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## TREATMENT

### Treatment dropout not always related to poor outcomes

Clinicians often assume that patients who drop out of PTSD treatment will not get better. However, recent research suggests some patients drop out because they *are* better. A study led by investigators at the Ralph H. Johnson VA Medical Center examined change in PTSD and depression symptoms in patients with PTSD who discontinued CPT or PE. Participants were 53 female victims of interpersonal violence who had participated in one of two larger studies of CPT or PE and terminated treatment prior to finishing all sessions. Participants completed self-report measures of PTSD (either the Posttraumatic Diagnostic Scale or PTSD Symptom Scale) and depression (BDI-II) before treatment and on even-numbered sessions. A sizable proportion of participants (36-56%) had clinically significant improvement and/or met good end-state criteria for PTSD (PDS < 21 or PSS < 14) and depression (BDI-II < 19) prior to early termination. These findings suggest that dropout sometimes reflects early treatment response, rather than a failure to respond or a dislike of the treatment—and it is important to remember this when interpreting PTSD treatment dropout. Frequent symptom monitoring can help identify patients who are improving before completing the full treatment protocol. This practice may lead to more consistent dropout estimates in research and clinical settings, and improve communication between clinicians and patients.

Read the article: <http://www.ptsd.va.gov/professional/articles/article-pdf/id46580.pdf>

Szafranski, D. D., Smith, B. N., Gros, D. F., & Resick, P. A. (2017). High rates of PTSD treatment dropout: A possible red herring? *Journal of Anxiety Disorders*. Advance online publication. PILOTS ID: 46580

### Oxytocin reduces risk of future PTSD symptoms in (some) recent trauma survivors

There are few evidence-based preventive interventions for PTSD. Intranasal administration of oxytocin, a neuropeptide, has been shown to reduce stress reactivity and enhance the protective effects of social support, leading investigators from the Netherlands to conduct the first examination of whether intranasal oxytocin reduces PTSD symptoms over time in acute trauma survivors. In a randomized, double-blind trial, investigators compared effects of 8 days of oxytocin (40 international units, 2x/day) or placebo in emergency department patients who were recently (within the past 12 days) exposed to trauma and experiencing moderate to severe acute posttraumatic distress. The oxytocin ( $n = 53$ ) and placebo ( $n = 54$ ) groups did not differ on PTSD symptom severity measured with the Clinician-Administered PTSD Scale at any follow-up assessments (1.5, 3, and 6 months). However, among patients who started with higher acute symptoms (baseline CAPS > 44), oxytocin was associated with lower PTSD, depression, and anxiety severity than placebo at all time points. Oxytocin was well-tolerated. With replication of these findings, oxytocin could be considered for selective prevention of PTSD among individuals with high acute PTSD symptoms.

Read the article: <https://doi.org/10.1016/j.biopsych.2016.11.012>

van Zuiden, M., Frijling, J. L., Nawijn, L., Koch, S. B. J., Goslings, J. C., Luitse, J. S., . . . Olf, M. (2016). Intranasal oxytocin to prevent PTSD symptoms: A randomized controlled trial in emergency department patients. *Biological Psychiatry*. Advance online publication. PILOTS ID: 46527

## Treating PTSD can improve physical health

Researchers at the VA Connecticut Healthcare System recently reported that Veterans with PTSD who received mental health treatment had a lower likelihood of developing hypertension—which is important because hypertension is a risk factor for serious health problems. The sample consisted of over 194,000 OEF/OIF Veterans who received care between October 1, 2001 and January 1, 2009. Most of the Veterans were male (85%) and white (65%), with an average age of 28 years at baseline; 36% had PTSD. The investigators used VA administrative data to determine how PTSD and receipt of treatment (either 8 psychotherapy sessions in 6 months or a prescription for an SSRI) were associated with the onset of hypertension, which was defined in one of three ways: a new diagnosis, a new prescription for anti-hypertensive medication, or an entry in the medical record of blood pressure indicating hypertension. During the observation period, 45% experienced one of the hypertension events. Although PTSD and treatment were associated with increased risk of hypertension, the effect of PTSD was smaller among Veterans who received treatment. For example, PTSD was associated with a statistically significant 24% increase in the rate of receiving a new diagnosis of hypertension among Veterans who did not get treatment, but only a non-significant 3% increase among Veterans who got treatment. These results are encouraging, but making causal

inferences about the effect of treatment is limited by the observational study design. Replication in randomized controlled trials is needed.

Read the article: <https://doi.org/10.1097/PSY.0000000000000376>

Burg, M. M., Brandt, C., Buta, E., Schwartz, J., Bathulapalli, H., Dziura, J., . . . Haskell, S. (2016). Risk for incident hypertension associated with posttraumatic stress disorder in military veterans and the effect of posttraumatic stress disorder treatment. *Psychosomatic Medicine*, 79, 181-188. PILOTS ID: 46602

## Randomized trial evaluates neurofeedback training in patients with PTSD

Neurofeedback training, which teaches patients to regulate their brain activity, has been used to help people with physical disabilities stimulate paralyzed muscles or communicate commands after a stroke. In a recent randomized trial, investigators with the Trauma Center at Justice Resource Institute evaluated whether neurofeedback training may also be beneficial for patients with PTSD. The study enrolled community adults with PTSD who had failed to respond to six or more months of trauma-focused therapy; it is unclear whether the therapy was evidence-based. Participants were asked to continue with therapy, and were also

## Take NOTE

### Review of medications for co-occurring PTSD and alcohol use disorder

Investigators with the National Center for PTSD reviewed the results of nine randomized controlled trials of pharmacological interventions in patients with a dual diagnosis of PTSD and alcohol use disorder.

Read the article:

<http://www.ptsd.va.gov/professional/articles/article-pdf/id46576.pdf>

Petrakis, I. L., & Simpson, T. L. (2017). Posttraumatic stress disorder and alcohol use disorder: A critical review of pharmacologic treatments. *Alcoholism: Clinical and Experimental Research*, 41, 226-237. PILOTS ID: 46576

### New reports from VA's Evidence-based Synthesis Program focus on cannabis, women Veterans

Investigators with the Evidence-based Synthesis Program (ESP) systematically reviewed the research literature on cannabis in the treatment of pain or PTSD, finding few rigorous studies.

Read the management brief: [http://www.hsrd.research.va.gov/publications/management\\_briefs/default.cfm?ManagementBriefsMenu=eBrief-no122](http://www.hsrd.research.va.gov/publications/management_briefs/default.cfm?ManagementBriefsMenu=eBrief-no122)

Read the full report (VA intranet only):

<http://vawww.hsrd.research.va.gov/publications/esp/cannabis.cfm>

A separate ESP report offers an evidence map of research on healthcare for women Veterans. The report describes 437 articles published from 2008 through 2015 and identifies priorities for future research.

Read the management brief: [http://www.hsrd.research.va.gov/publications/management\\_briefs/default.cfm?ManagementBriefsMenu=eBrief-no119](http://www.hsrd.research.va.gov/publications/management_briefs/default.cfm?ManagementBriefsMenu=eBrief-no119)

Read the full report (VA intranet only):

<http://vawww.hsrd.research.va.gov/publications/esp/womens-health2.cfm>

Danan, E., Ensrud, K., Krebs, E., Koeller, E., Greer, N., Velasquez, T., . . . Wilt, T. J. (2016). *An evidence map of the women veterans' health research literature (2008-2015)*. (VA ESP Project #09-009).

Kansagara, D., O'Neil, M., Nugent, S., Freeman, M., Low, A., Kondo, K., . . . Morasco, B. J. (2016). *Benefits and harms of cannabis in chronic pain or post-traumatic stress disorder: A systematic review*. (VA ESP Project #05-225).

randomized to 3 months of twice-weekly neurofeedback training ( $n = 28$ ) or waitlist ( $n = 24$ ). During neurofeedback sessions, EEG activity was recorded from scalp electrodes and fed back in real time. Participants received a reward (an audio tone and positive visual feedback on a videogame screen) when their EEG activity fell within the target range. The training was intended to teach participants to stabilize their EEG, thereby improving self-regulation and ultimately PTSD symptoms. At the 1-month follow-up, both conditions showed significant improvement in PTSD severity on the Clinician-Administered PTSD Scale, but neurofeedback training led to greater improvements than waitlist ( $d = -1.71$ ). As a next step, it will be important to see whether this novel treatment compares with more active control groups that can better account for possible placebo effects.

Read the article: <https://doi.org/10.1371/journal.pone.0166752>

van der Kolk, B. A., Hodgdon, H., Gapein, M., Musicaro, R., Suvak, M. K., Hamlin, E., & Spinazzola, J. (2016). A randomized controlled study of neurofeedback for chronic PTSD. *PLOS ONE*, 11, e0166752. PIILOTS ID: 46581

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## Sexual problems predict treatment outcomes in PTSD and depression

Sexual problems are common in PTSD and depression. Better understanding of how these problems influence (and are influenced by) treatment is key to providing optimal care. A study led by investigators at the University of Kentucky evaluated this interaction. The study used data from 45 male OEF/OIF Veterans who completed an 8-session behavioral activation and therapeutic exposure treatment for comorbid PTSD and depression. Interest in sexual activity, sexual arousal, PTSD, and depressive symptoms were assessed before and after treatment. Half the sample (53%) reported significant sexual problems at baseline. PTSD and depressive symptoms improved following treatment, but neither sexual desire nor sexual arousal problems improved. Among the 28 treatment completers, participants with sexual problems at baseline had less improvement than those without sexual problems in PTSD and depressive symptoms. It is unknown why participants with sexual problems were less responsive to treatment. One possibility, suggested by the authors, is that significant sexual problems are reflective (at least in part) of generalized impairment in interpersonal relationships, which may interfere with treatment gains. Sex differences are also an important consideration. A prior study found sexual concerns improved with successful PTSD treatment in a sample of female Veterans and active duty personnel (see the [December 2009 CTU-Online](#)); this study suggests the same may not be true for male Veterans.

Read the article: <https://doi.org/10.1080/00332747.2016.1142774>

Badour, C. L., Gros, D. F., Szafranski, D. D., & Acerno, R. (2016). Sexual problems predict PTSD and depression symptom change among male OEF/OIF Veterans completing exposure therapy. *Psychiatry*, 79, 403–417. PIILOTS ID: 46577

## Predictors of Outcome in Routine Care for PTSD

Research on predictors of PTSD outcome comes primarily from secondary analyses of clinical trials; data from clinical settings is lacking. A study led by investigators at the VA Center for Clinical Management Research in Michigan analyzed data from VA administrative records to examine outcomes in routine clinical care. Participants were Veterans ( $N = 2,237$ ) with a diagnosis of PTSD who had 4 PCLs within a 12-week period in the year following diagnosis. The sample was restricted to VA facilities that regularly administered the PCL. Using latent trajectory analysis, three distinct groups were identified based on initial symptom severity and improvement across 12 weeks: mild-improving (22%), moderate-improving (44%), and severe-stable (34%). Across groups, participants had approximately 5 psychotherapy sessions in 12 weeks. Compared with the mild-improving group, those in the moderate-improving and severe-stable groups were more likely to be non-white, Hispanic, and have comorbid depression. Those in the severe group were more likely than the mild group to be male, and more likely than the moderate group to have comorbid sleep disorder. The identified trajectories and risk factors are consistent with previously reported evidence from RCTs (see the [August 2016 CTU-Online](#)). Although all groups received a similar number of treatment sessions, the type of treatment is unknown. Future investigations will benefit from examining potential systematic differences between groups based on treatment type and how treatment relates to outcomes.

Read the article: <https://doi.org/10.1002/jts.22156>

Sripada, R. K., Pfeiffer, P. N., Rampton, J., Ganoczy, D., Rauch, S. A. M., Polusny, M. A., & Bohnert, K. M. (2017). Predictors of PTSD symptom change among outpatients in the U.S. Department of Veterans Affairs Health Care System. *Journal of Traumatic Stress*. Advance online publication. PIILOTS ID: 46579

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## Prolonged Exposure reduces distress regardless of the amount of prior traumatic exposure

Many people with PTSD have been exposed to more than one traumatic event. Experimental research in animal models and humans suggests that cumulative trauma impairs extinction learning, the hypothesized mechanism of exposure-based treatment, which in turn could lead to poorer treatment response. But research in nonclinical samples and previous PE trials suggests otherwise. To resolve this apparent contradiction, investigators from the University of Washington and Case Western Reserve University tested whether number of traumatic events predicted change in distress during in-session imaginal exposure and overall PTSD treatment outcomes after PE. Patients ( $n = 16$ ) with chronic PTSD received up to 10 sessions of PE and reported subjective levels of distress during imaginal exposure sessions (3-10). PTSD symptoms were measured with the PTSD Symptom Scale-Interview Version at baseline, posttreatment, and at 3- and 6-month follow-up. As expected, within-session distress and PTSD symptoms declined across sessions, and these declines did not vary according to the amount of prior trauma exposure. Amount of trauma also did not predict PTSD outcomes at follow-up (3 and 6 months). These results are encouraging because

they suggest that the amount of trauma patients have experienced does not compromise the probable active ingredient in PE, such that patients with greater amounts of trauma exposure can benefit from PE to the same degree as patients who have experienced only a single traumatic event.

Read the article: <https://doi.org/10.1002/da.22582>

Jerud, A. B., Farach, F. J., Bedard-Gilligan, M., Smith, H., Zoellner, L. A., & Feeny, N. C. (2016). Repeated trauma exposure does not impair distress reduction during imaginal exposure for posttraumatic stress disorder. *Depression and Anxiety*. Advance online publication. PILOTS ID: 46578

## ASSESSMENT

### Is previous trauma exposure a risk or a protective factor for PTSD?

The World Health Organization (WHO) World Mental Health Survey was a large, 12-year epidemiological study that spanned 22 nations. The size and scope of this study has allowed investigators at Harvard Medical School an unprecedented look at how repeated trauma exposure may influence PTSD risk. The investigators analyzed data from 34,676 respondents who participated in face-to-face interviews about their trauma history and PTSD symptoms (using the Composite International Diagnostic Interview). Among the 70% of the sample who reported experiencing at least one traumatic event during their lifetime, investigators focused on one randomly-selected trauma per person. Results showed that for some events, prior exposure to the same type of event was associated with a greater risk of PTSD, but for other events, the opposite was true. Among physical assault survivors, prior exposure to physical assault was linked with increased PTSD risk. In contrast, for those who participated in organized violence, prior organized violence participation was associated with lower PTSD risk. For other types of traumas, such as sexual assault, prior exposure did not affect PTSD risk. By showing that prior trauma exposure may act as a risk or protective factor (or neither), these findings help to untangle the complicated relationship between trauma type, prior trauma exposure, and PTSD prevalence.

Read the article: <https://doi.org/10.1001/jamapsychiatry.2016.3783>

Liu, H., Petukhova, M. V., Sampson, N. A., Aguilar-Gaxiola, S., Alonso, J., Andrade, L. H., . . . Kessler, R. C. (2017). Association of *DSM-IV* posttraumatic stress disorder with traumatic experience type and history in the World Health Organization world mental health surveys. *JAMA Psychiatry*, 74, 270-281. PILOTS ID: 46582

### New brief measure assesses trauma-related cognitions

One of the most widely-used measures of trauma-related cognitions, the Posttraumatic Cognitions Inventory (PTCI), is longer than is feasible to use in some clinical and research contexts. To address this issue, a team led by investigators from the VA San Diego Healthcare System and National Center for PTSD recently validated an abbreviated version of the PTCI. This brief scale, the PTCI-9, was developed using a sample of 223 male and female Veterans seeking treatment for PTSD. Participants completed the original 33-item PTCI and measures of mental health symptoms. Nine items with the highest factor loadings on the original three subscales of the PTCI (Negative Cognitions about the Self, Negative Cognitions about the World, and Self-Blame) were included in the PTCI-9. The PTCI-9 demonstrated good internal consistency (Chronbach's alphas = .80-.87) and strong correlations with the original PTCI subscales ( $r = .90-.96$ ). Similar results were found when the investigators validated the PTCI-9 in a sample of 117 treatment-seeking female civilians ( $r = .91-.96$ ). The PTCI-9 also correlated with measures of PTSD (CAPS and PCL), depression (BDI-II), and quality of life (Quality of Life Inventory) in both samples. These findings suggest that this shortened form of the PTCI is a valid measure of posttraumatic cognitions, and may be feasible to use even in busy clinical settings.

Read the article: <http://www.ptsd.va.gov/professional/articles/article-pdf/id46575.pdf>

Wells, S. Y., Morland, L. A., Torres, E. M., Kloezeman, K., Mackintosh, M.A., & Aarons, G. A. (2017). The development of a brief version of the Posttraumatic Cognitions Inventory (PTCI-9). *Assessment*. Advance online publication. PILOTS ID: 46575

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