



Emerging area of Practice: Understanding Equine Assisted Therapy

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*There is something
about the outside
of a horse that is
good for the inside
of a man.*

~Winston Churchill



What is Equine Assisted Therapy?

- Equine Assisted Therapy (EAT) is treatment that incorporates equine activities and/or the equine environment. Rehabilitative goals are related to the patient's needs and the medical professional's standards of practice. (NARHA, *EFMHA Glossary*, 2007)
- Some examples of EAT include: Hippotherapy and Equine Facilitated Psychotherapy (Horses and Humans Foundation, 2006).

Hippotherapy as a treatment strategy for occupational therapy



Hippotherapy

- Hippotherapy is a physical, occupational or speech therapy treatment strategy that utilizes *equine movement*. This strategy is used as part of an integrated treatment program to achieve functional outcomes.



Courtesy American Hippotherapy Association

What are the benefits of Hippotherapy?

Changes can be seen in client factors such as:

- Balance
- Body awareness
- Multi-sensory processing
- Righting reactions
- Motor planning
- Postural alignment, stability and security
- Mobility

How does hippotherapy work?

- The use of hippotherapy is based on dynamic systems and motor learning theory.
- It also relies on the treatment principles for neurodevelopmental treatment and sensory integration theory and treatment.



Motor learning principles

- Provides hundreds of practice opportunities
- Requires continuous problem solving
- Variability of practice



Neurodevelopmental treatment principles

- Continual facilitation of inhibition is provided by carefully graded equine movement
- The horse promotes symmetrical postural alignment
- The horse promotes movement disassociation within the context of an active movement
- The horse provides rhythmic repetitive, symmetrical, bilateral, weight shift and heightened feedback on midline orientation

Sensory Integration Principles

- Provides opportunities for enhanced sensory processing and modulation in the context of a meaningful activity
- The horse provides graded vestibular, proprioceptive, tactile and visual flow to normalize sensory processing
- Allows for a just right challenge

Treatment ideas addressing the child with mild hypotonia

- A horse with a lively gait, increased concussion and good adjustability would be selected, however a narrow or medium base of support may be chosen if there are hypermobility concerns
- Movement begins in anterior/posterior planes to balance flexor/extensor tone.
- If Pt. presents with decreased extensor tone and kyphosis with posterior pelvic tilt, alternative positioning may be used.
- GOALS: may include increasing access to play environment, increasing endurance to keep up with peers and improving motor planning for dressing and self help skills

Treatment ideas addressing the child with sensory processing deficits

- Selection of the equine movement is of particular importance to provide appropriate vestibular, proprioceptive and tactile input.
- Stirrups can be added to increase proprioceptive input
- The equine environment provides multi-sensory input, consider the environment
- Changes in pace, direction, positioning and vertical displacement can increase vestibular input.
- Monitor signs of over-stimulation
- GOALS- improving self regulation to engage in peer play and improving body awareness to enhance self care skills

Treatment ideas addressing the child with hypertonia

- Selection of the equine movement to provide smooth rhythmic movement with decreased concussion and good adjustability.
- Width of base of support is particularly important. A base of support that is too wide will often produce posterior pelvic tilt and may increase spasticity
- Alternative positions such as prone and supine can be used to elongate shortened muscle positions
- Stretching prior to transitioning onto the horse and improve pelvic positioning
- GOALS- to address modulation of tone to improve motor planning for self care and play skills

How EAT fits into the Occupational Therapy Practice Framework

- Evaluation
- Intervention
- Outcomes



Evaluation and Intervention

Who can benefit from occupational therapy using EAT?

- Children 2+ through the elderly population
- Common diagnosis include:
 - Autism or Pervasive Developmental Delay
 - Cerebral Palsy
 - Cerebral Vascular Accident (stroke)
 - Traumatic Brain Injury (TBI)
 - Spina Bifida
 - ADD/ADHD
 - Genetic disorders
 - Sensory Processing Disorder/Sensory Integrative Disorder
 - Mental health diagnosis
 - Occupationally deprived or those who would benefit from wellness programming

Evaluation

- Developing an occupation profile
 - Through interview or clinical observation prior to beginning treatment
- Analysis of occupational performance
 - Should include use of standardized measures
 - Must include a mounted portion
 - Collaborate with families and clients on goals (why are you coming to this environment for therapy)

Evaluation

- Consider why this client would attend hippotherapy/occupational therapy session rather than traditional/clinical occupational therapy?
- What about EAT makes the benefit involved outweigh the greater risks?
- Explain the risks to the family.

So what are the risks?



- Risks include falling off the horse causing injury or death
- Sudden movements causing whiplash
- Getting stepped on
- Allergic reactions
- If a horse is frightened or provoked it may divert from its training and act according to its natural survival instincts which may include, but are not limited to stopping abruptly; spinning around; changing directions and/or speed at will; shifting its weight; bucking; rearing; kicking; biting; and/or running from danger.



Evaluation considerations

- There is a comprehensive list of precautions and contraindications through NARHA
- Use your clinical judgment to determine if this is the safest treatment setting that will allow you to meet goals
- Consider your team, what types of clients can your facility, horses, volunteers, etc reasonably assist with?
- Do not be afraid to say “no” or “not now” to families seeking services.

Precautions and Contraindications

- Not everyone can benefit from EAT, certain conditions make equine movement detrimental, the equine environment unsafe or increase the risks associated with this intervention strategy
- These include:
 - Compromised head control
 - Uncontrolled seizures
 - Unsafe behavior (running/wandering, fire setting, animal abuse)

Great, what age can we start?

- Whoa! Hold your horses, not until two years of age!
- The movement of the horse is a powerful tool and the movement may cause micro-trauma in young, developing musculoskeletal systems
- Consider this when evaluating developmentally delayed children



What about sitting balance?

- Clients do not necessarily need independent sitting balance, in fact this is often a goal.
- Children can be placed in positions that develop independent sitting balance
- Adults should have independent sitting balance as their size may compromise safety
- Be aware of other conditions that may effect sitting balance, including seizures, medications and pain

Can't someone ride behind them?

- If head control or sitting balance is limited, a parent may ask if someone can sit behind their child, but there are some things to consider about tandem hippotherapy
 - Tandem hippotherapy is significantly more dangerous for the client, backrider, horse and therapy team
 - Tandem hippotherapy has humane treatment implications to the horse as our partner and is a precaution
 - There is a variety of adapted equipment that can replace the need for a backrider
 - There are NARHA standards guiding tandem hippotherapy
 - The client is likely to make no or slow progress as the client typically leans into the backrider. The backrider typically over-supports the client second to accommodating to the dynamic base of support
 - Often if a client waits 6 months to a year hippotherapy may be more appropriate and safe
 - Check out “Alternatives to backriding” video

■ *I saw a child who couldn't walk,
Sit on a horse, laugh and talk...
Then ride it through a field of daisies
and yet he could not walk unaided.
I saw a child, no legs below,
sit on a horse, and make it go
through woods of green
and places he had never been
to sit and stare - except from a chair.
I saw a child who could only crawl
mount a horse and sit up tall.
Put it through degrees of paces
and laugh at the wonder in our faces.
I saw a child born into strife
Take up and hold the reins of life
and that same child was heard to say
"Thank God for showing me the way..."
-John Anthony Davie*



Intervention Approaches- how to explain the use of hippotherapy to our colleagues

- **Create, Promote-** EAT may be used to promote social skills development with the equine as a facilitator or create a opportunity for leisure exploration and participation after discharge in a therapeutic riding program
- **Establish, Restore-** this is a main areas most EAT addresses, movement of the horse is used to establish independent sitting balance or restore pelvic mobility
- **Maintain-** typically, hippotherapy is not provided as a maintenance approach, however an occupational therapist may consult with a therapeutic riding instructor to provide a maintenance stretching and exercise program for the client during riding lessons
- **Prevent-** EAT can be used to prevent deformity, performance skill limitations and occupational deficits.

Types of interventions hippotherapy utilizes

■ Preparatory Methods

- When the horses' movement is used to decrease spasticity, provide vestibular input or a weightbearing surface for the client



Types of Intervention

Purposeful Activity:

Sitting astride allows the client to practice sitting balance and righting reactions

EAT sessions may incorporate play or pretend scenarios



Photo courtesy of GAIT

Types of Intervention

■ Occupation Based

- Working with and riding horses may be occupation based for a horseperson with a disability
- Play is the occupation of children and many children see EAT as fun!



Outcomes

Evidence Based Practice

- Due to confusion in the use of terms it is often hard to assess research material
 - Therapeutic riding is directed by a riding instructor without use of a medical professional, compare this with hippotherapy and you may understand the difference in outcomes.
 - Many research studies did not differentiate between therapeutic riding and hippotherapy
 - Some studies used their own terminology: equine therapy, horseback riding therapy, etc

What's the difference

■ Hippotherapy

- Completed by professional therapist (OT, PT, or Speech Therapist) in conjunction with a professional horse handler
- Direct hands on participation by therapist at all times
- The horse's movement is essential to assist in meeting therapy goals
- The goal of hippotherapy is professional treatment to improve neurological functioning in cognition, body movement, organization, and attention levels
- Hippotherapy is 1:1 treatment and generally occurs year-round until the client meets discharge criteria
- In hippotherapy the treating therapist continually assesses and modifies therapy based on the client's responses

■ Therapeutic Riding

- Completed by professional horseback riding instructor in conjunction with volunteers including a therapist who may be involved as a consultant
- Occasional hands on assistance by riding instructor and/or volunteer, with instructor primarily teaching from center of arena.
- The horse's temperament is essential to learn riding skills
- Therapeutic riding aims to provide social, educational, and sport opportunities in recreational horseback riding lessons adapted to individuals with disabilities
- In therapeutic riding, the individual is often taught riding lessons in a group format, which runs in "sessions". The instructor must respond to the group as a whole, in addition to fostering individual success
- In therapeutic riding, focus on the group lesson is encouraged, along with emphasizing proper riding position and rein skills

Evidence Based Practice

- **The effect of hippotherapy on ten children with cerebral palsy.** Casady RL, Nichols-Larsen DS. (2004) *Pediatr Phys Ther.* Fall;16(3):165-72.
- **PURPOSE:** The purpose of this study was to determine whether hippotherapy has an effect on the general functional development of children with cerebral palsy.
- **RESULTS:** One-way analysis of variance of group mean scores with repeated measures was significant ($p < 0.05$) for all PEDI subscales and all GMFM dimensions except lying/rolling. Post hoc analyses with the Tukey test for honest significant differences on the PEDI and GMFM total measures as well as GMFM crawling/kneeling and PEDI social skills subtests were statistically significant between pre-test 2 and post-test 1.
- **CONCLUSIONS:** The results of this study suggest that hippotherapy has a positive effect on the functional motor performance of children with cerebral palsy. Hippotherapy appears to be a viable treatment strategy for therapists with experience and training in this form of treatment and a means of improving functional outcomes in children with cerebral palsy.

Evidence Based Practice

- **Effects of Equine Movement on Attention and Communication in Children with Autism.** Macauley, BL. (2007) *AHA Conference Compendium*. April, 2007

Purpose: 12 week speech therapy session using hippotherapy with 15 children on the autism spectrum. Attention and communication behaviors were measured at the beginning of therapy and following the last hippotherapy session.

Results: CARS scale did not show change, however all 15 children improved in at least one of the four subtests. 91.8% (average) of session goals were met. Improvement of 13/15 relating to people, 9/15 listening behaviors, 10/15 verbal communication and 10/15 non-verbal communication.

Types of Outcomes possible with Equine Assisted Therapy

- **Occupational performance-** improving deficits and meeting functional goals
- **Client satisfaction-** tracking results through pre/post tests including use of the COPM
- **Health and wellness-** EAT can improve patients overall health and wellbeing
- **Prevention-** EAT can address unhealthy routines and develop active lifestyles to prevent declines in health
- **Quality of life-** Many times incorporating EAT into a treatment plan increases the quality of life for the patient and family. Patients enjoy interacting with the horse and feel a sense of freedom and empowerment in the EAT setting. EAT addresses self concept, health, functioning and progress towards the patients' goals.

Practitioner Qualifications

Qualification for treatment

- There are no state laws regarding the practice of equine assisted therapy
- The American Occupational Therapy Association (AOTA) recognizes the use of the movement of the horse (hippotherapy) as an intervention tool as long as it is based on an appropriate occupational therapy evaluation, treatment plan, and goals and assists in achieving the appropriate functional outcome. The occupational therapy practitioner using the movement of the horse also should be specifically trained in the use of this tool.
- NARHA centers have standards regarding the qualifications and supervision of therapists
- Any therapist considering entering the Equine Assisted Therapy field should want to gain a solid background in equine behavior, anatomy and movement and riding skills

Levels of specialty

As designated by American Hippotherapy Association (AHA)

- AHA Level I- Therapists has attended an introductory course, provides theory and basic horse handling, safety concerns, prepares therapists for mentoring
- AHA Level II- Therapist has attended an intermediate treatment focused course, evaluating equine movement, treatment strategies
- NARHA Registered Therapist- Attended AHA Level I and II and completed mentoring relationship, registered with NARHA
- Hippotherapy Clinical Specialist (HPCS)- is a designation of therapists who have advanced knowledge and experience in hippotherapy. For physical therapists, occupational therapists, and speech and language pathologists who have been practicing their profession for at least three years (6,000 hours) and have 100 hours of hippotherapy practice within the three years prior to application. Application fees apply, and a multiple-choice examination must be passed.

Interested?



- Clinicians should have a sound horsemanship knowledge or be willing to gain one through riding lessons and clinics with experienced horsepersons
- Clinicians should understand the benefits, dangers and limits of EAT
- Clinicians should engage in the mentor/mentee process when beginning to incorporate EAT into their OT practice

Fieldwork Opportunities

■ NEW JERSEY

Somerset Hills Handicapped Riding Center

Oldwick, NJ 08858, 908 439 9636 www.shhrc.org

- SHHRC operates year round with OT, PT and SLP and currently has contracts with Kean, NYU, Seaton Hall and Philadelphia University for Level I and II fieldwork

■ NEW MEXICO

Skyline Therapy Services, Ruth Dismuke-Blakely, CCC/SLP,
Sandia Park, NM 87047, 505.281.1811.

- Skyline operates year round, 5 days per week treating 10-15 patients per day utilizing all disciplines.

■ MICHIGAN

The Right Step: Rebecca Cook, OTR.: Grass Lake, MI. 49240:
517.914.0800 www.rightsteptherapy.com

- The Right Step has 1 OTR and operates 12 months per year offering Hippotherapy, Sensory Integration treatment and Therapeutic Listening home programs.

■ INDIANA

Theraplay, Carmel, IN 46032, 317.872.4166

- This center accepts OT students (part time and full time) and operates Monday-Friday. Fifty percent of the time is in hippotherapy sessions. Theraplay has been an affiliation site for University of Indianapolis, Western Michigan University and Indiana University.

Volunteering

- Choose a NARHA accredited or premiere center
- Ideally, look for a program that offers EAT
- Ask if possible to work with the therapist providing EAT and explain why.
- Volunteering with a therapeutic/adaptive riding program may allow you to see where an occupational therapist could assist the program through consultation or direct service
- Volunteers typically must attend a training at the center and will spend time working with the horses and participants, but each center will vary.



Equine Assisted Therapy

Ideas for occupational therapists

Groups



- The most recognized form of EAT is hippotherapy. However, occupational therapists bring expertise in working with group populations to effect change.
- Some ideas for groups in the EAT setting would be appropriate for development by an occupational therapist and could be run by other staff.

Wellness Perspective



Courtesy Strides

- Working around the farm can foster healthy habits and routines, develops strength and motor skills and improves cardiovascular health.
- With a rising number of children facing obesity, EAT is a motivating environment to promote health and fitness.

Community outreach programs

- An after school program for equine assisted activities to boost self esteem, self care, responsibility, peer modeling and provide positive adult role models.
- A program devoted to social and emotional growth in at risk youth. Provided through equine assisted therapy on and off the horse focusing on self esteem, social relationships, appropriate behavior, as well using reward and privilege based motivation.
- Respite care offered one week and one weekend night. Offers a change for parents with kids with disabilities a chance to have an adults only night. Children with special needs and their siblings will have fun completing equine assisted activities and craft/sensory activities.

Well-elderly program

- A program designed to promote health and delay dependence on others for care services. This program would use equine assisted therapy to enhance physical, social and emotional well-being.
- Topics may include: injury prevention, diet and exercise, home adaptation, ergonomics and expected age related changes in all physiological systems.

Life skills for people with mental health concerns

- Equine assisted therapy with discussion groups related to life skills to include dressing/bathing, hygiene, diet and exercise, medication management and community living
- These could include diagnosis specific groups such as depression, cancer/stroke survivor support groups as well as mixed inpatient psychiatric groups. May work well as a co-treat with mental health specialist.



Courtesy Fortune Center

Social skills groups

- Designed for children with a variety of diagnosis experiencing difficulties with social skills. This group utilizes equine assisted therapy both on and off the horse to develop appropriate social skills, create interaction and utilize bonding with the horse.

Courtesy Equine Assisted Therapy



Vaulting

For vaulters ages 5+ with a focus on teamwork, social and physical development. Vaulting includes time working with the horse, on a barrel and mat activities.



Courtesy Equi-ed

Consultation Method

- Consulting with adaptive riding instructors to assist in evaluating clients, adapting equipment, altering the environment and altering teaching strategies.
- The consultant must have a strong horseback riding background and the ability to adapt equipment, while keeping safety and the horses' health and comfort in mind.

Summary

- Equine assisted therapy provides many options for including horses and the equine environment to address functional challenges in clients of all ages.
- Hippotherapy is the most common form of EAT used and utilizes the movement of the horse to produce functional outcomes.
- EAT may also utilize ground activities, educational experiences and working in groups.

Questions

