



**connection**  
therapy

**Recognizing Eye  
Movement Patterns to  
Increase Participant  
Interaction**

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## Introduction

- Interactions with horses and participants have multiple layers
  - What is said; What is felt
- Yet, a lot of times, those two things are not the same, so then we need to add
  - What is observed
- Good news - In this discussion, we are going to combine your natural instincts as a human and your skills as a horse professional to recognize these patterns
- More good news...this is a bit like buying a new car, once you do that, you recognize it everywhere you look
- The tough part - allowing yourself to see the positive and negative experiences



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## Today's Discussion

- Introductions & course overview
- Overview of eye contact and movement patterns
- Description of similarities in physiology and behaviors in horses and humans
- Assessment of eye contact behaviors in horses and humans
- Discussion of activities that increase participant interaction
- Group collaboration and activity planning
- Q&A



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### Three Questions

- What do I see?
  - In the human's eyes
  - In the horse's eyes
- Is the participant ready for an interaction?
- Does the participant seek support?
  - How and from whom?



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### Eye Contact & Movement Patterns

- One of these children was ready for his photograph to be taken at this moment
- Which one?
- How do you know?



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### Research Studies about Horse Eye Movements

- ◊ When horses see an angry face, they display a leftward gaze
  - ◊ Smith AV, Proops L, Grounds K, Wathan J, McComb K. (2016).
- ◊ Blink rates correlate with increased cortisol and heart rate
  - ◊ Cortisol is understood to increase under stress
  - ◊ By extension, **blink rate is a proxy indicator the horse is experiencing stress**
  - ◊ Mott, R., Hawthorne, S., & McBride, S. (2020).



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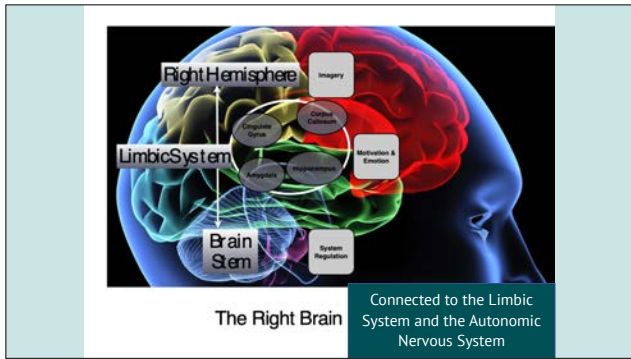
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### Nervous Systems Overview

- The autonomic nervous system is a vast structure that is responsible for maintaining our body
- Autonomic refers to the capacity for it to operate without conscious awareness
  - Both automatic and autonomous
- Includes the release and uptake of hormones, neurochemicals, as well as blood flow, breath, and body temperature

(Schore, 2003)




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### Nervous Systems Overview, continued

- Nervous system organization is similar across mammal species
- Regulated – affiliative, digestive movement (eating, defecation), able to emote (cry for humans)
- Fight/Flight – mobilized, hyper-alert to stimulation, overly reactive
- Freeze – systems shutdown, overwhelm, immobilized, and not responsive

(Schore, 2003)




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## Nervous Systems Overview, continued

- Ways we observe horses in a regulated state
  - Examples: ears, eyes, body movements, breath
- Ways we observe humans to be in a regulated state
  - Examples: voice tone, eye contact, body movements
- Ways we observe...other animals?

(Schore, 2003)



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## Emotional Displays

### • Nervous System Behaviors in Horses & Humans

- Fight
- Flight
- Freeze
- Regulated



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## Fight Response

- Mobilized, hyper-alert to stimulation, overly reactive
- Increased cortisol & adrenaline, narrowed vision, extremities activated
- Horses
  - Kicking, charging
- Humans
  - Physical violence, violent threats
- Dogs
  - Growling, charging



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## Flight Response

- Mobilized, hyper-alert to stimulation, overly reactive
- Increased cortisol & adrenaline, narrowed vision, extremities activated
- Horses
  - Fleeing/bolting
- Humans
  - Fleeing, abrupt discontinuations in relationships
- Dogs
  - Fleeing, bolting, hiding



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## Freeze Response

- Heart rate deceleration, immobilized but reactive, extremities de-activated
- Horses
  - Glassy-eyed, blank stare, little to no movement
- Humans
  - Flat expressions, dissociative, numb
- Dogs
  - Glassy-eyed, blank stare, little to no movement



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## Regulated Response

- Affiliative behaviors, digestive movement (eating, defecation), able to emote (cry for humans)
- Decreased cortisol, increased oxytocin, serotonin, bilateral extremity activation and synchronization
- Horses
  - Attentive, soft eyes, consistent gait
- Humans
  - Voice tone & prosody (rhythm), eye contact, body movements
- Dogs
  - Attentive, soft eyes



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### Three Questions

- What do I see?
  - In the human's eyes
  - In the horse's eyes
  - In my team mates' eyes
- Is the participant ready for an interaction?
- Where does the participant look for support?



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### Humans - Eyes, Mouth/Teeth, Shoulders

- ◊ What can we hear and see?
  - ◊ Voice tone, body movements
- ◊ Face
  - ◊ Eyes
  - ◊ Mouth/Teeth
- ◊ Heart
  - ◊ Shoulders either protect or open to allow access to heart and internal organs



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### Eye Contact & Movement Patterns - How Can We Help?

What might a glance look like prior to a problem?

- Probably a glance like this one
- Very common for humans to display
- Socially compliant eye contact, but feel internally stressed



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### Freeze - Possible Responses



- Will need 20- 25 minute recovery time before insight (conversation skills) return
- Low eye contact = low felt threat
    - Passive eye contact at first
  - Contained safe space, but access to exits
  - Limit-setting for safety, including no access to horses
  - Very similar to horses, assess for ability to follow your lead
    - "There is a cone over there, want to go with me to pick it up?"
    - During this activity, want to see if they are able to follow your directions, hearing and smell usually come back before eye contact
  - Activities - a walk, a card or board game, to get reciprocal interaction back

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### Flight - Possible Responses

Will need 20-25minute recovery time before insight (conversation skills) return

- Low eye contact = low felt threat
  - Meet gaze and let it go at height of fun
- Contained safe space, but access to guardians
- Limit-setting for safety, including no access to horses
- In-office options, freedom to choose from a small variety of interactive activities

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### Fight - Possible Responses

Will need 20-25 minute recovery time before insight (conversation skills) return

- Low eye contact = low felt threat
  - Meet gaze and let it go at height of fun
- Contained safe space, but access to guardians
- Limit-setting for safety, including no access to horses
  - Guardians and other professionals involved for physical violence
- Freedom to choose from a small variety of ACTIVE activities
  - "I'm saying no to hitting anyone, but you can hit the sand"

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### Three Questions

- What do I see?
  - In the horse's eyes
  - In the human's eyes
- Is the participant ready for an interaction?
- Where does the participant look for support?



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### Group Discussion

- What options are available in your settings?
- When a participant needs help regulating themselves, what is the structure for the horse to be involved?
- After today, what possibilities might you try?



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### Summary

- ◊ Communication is greatly enhanced when we can understand and respond to all of these nonverbal communications
- ◊ Regulation of the nervous system is great, but it is not always appropriate
- ◊ Different situations require different responses
- ◊ We can use that information to improve our own awareness of interactions
  - ◊ By becoming aware of our own nervous system functions and behaviors
  - ◊ By observing non-verbal signals we and others may be making without knowing
  - ◊ By learning about the non-verbal signals of communication horses are making

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