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The ***Combat & Operational Stress Research Quarterly*** is a compilation of recent research that includes relevant findings on the etiology, course and treatment of Posttraumatic Stress Disorder (PTSD). The intent of this publication is to facilitate translational research by providing busy clinicians with up-to-date findings, with the potential to guide and inform evidence-based treatment.

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PTSD increases suicide risk, particularly when depression is present

Key Findings: In a meta-analysis, PTSD was found to have a highly significant positive association with suicidality. The association persisted across many diverse studies using different measures of suicidality, current and lifetime PTSD, psychiatric and non-psychiatric samples, and PTSD populations exposed to different types of traumas. Further, comorbid major depression significantly increased the risk of suicidality in individuals with PTSD.
Study type: Meta-analysis
Sample: 63 studies on the relationship between PTSD and suicidality
Implications: There is strong evidence that a diagnosis of PTSD can put an individual at increased risk for suicidality, especially if there is comorbid depression. Thus, clinicians should fully assess suicide risk in individuals with PTSD symptoms. More research is needed to fully elucidate the nature and mechanisms of the relationships between PTSD, depression and suicidality.

Panagioti, M., Gooding, P.A., & Tarrier, N. (2012). A meta-analysis of the association between posttraumatic stress disorder and suicidality: The role of comorbid depression. *Comprehensive Psychiatry, 53*(7), 915-30. doi: 10.1016/j.comppsych.2012.02.009

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Persistent cognitive impairments among veterans may be due to psychological disorders rather than mTBI

Key Findings: OEF/OIF veterans with current Axis I diagnoses including PTSD showed significant cognitive impairment on neuropsychological performance measures (learning/memory and processing speed) compared to the control group, irrespective of mild traumatic brain injury (mTBI) history. Neuropsychological performance among veterans with a history of mTBI was not significantly different than the control group. There was also no significant difference in cognitive performance between the Axis I-only group and co-morbid mTBI/Axis I group.
Study type: Cross-sectional study with neuropsychological tests and clinical/self-report assessments
Sample: 104 OEF/OIF veterans classified into four groups: remote history of blast-related mTBI-only (n=18), current Axis I-only (n=24), co-morbid mTBI/Axis I (n=34), or post-deployment control (n=28)
Implications: The results suggest that blast-related mTBI by itself does not contribute to cognitive impairment months or years following injury. Veterans with mTBI often have co-morbid Axis I psychological disorders, which are often linked to cognitive impairments. The study highlights the importance of identification and treatment of cognitive deficits associated with psychiatric symptoms. In the future, studies should include larger samples and conduct longitudinal examinations of neuropsychological performance in order to better elucidate the causes for cognitive impairment seen in OEF/OIF veterans.

Nelson, N.W., Hoelzle, J.B., Doane, B.M., McGuire, K.A., Ferrier-Auerbach, A.G., Charlesworth, M.J., . . . Sponheim, S.R. (2012). Neuropsychological outcomes of U.S. Veterans with report of remote blast-related concussion and current psychopathology. *Journal of the International Neuropsychological Society, 18*(5), 845-55. doi: 10.1017/S1355617712000616

Killing while on deployment linked to higher PTSD symptoms

Key Findings: OEF/OIF veterans with sub-threshold or full PTSD were classified into four categories: High Symptom (34%), Intermediate Symptom (41%), Intermediate Symptom with Low Emotional Numbing (10%) and Low Symptom (15%). Those who killed on deployment were twice as likely to be in the High Symptom class compared to those who did not kill, and those who killed a non-combatant or killed in the context of anger or revenge were most at risk of having high PTSD symptoms.
Study type: Cross-sectional study with self-report assessments
Sample: 227 OEF/OIF veterans with sub-threshold or full PTSD related to military service
Implications: Killing in war and the circumstances of the killing may be important predictors of PTSD development. An assessment of killing experiences and reactions to killing should be considered as part of a comprehensive evaluation of veterans returning from combat deployments, although such an evaluation must be done in a sensitive fashion within a supportive therapeutic environment.

Maguen, S., Madden, E., Bosch, J., Galatzer-Levy, I., Knight, S.J., Litz, B.T., . . . McCaslin, S.E. (2012). Killing and latent classes of PTSD symptoms in Iraq and Afghanistan veterans. *Journal of Affective Disorders*, *145*(3), 344-8. doi: 10.1016/j.jad.2012.08.021

Violent details in re-scripted nightmares may reduce effectiveness of Imagery Rehearsal therapy

Key Findings: Using Imagery Rehearsal therapy to address or resolve nightmare themes through dream re-scripting was associated with a reduction in sleep disturbance in veterans with PTSD. However, references to violence in the re-scripted dreams and the experience of olfactory sensations in nightmares were related to reduced treatment responses.
Study type: Treatment evaluation study with self-report and clinical assessments
Sample: 48 male Vietnam War veterans with combat-related PTSD
Implications: Imagery Rehearsal therapy for PTSD-related nightmares may be most effective when the re-scripted dream does not involve violent details and includes a resolution of the nightmare theme. Future research on the characteristics of nightmares and re-scripted dreams may help to improve treatment outcomes through this type of therapy.

Harb, G.C., Thompson, R., Ross, R.J., & Cook, J.M. (2012). Combat-related PTSD nightmares and imagery rehearsal: Nightmare characteristics and relation to treatment outcome. *Journal of Traumatic Stress, 25*(5), 511-8. doi: 10.1002/jts.21748

Prolonged exposure for PTSD in substance-dependent patients

Key Findings: Participants with PTSD and substance dependence received either an integrated treatment (Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure [COPE]) plus substance dependence treatment as usual or treatment as usual alone. Analyses demonstrated that both groups experienced significant reductions in PTSD severity from baseline to nine-month follow-up. However, those in the COPE group showed a greater decrease in PTSD symptoms compared to treatment as usual alone. Both groups also demonstrated reductions in substance dependence rates and depression symptoms, whereas only the COPE group also had reductions in anxiety symptoms. There were no significant differences between the two groups in relation to changes in substance use, depression or anxiety.
Study type: Randomized controlled trial with self-report and clinical assessments
Sample: 103 Australian adults with PTSD and substance dependence diagnoses
Implications: Adding a trauma-focused prolonged exposure treatment component did not result in poorer substance use outcomes among patients with PTSD and substance use disorders compared to usual substance dependence treatment only in this particular sample. The findings suggest that for these co-morbid patients, COPE plus usual substance dependence treatment might be a viable option to reduce PTSD symptoms without increasing the severity of substance dependence.

Mills, K.L., Teesson, M., Back, S.E., Brady, K.T., Baker, A.L., Hopwood, S., . . . Ewer, P.L. (2012). Integrated exposure-based therapy for co-occurring posttraumatic stress disorder and substance dependence: A randomized controlled trial. *Journal of the American Medical Association, 308*(7), 690-9. doi: 10.1001/jama.2012.9071

Endorsement of PTSD symptoms among military personnel affected by anonymity

Key Findings: U.K. military personnel deployed to Iraq reported sub-threshold and probable PTSD more than twice as often when the survey was anonymous compared to identifiable (sub-threshold PTSD, 5.8% of anonymous vs. 2.4% of identifiable participants; probable PTSD, 4.8% of anonymous vs. 1.7% of identifiable participants). Those completing anonymous surveys were also more likely to endorse certain stigma/barriers to care statements, including: "leaders discourage the use of mental health services" (9.3% vs. 4.6%), "it would be too embarrassing" (41.6% vs. 32.5%) and "I would be seen as weak" (46.6% vs. 34.2%). There was a trend toward more anonymous vs. identifiable reporting of depression and general anxiety symptoms (22.9% vs. 18.1%), but it was not statistically significant.
Study type: Cross-sectional study with self-report assessments
Sample: 611 U.K. military personnel deployed to Iraq who completed anonymous (n=315) or non-anonymous (n=296) questionnaires
Implications: The study adds to the literature that has found that U.S. and U.K. military personnel report mental health symptoms more often when surveys are anonymous. Findings from the study also reveal that admitting certain stigmatizing beliefs is more common on anonymous surveys. Researchers should be aware of this discrepancy when deciding on anonymous vs. non-anonymous surveys to determine prevalence of mental health disorders, and those responsible for screening military personnel for the disorders should be aware that many personnel may not be willing to admit symptoms on identifiable surveys.

Fear, N.T., Seddon, R., Jones, N., Greenberg, N., & Wessely, S. (2012). Does anonymity increase the reporting of mental health symptoms? *BMC Public Health, 12*(1), 797. doi: 10.1186/1471-2458-12-797

Pre-injury mood associated with post-injury PTSD and post-concussive symptoms in mTBI patients

Key Findings: Patients with mild traumatic brain injuries (mTBI) reported greater acute stress disorder (ASD), PTSD and post-concussion symptom severity less than 24 hours, one week and one month post-injury compared to patients with injuries not involving the head. Higher depressed mood symptoms estimated pre-injury were predictive of greater ASD, PTSD and post-concussion symptom severity less than 24 hours, one week and one month post-injury. Higher resilience estimated pre-injury was also predictive of these adverse outcomes at one week and one month post-injury.
Study type: Prospective study with self-report assessments
Sample: mTBI patients (n=46) and patients with injuries not involving the head (n=29)
Implications: Findings suggest that mTBI patients are at greater risk for PTSD and post-concussive symptoms

in the short term post-injury compared to injured patients without mTBI. In addition, pre-injury depressed mood is a significant contributor to these adverse outcomes regardless of mTBI status. Unexpectedly, higher pre-injury resilience predicted more severe ASD, PTSD and post-concussive symptom severity in the short term, which the authors hypothesize could be due to the short time period to bounce back or a missing mediator variable, such as social support. Further research to explain the result is needed. Acute interventions that target mood post-injury may improve outcomes in injured patients.

McCauley, S.R., Wilde, E.A., Miller, E.R., Frisby, M.L., Garza, H.M., Varghese, R., . . . McCarthy, J. (2012). Preinjury resilience and mood as predictors of early outcome following mild traumatic brain injury. *Journal of Neurotrauma*. Advance online publication. doi: 10.1089/neu.2012.2393

Increasing treatment engagement through motivational interviewing

Key Findings: Four sessions of telephone-administered motivational interviewing (MI), plus a personalized referral or four neutral telephone check-in sessions and a standard referral (control group) were provided to veterans who had screened positive for mental health problems but had not started treatment. The MI group had a significantly greater number of participants engage in mental health treatment than the control group (62% vs. 26%). The MI group also had greater retention in treatment compared to the control group and significant reductions in stigma.
Study type: Randomized controlled trial with self-report assessments
Sample: 73 Iraq and Afghanistan veterans positive for at least one mental health problem but not engaged in treatment
Implications: Telephone motivational interviewing may be a good option for increasing treatment engagement in veterans with mental health problems. Future studies could extend the intervention to other groups of high-risk or rural veterans in need of treatment, or explore other technological means of conducting MI interventions.

Seal, K.H., Abadjian, L., McCamish, N., Shi, Y., Tarasovsky, G., & Weingardt, K. (2012). A randomized controlled trial of telephone motivational interviewing to enhance mental health treatment engagement in Iraq and Afghanistan veterans. *General Hospital Psychiatry, 34*(5), 450-9. doi: 10.1016/j.genhosppsych.2012.04.007

Perceived threat during deployment linked to post-deployment psychological disorders

Key Findings: Greater perceived threat during deployment was associated with post-deployment PTSD, anxiety and mood disorders but not substance use disorders. After controlling for combat exposure, deployment environment and preparedness significantly predicted perceived threat during deployment.
Study type: Cross-sectional study with self-report assessments
Sample: 1,740 OEF/OIF veterans
Implications: The findings corroborate previous literature suggesting that perceived threat during deployment can predict mental health problems post-deployment, and efforts to improve training/preparation and adjustment to the deployment environment may reduce perceived threat levels during deployment. Further research on perceived threat and its potential role in creating vulnerability to mental health disorders may enable the development of strategies to reduce symptoms of these disorders in returning veterans.

Mott, J.M., Graham, D.P., & Teng, E.J. (2012). Perceived threat during deployment: Risk factors and relation to Axis I disorders. *Psychological Trauma, 4*(6), 587-95. doi: 10.1037/a0025778

Reviews to Peruse

Hermann, B.A., Shiner, B., & Friedman, M.J. (2012). **Epidemiology and prevention of combat-related post-traumatic stress in OEF/OIF/OND service members.** *Military Medicine, 177*(8 Suppl), 1-6.

Zinzow, H.M., Britt, T.W., McFadden, A.C., Burnette, C.M., & Gillispie, S. (2012). **Connecting active duty and returning veterans to mental health treatment: interventions and treatment adaptations that may reduce barriers to care.** *Clinical Psychology Review, 32*(8), 741-53.

Riggs, D.S., & Sermanian, D. (2012). **Prevention and care of combat-related PTSD: directions for future explorations.** *Military Medicine, 177*(8 Suppl), 14-20.

Healing Touch with Guided Imagery reduces PTSD and depression symptoms among service members

Key Findings: A complementary medicine approach known as Healing Touch with Guided Imagery (HT + GI) combined with treatment as usual (TAU), any standard care for PTSD, in six sessions over three weeks led to statistically and clinically significant reductions in PTSD and depression symptoms among recently deployed service members compared to TAU only. Participants receiving HT + GI also showed significant improvements in mental quality of life and cynicism compared to TAU.
Study type: Randomized controlled trial with self-report assessments
Sample: 123 recently deployed active-duty service members with significant PTSD symptoms
Implications: Healing Touch with Guided Imagery – which involves gentle, non-invasive touch-based therapy to stimulate a healing response (HT) along with visualization to induce a state of deep relaxation (GI) – was effective in reducing PTSD and depression symptoms at a clinically significant level among combat-exposed service members. Future studies are warranted to determine whether the symptom reductions continue post-intervention and if this intervention may increase the likelihood of further engagement in mental health services.

Jain, S., McMahon, G.F., Hasen, P., Kozub, M.P., Porter, V., King, R., & Guarneri, E.M. (2012). Healing Touch with Guided Imagery for PTSD in returning active duty military: a randomized controlled trial. *Military Medicine, 177*(9), 1015-21. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed

Relationship of risky behaviors, rumination and psychiatric symptoms among combat veterans

Key Findings: Combat veterans with more PTSD and depressive symptoms reported more risky behaviors, such as aggression and dangerous substance use, but this association existed only for veterans with moderate to high levels of rumination (repeated thoughts about negative feelings and past events).
Study type: Cross-sectional study with self-report assessments
Sample: 91 U.S. combat veterans presenting to the VA
Implications: The findings suggest that individuals who engage in rumination may be more likely to react to negative moods by engaging in risky behaviors. Interventions that focus on replacing rumination with healthy coping strategies may be helpful in preventing risky behaviors in veterans.

Borders, A., McAndrew, L.M., Quiqley, K.S., & Chandler, H.K. (2012). Rumination moderates the associations between PTSD and depressive symptoms and risky behaviors in U.S. veterans. *Journal of Traumatic Stress, 25*(5), 583-6. doi: 10.1002/jts.21733

Deployment-related stressors linked to depression, anxiety

Key Findings: In a multivariate model of 11 demographic and psychosocial variables, four factors were related to both current depression and anxiety symptoms among previously combat-deployed U.S. Marines: combat exposure, deployment-related stressors, less positive attitudes toward leadership and screening positive for mild traumatic brain injury. Marital status was also related to depression, with those never married or divorced at higher risk. Deployment-related stressors carried the most risk for developing depression or anxiety symptoms out of all the factors analyzed.
Study type: Cross-sectional study with self-report assessments
Sample: 1,560 U.S. Marines previously deployed to Iraq and/or Afghanistan
Implications: The finding that deployment-related stressors (such daily hassles as problems with supervisors and concerns back home) are the strongest risk factors associated with depression and anxiety, even when controlling for combat exposure, is notable because these are potentially modifiable factors. The stressors can be directly addressed through military efforts to improve communication with families, improve leadership, support families back home and reduce the workload of deployed service members.

Booth-Kewley, S., Highfill-McRoy, R.M., Larson, G.E., Garland, C.F., & Gaskin, T.A. (2012). Anxiety and depression in Marines sent to war in Iraq and Afghanistan. *Journal of Nervous and Mental Disease, 200*(9), 749-57. doi: 10.1097/NMD.0b013e318266b7e7

Acupuncture may be helpful in treating some components of trauma spectrum response

Key Findings: Acupuncture appears to be efficacious in treating headaches. Although it seems to be a promising treatment option for anxiety, sleep disturbances, depression and chronic pain, more research is needed to

validate its effectiveness for those conditions. Acupuncture may not be effective for treating substance abuse. It is not currently known if it is a suitable treatment option for PTSD, fatigue and cognitive problems due to a lack of high-quality published studies for those conditions.
Study type: Systematic review
Sample: 52 systematic reviews/meta-analyses comparing use of acupuncture for disorders encompassing the trauma spectrum response
Implications: Acupuncture may be able to play a role in treating several conditions encompassed in the trauma spectrum response seen among combat veterans. However, areas of concern for many of the studies are a lack of information on safety issues and a lack of reporting on setting, context and expectations of treatment, which can have a significant impact on clinical outcomes. Thus, large-scale studies reporting on safety, setting and context are needed to confirm the usefulness of acupuncture in treating trauma-related dysfunction.

Lee, C., Crawford, C., Wallerstedt, D., York, A., Duncan, A., Smith, J., . . . Jonas, W. (2012). The effectiveness of acupuncture research across components of the trauma spectrum response (tsr): a systematic review of reviews. *Systematic Reviews, 1*(1), 46. doi: 10.1186/2046-4053-1-46

Perceived betrayal may be linked to PTSD symptoms

Key Findings: Among participants who experienced a traumatic event, total PTSD symptom severity was significantly associated with perceived life threat and perceived betrayal regarding the event, independent of trauma type and injury level. Specifically, perceived life threat was associated with re-experiencing and hyperarousal symptoms, while betrayal was associated with avoidance and numbing symptoms. Although trauma types that involve a perpetrator (such as in a sexual or physical assault) were associated with higher levels of betrayal, the association between betrayal and PTSD symptoms persisted regardless of trauma type, injury and perceived life threat.
Study type: Cross-sectional study with self-report assessments
Sample: 185 trauma-exposed college students
Implications: The results suggest that perceived life threat and betrayal contribute to PTSD in distinct and complementary ways, suggested by their relationships with different PTSD symptom clusters. The findings also indicate that betrayal plays a role in PTSD development independent of perceived life threat and other event characteristics. Future research should focus on replicating these findings in other trauma populations.

Kelley, L.P., Weathers, F.W., Mason, E.A., & Pruneau, G.M. (2012). Association of life threat and betrayal with posttraumatic stress disorder symptom severity. *Journal of Traumatic Stress, 25*(4), 408-15. doi: 10.1002/jts.21727

Concurrent change of depression and PTSD symptoms in CPT

Key Findings: Analysis of data from PTSD patients receiving cognitive processing therapy revealed that changes in depression and PTSD symptoms were strongly related. Further analyses showed that the changes were concurrent (changes in symptoms of one disorder did not precede the other).
Study type: Secondary analysis of data from a randomized study with self-report and clinical assessments
Sample: 126 women with PTSD who had experienced sexual or physical assault
Implications: The study found no evidence that changes in PTSD lead to changes in depression or vice-versa. The results suggest that there is a common mechanism of change (such as treatment) affecting both PTSD and depression simultaneously. Further research is needed to characterize the inter-relationship of PTSD and depression and the mechanisms affecting this relationship.

Liverant, G.I., Suvak, M.K., Pineles, S.L., & Resick, P.A. (2012). Changes in posttraumatic stress disorder and depressive symptoms during cognitive processing therapy: Evidence for concurrent change. *Journal of Consulting and Clinical Psychology, 80*(6), 957-67. doi: 10.1037/a0030485

Readjustment stressors post-deployment may motivate veterans to seek mental health treatment

Key Findings: Only 36% of National Guard soldiers returning from a combat deployment with significant PTSD symptoms sought mental health treatment within three months post-deployment. Higher reported levels of readjustment stressors (including marital, family and financial stressors) experienced by the soldiers after their return predicted higher rates of seeking mental health treatment post deployment, and this relationship persisted after controlling for PTSD and depression

Quarterly Highlight: Understanding and preventing military suicide

Despite considerable efforts at suicide prevention by military leadership, the military suicide rate continues to climb. This paper attempts to convey reasons from the service member's perspective on why the current efforts are not reversing the trend, and what can be done to try to stop it. Current suicide prevention efforts often focus on computerized trainings and mass briefings using PowerPoint to convey lists of risk factors and warning signs, which are questionable in their effectiveness. In addition, efforts to expand mental health care staffing may be less than effective if mental health stigma prevents personnel from accessing the care and the care provided does not include evidence-based therapies. Although the increasing suicide trend is partly due to underlying mental health disorders brought about by combat and operational stress, it may also be related to the military environment. The service member operates in an organization that values mental toughness, self-reliance and self-sacrifice and which teaches fearlessness about death. In such an environment, it becomes easier to understand how service members with psychological problems may become distressed if they believe they are not exhibiting mental toughness and are not able to solve their own problems. They may resist going to "outsiders" for mental health care and begin to see suicide as an honorable way to sacrifice weak members of the team for the good of the military unit. For more effective means of preventing military suicides, different strategies must be taken. Current suicide prevention trainings should be evaluated for effectiveness and alternative strategies should be identified. Instead of focusing on preventing death, it might be more effective to emphasize mental fitness/strength by training all service members on how to use psychological skills to enhance resilience and training military leaders specific techniques to enhance quality of life for personnel under their command. Also, the quality of military mental health care should be improved for those who do access it. Embracing military culture in suicide prevention efforts, as well as identifying and committing to evidence-based approaches to mental health prevention and treatment, may be a better way to stem the tragic tide of suicides in the military.

Bryan, C.J., Jennings, K.W., Jobes, D.A., & Bradley, J.C. (2012). Understanding and preventing military suicide. Archives of Suicide Research, 16(2), 95-110. doi: 10.1080/13811118.2012.6673

severity. However, the relationship was no longer present after adjusting for demographic factors, specifically age and marital status. Mental health treatment utilization was only slightly predicted by depression severity but was not predicted by PTSD severity.
Study type: Cross-sectional study with self-report assessments
Sample: 157 National Guard soldiers recently returning from deployment to Iraq who screened positive for PTSD
Implications: Readjustment stressors are common among National Guard soldiers returning from deployment with PTSD, and the stressors may be more predictive of seeking treatment than PTSD severity. The relationship appeared to be attributed to age and marital status in the sample of National Guard soldiers, who tend to be older and have more developed familial and occupational roles (and possibly more readjustment stressors) than active-duty service members. Further research is needed to determine if higher readjustment stressors are predictive of seeking treatment among younger, active-duty service members.

Interian, A., Kline, A., Callahan, L., & Losonczy, M. (2012). Readjustment stressors and early mental health treatment seeking by returning National Guard soldiers with PTSD. *Psychiatric Services, 63*(9), 855-61. doi: 10.1176/appi.ps.201100337

Depression does not affect treatment gains among veterans in PTSD/TBI treatment program

Key Findings: For veterans participating in a residential PTSD/TBI treatment program, those with co-morbid major depressive disorder (MDD) had reductions in PTSD and depression symptoms post-treatment that were comparable to those without MDD. However, those with MDD had higher scores on PTSD and depression symptom measures at all assessment time points (pre-treatment, mid-treatment and post-treatment).
Study type: Longitudinal study with self-report and clinical assessments
Sample: 47 male veterans with PTSD and TBI
Implications: Having MDD does not adversely affect improvements in PTSD/depression symptoms that can be achieved in PTSD/TBI residential treatment. Future research should include follow-up assessments to determine if symptom reductions are sustained long term in veterans with and without MDD.

Walter, K.H., Barnes, S.M., & Chard, K.M. (2012). The influence of comorbid MDD on outcome after residential treatment for veterans with PTSD and a history of TBI. *Journal of Traumatic Stress, 25*(4), 426-32. doi: 10.1002/jts.21722

Deep transcranial magnetic stimulation combined with brief exposure may be helpful in treating PTSD

Key Findings: PTSD patients who received 12 sessions of deep transcranial magnetic stimulation (DTMS) after brief scripted audio exposures to their traumatic event showed significant improvement in PTSD symptoms using the Clinician Administered PTSD Scale (CAPS) when compared to baseline levels. The group also had significantly reduced intrusion symptoms compared to the other two control groups (DTMS after exposure to non-traumatic event and sham stimulation after exposure to traumatic event), with a trend toward lower overall PTSD symptoms compared to the control groups (who did not show significant improvement). In addition, there was a significant decrease in the heart rate response to the traumatic exposure script throughout treatment only when exposure was followed by DTMS.
Study type: Double-blind randomized controlled trial with clinical and self-report assessments
Sample: 30 PTSD patients (26 completed at least eight sessions and were included in analyses) randomized into 3 treatment groups: DTMS after brief exposure to traumatic event (n=9), DTMS after brief exposure to non-traumatic event (n=8) or sham stimulation after exposure to traumatic event (n=9)
Implications: Repeated stimulation of the medial prefrontal cortex with DTMS after brief exposure to trauma may lead to the extinction of the fear response related to re-experiencing the traumatic events and may be a viable treatment option for those resistant to other forms of PTSD treatment. Although the initial results look promising, a larger sample size is needed to confirm the findings.

Isserles, M., Shalev, A.Y., Roth, Y., Peri, T., Kutz, I., Zlotnick, E., & Zangen, A. (2012). Effectiveness of deep transcranial magnetic stimulation combined with a brief exposure procedure in post-traumatic stress disorder - A pilot study. *Brain Stimulation*. Advance online publication. doi: 10.1016/j.brs.2012.07.008

Test your knowledge!

According to the summary "Deployment-related stressors linked to depression, anxiety" (pg. 5), are deployment-related stressors a stronger predictor of depression and anxiety than combat exposure?

A. Yes.

B. No, combat exposure is the stronger predictor.

C. They carry about the same risk.

Answer: A

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