physical assault or rape in a war zone, especially if the attacker was another service member (Hoge 2010). Rape within the war zone is known as Military Sexual Trauma, MST is particularly worrisome if the victim's commanding officer perpetrates the offence, which limits the victim's options when reporting the problem (Shay 2002). It is deemed disrespectful to skip the commanding officer directly above you when reporting a problem (Lt Jeff Rogers, personal communication, 2012). Another trust-based trigger for PTSD lies within the home community. High rates of PTSD among Vietnam veterans are linked to the anti-war sentiment in the United States and the feeling that the veterans were not welcome when they returned home (Shay 2002).



The paradox of PTSD rests in the fact that it is completely normal for the body to react this way when stress is high and constant, yet as a society, we have deemed hyper-vigilance and constant adrenaline rushes as negative effects of trauma, instead of valuing this response as the mechanism that saved us. The release of cortisol and other stress hormones that ignite the fight or flight response is normal and has allowed the human species to evolve over thousands of years. While not all people who experience combat stress, heavy combat, or the death of a close friend will develop PTSD, the experience of war will change each person returning home. Perna spoke to me about the mentality switch of enlisting into a service branch. He said, “There is a cultural belief that you are changed when you go into the military, that you handle pressures in a super human way...Yogis get that and combat vets get that you’re completely changed by the experience.” Society needs to understand the emotional shift that happens to soldiers returning from a war theater and not expect them to be the same people as the ones who left home nine months prior.

The fact that PTSD is a normal reaction to stress makes labeling it a disorder controversial by some doctors and increases the stigma of the illness in the military (Hoge 2010; Shay 2002). Doctors like Shay and Hoge push for a change in the name of PTSD, “which sounds like an ailment – even though from the definition that what we are dealing with is an *injury*” (Shay 2002:4). While a soldier will have PTSD for the rest of his or her life, there are things he/she can do to ameliorate the symptoms. The signs and symptoms are listed in seven criteria, within which the patient must answer, “yes” in order for the diagnosis to be true. The National Center for PTSD gives the following assessments for PTSD per the *DSM- IV*.

To begin the diagnosis process, Criterion A requires there must be a traumatic event. These event may vary, but people must have either witnessed or been confronted with an event or events that “involve actual or threatened death” or threat of injury/death to themselves or those around them (DSM-VI). Erin P. Finley, in her book *Fields of Combat*, relays the stories of various soldiers diagnosed with PTSD. One has “PTSD from being in Iraq and literally killing many people,” for him, that was the traumatic event (2011: 80).

Criterion B is the intrusive recollection, a recurrence of the event for the warrior in dreams, flashbacks, distressing recollections, as well as psychological distress when confronted with cues that resemble the event. Perna, who attends classes at University of Colorado at Denver, told me a story about trauma recollections getting in the way of every day life. Perna smiled as he told me he was sitting on the quad at school one day when he saw some teenage girl walking and texting and just not paying attention. He could feel his body becoming agitated because it set off triggers. The last time he saw someone texting and supposedly not paying attention, the person was actually a suicide bomber about to detonate an explosive. Perna says that he has to constantly remind himself that here she is truly just some teenage girl not paying attention, not a suicide bomber. In either Iraq or Afghanistan – he served in both theaters – the threat of a suicide bomber detonating a bomb via cell phone is very real and seeing a girl behave in a similar manner on the UCD campus acts as a trigger for Perna’s symptoms.

The third category, Criterion C, qualifies numbing and avoidance as a diagnostic requirement. This includes, but is not limited to, avoidance of thoughts or feelings associated with the trauma; activities/places that recall the trauma; feeling estranged from

others; and the inability to have loving feelings. Gloria Jones, a therapist and yoga instructor at the Mountain Post Behavioral Health Clinic on Fort Carson, recognizes dissociation as one of the main problems for warriors with PTSD. They are working so hard at numbing the emotions surrounding their trauma that they cannot let in other emotions. For Jones, *pranayama* is a guaranteed way to break patterns of dissociation by “bringing them back to the moment” and giving them the ability to “feel their body and existence.” She needs to remind the soldiers that they are still alive even though they have lost touch with their feelings.

The fourth, Criterion D, concerns hyper-arousal. Signs and symptoms of hyper-arousal include difficulty falling or staying asleep, outburst of anger, hyper-vigilance, and an exaggerated startle response. Jon Greuel, my YWI instructor, is not diagnosed with PTSD but exhibits signs of hyper-arousal through an exaggerated startle response. He recounted a story about being in a movie theater when the previews for an action flick activated his fight, flight or freeze response. He recalls sitting in the dark room, reminding himself that he was in fact in a movie theater and not in a combat zone. Geri Wagner, who has her Masters in counseling, told me that she must take hyper-vigilance into account when she is choosing a location to teach her class. She prefers rooms without windows; that way, the warriors can feel safe from the threat of a sniper.

Criterion E is the duration of the disturbance: have the above symptoms interfered with daily activity for longer than one month? Criterion F is the functional significance: do the symptoms interfere with social, occupational, or other areas of life, such as grocery shopping or socializing in public?

While some of these characteristics will be altered in the newer version of the *DSM* available May 2013, most of the diagnostic requirements will remain the same. If a person has experienced an event described in criterion A, a therapist would then determine if enough symptoms from criteria B-D are present and then examine the time scale as inquired in criterion E and F. According to the *DSM*, a patient would need to have experienced at least one (1) symptom in Criterion B, three (3) in Criterion C, and one (1) in Criterion D “moderately” to “extremely” often in order to qualify as having PTSD. Criterion E and F have to do with a time frame. It is generally recognized that the symptoms take at least one month to set in, especially when the soldier is returning home. Perna told me a story that he learned during his teacher training about the Cherokee Indians giving their men new names when they returned home from battle. By giving each man a new post-war name, the Cherokee honored the fact that battle changes a person. If American culture understood the significance of a new name as a changed battle-hardened identity, transitions would be easier for soldiers (Tick 2005).

Each section in the *DSM* criteria represents a different struggle for soldiers and their families when trying to cope with a PTSD diagnosis. Jonathan Shay, in his book *Odysseus in America: Combat Trauma and the Trials of Homecoming*, describes PTSD as the “persistence of *valid adaptations to danger* into a time of safety afterward,” maintaining that the hormonal change responsible for PTSD is normal when the body feels endangered (2002: 149). It is the continuation of those hormones being in the system after returning to safety that becomes problematic. When the mind cannot relax in a place of safety, the body cannot relax either. PTSD is often described as a physiological illness, meaning that the body is as equally affected as the mind. The body

can become tense, a place that is no longer “trustworthy” because of the hyper-arousal and startle reactions experienced by the soldier (Emerson and Hopper 2011). For some people, traditional psychotherapy or drug regimens do not ameliorate the physiological problems and patients need a different type of treatment to help fix the problems of PTSD.

Yoga teachers and therapists Jones and Wagner recognize that the same treatment will not work for each patient. Wagner stressed the importance of an “individualized approach” that included accounting for injuries and limitations of the soldier. She also recognizes other CAMs may be more beneficial for some soldiers because therapy depends on “what the client needs at this moment.” When I asked Jones about her thoughts on holistic treatment methods, her answer spoke to the importance of getting into the body – something typically not provided by traditional cognitive therapy. Jones believes holistic methods are the “way of the future”. She stated that the “absolute key to healing is to go to where the trauma lives and release its holding in the heart. There are neuro-cell tissues in the heart and you have to shift trauma that is stuck in those neuro-cells so soldiers can connect to a place they can feel positive emotions. It’s the only way to heal.” Jones’ statement about storing trauma in the heart is a yoking of science and yogic principles. The body stores pain and fear in various locations and yogis have a tendency to search out those places and watch the emotional fluctuations. This is where yoga and other CAMs may be most beneficial when offered as an accompaniment to traditional forms of therapy.

### **Complementary and Alternative Medicines: What is the Difference?**

Society perceives Complementary and Alternative Medicine as a typically unconventional treatment option for healing. A complementary medicine is used in conjunction with conventional methods of healing (e.g. acupuncture for pain management) while an alternative medicine is used in place of conventional medicine. The National Center for Complementary and Alternative Medicine lists several different types of mind-body healing such as yoga, meditation, acupuncture, and body based practices like massage and spinal manipulation. The NCCAM also suggests probiotics and movement-based therapies as treatment options.

CAMs can be considered a more holistic approach to healing because they turn the focus away from drugs and toward healing the body, spirit, and mind. Holistic healing is by no means a singular form of treatment. Holistic healers encourage different parts of the body to stimulate healing through channels such as energy, nutrition, or massage. Common therapies that have been easily adapted into Western medicine and culture include acupuncture, Ayurveda, Reiki, and yoga therapy. Some lesser-known treatments include art therapy, Chakra balancing, and past life regression. Some therapies sit in a strange balance between the mainstream and the niche market of New Age movements. Jean Scandlyn and Sarah Hautzinger have a chapter in their soon-to-be-published book *Beyond PTSD: Reckoning the Post 9/11 Wars from Home* dedicated to various forms of treatment that soldiers seek when traditional medicine no longer works. “Waiting to Serve,” suggests different treatments may work better for some soldiers and highlights members of the Colorado Springs region community that offer various therapies. Like yoga, these treatments are all options for soldiers; some may work better for a particular veteran than others, but the point is, they have the option to choose how

they heal. It may not be through yoga, it may be art therapy or equine therapy (therapy with horses), but the choice of *how* to heal is crucial. Antione Johnson, who owns a business dedicated to helping veterans with PTSD relax, is one of the “other options.” He has soldiers that have been on multiple deployments come in who are so “numb that they don’t recognize they aren’t feeling anything” (Scandlyn and Hautzinger 2014: 24). Johnson uses relaxation techniques to reawaken those soldier’s emotions. Body-based CAMs provide an outlet for veterans to begin the process of reconnecting with emotions. When veterans decide to leave the path of medication, they need to understand that there are options. Scandlyn and Hautzinger’s work points out just how many options for CAMs a veteran can utilize. Because the government is beginning to recognize therapies like EMDR and yoga therapy as tools to help reduce the affects of trauma related injuries, insurance may begin to cover more alternative treatments (Hoge 2010).

### **Yoga: a Complementary and (not an) Alternative Medicine**

Yoga is an option as a complementary treatment to cognitive therapy precisely because of its ability to heal the mind and the body. Yoga, as practiced in the West, is mainly seen as an exercise that focuses on the *asanas* (postures) alone. But for many teachers, Patanjali’s eight-limbed path provides the guidelines of yoga (Carrico 2013).<sup>6</sup> Teachers attempt to incorporate all the aspects of the Eastern practice in a way that is still meaningful, yet fits into the Western culture. The eight limbs of yoga are the five *yamas* or ethics to live by, the *niyamas*, self-discipline or restraints, *asana*, the postures or poses

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<sup>6</sup> <http://www.yogajournal.com/basics/158>.

that come to mind when we think of yoga, *pranayama*, breath work or breath control – yoga is all about controlling the breath – *pratyahara*, removal of the senses, *dharana*, intense focus and preparation for the seventh limb, *dhyana*, meditation which when combined with the other limbs leads to the eighth and final limb, *Samadhi*, bliss or super-consciousness, the ultimate goal reached by working on all other limbs of yoga together. Many people focus on the static stretches of yoga and not the mental and spiritual side. It is the combination of the spiritual nature with the mental clarity brought by *pranayama* and *dhyana* that creates fields of movement in the psyche and the somatic body.

There are two limbs of yoga that are of particular importance to the healing of soldiers with PTSD – *pranayama* and *dhyana*. John Madden teaches yoga at the Department of Defense office in Denver, Colorado to veterans and is currently undergoing the Warriors at Ease teacher training program. When asked if he thought *pranayama* practices would be a helpful preventative measure to use before deployment, his answer was “Heck yes!” Madden further explained that *pranayama* acts as a tool to regulate breathing. If soldiers can learn to regulate their breathing before a combat situation, then they have a tool to ground them to the present moment and potentially prevent dissociation. Both Jones and Wagner echoed this idea. Wagner emphasized that *pranayama* teaches soldiers to be in the moment and “accept whatever is going to come up because its going to come up.” When presented with a traumatic situation, a soldier can only use the tools he or she already has to process emotions and avoid dissociation. Jones believes in teaching multiple styles of *pranayama* to calm anxiety. Alternate nostril breathing activates both the right and the left hemisphere of the brain and proves helpful when trying to ground soldiers. Jones states, “soldiers might be able to process



pieces of trauma if they can ground to the present moment through the breath before their deployment.” She wants warriors to have the skills before going overseas so that they may be proactive in their stress processing. Perna, as the sole veteran that I interviewed, had a different perspective, but adheres to the power of *pranayama* in his own practice. The Navy SEALs are taught breathing techniques to calm themselves in high-stress situations; for *pranayama* to be taught to soldiers it must be done in a combat mindset. Separated from a combat mindset, Perna says, “No. It doesn’t mean shit when somebody pops a round off at you the first time. You can’t replicate that. That’s when the real training starts. You are remade as a human being from that point on.” But Perna insists that soldiers should be taught “a ton” of *pranayama* because it “down regulates” the nervous system. During the *asana* practice, yogis use a type of breathing called *ujjayi*, meaning to conquer or to be victorious. This is done by slightly constricting the back of the throat on the inhale and the exhale, producing a wave-like sound. Perna explains that the nerves on the back of the throat where the breath moves stimulate the PsNS, producing a calming effect when practiced. This works both in the yoga classroom and on the battlefield. Through the four interviews and my teacher training, it became more and more apparent how important breath is as a grounding tool. It is something we take for granted because it is an automatic response in the body. Notice the breath the next time you become agitated or happy, notice its depth and speed and notice how changing the breath changes your mood. It is like that for warriors with PTSD; changing the breath reminds them to stay in the present moment.

Meditation, *dhyana*, is another limb of yoga that is a coping tool for soldiers with PTSD. Hoge introduces the term mindfulness, which carries the same benefits as

meditation, but may not sound as daunting (2010). The benefits from meditation/mindfulness include the ability of focus on the present moment, cope with anxiety and pain, and decrease “the feeling of being revved up” that accompanies a PTSD diagnosis (Hoge 2010: 109). In the summary of chapter 5, “Attend to and Modulate Your Reactions,” Hoge suggests that mindfulness and meditation are “training exercises to help you utilize your warrior skills,” including intense focus, paying attention to the body’s reaction, and noticing the breath (2010: 113). Meditation is another tool that Jones and Wagner bring into their therapy sessions. When asked if yoga, or some other relaxation program, should be a mandated practice for men and women returning home from deployment who exhibit signs of PTSD, Jones stated that “something should be mandated right when they get back.” Trauma should be given a way out of the body through yoga or meditation, because veterans need a challenging practice to break through the barriers they have built up. Because not every veteran will respond positively to yoga, there need to be options for emotional release. Jones summarized her philosophy on yoga therapy clearing emotion blockages, asserting:

"These things [trauma] won't rock their world anymore because they have processed it. As Robert Frost wrote, ‘The only way out is through.’ Trauma has an energy that floods the cells of the body and all energy must move. Unfortunately when left unprocessed, it comes out in inappropriate ways such as anger outbursts, road rage, high-risk behaviors, etc. Many soldiers will try to build walls to contain it, but eventually the walls crumble. That's usually when we see them here at the clinic. Yoga gives them a tool to help process a little at a time so that it's not so overwhelming."

She brings attention to the fact that yoga helps soldier’s use their bodies as a tool to discipline the mind and reach past layers of trauma to get to the source and remember who they are. Medications cannot perform this task; only reaching into the trauma can alleviate the pain, making the demand for complementary treatments that much more

important. The holistic approach rooted in community, body-based therapies, and deep emotional healing seems to be a well-received method of treatment. In the words of Perna, “recovery is always on hard mode, you have to engage it appropriately.” An appropriate engagement might mean more than a traditional cognitive approach; it may mean a holistic approach to healing through the body-mind connection.

### **Yoga Warriors: Importance of proprioception in getting the mind back to the body.**

Lucy Cimini founded Yoga Warriors International (from here out Yoga Warriors) in 2005 in Worcester, Massachusetts. Cimini started the program after being asked by students who were veterans of the Vietnam War to teach a class at the local office of Veterans Affairs. This program offers a yoga class with a specific sequence of tested poses including affirmations and breathing exercises. Most yoga teachers create their own sequencing but within the Yoga Warriors the order of the poses is set without much room for change. This is because the order and the *asanas* have been tested and proven to calm the mind and body and prepare the soldier for sleep (Stoller et.al 2012). It is not worth the risk of inducing a flashback or triggering a negative memory to change the sequence. Instructors must keep their egos in check by not getting creative. John Madden suggests teachers remove the flowery talk of a traditional yoga class (e.g. open your heart to the sky as you ground through your roots into the present moment...) and focus on muscle functioning and proprioception. Teachers like Madden and Greuel have repeatedly affirmed the importance of scientific language. Using the muscle groups when explaining poses and the science behind why *pranayama* is helpful in creating a

healing space for the warriors because the teacher is using familiar language. The teacher is not introducing new concepts that the student must then internalize to understand; he or she is using the soldier's background in physical training and exercise or breathing techniques to relate the unknown of yoga. Instructors must make sure that students are comfortable; they need to eliminate avenues of outside fear and discomfort so when internal emotions arise from the practice, a soldier feels safe to explore. Another way for the warrior to connect with his or her body enough to allow the emotional opening is through the concept of proprioception.

Proprioception is the sense of how your own limbs are oriented in space. Where is your knee in relation to your ankle? Your hip? Or to the props used in class? The Yoga Warriors handbook encourages teachers to use proprioception to connect soldiers with their bodies. How do we do this? By using props, the wall, and heavy muscle loading we can remind soldiers that there is feeling in their bodies; they can use their limbs and nerve endings to feel the present moment. Heavy muscle loading refers to the placement of the arm on the thigh in poses like extended-side-angle; it encourages awareness of the body through weighted touch. In a pose like 'leg lifts with a strap,' we encourage two forms of proprioception to connect the mind to the body through physical sensation. The first one is the strap itself. The looped end goes around the warrior's foot or terminal limb point while the soldier uses his hands to hold the free end. The note in our handbook states 'leg lifts with a strap,' "...increases proprioceptive input provided by the strap, helps to reduce hyper-arousal, and increases body sensation/awareness," making it a required pose. The instructor tells the warriors to bring their attention to their foot, asking them to be aware of how the strap feels circling the foot. Then the instructor asks the student to

bring awareness to their hands, to run their hands up and down the strap, feeling the heat built by friction. For those of us without a mental injury, this part of the practice feels redundant. It may seem strange to bring attention to something as fleeting as the heat made by friction and other sensations that do not last. Yet yoga practices are about being mindful of daily sensations and the present moment. By focusing on the feeling of the strap, the mind has an object to connect with, fostering a meditative practice. This can be the hardest part for some of these soldiers; they may have an exceptionally hard time shutting off the survival center in their brain that constantly checks for snipers, IEDs, or some other threat to their safety or the safety of their buddies. But by giving them something specific to think about, like the strap or by drawing attention to their body at this particular moment, we focus attention away from the constant hyper-arousal.

The strap is not the only tool for proprioception; students can press their feet into the walls behind them when they are in a table balancing pose or any other floor pose. They can lean against the wall in a standing balance or if they are practicing chair yoga, the chair can be the object they use to feel the surrounding environment. Regardless of the number of complete limbs a soldier has, the teacher is responsible for creating proprioception and grounding for that student.<sup>7</sup> Helping the students stay in the present moment is achieved by reminding them to breathe, feel the props, and giving cues about alignment and body positioning. These subtle thoughts and pointers are crucial to a yoga class and staying active in the present moment. Together, proprioception and *pranayama* work with the entire body and mind.

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<sup>7</sup> Chair yoga is yoga done while sitting in a chair. It makes poses accessible to those with a limited range of motion or other physical impairment.

**Yoga and the body: Stress, sleep and the psoas.**

Timothy McCall, MD wrote an article for Yoga Journal's online readers titled "The Scientific Basis of Yoga Therapy" calling yoga the "most comprehensive approach to fighting stress ever invented."<sup>8</sup> He even encouraged the practice for people fighting illnesses like cancer or heart disease that add stress to everyday life. McCall recognized certain forms of yoga will encourage the activation of the PsNS, while others, like Sun Salutations, will activate the SNS. McCall believes that a teacher should combine both the vigorous practices and the relaxing practices for a deeper final relaxation. He explained the neuroplasticity of the brain, its ability to "constantly remodel itself" as one of the reasons why yoga is so effective. People have habits ingrained into the brain because we have been practicing them for so long. For some people those habits are drugs, alcohol consumption, exercise, or nail biting; for soldiers with PTSD, the habits are different. The habits may include anger, guilt, shame, sleeplessness, dissociation, and hyper-arousal — all cyclical feelings that leave the soldier and his or her family confused and unsure of how to help (Levin 2003). But Dr. McCall asserts that we can change our habits by repeating new and better habits that create stronger neural networks. The continuation of a yoga class forges strong attachments because yoga manifests as positive neuro-feedback loops to replace the negative ones formed by PTSD. It is by no means a

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<sup>8</sup> [http://www.yogajournal.com/for\\_teachers/2016](http://www.yogajournal.com/for_teachers/2016)

process that will happen overnight; generating new neuro-feedback loops takes a long time.

Facing internal challenges is not an easy task for anyone, which might be one of the reasons that people are afraid or hesitant to do yoga. It is not easy to dedicate time to sit with yourself and evaluate the emotions that we work so hard to avoid. Within my own personal yoga journey, I see my hesitation to come to the mat and practice when I am not pleased with my thoughts or actions. However, research shows that “mindfulness practices change brain structure... but it requires effort” (Siegel 2011: 23). Therefore, if we want the change we must actively seek it. When I know I need self-reflection and a change in my thinking patterns, I go to yoga. Hip openers like *ekapada kapotasana*, heart openers like *matsyandrasana*, and backbends like *urdhva danurasana* are all emotional poses, meaning you may burst into laughter or tears during one of them and have no idea why these emotions are bubbling up in the middle of a class filled with strangers. The Yoga Warriors International sequencing avoids using deep hip openers, heart openers, and backbends because they can activate the SNS and cause an emotional response. YWI chooses to use poses with more of a calming focus like forward folds. But if one is willing to put himself in a vulnerable place, these *asanas* may be key to moving forward. I had a friend that suffered from depression, and he was sick – very sick. This disease was eating away at him from the inside. After he passed away, I had a chance to speak with his father, who told me that he wished his son had found yoga. The thing that was even more heartbreaking was that my friend had just started going to a yoga class. He was doing his free week at a local studio and loved it. But yoga cannot fix things like depression overnight. It cannot fix them in three classes. It takes more

than just the initial step of unrolling the mat to get healthy; hard work, perseverance, and professional help from a licensed therapist, counselor or psychiatrist/psychologist are key to getting the mind into a better place. But unrolling the mat may be a step in the right direction.

Geri Wagner listed the innate ability yoga has to allow the practitioner to focus on the present moment as one of her favorite parts of the practice. Embracing the present moment is important for all of us, but more so for people suffering from anxiety, depression, or dissociation – people trying to escape the situation their body has trapped them in. Many veterans who come to yoga classes complain about the inability to sleep, according to Geri Wagner. She says that while most veterans are “pretty resistant” to yoga, once they try it and understand the benefits, they ask for *yoga nidra* because it helps them to rest, if not fall asleep. *Yoga nidra* “is an ancient form of meditative inquiry used to reduce physical, emotional and mental suffering. The approach fosters deep relaxation” and has been developed into a program called iRest at Walter Reed Army Hospital by Richard Miller (Engel et.al.). Stoller et.al.’s 2012 publication, *Effects of Sensory-Enhanced Yoga on Symptoms of Combat Stress in Deployed Military Personnel*, mentions that answers like, “I sleep better on nights with class than without” were common responses to the survey conducted at the end of the study. Yoga allows the body to realize its needs and then pursue them in a safe environment. Perna appreciates yoga’s ability to let him practice staying in the body’s panic place within the safe space created by the studio. Letting one’s guard down is encouraged in these classes because it promotes healing; it lowers the hyper-vigilance that keeps the mind awake at night.

*Trauma: Zebras shake it off and we collect it.*



This is a story that I have heard on several different occasions, from yoga teachers (Jon Greuel and Jessica Patterson) and a veteran (Dan Taslitz) who doubles as a wilderness guide. *Imagine you are a zebra, eating grass on the plains of southern Africa. You are enjoying the grass and the sun when suddenly you sense danger. The danger is a lion, a very hungry lion. It has startled your harem to run, hoping to escape the jaws of death.<sup>9</sup> The lion, however, has singled you out for lunch. You tap into your inner reserves and manage to outrun the beast. After the chase, from which the zebra has narrowly escaped, the animal will shake. It will shake its entire body, releasing the fear, stress, and trauma the animal just endured. The zebra will shake for a couple of minutes and then move on. It will walk away and not dwell on the event.*

The story of the zebra releasing its fear and trauma is a story that reflects our own society. It speaks to the fact that we do not have a way to “shake off” our trauma. We often do not have enough time to process what just happened before society pushes us to move forward. Because of this, we tend to hold onto our stress, fear, and trauma. We are clearly not the zebra that can shake off a lion’s attempt at lunch. We feel tension and trauma in our shoulders, hips, lower back, and neck. It makes our hearts hurt and our brains confused because we are rarely given enough time to acknowledge that there is a hurt inside of us before we need to move to the next most pressing issue. In *Once a Warrior Always a Warrior*, Hoge includes a section titled “Navigation Strategies for Spouses, Partners, and Family Members” which speaks to the fact that deployment is hard on the entire family, not just the soldier. Soldiers who remain in the service after their first deployment are “expected to ‘reset’ rapidly after return” and to be prepared for

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<sup>9</sup> Zebras live in pods/herds called harems.

the next deployment (Hoge 2010:256). Hoge recognizes that the time between deployments may be filled with training trips, which adds to the families' challenges. Because the soldier and the family members may have to immediately prepare for another deployment, they "keep buried their reactions from the previous deployment" and do not take time to process the trauma and stressed caused by separation (Hoge 2010: 257). The process of readiness is conflated against that of wellness because of the unpredictability of deployment. Perna, who was deployed twice, in Operation Enduring Freedom from 2005-2006 and Operation Iraqi Freedom from 2006-2007, says that people assume once a soldier is removed from the war theater the trauma will "stop. But it doesn't stop and now something is wrong and we label it a disorder. Who came up with that?" Soldiers are not given time to digest their emotions between deployments, because according to Perna, there is no time: soldiers are constantly training to go to war. From the moment they arrive at boot camp, they are told, "You are going to war." Marines like Perna are always training for war; they have no time to digest because the mission is to fight in wars. Hyper-vigilance, created by their experiences, will keep them alive in future deployments but will also affect them in their stateside lives. Marines and soldiers cannot let go of trauma and fit into normal society without some sort of reconditioning and release. Even more so, active duty soldiers cannot or do not want to "ramp down" their emotions because not feeling keeps them safe.

Unlike the zebra, our body does not twitch to release trauma; instead our muscles, especially the iliopsoas, contract, tensing our body, preparing for the fight or flight response but never letting go. During the presentation "Staying Strong in the Field," by Dan Taslitz, spent at least 20 minutes talking about the psoas and ways to release the

muscle. There are companies like the Magis Group formed specifically to educate soldiers on the psoas, and Perna spent time learning about the psoas in his Ana Forrest teacher training. The iliopsoas is the muscle that connects the spine to the femur through the hips. It can become tense from constant sitting or hunching over when not stretched properly. The psoas is the first muscle to grip when the fight or flight response is activated, according to Perna, and is often the last to get released. It is also thought to hold tensions from stress like other muscles in the body. Gripping of the psoas initiates a hunching movement of the torso that protects and shields our vital organs but can be difficult to relax. Not only has the trauma affected the mind, but also it has taken hold of the body, turning somatic trust against our selves.<sup>10</sup> Pain “may still be held somatically” when soldiers dissociate from traumatic memories and emotions, which in turn causes further physical pain (Emerson and Hopper 2011:22, 23). For Perna, one of the greatest benefits of yoga is the ability for him to have pain-free days, or pain-managed days, for his lower back. Many therapists, like Gloria Jones and Geri Wagner, believe that treatment for trauma must incorporate the body as well as the mind due to the encompassing nature of trauma (Emerson and Hopper 2011). Yoga as a complementary treatment to cognitive therapy has the potential to reach the heart of trauma living inside veterans in addition to regulating stress levels, promoting sleep, and stretching painfully tense muscles.

## **Conclusions**

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<sup>10</sup> Soma (noun): the body as distinct from the mind.  
Somatic (adjective): affecting the body as distinct from the mind.

There is a phrase in the Yoga Warriors manual that says, “Yoga begins with the questions, ‘What is *right* with me?’ not ‘What is *wrong* with me?’” The practice becomes a means for cultivating the construction of positive neuro-feedback loops that McCall writes about. Yoga Warrior teachers say affirmations like “I forgive myself,” “I reach out to others for healing,” and “I open my heart to the breath of joy” during specific poses, on 3-5 occasions per class, repeated three times. These phrases cultivate gratitude and love; they remind the speaker that the body is still there and that its betrayals do not have to continue. The guilt soldiers feel may be eased because they can forgive themselves and open themselves to joy through positive affirmations. Perna listed several reasons why he loves yoga; one reason is because yoga teaches us how to love all parts of the self – even the dark spaces that do not mix with the status quo. He also respects the fact that yogis understand what emotional change does to a person because yogis actively unearth their own emotional issues each time they practice – just like veterans. This practice also teaches soldiers and veterans to handle their anger more productively and quiet the mind. All this is possible; it just takes a little bit of work and dedication.

As with most ethnographic work, an introduction into the author’s base is crucial to understanding the groundwork of research. If I had not experienced what came to be known in my mind as the Year of Death (between Lacey and Mikey’s passing, someone I or my family knew passed away every 3 months or so), yoga would not have had such a profound effect on my healing. Because the *guru*, or teacher, that is death, provided a method of healing within community for me, I believe that others may benefit from a similar holistic, body-based, community practiced method of healing. In examining the

challenges of and treatments for PTSD, this paper discussed literature crucial to my understanding of PTSD. The authors of the texts used in this essay recognize the enormity of the PTSD problem. By researching the issue, they have affirmed the warrior's ethos that they "will never leave a fallen comrade." Not all the contributors have been members of the Armed Services, but they seek the healing of wounded warriors as much as any service member does. Communities of practice both in the military and the yoga studio are an integral part of the holistic healing. While these are two distinct communities, they follow familiar patterns of a shared identity, purpose, and provide a comfortable setting for members. Based on interviews and selections from Shay, I assert that community is a powerful force behind a soldier's will to fight against his or her psychological injury. Both the yoga community and the military community practice training as a whole and serve as support to one another. Because members of these communities are conditioned to work as a team and to assist their peers, these groups create safe places for healing. Without knowledge of the biological background of PTSD and a brief overview of the diagnostic process, an understanding of PTSD would be limited. While reading this section it becomes more and more evident that PTSD is a normal reaction to abnormal events. The human psyche is not designed to sustain repeated trauma without developing some sort of coping mechanism. However, society termed hyper-arousal, dissociation, and recollections of traumatic event as cumbersome and discomfoting to family members. PTSD is an injury to the soul; in treating individuals with this wound as a dangerous group, society has alienated the men and women protecting American freedoms. Complementary and alternative medicines have great potential to heal PTSD because there are so many holistic, body-based,

community practiced options to tailor a healing regimen. The research here – and in the words of Gloria Jones, “There always needs to be more research” – has proven to be affirming for yoga. The breath work and mindfulness cultivated by meditation have healing qualities in the stimulation of the PsNS. Cognitive therapy can tap into the calm produced by yoga and work to the heart of the trauma while preventing dissociation patterns. The final section of the essay spoke to specific areas that trauma affects and how yoga helps to ameliorate that pain. Stress, sleeplessness, and tight muscles are common side effects of PTSD and TBIs because of how the body stores tension. We are and are not like zebras; we cannot shake our trauma out of the body without stimulation of the psoas muscle. Instead, humans must turn to mind-body therapies that deal with the physical pain and emotional trauma associated with PTSD.

Yoga works to reestablish positive feedback loops through community, *prana*, meditation, and therapy. Wagner and Jones both agree that a separation of yoga and therapy, as opposed to therapy sessions that include yoga practice, remain beneficial because “anyone would benefit from the yoga code, living in the moment and experiencing the self” but the two complement each other in an ideal manner. In order to fully accrue the benefits of yoga as a therapy, the soldier must attend clinical sessions as well. In the words of Geri Wagner, healing is “doing the work you have to do,” there is no easy way to heal, but yoga therapy may be the best way to heal the mind and the body simultaneously.

## Appendix:

### **The Soldiers Creed:**

The Soldiers 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 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 Warrior Ethos:**

I will always place the mission first. / I will never accept defeat. / I will never quit. / I will never leave a fallen comrade.

### ***DSM IV* PTSD Criteria:**

Criterion A: the stressor.

The person must be exposed to a traumatic event

1. The person has experienced, witnessed, or been confronted with an event or events that involve actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others.
2. The person's response involved intense fear, helplessness, or horror. Note: in children, it may be expressed instead by disorganized or agitated behavior.

Criterion B: intrusive recollection

The traumatic event is persistently re-experienced in at least **one** of the following ways:

1. Recurrent and intrusive distressing recollections 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.
2. Recurrent distressing dreams of the event. Note: in children, there may be frightening dreams without recognizable content
3. 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 upon awakening or when intoxicated). Note: in children, trauma-specific reenactment may occur.
4. Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
5. Physiologic reactivity upon exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

**Criterion C: avoidant/numbing**

Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by at least **three** 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 foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

**Criterion D: hyper-arousal**

Persistent symptoms of increasing arousal (not present before the trauma), indicated by at least two of the following:

1. Difficulty falling or staying asleep
2. Irritability or outbursts of anger
3. Difficulty concentrating
4. Hyper-vigilance
5. Exaggerated startle response

**Criterion E: duration**

Duration of the disturbance (symptoms in B, C, and D) is more than one month.

**Criterion F: functional significance**

The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than three months

Chronic: if duration of symptoms is three months or more

Specify if:

With or without delay onset: Onset of symptoms at least six months after the stressor



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