

Physiologic Stress Indicators in Horses Working with Military Veterans in Therapeutic Horseback Riding



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INTRODUCTION

- More than 850 accredited Therapeutic Horseback Riding (THR) centers in U.S.
- Popularity of THR for military veterans is growing
- Potential stress due to a horse’s ability to sense different emotions combined with an inexperienced rider
- Limited research investigating stress in horses working in THR centers



SPECIFIC AIMS

- To what extent do horses working with military veterans with PTSD experience changes in circulating plasma concentrations of adrenocorticotrophic hormone (ACTH) and serum cortisol or stress behaviors during or immediately after riding sessions?
- To what extent is the length of time that a horse has been working with military veterans with PTSD associated with lower stress levels during THR?

METHODS

Horses’ blood samples will be drawn from jugular vein
Serum cortisol and ACTH will be measured at multiple time points:

- Resting day
- Before riding session
- After tacking
- After riding session

All samples will be transported chilled, centrifuged and frozen for bulk analysis.



EQUINE DEMOGRAPHICS

		N=23
Age (years)	Mean Range	17 7-28
Gender	Male Female	17 6
Breed	Arabian Draft Morgan Quarter Horse Other	3 7 2 5 6
Origin of Horse	Donated Leased Other	16 3 4
Length of time used for THR	Less than 1 year 1-4 years 5-9 years 10-15 years More than 15 years	5 10 5 2 1
Previous training or work	Show horse Pleasure horse Mounted police	12 10 1
Days per week doing THR	Mean Range	3.7 2-6
Age (years) of rider population most often used with	Children (0-12) Adolescents (13-19) Adults (20-59) Older Adults (60+)	19 22 20 8
Disability type of rider population most often used with	Developmental Behavioral Emotional Physical Psychological Social	23 23 16 23 17 16

ANTICIPATED RESULT

We anticipate that THR is no more stressful to horses than when they are not engaging in THR work.



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