Anxiety not always the primary emotion in PTSD

Key Findings: Among general population PTSD patients, less than 50% of PTSD cases presented with anxiety as the primary emotion, with the rest presenting primarily with sadness, anger or disgust. Among those PTSD patients who received exposure-based cognitive behavioral therapy (CBT), those with anxiety-based PTSD appeared to benefit more from this treatment than those with non-anxiety based PTSD.

Study type: Two-part symptom evaluation and treatment outcome study with clinical interviews and self-report assessments

Sample: 75 PTSD patients from a trauma clinic (Study 1); 20 patients from Study 1 who received CBT (Study 2)

Implications: Although PTSD has typically been considered an anxiety-based disorder, studies such as this suggest that other emotions may be primary in the presentation of PTSD. Further, treatments directed at anxiety-based PTSD, such as exposure-based CBT, may not be as beneficial in non-anxiety-based PTSD. Assessing whether a patient’s PTSD is anxiety- or non-anxiety-based may help in developing the most beneficial treatment modality.

Psychiatric diagnoses and treatment of U.S. military personnel while deployed to Iraq

**Key Findings:** U.S. military personnel who sought mental health treatment while deployed to Iraq were most often diagnosed with anxiety disorders (31%, including 11% with posttraumatic stress disorder), followed by adjustment (27%) and mood disorders (25%, including 22% with depression). Treatment plans recommended by providers most often included medication but were often combined with recommendations for psychotherapy/counseling and/or behavioral modifications (including coping skills training, self-care recommendations and substance abuse classes).

**Study type:** Retrospective record review

**Sample:** 1,336 U.S. military personnel seeking mental health treatment while deployed to Iraq

**Implications:** The findings illustrate that anxiety disorders, depression and adjustment disorder are common diagnoses among military personnel deployed to a combat zone, and medications are an often-prescribed treatment plan due to the difficulty of providing consistent therapy sessions in the deployed environment. Further examination of post-deployment health outcomes among this sample may help to determine which in-theater treatments may be most effective in managing mental health problems that arise while on deployment.


Group-based exposure therapy effective in reducing PTSD among combat veterans

**Key Findings:** Each of the 10 veterans who participated in 12 weeks of group-based exposure therapy for PTSD completed the full course of therapy and demonstrated clinically significant reductions in PTSD severity. PTSD severity was not significantly different from post-treatment to 3-month follow-up, indicating participants maintained their improvements post-treatment. The group-based exposure therapy included in-session imaginal exposure, imaginal and in vivo exposure homework, and opportunities to bond with the group, learn coping skills and participate in healing ceremonies.

**Study type:** Treatment evaluation study with self-report and clinical diagnostic assessments

**Sample:** 10 male OIF and Vietnam-era veterans with PTSD

**Implications:** Although the sample size was very small, this study demonstrated that group-based exposure therapy for PTSD can have high retention rates and be very successful in lowering PTSD severity among combat veterans. The authors give several hypotheses as to why group-based exposure therapy may be more effective than individual therapy, including its facilitation of group cohesion, modeling of treatment tolerability and success by other group members, and exposure to multiple traumatic combat events instead of only one event. Further examination of this treatment modality with larger sample sizes is warranted.


Early CBT effective in reducing chronic symptoms of PTSD, depression and anxiety among injured patients

**Key Findings:** Injured patients screening as high risk for developing PTSD, anxiety or depression during hospitalization and at 4-weeks post-injury who received 4-10 sessions of cognitive-behavioral therapy (CBT) had significantly improved mental health at 12 months compared to those who received usual care.

**Study type:** Randomized controlled trial with self-report and clinical diagnostic assessments

**Sample:** 46 hospitalized injured general population patients who were assigned to either CBT (n=24) or usual care (n=22)

**Implications:** Implementing targeted early psychological interventions such as CBT for traumatically injured patients at high risk for developing PTSD, anxiety or depression can be effective in preventing the development or halting the chronic progression of these mental health conditions. Further research on larger sample sizes is needed to confirm these findings.

Individual augmentees do not report increased mental health symptoms

**Key Findings:** Deployment as a Navy individual augmentee (IA) was not significantly associated with newly reported PTSD or symptoms of mental health problems (including PTSD, depression, panic or other anxiety and alcohol-related problems) compared with non-IA deployment.

**Study type:** Prospective exploratory study with self-report assessments

**Sample:** 2,086 U.S. Navy personnel who had deployed in support of OEF/OIF

**Implications:** Given that service members deployed as IAs are often presumed to lack the unit cohesion and social support that other members deployed with their units are presumed to have, IAs have been hypothesized to have an increased risk for mental health symptoms associated with low unit cohesion and social support. However, the authors did not find this to be the case. Further study is needed to determine if IAs actually do report lower unit cohesion and social support (not measured in the current study), and if there are other factors, such as increased training, that may protect IAs from mental health symptoms post-deployment.


PCL overestimates persistent PTSD prevalence among National Guard soldiers

**Key Findings:** The PTSD prevalence rate among National Guard soldiers assessed via clinical diagnostic interview (CAPS with DSM-IV-TR criteria) 6-12 months post-deployment was 6.5%. A score of 45 on the PTSD Checklist-Military (PCL-M) given three months prior to the clinical interview was found to be the optimal cut-point in predicting the later PTSD diagnosis, although this score still led to a false positive rate of 78% (76% when combined with DSM-IV-TR symptom cluster requirements). However, the Beck Depression Inventory-II (BDI-II) was found to be as similarly strong a predictor of PTSD diagnosis as the PCL-M, and the PCL-M accounted for only 5% of additional variance in predicting PTSD diagnosis beyond that accounted for by the BDI-II.

**Study type:** Scale validation study with self-report and clinical diagnostic assessments

**Sample:** 348 U.S. National Guard soldiers returning from a combat deployment to Iraq

**Implications:** All cut scores examined for the PCL-M were found to greatly overestimate the prevalence of persistent PTSD in combat-exposed National Guard soldiers three months after the PCL-M was administered, including the standard strict cut score of at least 50 and endorsement of DSM-IV-TR symptom clusters. However, a screening tool such as the PCL-M is expected to give some false positives, as it is not designed to assign a diagnosis. The authors recommend that the PCL should only be used to rule out PTSD in this population instead of using it as a diagnostic tool. The authors also state that the relationship between the PCL and the BDI-II seen in this study suggests that both of these measures may be assessing general distress rather than unique components of PTSD.


Home problems linked to greater mental health symptoms in deployed troops

**Key Findings:** U.K. service members who reported greater home difficulties while deployed also reported higher mental health symptoms, including symptoms of PTSD, anxiety and depression. This relationship remained even after adjusting for combat exposure, unit cohesion and leadership quality. Personnel who reported higher mental health symptoms were also more likely to report poor perceived military support for their family.

**Study type:** Cross-sectional study with self-report assessments

**Sample:** 2,042 British forces personnel serving in Iraq and Afghanistan

**Implications:** Home difficulties and poor perceived family support among deployed troops may have a detrimental effect on troops’ mental health. Increasing efforts to provide support to military families during deployment and ensuring troops are made aware of this support may have a positive impact on deployed troops’ mental health.

**Suicide risk factors in the military**

**Key Findings:** Suicide rates for every branch of the U.S. military increased from 2005 to 2007. Factors associated with increased risk for suicide among active-duty U.S. military personnel were mental health diagnoses, mental health visits, prescriptions for selective serotonin reuptake inhibitors or sleep aids, reduction in rank, enlisted rank, separation or divorce, and OEF/OIF deployments.

**Study type:** Cross-sectional record review across two time periods

**Sample:** All active-duty U.S. military members during 2005 (n=2,064,183) and 2007 (n=1,981,810)

**Implications:** Suicide rates continue to rise in the military, and further research is needed on whether existing suicide prevention programs are effective. Such programs, as well as providers and leadership, should be informed of the risk factors identified in this study to potentially provide early intervention to personnel at high risk of suicide.


**Aripiprazole effective in treating veterans with chronic PTSD resistant to antidepressants**

**Key Findings:** Veterans with chronic PTSD who participated in a 12-week open-label, flexibly dosed trial of aripiprazole reported a significant reduction in PTSD and depressive symptoms. Overall, the medication was well tolerated during the course of study and there was a low drop-out rate.

**Study type:** Treatment outcome study with clinical interviews and self-report assessments

**Sample:** 10 veterans with chronic PTSD who had responded suboptimally to antidepressants

**Implications:** Although the initial results look promising, this study is limited by small sample size and by open-label study design. Future research is warranted with a larger, randomized, placebo-controlled study, testing aripiprazole both as a monotherapy and an adjunctive therapy.


**Longer dwell times may reduce risk of post-deployment PTSD**

**Key Findings:** Marines with two OIF deployments had higher rates of new-onset PTSD compared to those with one deployment (2.1% vs. 1.2%). Among Marines with two deployments, longer dwell times (time between deployments) at home relative to first deployment length were associated with reduced odds of new-onset PTSD, other mental health disorders, and PTSD with other mental health disorders.

**Study type:** Retrospective deployment and healthcare records review

**Sample:** 65,704 U.S. Marines who deployed in support of OIF either once (n=49,328) or twice (n=16,376)

**Implications:** Longer dwell times may reduce the risk of developing new-onset PTSD or other mental health disorders after a combat deployment. The findings may be useful in guiding policy decisions, although expanding this research with information such as self-reported mental health, life stressors during dwell time and incorporating Marines with more than two deployments would be useful in verifying these conclusions.


**REVIEWS TO PERUSE**


PTSD symptom trajectories among deployed U.S. military personnel

Key Findings: Analysis of U.S. service members who had deployed either once or multiple times revealed that both groups shared very similar PTSD trajectories over time, with the vast majority (83% single deployers, 85% multiple deployers) displaying a low-stable (resilient) symptom pattern that lasted from pre-deployment to several years post-deployment. The other PTSD symptom trajectory patterns included moderate-improving (8%, 8.5%), worsening-chronic (6.7%, 4.5%), high-stable (2.2% single deployers only) and high-improving (2.2% multiple deployers only).

Study type: Prospective cohort study with self-report assessments

Sample: U.S. military personnel who deployed either once (n=3,393) or multiple times (n=4,394)

Implications: Both single and multiple deployers exhibited similar PTSD symptom trajectories from pre-deployment to several years post-deployment, including the most prevalent pattern of low-stable symptoms. Only a small minority of service members displayed persistent or worsening symptoms, which were associated with combat exposure. Resilience programs or other interventions should be further investigated for their effectiveness in reducing the percentage of deployers who display the persistent or worsening pattern trajectory.


Battlemind not effective in improving mental health of U.K. troops compared to standard post-deployment brief

Key Findings: U.K. armed forces personnel returning from deployment to Afghanistan who received a one-time short presentation of the U.K.-adapted version of Battlemind (a U.S. post-deployment psychoeducational intervention) in lieu of their standard post-deployment brief reported mental health symptoms six months later that were not significantly different from a similar group who received the standard U.K. post-deployment brief. There was a small difference in binge drinking between the two groups, with the Battlemind group reporting less binge drinking, although there was no difference between the groups in overall alcohol abuse reporting.

Study type: Cluster randomized controlled trial with self-report assessments

Sample: 2,443 U.K. armed forces personnel returning from deployment to Afghanistan

Implications: The U.K.-adapted version of Battlemind did not result in improved mental health compared to the standard post-deployment brief, regardless of level of combat exposure, but may have had a small impact on reporting of binge drinking. Further study of the Battlemind training should be conducted to evaluate the effectiveness of this intervention.


CPT effective in reducing PTSD symptoms among veterans seeking treatment with community-based providers

Key Findings: Veterans with PTSD who received cognitive processing therapy (CPT) from community-based providers showed significantly greater improvement in PTSD symptoms compared to those who received treatment as usual (TAU), both at post-treatment and three-month follow-up. In addition, the CPT group also showed greater improvement in anxiety, depression, social and personal relationships compared with the TAU group. On completion of treatment, 37.5% of those in CPT group no longer met criteria for PTSD compared to 13% in the TAU group.

Study type: Randomized controlled trial with clinical interviews and self-report assessments

Sample: 59 veterans with military-related PTSD who received either 12 sessions of CPT (n=30) or equivalent amount of TAU (n=29)

Implications: International clinical practice guidelines support CPT, a component of trauma-focused cognitive behavioral therapy, as a first-line treatment for PTSD. These results reiterate the efficacy of CPT over TAU in the treatment of PTSD and extend its efficacy to a community-based setting.

Educational website for military family members increases PTSD knowledge

**Key Findings**: Use of an educational website by military family members significantly improved PTSD-related knowledge on a 25-item test. Among those family members who returned for a follow-up at least 10 days after the initial visit to the site (n=217), 57% had taken actions such as talking to service members about their symptoms or convincing them to get medical attention.

**Study type**: Educational website evaluation with self-report assessments

**Sample**: 497 military family members

**Implications**: This study demonstrates that use of a website developed specifically for military family members can improve their knowledge of PTSD and can lead them to take action on behalf of service members, including discussion of post-deployment symptoms and urging them to seek mental health care. Interventions directed at military family members may be effective in persuading the service member to get the help needed, but further study is needed to determine if interventions such as this website are making a significant impact on help-seeking behavior or adverse health or social outcomes.


Killing in combat may be independently associated with suicidal ideation

**Key Findings**: Veterans with more killing experiences were twice as likely to report suicidal ideation compared to those with less or no killing experiences, even after controlling for PTSD, depression, substance abuse and combat exposure. PTSD, depression and substance abuse were each linked to suicidal ideation in an adjusted model, but PTSD was the only factor to be associated with actual suicide attempts.

**Study type**: Cross-sectional retrospective study with self-report and clinical assessments

**Sample**: 259 male Vietnam veterans

**Implications**: The findings indicate that killing experiences among veterans are independently associated with suicidal ideation, even after taking mental health disorders into account. Assessment of killing experiences among war veterans may enable mental health providers to have a better understanding of their patient and design treatments appropriate for patients with possible suicidal ideation.

Maguen, S., Metzler, T.J., Bosch, J., Marmar, C.R., Knight, S.J. & Neylan, T.C. (in press). Killing in combat may be independently associated with suicidal ideation. *Depression and Anxiety*.

Tones inferior to eye movements in the EMDR treatment of PTSD

**Key Findings**: PTSD patients who received eye movement desensitization and reprocessing (EMDR) treatment under three conditions (recall only, recall plus eye movement, recall plus beep tones) demonstrated that eye movement was superior to tones and recall only in decreasing the emotionality and vividness of trauma memories. However, participants felt that tones had the highest treatment efficacy and most preferred tones over eye movement.

**Study type**: Treatment outcome study with clinical interviews and self-report assessments

**Sample**: 12 civilian trauma survivors with PTSD

**Implications**: Although eye movement was clearly superior to tones in EMDR treatment, the patients actually perceived the tones to be more effective, and most patients preferred the tones over eye movement. Although EMDR is considered to be evidence-based treatment for PTSD, replacing eye movements with beep tones based on patients’ preferences may result in suboptimal treatment.


Genetic influences on trauma, PTSD and depression

**Key Findings**: An analysis of genetic contributions to PTSD and major depressive disorder (MDD) using siblings revealed that 46% of the variance in PTSD and 27% of the variance in MDD is accounted for by heritable factors. There was also a substantial genetic influence on exposure to trauma (likely through personality traits), with heritable factors accounting for 60% of the variance for high-risk trauma (assaultive and severe childhood trauma) and 47% of the variance for low-risk trauma (such as accidents, natural disasters and combat). There was an extremely high degree of genetic overlap with high-risk trauma exposure and...
both MDD and PTSD, and a complete correlation of genetic factors contributing to MDD and PTSD.

**Study type:** Cross-sectional study with structured clinical phone interviews

**Sample:** 2,591 siblings: 996 female and 536 male twins and their non-twin siblings (625 female and 434 male non-twin siblings) from a population-based sample enrolled in the Childhood Trauma Study

**Implications:** The high comorbidity between PTSD and MDD may be due in part to the shared genetic factors that cause the disorders. This study found that the genetic risk behind both PTSD and MDD is essentially from the same sources, which are also shared to a high degree with exposure to high-risk trauma. Findings demonstrate the importance of closely observing individuals with a family history of PTSD and MDD for mental health symptoms after a traumatic experience.


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**Protective and risk factors for PTSD and common mental disorders among U.K. military personnel**

**Key Findings:** Among combat-deployed U.K. military personnel, combat exposure was associated with both PTSD symptoms and symptoms of common mental disorders (such as depression and anxiety). The prevalence of common mental disorders in this population was 17.1%, and 2.7% had probable PTSD. Protective factors against PTSD and common mental disorders were unit cohesion, morale, and perceived good leadership.

**Study type:** Cross-sectional study with self-report assessments

**Sample:** 1,431 U.K. Armed Forces personnel deployed to Afghanistan

**Implications:** Unit cohesion, morale and perceived good leadership may help temper the effects of combat exposure and development of mental health problems among combat-deployed military personnel. Enhancement of these protective factors through trainings and interventions may help to promote military effectiveness and the well-being of military personnel both during deployment and in garrison.


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**Animal-assisted therapy for Wounded Warriors**

**Key Findings:** Wounded Warriors who participated in 3 to 6 occupational therapy classes with or without animal-assisted therapy (AAT) did not show significant differences in mood state, stress levels, resilience, fatigue and most measures of daily functioning when compared to their baseline reports of these measures. However, several participants in the AAT group anecdotally expressed benefits from the intervention.

**Study type:** Treatment outcome non-randomized controlled study

**Sample:** 24 Wounded Warriors participating in either an Occupational Therapy Life Skills program (n=12) or the same program with AAT (n=12)

**Implications:** Although some participants anecdotally reported positive experiences in AAT, the findings do not support an added benefit of this therapy when added to occupational therapy. However, sample size, limited and variable class sessions, assessment timing, and non-randomization could be responsible for the null findings and should be addressed in further research studies on the efficacy of AAT.


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**Conference presentations are now online!**

Videos and slides from presentations given at the Navy and Marine Corps Combat & Operational Stress Control Conference 2012 are now available online: www.nccosc.navy.mil.
Combat stress training needs in combat medics

Key Findings: Survey answers from U.S. Army combat medics given three months after a 12-month OEF/OIF deployment demonstrated a need for better preparation in types of shifts required during deployment, type and intensity of combat likely to be seen and experienced, more adequate training in the areas of stress and mental health care management, and easier access to mental health care.

Study type: Cross-sectional study with self-report assessments

Sample: 347 U.S. Army combat medics recently deployed to OEF/OIF

Implications: Although progress is being made in addressing mental health care needs in the military, there is still a need for further reduction of stigma and barriers to mental health care for soldiers in all stages of deployment, and for increased recognition of stress and mental health needs during deployment. More training to prepare medics for deployment experiences, including work and combat experiences, may also be beneficial.


TEST YOUR KNOWLEDGE!

According to the summary “Genetic influences on trauma, PTSD and depression” (pg. 6), to what extent are genetic factors shared between depression and PTSD?

A. 25% correlation
B. 50% correlation
C. 75% correlation
D. 100% correlation

Answer: D