## HEALTH AND STRESS

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# THE PTSD DISASTER – IS THERE ANY SOLUTION?

KEYWORDS: Homer, Herodotus, Shakespeare, soldier's heart, effort syndrome, nostalgia, exhaustion, shell shock, combat fatigue, PTSD fraud, September 11th Victim Compensation Fund, drug, psychotherapy and CAM, SSRIs, PET scanning, magnetoencephalography, rTMS, cranial electrotherapy stimulation, heart rate variability feedback

PTSD (Post Traumatic Stress Disorder) is often viewed as a relatively recent illness, since it first appeared as a new psychiatric diagnosis in 1980. The term was used to describe a combination of symptoms seen in Vietnam combat veterans subjected to severe stress that included depression, detachment, difficulty in sleeping, nightmares, sudden outbursts of anger, and recurrent flashbacks of violent events. Since then, the incidence of PTSD has skyrocketed, not only in military personnel, but also civilians.

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The Evolution Of PTSD, And How It Became A Political Football

A Compensation Catastrophe And A Therapeutic Disaster

Why "Energy Therapy" Based On Neuroimaging Is Superior And Safer A major reason for this is the difficulty in confirming the diagnosis, which is based on self-report of symptoms that can be faked in an attempt to receive lucrative lifetime tax-free compensation. An even more important problem is the failure of current approaches to prevent PTSD or to significantly improve the lives of patients suffering from its long term debilitating and often disabling effects.

As indicated in previous Newsletters, incapacitating reactions resulting from combat stress are hardly new. Over 3,000 years ago, an Egyptian veteran of several fierce conflicts described the feelings he experienced before going into battle as follows: "You determine to go forward. . . . Shuddering seizes you, the hair on your head stands on end, your soul lies in your hand." Homer detailed Achilles' emotional disintegration following the battlefield death of his best friend in *The Iliad*. The Greek historian Herodotus tells of an Athenian soldier in the 490 B.C. battle of Marathon who became

permanently blind when the soldier standing next to him was killed, "although the blinded soldier was wounded in no part of his body." Another was so visibly shaken by the thought of hand-to-hand combat he was nicknamed, "Trembler", and later hanged himself in shame.

Since troops can respond to the stress of battle in different ways, diagnostic criteria for PTSD have been steadily expanded. Most of these additions were anticipated by Shakespeare in Lady Percy's portrayal of the demeanor of her warrior husband, "Harry Hotspur", as noted in red italics.

O, my good lord, why are you thus alone? *social withdrawal and isolation* For what offence have I this fortnight been

A banish'd woman from my Harry's bed? sexual dysfunction, reduced intimacy

Tell me, sweet lord, what is't that takes from thee

Thy stomach, pleasure and thy golden sleep? *lack of appetite, pleasure ,insomnia* Why dost thou bend thine eyes upon the earth, *loneliness and depression* 

And start so often when thou sit'st alone? *hyperactive startle reaction* 

Why hast thou lost the fresh blood in thy cheeks; *pallor*, *peripheral vasoconstriction* 

And given my treasures and my rights of thee *loss of intimacy* 

To thick-eyed musing and cursed melancholy? depression

In thy faint slumbers I by thee have watch'd, fitful and hypervigilant sleep

And heard thee murmur tales of iron wars:

Speak terms of manage to thy bounding steed;

Cry 'Courage! to the field!' And thou hast talk'd

Of sallies and retires, of trenches, tents,

Of palisadoes, frontiers, parapets,

Of basilisks, of cannon, culverin,

Of prisoners' ransom and of soldiers slain,

And all the currents of a heady fight. descriptions of traumatic dreams, nightmares

Thy spirit within thee hath been so at war

And thus hath so bestirr'd thee in thy sleep, *fragmented sleep* 

That beads of sweat have stood upon thy brow *night sweats* 

Like bubbles in a late-disturbed stream;

And in thy face strange motions have appear'd, increased muscle tension

Such as we see when men restrain their breath

On some great sudden hest. O, what portents are these? disturbed breathing

Henry IV, Part 1, Act 2, Scene 3

Although written over four hundred years ago, it is difficult to think of a more eloquent and succinct description of battle related PTSD in soldiers.

#### The Evolution Of PTSD, And How It Became A Political Football

As Ecclesiastes reminds us, "There is nothing new under the sun." Swiss military physicians in 1678 described a combat reaction in troops fighting in foreign countries they called *nostalgie* (nostalgia). It was characterized by incessant thinking of home, melancholy, insomnia, fatigue, loss of appetite, anxiety and palpitations. Soon after, German doctors referred to a similar syndrome as heimweh (homesickness), the French termed it maladie du pays (disease of the country) and in Spanish soldiers, it was estar roto (to be broken). The general consensus was that all of these symptoms were due to a strong longing to return home. Many consider the Civil War to represent the first example of modern warfare, since soldiers now had to face repeating rifles and pistols, Gatling guns, howitzers and delayed-time artillery rounds. Improved technology such as telescopic sights and spiral barrels also greatly increased the accuracy and destructiveness of rifles. As a result of these novel and severe threats, disabilities due to emotional disorders became so common that field commanders and physicians pleaded with the War Department to provide some type of screening process to eliminate recruits who might be more susceptible to psychiatric breakdowns. So, doctors who had no way to treat such problems, simply mustered out the extreme cases during the first three years of the war. As one PTSD authority later wrote "They were put on trains with no supervision, the name of their home town or state pinned to their tunics, and others were left to wander about the countryside until they died from exposure or starvation."

Their ranks were swelled by malingerers who feigned mental and emotional disabilities to obtain a medical discharge. Small wonder that many wanted to avoid combat, since most field hospitals consisted of little more than a tent with a single surgeon and untrained male nurses. Damaged limbs were amputated at an alarming rate and patients received no anesthesia or painkillers. There were also no antibiotics or method of sterilizing instruments and many died from infections. Hospitalization was often regarded as a death sentence since mortality rates due to diseases were more than twice those from bullets and artillery shells. Union Army statistics listed 67,000 killed in action and 43,000 deaths from wounds, but 224,000 died of disease and an additional 24,000 from "other causes". Things were probably even worse for the Confederates, but no accurate data is available.

The number of mentally deranged soldiers aimlessly wandering around the country was so alarming that there was a huge public outcry, and at the urging of physicians, the first Government Hospital for the Insane was established in 1863. After the war was over, the facility was closed as it was felt it would no longer be needed. It was largely replaced by a system of soldiers' homes that were like hotels, and often had attached or nearby hospital facilities to provide care for those who were physically or mentally

disabled. Although candidates were carefully screened for any evidence of deception or malingering, it became evident that the need for hospital services was increasing rather than decreasing. This seemed strange, since the most common psychiatric diagnosis was "nostalgia", which no longer appeared to apply. Some symptoms may have been due to flashbacks, since doctors had also noted that mentally healthy troops on normal leave often suffered nervous breakdowns while at home. Those who did have emotional complaints following combat stress were diagnosed as having "exhaustion". The preferred treatment was to bring them to the rear for a short period of time, before ordering them to return to the front lines. In retrospect, this was probably the worst thing to do, and many of those who survived this treatment may also have had flashbacks.

In 1871 Dr. Mendez DaCosta, a Civil War surgeon, described a condition seen in combat veterans that was characterized by palpitations, left sided chest pain, sweating, shortness of breath and fatigue on minimal exertion. Although strongly suggestive of heart disease, no evidence of a physical cause for any of these complaints could be found and they were subsequently referred to as soldier's heart, neurocirculatory asthenia and Da Costa's Syndrome. During its unsuccessful 1904-1905 war with Japan, the Russian Army was the first to recognize that these and other anxiety disorder complaints, as well as conversion reactions (e.g. blindness, deafness, and paralysis) were legitimate medical disorders due to combat stress. The protocol they adopted was to treat such psychiatric casualties near to the front, but out of danger. An attempt was made to gradually return those that had significantly improved to active duty, which most authorities still agree with. Unfortunately, it was less than 80 percent successful due to the lack of effective therapies.

In World War I, disabling mental disturbances and PTSD symptoms were diagnosed as "soldier's heart" or "effort syndrome." The diagnosis "shell shock" also emerged to refer to soldiers with neurological symptoms but no physical injuries, because it was believed that exploding shells had damaged their nervous systems due to changes in local atmospheric pressure. The problem with these diagnoses was that they were considered to be temporary problems that did not warrant long-term treatment. The commanding officer of one U.S. hospital said "a war neurosis which persists is not a creditable disease to have ... as it indicates in practically every case a lack of the soldierly qualities which have distinguished the Allied Armies." Another medical officer defined the condition as merely an "escape" from intolerable circumstances, and soldiers with persistent symptoms were viewed as malingerers. Other combat veterans were merely diagnosed with "bad nerves" which not only didn't warrant long-term treatment, but also induced a "get over it" attitude from military and medical authorities. The

British Army reportedly executed more than 300 of its own soldiers for cowardice, desertion or insubordination, although it now seems likely that many were suffering from stress due to the horrors of living in trenches with rotting horseflesh, mud, poor food, weapons that would not fire, periodic hand to hand combat, exposure to artillery bombardment, poison gas, and the sheer terror of waiting for death. Many were unable to fight because they couldn't stop crying and their memory and concentration were so impaired or they were so mentally and physically drained that they were "numb" and barely able to move, much less follow commands. Most of our troops with such problems were quickly evacuated to hospitals back in the U.S.A. because they were a severe drain on morale that might have quickly spread to susceptible comrades. It is estimated that PTSD symptoms were responsible for the evacuation of 10 percent of American enlisted men. In addition to this military embarrassment, there were significant financial costs, since disabled veterans were retired with lifetime pensions and perpetual medical care.

As a result, elaborate efforts were made to screen individuals for combat readiness during World War II to minimize loss of personnel from emotional problems. However, this failed miserably, and compared to World War I, 300 percent more troops suffered from PTSD complaints. General George Patton lost his command and severely tarnished his distinguished military career after yelling at and slapping two hospitalized privates with apparent "shell shock", one of whom was actually suffering from malaria. Although the "shell shock" theory of brain injury had been thoroughly discredited, it remained a popular diagnosis in World War II, which also provided the concept of "combat fatigue" that was present in up to one third of all casualties. By the time of the Vietnam conflict, two decades later, military experts had concluded that the moral strength of a soldier was not as important as the length of combat exposure. Even the toughest troops could "break" if exposed to severe or lengthy periods of trauma. As a result, tours of duty were limited to thirteen months, since it was assumed that this lower period of exposure and knowing that the tour was limited would reduce combat fatigue casualties. This also failed since well over a third of returning Vietnam combat veterans continued to suffer from depression, flashbacks and other PTSD complaints.

It was largely because of the Vietnam conflict that PTSD was recognized as a distinct psychiatric disease rather than a syndrome consisting of certain symptoms. The problem was that there was nothing applicable to this in *The Diagnostic and Statistical Manual of Mental Disorders* (DSM) "bible" that provides the official definition of all mental illnesses. When first published in 1952, what we now call PTSD was called "stress response syndrome" that was caused by "gross stress reaction". In the second 1968 edition (DSM-II),

all trauma-related disorders were lumped together under "situational disorders". But this meant that if symptoms persisted longer than 6 months after returning from Vietnam, they were due to a "pre-existing" condition, making it a "transient situational disorder", and the problem was not service connected. The unpopularity of the war and the characterization of returning soldiers as baby killers, rapists, mass murderers and dangerous psychotic freaks resulted in numerous "walking wounded" and quite likely contributed to their high rates of suicide. After PTSD was listed as a distinct disease in the 1980 DSM-III, it became a political football when attempts were made to draft legislation for reimbursement. The House and Senate could not agree and various veterans' organizations had conflicting views about what had to be done.

Prior legislation proposed in 1973 and 1975 seeking better funding for Vietnam veterans to obtain drug and alcohol rehabilitation and readjustment counseling services passed the Senate on both occasions. However, the House was dominated by World War II veterans who did not believe that Vietnam had produced problems different than they or older veterans had experienced. In addition, the American Legion as well as the Veterans of Foreign Wars, two very politically powerful groups, also lobbied strongly against this legislation. There were numerous heated protests and rallies. John Kerry (now Senator John Kerry) a founder of the Vietnam Veterans Against the War and holder of three Purple Hearts, a Bronze and Silver Star Medal for his Vietnam service duty, reported that a Minnesota American Legion Post excluded Vietnam veterans because they "lost the war." There were numerous concerns and complaints about the 1980 definition of PTSD, and particularly the ease with which malingerers could falsify the diagnosis. As a result, the criteria were tightened in the 1987 revision (DSM-III-R), but abuses persisted. Further attempts were made in the 1994 DSM-IV and a subsequent revision in 2000 but critics were not satisfied.

PTSD symptoms are so common that depressed people who have never faced trauma usually qualify for the condition. In one recent study, almost 80 percent of depressed people had symptoms of post-traumatic stress even if they could not cite a single trauma that might have caused them. Even the chairman of the committee who wrote the latest definition admitted that it was outdated because of the blurred distinction between PTSD and other diagnoses. The DSM-IV editor further stated, "My concern is that it's overused. It started out as combat neuroses for very severely traumatized soldiers, but now it's all over the place." In 1999, the Department of Defense started to require the additional use of the term "combat stress reaction" for Armed Services personnel and this was later changed to "combat operational stress reaction" to show how it differed from PTSD in civilians. Despite improved screening, by the time the U.S.

invaded Iraq in 2003, little progress had been made in either preventing or treating PTSD and soldiers with more than one tour were 50% more likely to suffer from combat trauma. Army psychiatrists published a study in the July 1, 2004 New England Journal of Medicine that found that more than 17% of troops suffered from major depression, generalized anxiety, or PTSD three to four months after returning from Iraq.

Subsequent reports suggest that these problems have progressively worsened. A 2009 Stanford University study estimated a **35 percent PTSD rate in returning Iraq and Afghanistan war veterans.** In tens of thousands more, the first signs of the disorder may not appear until flashbacks occur years later. Since the media have emphasized this delayed diagnosis, numerous new requests for PTSD compensation have poured in from Vietnam, Korean and Kuwaiti veterans. That's not surprising since soldiers diagnosed with PTSD are eligible to receive significant monthly stipends and some claims could be retroactive. The latest figures indicate that the number of Afghanistan and Iraq veterans being treated for PTSD by the VA had increased from 134,000 in June 2010 to 143,530 in January 2011, just 6 months later.

#### A Compensation Catastrophe And A Therapeutic Disaster

PTSD's real but invisible scars can mark clerks and cooks just as easily as they can infantrymen fighting a faceless enemy in these new wars without a front line. Because of increasing pressure from veterans groups and others, eligibility criteria for PTSD have been lowered and it is no longer necessary for veterans to document that specific events caused their PTSD. All that is required is to prove that they served in a war zone. As one psychiatrist with extensive military experience commented, "The threshold has been lowered. The question is how many people will take advantage of that [because] PTSD is among the easiest psychiatric conditions to feign." A retired longtime claims specialist with the Veterans Benefits Administration and a Vietnam veteran similarly said "I could get 100 percent disability compensation for PTSD for any honorably discharged veteran who's willing to lie." Consider the following three examples:

Gulf War veteran Felton Lamar Gray told a VA psychologist he was spattered with "blood and chunks of head" when his "best friend" was shot in the face in Iraq. But only after the VA rated Gray 100 percent disabled did anyone check into his stories. Gray had told the VA psychologist that he had put "hundreds of Iraqi soldiers in bags," and that his best friend was hit in the face with a bullet during a mission to clear an enemy trench, spraying Gray with gore. In her report, the psychologist wrote, "This man has suffered severe enough traumas to qualify for a diagnosis of post traumatic stress disorder and in fact has serious symptoms." That earned Gray a designation of "individual unemployability" and 100 percent compensation. The problem is that none of this was true. His "best friend", who is still alive, said he hardly knew Gray. He did have an M-16 explode in his face during a training exercise but only had "a little scratch on my face and ringing in my ears" and didn't require any medical attention. As for handling dead Iraqis, he said, "Everybody we captured was alive. There wasn't no body bags." When the Board of Veterans Appeals

granted Gray a 70 percent rating for PTSD, the panel acknowledged that it did so without verifying his stressors or even his dates of service. The board accepted Gray's Combat Infantryman Badge "as sufficient evidence of in-service stressors."

Thomas James Barnhart is a Coast Guard veteran who used forged documents to convince VA doctors he was an elite, much-decorated Navy SEAL. Barnhart's tales of daring rescues and of cradling a dying helicopter pilot in his arms won a congressman to his cause and helped him get a 30 percent PTSD disability rating from the VA, before it was found that the closest he got to the jungles of Vietnam was a stint on a Navy warship off the coast in 1969 and 1970. But when he switched to the Coast Guard, Barnhart would "spin yarns about his secret missions with the Navy SEALs" and even claimed to have been nominated for the Medal of Honor. He was later convicted of violating the Stolen Valor Act, sentenced to 12 months and a day in prison, two years of supervised release, and ordered to pay restitution for most of the money he had received.

Vietnam-era veteran Keith Roberts said he was traumatized in 1969 when he was prevented from rescuing his very good friend from being crushed to death in the wheel well of a C-54 Skymaster transport plane. He had asked to have a forklift raise the craft's nose but claimed that superiors nixed the plan to avoid damaging the plane. Starting in 1987, Roberts filed a string of disability claims with the VA, eventually blaming PTSD for everything from smoking addiction to arthritis. In 1999 he was declared 100 percent disabled and got a lump sum payment, retroactive to August 1993. Investigators later determined that Roberts didn't even participate in the rescue effort and hardly knew his "very good friend". After losing his benefits, Roberts was convicted of wire fraud, sentenced to 48 months in prison and ordered to pay \$262,943.52 in restitution. The U.S. Court of Appeals for Veterans Claims upheld this decision in a 45-page ruling that Roberts had "committed fraud in securing VA benefits for his PTSD."

These cases illustrate how lengthy and laborious the present system is and why the overwhelming majority of fraudulent PTSD diagnoses are never detected. Doctors make diagnoses without verifying the veteran's story and once a PTSD diagnosis is made, raters are prohibited from cross-examining the veteran. One psychiatrist pointed out that "checking behind a patient, actually breaks the confidentiality of the doctor/patient relationship, putting it into a position of adversarial rather than cooperative." In addition, VA officials are legally bound "to resolve any reasonable doubt in the veteran's favor." The Chief of Psychiatry at the VA Medical Center, who had conducted a forensic examination of Gray and confirmed the psychologist's PTSD diagnosis said, "Gray fooled me. It's easy," and "the three hours recommended by the VA for a compensation and pension exam are hardly sufficient to form an opinion." There are obviously not enough psychologists, psychiatrists, raters and legal personnel to handle the avalanche of cases. Veterans groups have sued the VA over an enormous backlog, complaining that claims can take years to be approved, and that some veterans had committed suicide as a result. Everyone involved is under enormous pressure to push claims through, and one rater recalls a supervisor telling him "You don't get it. Your job is to pay." Nobody knows the full extent of PTSD fraud, but several years ago, when the VA cross checked its roster of "unemployable" PTSD veterans with federal tax and Social Security databases, 8,846 reported over \$6,000 in earnings, including 289 with annual income of \$50,000 or more. Most survivors of combat or rape never develop PTSD and most symptoms drop sharply over time. In contrast, VA rates are rapidly rising and more than half seeking treatment show evidence of malingering on forensic tests and/or misrepresent the extent of their combat service. PSTD has been newly diagnosed in 50,000 of Iraq and Afghanistan war veterans from 2002-2006 at VA facilities, nearly 20 percent. NOW, IT IS ESTIMATED THAT OVER 30% OF RETURNING TROOPS ARE BEING DIAGNOSED WITH PTSD.

One consequence of this is that the Army has apparently pressured its medical staff not to diagnose PTSD in Irag combat veterans, as reported by one being treated for this at Fort Carson. Because of his battle-damaged memory, he had put a recording device in his pocket so that he would not forget anything he was told by psychologist David McNinch. One of these comments was, "OK, I will tell you something confidentially that I would have to deny if it were ever public. Not only myself, but all the clinicians up here are being pressured to not diagnose PTSD but diagnose anxiety disorder NOS [not otherwise specified] instead." He added that Army medical boards were "kicking back" his diagnoses of PTSD, saying soldiers had not seen enough trauma to have "serious PTSD issues". . . . Unfortunately, yours has not been the only case . . . . I and other doctors are under a lot of pressure to not diagnose PTSD. It's not fair." After being made aware of the tape, McNinch confirmed that the head of Fort Carson's Behavioral Health Department had ordered him to diagnose the soldiers with disorders other than PTSD and that countless soldiers had been misdiagnosed at Fort Carson and other Army hospitals. Officials also told him "We are just counting people. We don't plan on treating them." This shocking revelation followed remarks made by a retired Army psychiatrist who said that the Army has ordered its medical staff to misdiagnose soldiers suffering from war-related PTSD to reduce their benefits.

The VA has also been accused of similar practices. A psychologist who coordinated a PTSD team was asked by Congress to explain an e-mail she sent to her staff entitled "Suggestion". She wrote "Given that we are having more and more compensation-seeking veterans, I'd like to suggest that you refrain from giving a diagnosis of PTSD straight out. .... We really don't or have time to do the extensive testing that should be done to determine PTSD." She suggested that "adjustment disorder" might be more appropriate in many cases since treatment is similar. Veteran groups have long suspected that the government has been attempting to reduce costs by assigning a lower disability benefits rating and, in one lawsuit, accused the VA of misclassifying PTSD claims as pre-existing personality disorders to avoid paying out benefits. The ultimate price tag of PTSD is unknown, but

### the cumulative cost of PTSD disability was estimated at over \$650 billion by 2007, more than the total cost of the Iraq war at that time.

Fraud is even more rampant in civilian cases, which one authority described as "being all over the place." With respect to the senior military psychiatrist's complaint that "the three hours recommended by the VA for a compensation and pension exam are hardly sufficient to form an opinion", contrast this with former Detroit Mayor Kwame Kilpatrick's PTSD diagnosis that was based on one telephone conversation. Kilpatrick is suing SkyTel, the company that released text messages confirming various indiscretions that led to his dismissal. According to a March 25 Newspaper report, "Dr. Norman Stanley Miller is the psychiatrist who examined Kilpatrick. He says he based his diagnoses of him primarily on a single phone conversation with Kilpatrick in March while in jail, as well as phone calls with his wife, mom, and sister." He described him as sad, helpless, confined, embarrassed, depressed, anxious, humiliated and devastated. The text message scandal had caused the former mayor "lots of physical and emotional ailments. He has difficulty falling asleep, irritability, some bowel problems, difficulty concentrating, [and] these symptoms meet the criteria of Post Traumatic Stress Disorder." Miller's 74-page deposition also revealed that he has a JD degree, specializes in addiction disorders, charges \$400/hr to review records and \$500/hr to testify in court. Protests from outraged vets and others are still pouring in to the paper.

The September 11th Victim Compensation Fund created by Congress awarded \$7 billion to 97% of the families that applied, with an average payout of \$1.8 million. It subsequently resulted in several hundred arrests for attempts to defraud federal relief programs and private charities of millions of dollars and the list keeps growing. A 41-year-old painter who claimed he was living with such severe pain from injuries that he could never work again and received \$1 million, was sentenced to 2 1/2-years in prison and ordered to pay \$125,000 in restitution because of proof that he had lied. In a video taken at a wedding showing him dancing to "Stayin Alive", he was twisting his body like a contortionist, grinding with a woman and doing the limbo. Everybody seems to want to get in on the act. A survey of 11,000 residents living a few blocks from Ground Zero found that one in eight were suffering from PTSD two to three years after the attack — a rate higher than that for rescue and recovery workers with prolonged direct exposure.

Workers' compensation claims must be filed within two years of an accident, but since illness from exposure to ground zero dust could take longer to develop, 10,000 workers have sued for benefits. No proof of any compensable disease was found in a third of those cases that have been

adjudicated. A ruling that extended the deadline to Sept. 11, 2010, made over 30,000 more workers eligible to apply for reimbursement. The Zadroga 9/11 Health and Compensation Act approved a few months ago has now expanded eligibility for compensation to sanitation workers, window washers, commercial cleaners and janitors who were simply near Ground Zero, as well as private carting, barge and other maritime workers, truck drivers and transfer station workers who helped move debris from the site.

The situation is even more dismal with respect to PTSD therapy, which is dominated by drugs with significant side effects that often worsen quality of life and can be lethal. Only two are approved for treatment, but since neither is very effective, most military personnel have to take many more, with catastrophic consequences. Three examples of such disasters that were reported in the February 12 *New York Times* are described below.

Senior Airman Anthony Mena was part of a military police unit that conducted combat patrols alongside Army units in downtown Baghdad. His duties included cleaning up the remains of suicide bombing victims and he was nearly killed by a bomb himself on one occasion. He returned from his second deployment to Iraq complaining of back pain, insomnia, anxiety and nightmares. Doctors diagnosed PTSD and prescribed powerful psychiatric drugs and narcotics. Despite this, his pain and depression deepened. In 2008, he told one doctor "I have almost given up hope. I should have died in Iraq." Instead he died in his Albuquerque apartment, on July 21, 2009, five months after receiving a medical discharge. During those months, he rarely left home without a backpack filled with medications. A toxicologist found eight drugs in his blood, including three antidepressants, a sedative, a sleeping pill and two potent painkillers. The medical examiner concluded. Anthony Mena was 23.

Corporal Nicholas Endicott joined the Marines in 2003 after working as a coal miner in West Virginia. He served two tours in Iraq and one in Afghanistan, where he was involved in heavy fighting and saw his comrades killed. On one mission, he was blown more than eight feet in the air by a roadside bomb. After returning from his third deployment, in 2007, Corporal Endicott told doctors that he was having nightmares and flashbacks, and was diagnosed as having PTSD. Although numerous medications were prescribed, he continued to suffer from severe anxiety, headaches and vivid nightmares. After a car accident, he assaulted the other driver and was admitted to the National Naval Medical Center in Bethesda for anger management therapy and training. On Jan. 29, 2008, he was found dead in his room and at least nine prescription drugs to reduce anxiety, improve sleep and reduce pain were found in his system. He was 26. His father said, "He survived over there. Coming home and dying in a hospital? It's a disgrace."

Gunnery Sergeant Christopher Bachus had spent virtually his entire adult life in the Marine Corps, deploying to the Middle East in 1991, Iraq during the invasion of 2003 and, Afghanistan in 2005. When he returned home, he suffered from anxiety, flashbacks of combat in Iraq, irritability and depression due to what doctors called "survivor's guilt". He was diagnosed as having PTSD and was started on drugs for depression, anxiety and Klonopin, an antipsychotic. In 2006, after a period of improvement, his medications were discontinued, but he asked to be put on them again six months later. Although he was still anxious and depressed, he was deployed to Iraq again in early 2007, but was sent home in a few months when it was discovered that he was on psychiatric medications.

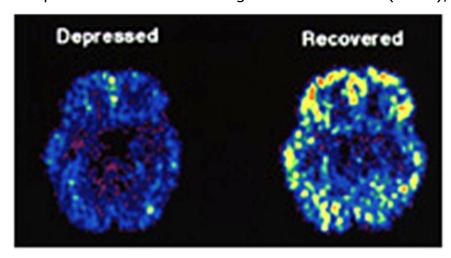
Frustrated that he could not be in a front-line unit and ashamed to work behind a desk, he applied for a medical discharge, which proved to be a lengthy and stressful process that made things worse. In March 2008, a military doctor added opiates to his medical regimen to relieve back pain, and shortly thereafter, he called his wife in Ohio and told her "You know, babe, I am really tired, and I don't think I'll have any problems falling asleep tonight." He was found dead in his on-base quarters in North Carolina a few days later. His wife later told investigators that he sounded delusional, but not suicidal. She was correct. An autopsy revealed two antidepressants, oxymorphone and oxycodone opiates, and an anti-anxiety medication in his system. Nearly 30 bottles of pills were found at the scene, most of them recently prescribed. According to the report, the delirium he experienced in his final days was "most likely due to the interaction of his medications." Sergeant Bachus was 38 and had served in the military for seventeen years.

All of these three veterans died in their sleep, had five or more prescribed medications in their systems at autopsy and were classified as accidents, not suicides, since they had not taken more than prescribed dosages just what their doctors had ordered. And for thousands more, these drugs make their quality of life much worse than the symptoms for which they were prescribed. An anonymous survey revealed that 12% of combat troops in Iraq and 17% of those in Afghanistan are taking prescription antidepressants or sleeping pills to cope with stress. Of all PTSD therapies, SSRI antidepressants claiming to boost serotonin are the treatment of choice. Yet, despite all the advertising hype, no studies have demonstrated a deficiency of this or other neurotransmitters in depression. It should be reemphasized that these drugs show such scant superiority over placebos, that clinical trials to obtain FDA approval for new antidepressants now use an approved product as a control, since it is only necessary to show equivalent effectiveness. Tianeptine, an antidepressant that raises serotonin, is actually more effective for PTSD in animal studies.

In addition to serious side effects, and severe withdrawal symptoms when attempting to stop treatment, SSRIs have also been linked to increased suicides. Paxil and Zoloft, the only two drugs approved by the FDA for treating PTSD have long been banned in the U.K. and Ireland for use in anyone under the age of 18. In 2004, a black box warning of increased risk of suicide in children and adolescents was mandated by the FDA and was extended to age 24 two years ago. The latest Army report reveals that in 2009, the number of suicides by deployed soldiers was six times greater than in 2008, the year in which the suicide rate surpassed all other years. Soldiers and Marines under age 25 had the highest PTSD rates since they were more likely to see combat and be deployed multiple times. It is estimated that over 20,000 troops in Afghanistan and Iraq are currently taking SSRI antidepressants. MORE SOLDIERS ARE NOW DYING FROM SUICIDE THAN FROM COMBAT INJURIES.

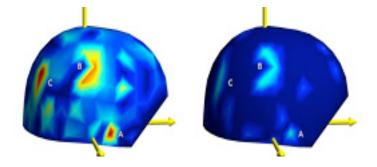
#### Why "Energy Therapy" Based On Neuroimaging Is Superior And Safer

There is no biomarker to confirm the diagnosis of PTSD or the efficacy of drugs or any other intervention. That's not surprising, since PTSD is a syndrome of symptoms such as depression, flashbacks and exaggerated startle responses that have different causes. It is not a discrete diagnosis like diabetes, where blood tests can diagnose and monitor a patient's progress. Depression is similarly a description of symptoms that can have numerous causes, which is why there are so many diverse treatments ranging from, ultraviolet light, hormones, sleep deprivation, acupuncture, exercise, vitamins, St. John's wort, fish oil, and other supplements, to vagal, electric and electromagnetic cranial stimulation, psychotherapy, and five different classes of antidepressant drugs. Yet, without a biomarker, there is no clear way to determine which of these is best for any given patient. The only exception has been energy defects in prefrontal cortex sites seen on Positron Emission Tomography (PET) scans that can be corrected by repetitive Transcranial Magnetic Stimulation (rTMS), as illustrated below.



Left - PET scan of a depressed patient's brain showing a lack of bright yellow-red areas that reflect neuronal activity. Right - PET scan after therapy now reveals the greatly increased activity in the prefrontal cortex (top of scan) and a return to the normal pattern seen in healthy people.

Even more impressive is that these patients were resistant to the antidepressants prescribed by the military. In addition, serial scans showed a progressive restoration of energy in the affected sites that correlated with the degree of clinical improvement, making it unlikely to be a placebo effect. A recent report claims that PTSD can now be diagnosed with 95 percent accuracy using magnetoencephalography (MEG). This is another neuroimaging technique that maps brain activity by recording minute magnetic fields produced by naturally occurring electrical currents when neurons communicate with each other, as illustrated below.



Left – The greatest abnormalities are seen in areas of the brain that are responsible for regulating memory and fear (B), and two others (C&A). Right – These same changes are also present, but to a lesser degree, in PTSD patients who have recovered.

Such a biomarker would not only improve the accuracy of PTSD diagnosis and ratings of its severity, but could also assess the efficacy of treatment. Drugs are obviously not the answer, nor are cognitive-behavioral attempts to change the way people think about situations, such as exposure therapy, inoculation, movement desensitization eve and restructuring. In addition to a severe lack of personnel to administer these techniques, a recent extensive review of the literature concluded that "no psychological intervention can be recommended for routine use following traumatic events and that multiple session interventions, like single session interventions, may actually have an adverse effect on some individuals." As a result, we are now spending millions on CAM (Complementary-Alternative Medicine) approaches, including yoga, hypnosis, acupuncture, massage, art, dance therapy and herbal supplements. One congressman wants \$2 million to study the benefits of prayer. The situation is so serious that the 2012 budget allocates \$7.2 billion for treating PTSD and brain trauma.

What seems incomprehensible is the lack of any reference to CES (Cranial Electrotherapy Stimulation) and HRV (Heart Rate Variability) feedback, bioelectromagnetic approaches that have been found to be effective and safe in over two dozen publications in peer-reviewed journals. One CES device that has been demonstrated to relieve PTSD and depression in several clinical trials, is supported by imaging studies showing its effects on relevant brain sites. In a VA Center study, it was preferred by 75% of patients over all CAM techniques, with HRV feedback making up the bulk of other choices. All of these relatively inexpensive devices are self-administered, so treatment can be provided whenever and wherever the patient desires, forever. This significantly reduces the need for health care personnel, which makes them the most cost effective options available. CES and HRV reduce PTSD via different mechanisms, so there is good reason to believe that their combined use would have synergistic effects. Senior military physicians I have spoken with agree, some said that this practice is already being used, and are unable to explain why it is not recommended. I have made several calls to their superiors who are responsible for implementing new therapies inquiring about this, and explaining that I have no financial interest in any of these products. Since none of these calls have been returned and tens of thousands of troops may continue to suffer needlessly, I intend to keep pursuing this with others — so stay tuned!

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