

EAAT Benefits (from the PATH International website)

The benefits of animal-assisted activities and therapies have been recognized for a long time, but the specific benefits of interacting with horses may be less well known. Working with horses can have a major physical and emotional impact on people with a wide variety of issues and disabilities. Some (but not all) issues and disabilities for which equine-assisted activities and therapies (EAAT) are useful are listed with supporting evidence where available.

Amputations

People who have experienced an amputation can be successful riders and drivers. Many para-equestrians have successfully competed with an amputation. Professional Association of Therapeutic Horsemanship International (PATH Intl.) centers are experienced in creating adaptations in equipment to accommodate for people with amputations of upper and lower extremities. Drivers can learn one-handed driving and compete in pleasure driving competitions.

Borges de Araujo, Araújo, Santana, Lopes & Franck (2006) studied the use of hippotherapy as a physical therapy strategy to improve postural steadiness in patients with lower limb amputations. Data were gathered using a platform sensor F-Mat connected to a computer before the first physical therapy session utilizing hippotherapy and after the 20th session. Results from the three participants indicated increased speed and distance post treatment.

Attention Deficit Disorder

Children with attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD) have difficulties with attention and self control of behavior. Horseback riding requires attention to the instructor and the horse. Children who participate in a riding program will be taught sequential steps for learning to control their horse and becoming more independent. Riding lessons can be modified in length to accommodate for decreased attention span in the beginning of the program. Children with ADD or ADHD may also benefit from participation in a vaulting program at a PATH Intl. center. Vaulting requires attention and timing for approaching the horse on the lunge line as well as mounting and dismounting. In vaulting, children work in groups requiring self control and team work.

Autism

Children and adults with autism participate in a variety of PATH Intl. center programs including riding, driving, vaulting, hippotherapy, and equine-facilitated psychotherapy (EFP). Both equine-assisted activities such as riding or vaulting and equine-assisted therapy such as hippotherapy or psychotherapy can impact the life of a person with autism.

Bass, Duchowny, and Llabre (2008) studied children with autism participating in a 12 week therapeutic horseback riding program. Two instruments were used to measure social functioning before and after the intervention: the Social Responsiveness Scale (SRS) and the Sensory Profile

(SP). They found the children with autism who participated in the therapeutic horseback riding program improved in sensory integration and directed attention as compared to the control group.

Macauley (2007) studied children with mild, moderate and severe autism participating in a 10 week speech therapy session using hippotherapy. The children were evaluated using the Childhood Autism Rating Scale (CARS) as well as attention to task and number of session goals met. All children showed progress on at least one of the following four CARS subtests: relating to people, listening behaviors, verbal communication and nonverbal communication.

Brain Injuries

People with brain injuries can experience multiple symptoms related to their injury. They may participate in a variety of programs depending on their abilities and goals. People with a brain injury who are seeking to pursue a new recreational outlet may benefit from riding or driving programs. Participants develop skills needed to direct their equine partners through obstacles, cones courses, or on trail rides.

Cerebral Palsy

People of all ages with cerebral palsy may enjoy interacting with horses. Children can learn a sport such as riding to share with their peers. Adults may treasure riding as a life long leisure activity. Horseback riding requires skills including good posture, coordination, and balance to direct the horse. Riders with cerebral palsy may progress from riding with sidewalkers to riding independently. Some people with cerebral palsy may prefer to learn carriage driving and may even be able to drive from their own wheelchair in a specially designed carriage.

A large amount of research in equine-assisted therapy has involved children with cerebral palsy. Shurtleff, Standeven, & Engsberg (2009) measured head and trunk stability changes in children with cerebral palsy after 12 weeks of hippotherapy treatments provided by an occupational or physical therapist. The research team used a motorized barrel and video motion capture to challenge and measure the changes in motor control. The children showed very significant improvements in control of their trunks and heads at the end of the intervention period and maintained improvements after a 12 week period without treatment.

Cerebrovascular Accident/Stroke

People who have experienced a cerebrovascular accident (CVA) or stroke may experience challenges from deficits resulting from the area of the brain affected by the stroke. Examples of deficits include loss of the use of a limb such as an arm/hand, difficulty finding or understanding words, or balance problems. PATH Intl. centers offer a variety of programs to work with these challenges and those who have had a CVA may benefit from an enjoyable physical activity involving horses. They can learn to ride or drive with one hand or may use an adapted rein on their weaker side. Riding in a group is a great shared social experience as well as opportunity to interact with horses.

Deafness

People who are deaf or hard of hearing may experience improved self-esteem and a sense of independence and empowerment by becoming an independent equestrian. People with hearing impairments will develop unique ways to communicate with their instructor and equine partner while learning riding or driving.

Developmental Delay/Cognitive Delay

PATH Intl. centers are able to provide a variety of recreational programs that reflect personal preferences and choices for the person with developmental delays. Learning horseback riding skills includes leisure and recreational activities alone and with others, riding socially with others, taking turns, extending the time of the riding lesson and expanding one's repertoire of skills towards independent riding. Some persons may choose to compete in programs such as the Special Olympics.

Down Syndrome

Children and adults with Down syndrome may participate in equine-assisted activities or equine-assisted therapy if atlantoaxial instability (AAI) has been ruled out with current x-rays and/or the participant has no signs or symptoms of this condition per their physician.

Champagne and Dugas (2010) provided 11 weeks of hippotherapy to two children with Down Syndrome and measured changes in postural control. The Gross Motor Function Measure (GMFM) and accelerometry were the instruments used to measure. Improvements in gross motor behavior (particularly walking, running, and jumping) were revealed by the GMFM. The overall accelerometry data demonstrated interesting adaptive responses to the postural challenges induced by the horse.

Emotional Disabilities

Many people with emotional disabilities are able to enjoy equine based programs that promote physical activity and social interaction. PATH Intl. programs are designed for safety and close supervision as well as fun, interesting activities.

Learning Disabilities

Participants in a PATH Intl. program are presented information about riding and driving skills and horsemanship in a variety of methods. People with learning disabilities have the chance to learn through visual, auditory, and kinesthetic methods while learning to ride or drive a horse. They may be motivated to learn more about horses than they are in their school classroom. The horse's response to the aids given by the rider or driver is natural positive reinforcement and helps participants build skills.

Multiple Sclerosis

Therapeutic riding can be a great source of exercise in which people with multiple sclerosis may choose to participate. They can participate in riding within their limits of strength and energy and still enjoy an active recreational activity or sport. Riding may help people with multiple sclerosis stay limber and active.

Silkwood-Sherer and Warmbier (2007) studied the effects of hippotherapy on postural stability in persons with multiple sclerosis. They found that the group receiving hippotherapy (9 adults) demonstrated a statistically significant improvement in balance as measured by the Berg Balance Scale (BBS) and Tinetti Performance Oriented Mobility Assessment (POMA) following 7 weeks of hippotherapy intervention. The comparison group consisting of 6 adults showed no improvement in balance. A between group difference in the BBS scores by 14 weeks was noted, thus suggesting that improvements in the intervention group may have been caused by the hippotherapy treatments. None of the subjects in either the intervention or comparison groups participated in other forms of rehabilitation during the study.

Muscular Dystrophy

People with muscular dystrophy may participate in programs at PATH Intl. centers to keep active while engaging in an enjoyable activity. Riders may start out more independent, but may need more support as their disease progresses. Riding lessons may be tailored to the abilities and stamina of the rider. The PATH Intl. instructor may support their transition to a non-mounted program such as driving or a hippotherapy program as their needs change. This flexibility helps the person with muscular dystrophy stay active and engaged while coping with changes in their abilities.

Spina Bifida

Participants with spina bifida may participate in equine-assisted activities or therapies at a PATH Intl. center. Prior to participation, the client's doctor will need to carefully screen the participant for concerns such as tethered cord, hydromyelia or Chiari II malformation. Any changes in neurological status must be carefully monitored during participation in riding programs. Learning to ride or a horse may be an empowering experience and allow someone with limited mobility from spina bifida to experience a greater freedom on the back of a horse.

Spinal Cord Injuries

People who have had a spinal cord injury may have varied levels of impairments from sensory loss to quadriplegia. A complete spinal cord injury above T-6 is a contraindication for riding, but would not necessarily prevent a client's participation in other types of equine programs such as driving and unmounted activities. Many people who have had a spinal cord injury may participate in therapeutic riding lessons, carriage driving or may choose an equine-assisted therapy program to address challenges with trunk control or coping with their injury.

Lechner, Kakebeeke, Hegemann, and Baumberger (2007) conducted research to determine the effect of hippotherapy on spasticity and mental well-being of persons with spinal cord injury (SCI). Spasticity was measured by the Ashworth Scale and subjects' self-rating on a visual analogue scale. Well-being was measured by subjects' self-report on the well-being scale Befindlichkeits-Skala of von Zerssen. The researchers found that only the effect of hippotherapy reached significance for clinically rated spasticity compared with the control condition (without intervention). Immediate improvements in the subjects' mental well-being were detected only after hippotherapy.

Visual Impairment

People who have a visual impairment are able to learn to ride or drive independently and compete in equestrian events. People with visual impairments may participate as part of a vaulting team. Strategies to help people with visual impairments include use of intercom systems with the instructors, learning to count steps/strides, or auditory markers in the arena. These strategies are frequently used at PATH Intl. centers and both instructors and horses are able to accommodate and accept the rider or driver's differences.

References

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Note: Following each reference citation is the type of evidence. In this set of references, the highest type of evidence is a published single research study, followed by a published descriptive report, and then an oral presentation of a single research project. Type of evidence is important and is a factor for consideration for evidence-based practice.