

CLEARINGHOUSE FOR MILITARY FAMILY READINESS

Is Therapeutic Horseback Riding an Effective Treatment for Veterans with PTSD? Rapid Review

Clearinghouse Technical Assistance Team

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Q: Is Therapeutic Horseback Riding (THR) an effective treatment for veterans with PTSD?

A: There is a lack of evidence to definitively answer this question. Of the limited evidence available, the results appear to be trending in the direction of THR improving PTSD *symptoms*. However, more rigorous research is needed to determine if THR is an effective *treatment* for veterans with PTSD. Further, the limited amount of research available examines Equine-Assisted Interventions (EAI) or Equine-Assisted Therapy (EAT) rather than THR specifically. THR is often considered a type of EAI or EAT, and some EAT programs include THR as part of the treatment. However, terminology varies throughout the field and these terms may have different meanings depending on the source.¹ Three recent studies examining EAI or EAT interventions are summarized below.

1. A Systematic Review of Equine-Assisted Interventions in Military Veterans Diagnosed with PTSD (Boss et al., 2019)
 - **Conclusion:** EAI may be effective as an adjunct treatment for PTSD in veterans. The studies included in this review are indicative of both significant and non-significant findings with data trending in the direction of EAI improving PTSD symptoms. However, the authors could not make a definitive statement on the effectiveness of EAI based on the current evidence.
 - **Details:** Nine studies published through July 2019 were included in this systematic review. All studies had a small sample size (i.e., largest n = 38). Of the nine studies, three used THR as an intervention:
 - Johnson et al. (2018) conducted a RCT of a once per week, six-week THR program with 29 participants. The authors reported a statistically significant ($p \leq .01$) decrease in PTSD symptoms at three weeks, and a statistically ($p \leq .01$) and clinically² significant decrease in PTSD symptoms at six weeks.
 - Lanning et al. (2017) conducted a study of an eight-week THR program with 51 participants. The findings were not statistically significant.
 - The third study used qualitative data and was not included in the findings for PTSD measures.
2. Equine-Assisted Therapy for Veterans with PTSD: Manual Development and Preliminary Findings (Arnon et al., 2020)

¹ To address the terminology inconsistencies, the Professional Association of Therapeutic Horsemanship International convened a task force in 2019 with the goal of reaching term definition consensus; a resource guide with definitions is slated to be released this year (PATH International, 2020).

² A 10-20-point change on the PTSD Checklist for DSM-IV represents a clinically significant change (U.S. Department of Veterans Affairs, 2020).

- **Conclusion:** All participants (n = 8) reported involvement in the program as a positive experience and showed some benefits post-treatment. However, four of the six participants assessed at the three-month follow-up had worsening PTSD and depression symptoms. The authors suggest additional research is needed to determine the effects of this program. Given the extremely small sample size, these results are preliminary at best and should not be generalized.
 - **Details:** An equine specialist and mental health professional led 90-minute sessions once per week for eight weeks. Participants worked in teams of two and engaged in equine grounding exercises, psychoeducation, and group sessions. No horseback riding exercises were included in this program.
3. Equine Assisted Therapy for Patients with Post Traumatic Stress Disorder: A Case Series Study (Shelef et al., 2019)
- **Conclusion:** This study suggests that EAT may be a beneficial treatment for patients with PTSD. After six months of EAT, participants who completed the program (n=13) showed statistically significant ($p < .05$) improvements in the ability to work and perform daily tasks.
 - **Details:** This was a prospective, case study conducted in Israel, with 13 of 23 participants completing six months of EAT. Participants received EAT once a week for three hours over the course of six months. EAT activities included horse grooming and saddling, horseback riding, groundwork with the horse, and a group session to process experiences and learn coping skills.

References

- Arnon, S., Fisher, P., Pickover, A., Lowell, A., Turner, J., Hilburn, A., Jacob-Mcvey, J., Malajian, B., Farber, D., Hamilton, J., Hamilton, A., Markowitz, J., & Neria, Y. (2020). Equine-assisted therapy for veterans with PTSD: Manual development and preliminary findings. *Military Medicine*, *185*(5–6), E557–E564. <https://doi.org/10.1093/milmed/usz444>
- Boss, L., Branson, S., Hagan, H., & Krause-Parello, C. (2019). A systematic review of equine-assisted interventions in military veterans diagnosed with PTSD. *Journal of Veterans Studies*, *5*(1), 23. <https://doi.org/10.21061/jvs.v5i1.134>
- Johnson, R., Albright, D., Marzolf, J., Bibbo, J., Yaglom, H., Crowder, S., Carlisle, G., Willard, A., Russell, C., Grindler, K., Osterlind, S., Wassman, M., & Harms, N. (2018). Effects of therapeutic horseback riding on post-traumatic stress disorder in military veterans. *Military Medical Research*, *5*(1), 1–13. <https://doi.org/10.1186/s40779-018-0149-6>
- Lanning, B., Wilson, A., Krenek, N., & Beaujean, A. (2017). Using therapeutic riding as an intervention for combat veterans: An international classification of functioning, disability, and health (ICF) approach. *Occupational Therapy in Mental Health*, *33*(3), 259–278. <https://doi.org/10.1080/0164212X.2017.1283282>
- PATH International. (2020). *Baseline Definition Summit*. <https://www.pathintl.org/about-path-intl/baseline-definition-summit>
- Shelef, A., Brafman, D., Rosing, T., Weizman, A., Stryjer, R., & Barak, Y. (2019). Equine assisted therapy for patients with post traumatic stress disorder: A case series study. *Military Medicine*, *184*(9–10), 394–399. <https://doi.org/10.1093/milmed/usz036>
- U.S. Department of Veterans Affairs. (2020, August). *PTSD checklist for DSM-5 (PCL-5)*. PTSD: National Center for PTSD. www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp