STRONG STAR Multidisciplinary PTSD Research Consortium Studies

TREATMENT STUDIES

1. Prolonged Exposure for PTSD among OIF/OEF Personnel: Massed vs. Spaced Trials

Principal Investigator: Edna Foa, PhD, Director, Center for the Treatment and Study of Anxiety at the University of Pennsylvania

Research Focus: With a large body of evidence showing that Prolonged Exposure (PE) therapy can be used to treat PTSD effectively and efficiently, this randomized clinical trial by STRONG STAR seeks to determine if it can be delivered even more efficiently so as to better serve the needs of military patients. PE traditionally includes 8 to 12 sessions spread out over the course of 5 to 12 weeks. Dr. Foa has designed this study to see if the timeframe can be condensed without decreasing the treatment's efficacy. Specifically, she will compare a standard outpatient treatment approach for PTSD consisting of 10 treatment sessions spaced over 8 weeks to the same amount of treatment delivered in a massed format consisting of 10 sessions of daily treatment over a 2-week period. If the massed treatment delivered in a 2-week period is as effective as the standard 8-week treatment approach, it will offer a valuable treatment option for military personnel.

Status of Study: Enrollment closed. Investigators analyzing data and reporting study findings.

Study Site: Carl R. Darnall Army Medical Center (Fort Hood, TX)

2. Cognitive Processing Therapy for Combat-Related PTSD

Principal Investigator: Patricia Resick, PhD
Director of the National Center for PTSD, VA Boston Healthcare System

Research Focus: In an effort to find the most efficient way of delivering one of the gold standard treatments for PTSD, this randomized clinical trial will evaluate the efficacy of Cognitive Processing Therapy (CPT) in an individual versus a group setting. STRONG STAR investigators will compare the delivery of CPT in individual versus group settings to see if this more efficient delivery method maintains its efficacy. They also will compare group-administered CPT to another type of supportive group therapy; test the efficacy of CPT for the first time with active-duty military personnel; and examine predictors of treatment outcome, such as gender, race and ethnicity, and comorbid conditions, along with the effect of multiple deployments and traumatic brain injury.

Status of Study: Enrollment closed. Investigators analyzing data and reporting study findings.

Study Site: Carl R. Darnall Army Medical Center (Fort Hood, TX)

3. Treatment of Chronic Stress Reaction and Chronic Pain after Traumatic Orthopedic Injury: A Randomized Clinical Trial

Principal Investigator: Robert Gatchel, PhD, The University of Texas at Arlington

Research Focus: Because orthopedic trauma can frequently lead to comorbid pain and PTSD symptoms, and because research suggests that patients coping with both chronic pain and PTSD symptoms respond poorly to treatment targeting only one diagnosis, this novel investigation will examine the effects of combining preventive pain and PTSD treatments for trauma patients. Researchers will identify the comorbidity of orthopedic trauma and traumatic stress in an active-duty military population and evaluate a preventive behavioral health treatment strategy aimed at helping to retard or halt the development of PTSD and chronic pain. The investigators hypothesize that treating individuals with chronic pain and PTSD symptoms through a proven psychosocial model will help to improve psychological, socioeconomic and physical symptoms of these chronic clinical syndromes; facilitate the return to active duty of military personnel living with pain and traumatic stress; and have a positive impact on other psychosocial and socioeconomic outcomes such as work retention, additional health-care utilization, depression symptoms, health-related quality of life, and perceived disability.

Status of Study: Enrollment closed. Investigators analyzing data and reporting study findings.

Study Sites: San Antonio Military Medical Center, Joint Base San Antonio – Ft Sam Houston
Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio – Lackland
South Texas Veterans Health Care System (San Antonio)

4. Alcohol Use Disorder in PTSD Patients Treated with SSRIs: An Alcoholic Subtype Hypothesis of Vulnerability

Principal Investigator: John Roache, PhD, The University of Texas Health Science Center at San Antonio

Research Focus: This randomized clinical trial will examine how comorbid alcohol dependence impacts the effectiveness of selective serotonin reuptake inhibitors (SSRIs), the only FDA-approved medication for the long-term treatment of PTSD, when used in combination with cognitive-behavioral therapy. In two separate investigations, researchers will classify participants by subtypes of alcoholism (Type A or Type B) and examine the two groups' varying response to SSRI treatment. Based on these observations, researchers hope to identify baseline predictors of response to SSRI treatment, giving clinicians a valuable tool to assess who would benefit from such therapy and who would be neutrally or even negatively affected by it. This would allow treating physicians to tailor their patients' therapies accordingly.

Status of Study: Enrollment closed.

Study Sites: Central Texas Veterans Health Care System (Waco);
South Texas Veterans Health Care System (San Antonio)

5. Individual PE vs. Couples' Cognitive-Behavioral Therapy for Combat-Related PTSD

Principal Investigator: Candice Monson, PhD, Ryerson University, Canada

Research Focus: Recognizing the impact that an individual's PTSD can have on relationships with loved ones, as well as the importance of social support in a patient's effort to recover from the disorder, this STRONG STAR trial will examine the efficacy of Cognitive-Behavioral Conjoint Therapy (CBCT) in treating a sample of active-duty military personnel who have recently returned from combat deployments. This randomized clinical trial will compare traditional Prolonged Exposure therapy, which involves only the individual service

member, to CBCT, which involves the service member and his or her spouse. It also will include behavioral communication skills training in addition to psychoeducation and cognitive interventions based on Cognitive Processing Therapy. Because the CBCT protocol addresses both individual and couple-level distress, researchers expect to see greater improvement in couple functioning with this treatment as they explore the role that military spouses can play in PTSD treatment and recovery.

Status of Study: Enrollment closed.

Study Sites: San Antonio Military Medical Center, Joint Base San Antonio – Ft Sam Houston
Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio – Lackland
Carl R. Darnall Army Medical Center, Ft Hood, Texas

6. Brief Cognitive Behavioral Treatment of Deployment-Related PTSD in Primary Care Settings: A Randomized Controlled Trial

Principal Investigator: Lt Col Jeffrey Cigrang, PhD
Wright-Patterson Air Force Base, Ohio

Research Focus: In this study, STRONG STAR investigators have developed and are evaluating a condensed cognitive-behavioral therapy (CBT) for PTSD that can be implemented by mental health providers working in an integrated primary care setting. It is believed that treatment in this setting might be better utilized by patients than treatment at a mental health clinic because of its more discreet nature and decreased stigma, and because the shorter sessions would more easily fit into a busy work schedule. Following completion of a successful pilot study, this randomized controlled trial seeks to determine whether this treatment delivery method is well received by military personnel; its efficacy in reducing PTSD symptoms; and the level of PTSD severity that is appropriate for this form of treatment.

Status of Study: Enrollment closed. Investigators analyzing data and reporting study findings.

Study Sites: San Antonio Military Medical Center, Joint Base San Antonio – Ft Sam Houston
Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio – Lackland
Joint Base San Antonio – Randolph

7. Outcomes of Prolonged Exposure and Cognitive Processing Therapy used in the Treatment of Combat Operational Stress Reactions in Deployed Settings

Principal Investigator: Lt Col Alan L. Peterson, PhD, ABPP (U.S. Air Force, Retired)
The University of Texas Health Science Center at San Antonio

Research Focus: The military's long-standing policy on mental health therapy during combat deployment is that brief treatment should be provided near the battlefield and as soon as possible to increase the likelihood of a positive outcome. In addition, more than 500 military mental health professionals have been trained to provide Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT), two cognitive-behavior therapies shown to be effective in treating civilian patients with non-combat-related PTSD. However, little to no research has been conducted on the use of early interventions for PTSD with active-duty military personnel serving in a deployed setting, where the unique environment could impact both the delivery and outcome of treatment. This pilot study will allow researchers to collect and evaluate outcome measures of 40 deployed U.S. military personnel who show symptoms of combat operational stress reactions, including PTSD and acute stress disorder, and who receive CPT or PE therapy from military mental health providers in Iraq. Researchers will assess the reduction in symptoms upon completion of therapy and how well treatment gains are maintained after 3- and 6-

month follow-up periods. Their findings will provide much-needed insight on the efficacy of the leading non-pharmacologic treatments for stress-related disorders when delivered "in theater." They anticipate positive results that will lead to a randomized clinical trial.

Status of Study: Closed to enrollment; clinical phase complete. Researchers are analyzing results and preparing findings for presentation and publication.

Study Sites: Designated U.S. military sites in Afghanistan

BIOLOGICAL STUDIES

8. Genetic and Environmental Predictors of Combat-Related PTSD

Principal Investigator: Douglas E. Williamson, PhD,
The University of Texas Health Science Center at San Antonio

Research Focus: In an effort to guide the development of new and improved preventions and treatments for PTSD, this study will use assessments and biological data from service members prior to and following deployment to examine the interaction and influence and genetic and environmental factors on PTSD susceptibility.

Status of Study: Enrollment closed. Currently conducting follow-ups with study participants.

Study Sites: Carl R. Darnall Army Medical Center (Ft. Hood, TX)

9. Neuroimaging Studies of PTSD and PTSD Treatment among Combat Veterans

Principal Investigator: Peter Fox, MD, University of Texas Health Science Center at San Antonio

Research Focus: In this STRONG STAR investigation, researchers will apply advanced neuroimaging methods to study PTSD in the context of ongoing treatment trials to address 1) the underlying neuroanatomical pathology of PTSD (changes in the anatomy of the nervous system or nervous tissue that accompany the development of PTSD); 2) the underlying pathophysiology of PTSD (functional changes in the brain that are associated with the disorder); and 3) neurobiological changes corresponding with successful PTSD treatment. The ultimate goal is to shed light on the underlying neurobiology of PTSD in hopes of developing more effective, targeted treatment interventions. Study participants will be recruited from one STRONG STAR clinical trial using cognitive-behavioral therapy to treat PTSD; a second STRONG STAR trial looking at the influence of alcohol dependence and alcoholic subtype on response to drug therapy for PTSD; and a control group of soldiers who returned from deployment to Iraq without PTSD. Using a combination of state-of-the-art brain imaging methods and various cognitive and emotional tests and physical challenges, researchers will look for PTSD-specific patterns of brain activity in PTSD patients compared to the control group, as well as for changes in patterns of brain activity associated with successful PTSD treatment.

Status of Study: Enrollment closed. Investigators are analyzing results and publishing study findings.

Study Sites: South Texas Veterans Health Care System, San Antonio (recruitment site);
Carl R. Darnall Army Medical Center, Fort Hood, TX (recruitment site);
University of Texas Health Science Center at San Antonio (performance site)

EPIDEMIOLOGICAL STUDIES

10. Prevalence of Fibromyalgia in PTSD Patients and Family Members

Principal Investigator: Col Jay B. Higgs, MD, (U.S. Air Force, Retired)
San Antonio Military Medical Center

Research Focus: Due to the significant overlap between PTSD and a painful rheumatic disorder known as fibromyalgia, this exploratory study seeks to determine whether it is important to assess for fibromyalgia in active-duty military personnel with PTSD. As part of this research effort, PTSD patients enrolled in STRONG STAR clinical trials at Fort Hood will be asked to consent to an additional study in which they will be screened for fibromyalgia. Investigators will then calculate the prevalence of fibromyalgia among PTSD patients and observe its influence on their prognosis. The prevalence of fibromyalgia among patients' spouses who are willing to consent to screening will be similarly investigated, as researchers look for secondary familial consequences of PTSD. Study findings could shed light on yet another painful effect of PTSD and reveal additional complications for health care professionals to consider when treating PTSD or fibromyalgia.

Status of Study: Enrollment closed. Investigators analyzing data and reporting study findings.

Study Sites: Carl R. Darnall Army Medical Center (Ft. Hood, TX)

11. The Impact of the Treatment of PTSD on Comorbid Insomnia and Pain

Principal Investigator: COL Stacey Young-McCaughan, PhD, RN (U.S. Army, Retired)
The University of Texas Health Science Center at San Antonio

Research Focus: This exploratory study for STRONG STAR will evaluate the interrelation of comorbid insomnia, pain and PTSD as seen in participants of other STRONG STAR randomized clinical trials focused on the treatment of combat-related PTSD. In particular, Dr. Young-McCaughan will perform an in-depth analysis to determine if the successful treatment of PTSD in turn reduces comorbid insomnia and pain, or whether additional therapies are needed to treat these conditions. Conversely, she will analyze whether comorbid insomnia and/or pain have a negative effect on participants' response to PTSD therapy, potentially indicating that these comorbidities need to be specifically targeted in an effective PTSD treatment plan. Additional insights gained from this investigation could improve the ability of mental health professionals to tailor patients' treatment to achieve the best possible outcomes.

Status of Study: Preliminary data review underway.

Study Sites: Analyses will include data from all STRONG STAR study sites.

12. Who gets better and why? Predicting Outcome Trajectories in STRONG STAR Trials

Principal Investigator: Brett Litz, PhD,
Massachusetts Veterans Epidemiological Research and Information Center, VA Boston Health Care System; and Professor, Boston University School of Medicine

Research Focus: Adaptation to military operational stress and trauma is an unfolding dynamic, impacted

by a complex web of biological, social, and service-related risk and resilience factors. Likewise, there are multiple courses of adjustment, or maladjustment, that individuals follow in their response to stress and trauma over time, as well as in their response to treatment interventions; the causes of these different "trajectories of response" remain unknown. This study will utilize the comprehensive dataset developed from all STRONG STAR trials to perform a variety of analyses aimed at providing knowledge to inform decisions about how best to prevent problems in those most at risk for PTSD and tailor treatments for maximum benefit. Researchers will evaluate the prevalence of four possible trajectories of response to treatment: recovery/positive outcome course; resilience course; relapse course; and a chronic worsening course, as well as the particular psychological, social, and service-related risk and resilience variables that correspond with each trajectory. These variables could become valuable predictors of how an individual will respond to war-zone trauma and to various treatments for PTSD among service members. Ultimately, STRONG STAR investigators believe their findings can be used to support evidence-based decisions about primary and secondary prevention of chronic deployment-related mental health problems, especially PTSD.

Status of Study: Preliminary data review underway.
Study Sites: Analyses will include data from all STRONG STAR study sites.

13. STRONG STAR Repository

Principal Investigator: Alan Peterson, PhD,
The University of Texas Health Science Center at San Antonio

Research Focus: The STRONG STAR Repository will establish a comprehensive database of clinical and biological information collected from human subjects participating in various STRONG STAR clinical trials. This database will be used to support the efforts of STRONG STAR investigators and to help address future questions that arise from their research. A future aim of STRONG STAR, in accordance with federal and Department of Defense guidelines, is to make this resource widely available to support investigations by other researchers for future study of combat-related PTSD.

Status of Study: Repository is being implemented concurrently with ongoing STRONG STAR clinical trials.

Study Sites: Repository information and samples will be collected from all STRONG STAR study sites:
Carl R. Darnall Army Medical Center, Ft Hood, Texas
San Antonio Military Medical Center, Joint Base San Antonio – Ft Sam Houston
Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio – Lackland
South Texas Veterans Health Care System, San Antonio
University of Texas Health Science Center at San Antonio

PRECLINICAL RESEARCH

14. Mechanisms of Vulnerability to PTSD: The Role of Early Life Stressors

Principal Investigator: Randy Strong, PhD,
The University of Texas Health Science Center at San Antonio

Research Focus: This preclinical trial is testing the hypothesis that early life stressors cause alterations in the expression of genes, specifically genes that regulate hypothalamic pituitary adrenal (HPA) axis activity, and that these genetic changes increase an individual's susceptibility to PTSD following a traumatic event in later life. The HPA axis is an important

component of the neuroendocrine system that regulates several bodily functions, including response to stress. If the hypothesis of this study is correct and researchers identify a molecular link between early environment, gene expression, and susceptibility to PTSD, their findings could shed light on intervention methods that might reverse someone's increased susceptibility to this potentially devastating disorder, perhaps with the use of medication.

Status of Study: Studies complete. Investigators publishing findings.

Study Site: University of Texas Health Science Center at San Antonio

STRONG STAR Research Cores:

STRONG STAR Consortium Director & Administrative Core Director: Lt Col Alan Peterson, PhD, ABPP (U.S. Air Force, Retired)
The University of Texas Health Science Center at San Antonio

Assessment Core Director: Brett Litz, PhD
National Center for PTSD/VA Boston Health Care System;
Boston University School of Medicine

Biostatistics and Data Core Director: Jim Mintz, PhD
The University of Texas Health Science Center at San Antonio

Genomics and Basic Science Core Director: Douglas Williamson, PhD
The University of Texas Health Science Center at San Antonio

Neuroscience Core Director: Peter Fox, MD
The University of Texas Health Science Center at San Antonio