Coming Home STRONG!
An Integrative Approach: The Treatment of PTSD in Post-Deployment Soldiers with Acupuncture
William Beaumont Army Medical Center
Ft. Bliss Restoration & Resilience Center

Carl R. Darnall Army Medical Center
Warrior Combat Stress Reset Program

Evans Army Community Hospital

Naval Medical Center at San Diego
Naval Center for Combat & Operational Stress Control

Naval Hospital at Camp Pendleton

Cheyenne Veterans Affairs Medical Center

Washington State Veterans Affairs Department

Seattle Veterans Affairs Medical Center

George E. Wahlen Veterans Affairs Medical Center
National Center for Complementary and Alternative Medicine (NCCAM)
Funding appropriated for the fiscal year of 2008: $121.6 million.
The research initiatives of NCCAM have focused their efforts on research that will yield the greatest impact on the health and well-being of people at every stage of life.

- Enhance physical and mental health and wellness.
- Manage pain and other symptoms, disabilities, and functional impairment.
- Research that has a significant impact on a specific disease or disorder.
- Prevent disease and empower individuals to take responsibility for their health.
- Reduce selected health problems of specific populations.
Centers of Excellence for Research on CAM
  – Neuroimaging Acupuncture Effects on Human Brain Activity
    • Functional MRI (fMRI) and PET studies on acupuncture at specific acupuncture points have demonstrated significant modulatory effects on the limbic system, paralimbic and subcortical gray structures.
    • In a recent fMRI study at Harvard University by Hui et al. (2005), acupuncture stimulation that produced deqi sensation at ST36 produced a reduction in neuronal activity; particularly the limbic/paralimbic structures and limbic cortices in the cerebrum (amygdala, hippocampus, cingulate, septal area, temporal pole, frontal pole, and ventromedial prefrontal cortex).
Center on Mindfulness-Based Stress Reduction, Stress Arousal, and Immune Response in Early HIV

- Evaluated the use of Mindfulness-Based Stress Reduction (MBSR) in people with early stage HIV infection.
- MBSR uses meditation techniques to reduce stress and better manage emotions.
- A RCT that determined whether MBSR, a low-risk intervention, could slow disease progression and delay the need for antiretroviral treatment.
- Additionally, the center will examine the effects of MBSR on stress processes and on the immune system.
NCCAM

♦ UCLA Center of Excellence in Pancreatic Diseases
  – Focused on elucidating the mechanisms of action in plant-derived compounds found in a variety of dietary and herbal supplements and traditional herbal medicines, including antioxidants such as curcumin (a component of the spice turmeric) and lycopene (the component that gives tomatoes their color), and preparations of green tea and Scutellaria baicalensis (Huang Qin).
Military Economic Perspective
Military Economic Perspective

♦ In a study conducted by The RAND Corporation, researchers estimate that PTSD and depression among returning service members will cost the nation as much as $6.2 billion in the two years following deployment -- an amount that includes both direct medical care and costs for lost productivity and suicide.
♦ For a typical service member returning from Iraq or Afghanistan (an E-5 with 5 to 7 years of service), baseline scenario predicts that two-year post-deployment costs range from $5,635 to $13,935 for PTSD.
♦ The Congressional Budget Office (CBO) estimates that life-long veteran benefits will be $7 to $9 billion over a period of 2008 through 2017 for Afghanistan and Iraq veterans.
Military Economic Perspective

- Therefore, investing in more high-quality treatment could save close to $2 billion within two years by substantially reducing those indirect costs.
  - So far, the Pentagon has invested $5 million in 2008 on research in seeking new ways to treat troops suffering from combat stress and brain damage by researching alternative methods such as acupuncture, meditation, yoga, and the use of animals as therapy.

- U.S. Navy Case Study
  - Cost savings for outpatient acupuncture therapy for a single patient would be approximately $3,956.18. This figure includes the total cost for a 24-hour inpatient hospitalization ($3,958) and the cost of needles for one-week of treatments ($1.82).
  - Reduction in indirect costs from outpatient acupuncture therapy.
    - There was a decrease in sick quarters and light limited duty status resulting in an increase in operational man-days.
Military Economic Perspective

- U.S. Navy Case Study
  - Weekly Costs
    - Acupuncture: $1.82
    - Ibuprofen: $10.08
    - Celecoxib: $20.58
  - Thus, the total cost savings per patient for one week of treatments would be $2,476.32 (132 different patients seen at the outpatient acupuncture pain clinic).
  - Acupuncture treatments for pain management as compared to pharmacotherapy (celecoxib) for one year would give us a total cost savings of $128,768.64.
Research: Military Medicine
Evaluating the Efficacy of Acupuncture as a Treatment for Post-Traumatic Stress in Military Personnel

- To evaluate the efficacy and acceptability of acupuncture as a treatment for PTSD in a military population, we conducted a 12-week (8-treatment), randomized, waitlist-controlled trial (n=55).
- Acupuncture was associated with a significant decrease in PTSD Checklist (PCL) symptoms, which was maintained at the 3-month follow-up.
- Symptom reductions were significantly greater in the acupuncture condition than in the waitlist.
- Similar patterns of improvement were seen with symptoms of pain, depression, and psychological functioning.
Research: Military Medicine

- Acupuncture and Integrated CBT for Post-Traumatic Stress Disorder: A Randomized Controlled Pilot Trial
  - People diagnosed with PTSD were randomized to either acupuncture treatment, a group integrated cognitive-behavioral therapy (iCBT), or a wait-list control (WLC).
  - The primary outcome measure was self-reported PTSD symptoms at baseline, end-treatment, and three-month follow-up. Repeated measures MANOVA was used to detect predicted Group X Time effects.
  - Compared to the WLC condition, acupuncture provided large treatment effects for PTSD ($F[1, 46] = 12.60; p < 0.01; \text{Cohen’s } d = 1.29$), similar in magnitude to group iCBT ($F[1, 47] = 12.45; p < 0.01; d = 1.42$) (ACU vs. iCBT, $d = 0.29$).
  - Symptom reductions at end-treatment were maintained at 3-month follow-up for both interventions. Acupuncture may be an efficacious non-exposure treatment option for PTSD.
A Randomized Controlled Study of Mind-Body Skills Groups for Treatment of War-Zone Stress in Military and Veteran Populations.

- A randomized controlled trial (RCT) to study the effectiveness of mind-body approaches (meditation, guided imagery, biofeedback, and yoga) in the treatment of post-traumatic stress disorder and major depression in post-deployment soldiers.
- This study follows the model used in the treatment of post-traumatic stress disorder in war-traumatized children in Kosovo. The study was the first RCT of any intervention with war-traumatized children, and is also the first RCT of a successful, comprehensive mind-body approach with any traumatized population.
Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury Studies Funded in 2008:

- Acupuncture for Combat-Related Post-Traumatic Stress Disorder
- Acupuncture as a Novel Technique for Treating Insomnia in the Outpatient Traumatic Brain Injury population: A Randomized Controlled Trial
- Acupuncture for the Treatment of Trauma-Induced Spectrum Disorder: A Three-Armed Randomized Pilot Study
- Evaluation of a Yoga Intervention for PTSD
- The Impact of Meditation on Veterans with Post-Traumatic Stress Disorder
- Mindfulness and Self-Compassion Meditation for Combat Post-Traumatic Stress Disorder: A Randomized Controlled Trail and Mechanistic Study
Integrative Approach: Team Building Exercise
Case History

- **Background information:** 30 year-old male reported depressed mood and high anxiety with agitation for the past 6 months. Described the many exposures to traumatic events during combat in Iraq.

- **Psychological symptoms:** Recurrent, persistent thoughts, and images of traumatic events, attempts to avoid and suppress thoughts and images, recurrent distressing nightmares, avoidance of situations reminding him of events, feelings of detachment, sleep disturbance, irritability and anger, and exaggerated startle response.

- **Physical symptoms:** Diagnosed with sural nerve palsy in his right foot. Soldier states that he has no feeling on the bottom of his right foot. There is constant pain (6 out of 10 pain scale) located posterior to the lateral malleolus. Pain worsens with movement and with pressure.

- **General appearance:** In acute distress, oriented to time, place, and person, patient did not appear uncomfortable.

- **Pulse/Tongue:** (L)- rapid, slippery, wiry (R)- rapid, slippery, wiry; slight purple, swollen, thin, white coating, with red tip.
Integrative Approach

♦ What is happening with this patient?
♦ What is the acupuncture treatment plan?
  – What meridians are affected?
  – What is the point prescription?
♦ What methods can we use?
♦ What is the integrative medicine treatment plan?
Integrative Approach

♦ What is happening with this patient?
♦ Repeated “reliving” of the event
  – Recurrent, persistent thoughts, and images of traumatic events.
  – Recurrent distressing nightmares.
♦ Avoidance
  – Attempts to avoid and suppress thoughts and images.
  – Avoidance of situations reminding him of events.
♦ Arousal
  – Sleep disturbance, irritability and anger, and exaggerated startle response.
Integrative Approach

♦ What is the acupuncture treatment plan?
  – Reduce anxiety, hyperarousal, irritation, pain, and improve sleep.
  – What is the duration of the treatment?
♦ What meridians are affected?
  – HT?
  – LIV?
  – KID?
  – SP?
  – GB?
♦ What is the point prescription?
  – GB20, GB21, HT7, PC6, SP6, ST36, UB15, UB16, UB20, UB23, LIV3, Yintang.
Integrative Approach

♦ What methods can we use?
  – Cognitive behavioral therapy
  – Pharmacotherapy
  – Acupuncture
  – Medical massage
  – Reiki
  – Meditation
  – Tai-chi
  – Yoga
  – Cardiovascular activities
Integrative Approach

What is the integrative medicine treatment plan?
- Acupuncture and reiki
- Acupuncture vs. pharmacotherapy
- Acupuncture and cognitive behavioral therapy
- Acupuncture and medical massage
- Acupuncture
  - Auriculotherapy
  - Moving cupping
  - Electroacupuncture
  - Acupuncture treatment protocol
Stages of Recovery
Stages of Recovery

A Healing Relationship

Safety

Remembrance & Mourning

Reconnection

Commonality
Stages of Recovery

♦ A Healing Relationship
  – The core experiences of psychological trauma are disempowerment and disconnection from others. Recovery, therefore, is based upon the empowerment of the survivor and the creation of new connections.
  – The first principle of recovery is the empowerment of the survivor. The survivor must be the author and arbiter of their own recovery.

♦ Safety
  – Establishing safety begins by focusing on control of the body.
    • Regulation of bodily functions such as sleep, eating, and exercise, management of post-traumatic symptoms, and control of self-destructive behaviors.
  – Establishing safety with the control of ones environment.
    • The establishment of a safe living situation, financial security, and a plan for self-protection.
Stages of Recovery

♦ Remembrance and Mourning
  – A story of the trauma is reconstructed.
  – Reconstructing the trauma story begins with a review of the patient’s life before the trauma.
  – The telling of the trauma story will inevitably plunge the survivor into profound grief. The descent into mourning is at once the most necessary and the most dreaded task of this stage of recovery.

♦ Reconnection
  – A survivor faces the task of creating a future; they have mourned the old self that the trauma destroyed, now they must develop a new self.
  – A survivor can establish an agenda. They can recover some of their aspirations from the time before the trauma.
  – With peers, they now seek mutual friendships.
Stages of Recovery

♦ Commonality

– Traumatic events destroy the sustaining bonds between individual and community. Those who have survived learn that their sense of self, worth, of humanity, depends upon a feeling of connection to others.

– The solidarity of a group provides the strongest protection against terror and despair, and the strongest antidote to traumatic experience.

– The restoration of social bonds begins with the discovery that one is not alone.

– Nowhere is this experience more immediate, powerful, or convincing than in a group. Because traumatized people feel so alienated by their experience, survivor groups have a special place for the recovery process.

– The encounter with others who have undergone similar trials dissolves feelings of isolation, shame, and stigma.
Western Medicine
Post-Traumatic Stress Disorder

Definition: Post-Traumatic Stress Disorder (PTSD) is an anxiety disorder that develops in response to a traumatic experience and is characterized by the core features of reexperiencing, avoidance behaviors, numbing responsivity, and hyperarousal.
Epidemiology

- Prevalence of PTSD in the U.S. population is estimated to be between 1 and 12 percent.
- Higher in at-risk populations, such as combat veterans, inner-city children, citizens and refugees of post conflict countries, and victims of terrorist attacks.
- On average, 25% of individuals experiencing one or more traumas develop PTSD.
- Symptoms occur in everyone (i.e., 98%)
  - Roughly 80% recover and do not develop PTSD
  - About 20% do not recover and develop PTSD
- Pretraumatic risk factors include: history of prior trauma, psychiatric history, and family psychiatric history.
PTSD Symptom Clusters

♦ Repeated “reliving” of the event
  – Recurrent distressing memories of the event
  – Recurrent dreams of the event
  – Flashback episodes
  – Bodily reactions to situations that remind them of the traumatic event

♦ Avoidance
  – Inability to remember important aspects of the trauma
  – Lack of interest in normal activities
  – Feelings of detachment
  – Sense of having no future
  – Emotional “numbing”
  – Reduced expression of moods

♦ Arousal
  – Outburst of anger
  – Sleeping difficulties
  – Difficulty concentrating
  – Hypervigilance
PTSD Physiological Assumptions

♦ PTSD = Genetic predispositions and BioPsychoSocial vulnerabilities + the experience of war, leading to dysfunction in/damage to structures of the brain, especially the limbic system.
  – Probable changes to the amygdala
  – Probable damage to the hippocampus
  – Chronic over-activation of the HPA axis
The human amygdala (blue) and hippocampus (green).
Pathophysiology of PTSD

♦ Amygdala
  – A medial temporal lobe structure that appears to be involved in the assessment of threat-related stimuli.
  – Plays a crucial role in the process of fear conditioning.
  – High levels of catecholamine and cortisol release during stress enhance the functioning of the amygdala, promoting fear conditioning.
  – Evidence suggests that the amygdala may be hyperresponsive in individuals with PTSD.
    • Increased regional cerebral blood flow (rCBF) in the amygdala.
Pathophysiology of PTSD

- Medial prefrontal cortex
  - Involved in the extinction of fear conditioning and the retention of extinction.
  - There is an abnormal extinction of fear responses in PTSD.
  - Clinically, PTSD patients experience only minimal declines in fear responses over repeated presentations of traumatic reminders.
  - Medial prefrontal cortex is hyporesponsive in PTSD.
    - Decreased regional cerebral blood flow (rCBF) in the medial prefrontal cortex.
Pathophysiology of PTSD

- Hippocampus
  - Involved in memory processing.
  - The hippocampus plays an important role in connecting and organizing different aspects of a memory.
  - Short-term memory loss was associated with diminished right hippocampal volume in PTSD patients.
  - Severe stressors and high levels of stress-related hormones can be associated with memory impairment and hippocampus cell damage.
Neurobiology of PTSD

♦ Hypothalamic-Pituitary-Adrenal (HPA) Axis
  – Chronic HPA axis over-activation.
  – Low levels of cortisol output.
  – Enhanced negative feedback inhibition.
    • Due to a generally increased sensitivity of cortisol receptors.
  – Increase in lymphocyte II glucocorticoid receptors.
    • Deactivation of glucocorticoid receptors in the amygdala during the retrieval process can persistently disrupt a traumatic memory.

♦ Sympathetic-Adrenal-Medullary (SAM) System
  – Increase in SAM system activation is common in PTSD patients.
  – Increase heart rate, blood pressure, and startle response.
  – Increase in plasma catecholamine output (epinephrine & norepinephrine).
Neurobiology of PTSD

♦ Glutamate
  – A major CNS excitatory neurotransmitter.
  – A glutamate receptor, NMDA (N-methyl d-aspartate), mediates learning, extinction, and sensitization.
    • The limbic nuclei, the amygdala, and its associated areas, become sensitized to traumatic reminders and activate these receptors.

♦ GABA
  – Is involved in neuromodulation, mediates cognition, hormonal modulation, and opposes the release of CRH (corticotropin-releasing hormone).
  – Low levels of GABA output is associated with anxiety, hyperarousal, and re-experiencing “kindling” (another form of sensitization).
Noradrenergic sensitization presumably lies at the basis of hyperarousal symptoms.
- Exposure to trauma-related stimuli increases plasma concentrations of NE, EPI, and their metabolites in those with PTSD.
- Intravenous administration of the 2 receptor antagonist yohimbine, which results in increased NE activity, precipitates flashbacks and panic attacks in most PTSD patients.

Opioid dysfunction may underlie some of the numbing symptoms seen in PTSD.
- Conditioned and unconditioned stressors triggers the release of endogenous opioids leading to stress-induced analgesia that can be blocked by opioid antagonists.

Cortisol mediated damage to the hippocampus may underpin problems in memory.
- Neuronal damage to the hippocampus resulting in cognitive impairment.
Neurochemical Alterations in PTSD

- Serotonin depletion may be a factor in the development of depression and aggression.
  - Seems to play numerous roles in the central nervous system, including regulation of sleep, aggression, appetite, cardiovascular and respiratory activity, motor output, anxiety, mood, neuroendocrine secretion, and analgesia.
  - Evidence of serotonergic dysregulation in PTSD includes frequent symptoms of aggression, impulsivity, depression.
- Dopamine dysfunction may mediate symptoms of hypervigilance and paranoia.
  - Reduced activity in the dopamine system, in the prefrontal medial cortex, could lead to excessive and persistent fear of trauma-related cues.
Treatment of PTSD

Trauma releases a shock wave

Stuck “On”

Awake and alert
Day, summer
Night, winter
Sympathetic
Parasympathetic

Stuck “Off”
Treatment of PTSD

♦ Cognitive-Behavioral Therapy
  – Cognitive therapy
    • Identify thoughts about the world and yourself that are making you feel afraid or upset.
    • Learn to replace these thoughts with more accurate and less distressing thoughts.
    • Helps you understand that the traumatic event you lived through was not your fault.

♦ Cognitive-Behavioral Therapy
  – Exposure therapy
    • Goal is to have less fear about your memories.
    • Repeated confrontation of feared stimuli through imagination or in person.
    • Systematic desensitization is one form of exposure therapy where patient repeatedly imagines weak-anxiety-arousing stimulus until stimulus loses ability to evoke anxiety.
Treatment of PTSD

♦ Pharmacotherapy
  – Selective Serotonin Reuptake Inhibitors
    • First line of choice in the treatment of PTSD.
    • Sertraline: effectively reduces symptom clusters of PTSD (hyperarousal, avoidance, intrusion).
  – Adrenergic antagonists
    • Clonidine & propranolol decreases symptoms of nightmares, insomnia, hypervigilance, startle reactions, and anger outbursts.

♦ Pharmacotherapy
  – Tricyclic antidepressants
    • Imipramine
    • Fallen out of favor as first line treatment for PTSD.
    • More side effects than SSRIs.
  – Monoamine Oxidase Inhibitors
    • Powerful antidepressant & antipanic agents.
    • But strict dietary, alcohol restrictions.
  – Benzodiazepines
    • No positive findings to prescribe to PTSD patients.
Art Therapy
I FEEL LIKE A STUCK PIG!!!!

OH YEAH... THAT'S IT SCOTT... I GOT IT...

YEAH!!!!
BULL'S EYE!
HIGH-SCORE!
Patient Education

♦ Exercise regularly
  – Psychological well-being increases with physical exercise.
♦ Cardiovascular exercise is recommended
  – Water polo, swimming, walking.
♦ Use relaxation methods
  – Meditation, yoga, tai-chi.
Traditional Chinese Medicine
TCM Etiology & Pathology

- **Phlegm**
  - Tends to linger.
  - Can cause heat.
  - Effects the heart.

- **Dampness**
  - Tends to linger.
  - Has a downward action.
  - Can cause heat.
  - Effects the spleen.

- **Heat**
  - Has a rising and ascending action.
  - Effects the head and facial areas.
  - Effects the heart.
  - Impair body fluid.
The Seven Affects
- Joy: Too much joy damages the heart.
- Anger: Prolonged anger also damages the liver.
- Thought: Too much thinking damages the spleen.
- Sorrow: Excessive sorrow damages the lungs.
- Fear: Prolonged fear damages the kidneys.
- Anxiety: Damages the heart and the spleen.
- Fright: Damages the heart and the gallbladder.
In Chinese Medicine, PTSD is caused primarily by recurrent stimulation of the seven affects: joy, thought, anxiety, sorrow, fear, fright, and anger.

This recurrent stimulation can internally damage three main viscera of the spleen, heart, and liver.

The dysfunction of the viscera can then result in the disturbance of qi and blood.

The liver and spleen have a reciprocal relationship where a dysfunction in one viscera can affect the other.

- Excessive anger mainly affects the liver, causing qi stagnation and resulting in spleen qi vacuity.
- Persistent liver qi stagnation leads to the accumulation of fire that can damage yin fluids.
- Fire tends to have an upward effect that results in the disturbance of the heart and disquiets the spirit.
TCM Etiology & Pathology

♦ Excessive worrying, over-thinking, and anxiety can damage the heart and the spleen, causing heart-blood and spleen qi vacuity.
  – The heart lacks nourishment and the spirit will become disquieted.
♦ Excessive fear and fright, the qi mechanism becomes depressed and stagnant.
  – Leads to blood stagnation and the obstruction of the heart vessels.
TCM Pathogenesis

- Recurrent Stimulation
  - Damage Viscera
    - Dysfunction of Qi and Blood
      - Disturbance of the Heart
TCM Treatment

- Acute phase:
  - Heat
    - Tends to rise and impair body fluids.
  - Phlegm
    - Tends to linger
    - Causes heat and effects the heart.

- Chronic phase:
  - Heat accumulation over long periods of time.
  - Leads to blood stasis, qi deficiency, and yin deficiency.
  - Need to clear phlegm, drain dampness, eliminate heat, nourish yin and tonify qi.
TCM Treatment

♦ Acute phase:
  – Usually affects the heart and liver.
  – Differentiation pattern of heart-fire, heart phlegm fire and liver-heat.
  – Agitation, anger, palpitations, nightmares, frequent panic attacks, difficulty falling asleep.

♦ Chronic phase:
  – Usually affects the spleen, the heart, and the kidney.
  – Differentiation pattern of qi deficiency, blood stasis, and yin deficiency.
  – For yin deficiency, there is usually a persistence of the disease.
TCM Differentiation

♦ Heart-fire (acute phase):
  - Symptoms- Palpitations, mind races, thirst, difficulty falling asleep, short voidings of reddish urine, and constipation, red tongue body with thin yellow coating, rapid pulse.
  - Points- LI11, HT3, HT7, Yintang, Anmian, LIV2, REN15, PC7.

♦ Liver-heat (acute phase):
  - Symptoms- Outbursts of anger, dream-disturbed sleep, irritability, stress & anxiety, thirst, red tongue with thin yellow coating, rapid pulse.
  - Points- LI11, LIV2, LIV3, Yintang, Ear-Shenmen, Anmian, GB21.
  - Herbs- Long Dan Cao, He Huan Pi, Huan Qin, Zhi Zi, Chai Hu.
TCM Differentiation

♦ Heart phlegm fire (acute phase):
  – Symptoms- Mental confusion, lack of mental clarity, palpitations, restlessness, incoherent speech, rash behavior, tendency towards hitting a/or scolding people, uncontrollable laughter a/or crying, yellow urine, red tongue body with thin yellow coating, slippery, and rapid or wiry pulse.
  – Points- PC5, HT7, HT8, PC7, REN15, ST40, Yintang.
  – Herbs- Huang Lian, Huang Qin, Zhi Shi, Ban Xia, Zhu Ru, Fu Shen, Yuan Zhi, Dan Nan Xing, Chuan Xiong.

♦ Heat leading into liver qi stagnation (chronic phase):
  – Symptoms- Poor appetite, depression, irritability, fatigued, anger, purple tongue with thin white coating, pulse is choppy.
  – Points- SP6, PC6, UB18, LIV2, ST36, LI4, LIV3, LI11, Yintang.
  – Herbs- Chai Hu, Bai Shao, Fu Ling, Bai Zhu, Mu Dan Pi, Zhi Zi, Dang Gui, Sheng Jiang, Gan Cao, Bo He.
TCM Differentiation

- Heart blood deficiency with spleen qi deficiency (chronic phase):
  - Symptoms- Anxiety, insomnia, profuse dreams, impaired memory, lassitude of the spirit, lack of strength in the limbs, loose stools, shallow facial complexion, excessive worry, fatigue, pale tongue with thin, white coating, thin, weak pulse.
  - Points- HT7, PC6, SP6, ST36, UB15, DU20.
  - Herbs- Fu Shen, Huang Qi, Yuan Zhi, Long Yan Rou, Bai Zhu, Dang Gui, Suan Zao Ren, Mu Xiang, Ren Shen.

- Phlegm accumulation leading to yin deficiency (chronic phase):
  - Symptoms- Mental exhaustion, fear and dread, agitation, tinnitus, dizziness, insomnia, heart palpitations, night sweats, low back and knee soreness, insomnia, dry throat, and thirst, dry and red tongue body with thin coating or no coating, thready and slippery pulse.
  - Points- KID3, KID7, KID2, UB23, ST40, SP6, HT7, LIV8, SP10.
  - Herbs- Xuan Shen, Yuan Zhi, Bai Zi Ren, Sheng Di Huang, Zhi Mu, Gua Lou, Fu Ling, Long Gu, Huang Bai.
TCM Differentiation

- Heart qi and blood stasis (chronic phase):
  - Symptoms- Anxiety, insomnia, profuse dreams, impaired memory, lassitude of the spirit, lack of strength in the limbs, loose stools, shallow facial complexion, excessive worry, fatigue, pale tongue with thin, white coating, thin, weak pulse.
  - Points- HT7, PC6, LIV3, LI4, REN17, UB15, UB16.
  - Herbs- Dan Shen, Dang Gui, Chuan Xiong, Chi Shao, Tao Ren, Hong Hua, Chai Hu, Zhi Ke, Xiang Fu, Yu Jin, Long Chi, Yuan Zhi, Hu Po.
Integrative Approach
Intensive Outpatient Pilot Pain Program

- Program Sponsor: Manakai O Malama Integrative Healthcare
- Clinical Services: Pain management, preventive medicine, primary care, occupational medicine, family medicine, osteopathy, psychology, acupuncture/Traditional Chinese medicine, physical therapy, therapeutic massage, nutritional counseling
- Partner: Hawaii Medical Services Association & 2 worker's compensation carriers
- Outcomes (Quality of Life): Improvement on all subjective, quality of life measures
- Outcomes (Use of Opiates): 79% were on these medications to start, 50% of those on opiates ended use
- Outcomes (Disability): 64% were disabled, prior to study, 85% of these returned to work
- Cost of Program: approximately $10,000 per participant
Integrative Approach: Ft. Bliss Restoration & Resilience Center
Restoration & Resilience Center Treatment Approach

♦ Standard Behavioral Health Approach:
  – Medicate the central nervous system leading to changes in cognition, emotion, and behavior.
  – Psychotherapy to help cope with symptoms.
  – Mostly treats inside out.

♦ Alternative Medical Effect:
  – Intervene physiologically to reduce arousal (free qi and energy) leading to changes in cognition, emotion, and behavior.
  – Cumulative effect leading to physiological changes (i.e., melatonin, cortisol, fMRI neuronal signal reduction in the limbic system) and reduction in hypertonicity and hyperarousal.
Treatment Framework: Restoration & Resilience Center

♦ Agoraphobia/claustrophobia reduction track
♦ Goal: Increase soldier's tolerance for public places, crowds, enclosed areas.
♦ Interventions: Therapeutic outings to challenging public places (malls, bowling alley, Carlsbad Caverns).
Treatment Framework: Restoration & Resilience Center

♦ Cognitive-behavior track
♦ Goal: Reduce Soldier's cognitive distortions and errors related to combat experience.
♦ Interventions: Individual and group psychotherapy with CBT interventions.
Treatment Framework: Restoration & Resilience Center

♦ Cognitive rehabilitation track
♦ Goal: Reduce soldier's hyperarousal to increase ability to focus and attend, and improve memory functioning (encoding and retrieval) through hippocampal rehabilitation.
♦ Interventions:
  - Hyperarousal reduction: Acupuncture, biofeedback, reiki, medical massage, daily power walk, daily physical training, water polo, and movement therapies (tai-chi, qi-gong, yoga).
  - Improvement in Memory Functioning: Brain Train (computer-based cognitive rehabilitation program).
Treatment Framework: Restoration & Resilience Center

♦ Emotional/grief work track
♦ Goal: Reduce Soldier's negative emotional valence attached to distressing combat memories/images.
♦ Interventions: Individual and group psychotherapy, expressive (art) therapy focused on emotional processing and grief work.
Treatment Framework: Restoration & Resilience Center

- Military reintegration track
- Goal: Increase Soldier's ability to tolerate combat-simulated environments and activities.
- Interventions: Engagement Skills Trainer (EST) 2000 (indoor simulated firing range); brief group missions (day-long Habitat for Humanity mission) Planned: live range firing, shoot houses, IED lane, week-long Habitat for Humanity mission.
Treatment Framework: Restoration & Resilience Center

♦ Physical arousal reduction track
♦ Goal: Reduce soldier's physical agitation, startle response, muscular hypertonicity.
♦ Interventions: Acupuncture, biofeedback, reiki, medical massage, daily power walk, daily physical training, water polo, and movement therapies (tai-chi, qi-gong, yoga).
Treatment Framework: Restoration & Resilience Center

♦ Re-socialization track
♦ Goal: Increase soldier's tolerance for/ability to engage in social interaction with comrades, friends, family.
♦ Interventions: Recreation room at Center, Therapeutic Outings (planetarium, golf, bumper cars, water polo, social events at Center).
Treatment Framework: Restoration & Resilience Center

♦ Spiritual (Meta-Cognitive) Healing Track

♦ Goal: Help soldiers recoalesce a cohesive, reliable, robust self, reconceptualize a "meaning" for their lives, work through issues of death & dying, and (if appropriate) develop a more mature concept of deity that can be 'squared' with their combat experience.

♦ Interventions: Individual/group psychotherapy, counseling by facility chaplain, cross-cultural group experiences (Native American sweat lodge, Apache warrior healing ritual, etc.).
Integrative Approach: Warrior Combat Stress Reset Program
Warrior Combat Stress Reset Program

Treatment Approach

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  – Medicate the central nervous system leading to changes in cognition, emotion, and behavior.
  – Psychotherapy to help cope with symptoms.
  – Mostly treats inside out.

♦ Alternative Medical Effect:
  – Intervene physiologically to reduce arousal (free qi and energy) leading to changes in cognition, emotion, and behavior.
  – Cumulative effect leading to physiological changes (i.e., melatonin, cortisol, fMRI neuronal signal reduction in the limbic system) and reduction in hypertonicity and hyperarousal.
Treatment Framework: Warrior Combat Stress Reset Program

- Cognitive-behavior track
- Goal: Reduce Soldier's cognitive distortions and errors related to combat experience.
- Interventions: Individual and group psychotherapy with CBT interventions.
Treatment Framework: Warrior Combat Stress Reset Program

♦ Cognitive rehabilitation track
♦ Goal: Reduce soldier's hyperarousal to increase ability to focus.
♦ Interventions:
  - Hyperarousal reduction: Acupuncture, biofeedback, reiki, medical massage, and movement therapies (tai-chi, qi-gong, yoga).
Treatment Framework: Warrior Combat Stress Reset Program

- Emotional/grief work track
- Goal: Reduce Soldier's negative emotional valence attached to distressing combat memories/images.
- Interventions: Individual and group psychotherapy, expressive (art) therapy focused on emotional processing and grief work.
Treatment Framework: Warrior Combat Stress Reset Program

♦ Physical arousal reduction track
♦ Goal: Reduce soldier's physical agitation, startle response, muscular hypertonicity.
♦ Interventions: Acupuncture, biofeedback, reiki, medical massage, and movement therapies (tai-chi, qi-gong, yoga).
Case Study
Acupuncture Treatment Protocol

♦ Acupuncture point prescription combined front and back treatments to avoid point fatigue (tolerance due to frequent use).
♦ Front treatment included acupuncture points bilaterally at GB21 (reduce), ST36 (reduce), SP6 (reduce), LIV3 (reduce), and one point at Yintang (reduce).
♦ Back treatment included acupuncture points bilaterally at UB15 (reduce), UB16 (reduce), UB18 (reduce), UB20 (reduce), UB23 (reduce), GB20 (reduce), PC6 (reduce), HT3 (reduce).
♦ Up to 2 flexibly prescribed points could be added to the standard acupuncture protocol points.
♦ Different needling techniques were used to address the patient’s diagnosis or constitution.
Acupuncture Treatment Protocol

- Aishi points were used on an as needed basis to treat a specific pain area.
- Each treatment session lasted one hour.
- Each patient were seen once a week for six months.
- Needles were inserted at a depth of $\frac{1}{4}$ to $\frac{1}{2}$ inch and manually stimulated to produce De Qi sensation.
- Vaccaria seeds (ear seeds) were placed at shenmen, heart, nervous subcortex, sympathetic, liver, and neurasthenia area after each treatment. All six auricular points were used, three in each ear.
- Patients were asked to massage each point at least 10 minutes per day for one week.
# Acupuncture Treatment Protocol

<table>
<thead>
<tr>
<th>Function/Indication</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear phlegm</td>
<td>ST40</td>
</tr>
<tr>
<td>Drains dampness</td>
<td>SP9</td>
</tr>
<tr>
<td>Tonifies kidney</td>
<td>KID2, KID3, UB23 or KID6</td>
</tr>
<tr>
<td>Moves liver qi</td>
<td>Gan Wang, LIV2</td>
</tr>
<tr>
<td>Tonifies yin</td>
<td>LIV8</td>
</tr>
<tr>
<td>Moves qi and blood</td>
<td>LI4, and LIV3</td>
</tr>
<tr>
<td>Calms the mind</td>
<td>Anmian, Ear-Shenmen, HT7, PC6, PC7</td>
</tr>
<tr>
<td>Tonifies qi and blood</td>
<td>ST36, SP6</td>
</tr>
</tbody>
</table>
Case History

- **Background information**: 35 year-old male reported depressed mood and poor attitude for 4 months. Described the many exposures to traumatic events starting with the Oklahoma City federal building bombings, the 9/11 Twin Towers, Hurricane Katrina, and combat in Iraq.

- **Psychological symptoms**: Recurrent, persistent thoughts, and images of traumatic events, attempts to avoid and suppress thoughts and images, obsessional behaviors to rid self of guilt and anxiety, recurrent distressing nightmares, avoidance of situations reminding him of events, feelings of detachment, sleep disturbance, irritability and anger, hypervigilence, and exaggerated startle response.

- **General appearance**: In acute distress, oriented to time, place, and person, patient did not appear uncomfortable.

- **Current medications**: Prazosin, hydroxyzine, zolpidem, citalopram, sumatriptin, promethazine.
Case Study

- 1st treatment on 6/10/08
- **Subjective:** Left hand numbness. Starts from scapula and ends at index and middle finger. Neck pain, has a hard time turning head. Pain scale: 3/10. Has anxiety, depression, hyperarousal, can’t sleep. Left treatment with less hand numbness and his neck had full range of motion.
- **Objective:** Behavior demonstrated psychomotor agitation, mood was frustration, anxious, and anger. Affect was full-ranging, irritable, agitated. Affect was congruent with the mood. Thought content revealed no impairment. Left hand numbness traveled through heart meridian.
- **Pulse/Tongue:** (L)- slippery, (R)- slippery; slight purple, swollen, thin, white coating, red tip with red prickles throughout the upper-half of the tongue.
- **TCM Diagnosis:** PTSD with heart shen disturbance and liver depression.
- **Points:** Standard acupuncture treatment protocol with acupuncture points at HT3, SJ5, LI11, baxie, HT1 and HT3 for left hand numbness, and one aishi point for neck pain.
Case Study

♦ 5th treatment on 6/24/08

♦ **Subjective**: Migraines at a pain scale of 7 out of 10. Starts at base of the neck and ends at the temples. Is also photosensitive to light. Anxiety, agitation, and anger has improved. Not as depressed. Fell asleep during treatment. Left treatment with no migraine and less photosensitivity.

♦ **Objective**: Frustration, anxiety, and anger has improved. Thought content revealed no impairment.

♦ **Pulse/Tongue**: (L)- wiry, (R)- slippery; slight purple, swollen, thin, white coating, red tip with red prickles throughout the upper-half of the tongue.

♦ **TCM Diagnosis**: PTSD with heart shen disturbance and liver depression.

♦ **Points**: Standard acupuncture treatment protocol with acupuncture points at GB20, UB2, GB14, Yuyao, Taiyang and one aishi point for neck pain.
Case Study

- 8th treatment on 7/21/08
- **Subjective**: Has had no migraines for three weeks since acupuncture treatment. Sleep is good. Has no left arm numbness or pain in HT meridian. Still has nightmares. Panic attacks and anxiety are much better. Depression has improved. Left shoulder pain with rotating of neck that is located on top of trapezius. Pain scale 3/10. Left treatment with no pain and less anger.
- **Objective**: Frustration, anxiety, and anger has improved. Thought content revealed no impairment.
- **Pulse/Tongue**: (L)- wiry, (R)- slippery; slight purple, swollen, thin, white coating, red tip throughout the upper-half of the tongue.
- **TCM Diagnosis**: PTSD with heart shen disturbance and liver depression.
- **Points**: Standard acupuncture treatment protocol with acupuncture points at three aishi points for left shoulder pain.
When to Use Combination Therapies
Massage Therapy & Acupuncture

♦ Pain management
♦ Reduced physical arousal reduction
  – Muscular hypertonicity
  – Physical agitation
♦ Reduced hyperarousal
♦ Reduced anxiety and stress
Reiki & Acupuncture

- Pain management
- Reduced physical arousal reduction
  - Muscular hypertonicity
  - Physical agitation
- Reduced hyperarousal
- Reduced anxiety
- Insomnia
  - Had better sleep, more rested.
Biofeedback & Acupuncture

- Reduced physical arousal reduction
  - Muscular hypertonicity
  - Physical agitation
- Reduced hyperarousal
- Reduced anxiety
- Insomnia
  - Had better sleep, more rested.
Pharmacotherapy vs. Acupuncture

- **Depression**
  - Combinatorial approach of pharmacotherapy and acupuncture provided good outcomes.

- **Anxiety**
  - Combinatorial approach of pharmacotherapy and acupuncture provided good outcomes.

- **Pain management**
  - Acupuncture provided good outcomes with no side effects.
  - Pain medications seem to have side effects of drowsiness, dizziness, constipation, sedation, and depression with possible long-term effects of dependency.

- **Insomnia**
  - Acupuncture combined with medications provided good results.
Auriculotherapy with Electroacupuncture (EA)
Auriculotherapy with EA

♦ A method that combines traditional filiform needling methods with pulse current stimulation.
♦ EA strengthens stimulation of the acupoints and improves the therapeutic effects.
♦ Treatment protocol
  – After insertion of needles and deqi is obtained, electricity is passed through pairs of needles to give a continued stimulation for a duration of 20-30 minutes.
  – Points used shenmen, heart, nervous subcortex, sympathetic, liver, neurasthenia area. All six auricular points are used, three in each ear.
  – Treats hyperarousal, irritability, anger, palpitations, anxiety, and insomnia.
Moving Cupping
Moving Cupping
NADA Protocol
NADA Protocol

- A method that combines traditional filiform needling methods in a group setting.

- Treatment protocol
  - Treatments occur in a group setting and occurs 3 times per week.
  - Treatments lasts 30 to 45 minutes.
  - Uses the 5 needle ear technique insertion into the sympathetic, shenmen, kidney, liver, and lung.
  - Treats irritability, anger, palpitations, anxiety, insomnia, and smoking cessation.
Compassion Fatigue
Compassion Fatigue

- A term that refers to a gradual lessening of compassion over time.
- Healthcare providers exhibit several symptoms including hopelessness, a decrease in experiences of pleasure, constant stress and anxiety, and a pervasive negative attitude.
- This can have detrimental effects on individuals, both professionally and personally, including a decrease in productivity, the inability to focus, and the development of new feelings of incompetency and self doubt.
Compassion Fatigue

♦ Self-Maintenance
  – Qi-Gong
  – Medical Massage
  – Yoga
  – Tai Chi
  – Acupuncture
  – Reiki
♦ Leave Work at Work
Conclusion
Conclusion

♦ Integrative approach provided good outcomes.
♦ Be supportive and listen to your patients.
♦ Meditate, relax, and meditate some more.
♦ Take care of your body.
   – Qi-Gong
   – Tai Chi
   – Medical massage
   – Reiki
♦ Alternate your methods.
♦ Most important, be flexible.
Questions???