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Senior English

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Note Cards

**A1:** “Observations have shown that the 3-dimensional movement of a walking horse passively moves a child’s pelvis with motions that are the same as those required for walking, thus producing perturbations to the child’s center of gravity in the sagittal, frontal, and transverse planes.”

**A2**: “Hippotherapy is a task-orientated strategy that allows children to discover their own solutions for improving postural control.” Source A

**A3:**“As the therapist alters the horse’s speed and direction and client activities, randomization of the necessary anticipatory and reactive adjustments is provided, allowing practice of equilibrium and righting reactions.” Source A

**A4:**“Hippotherapy provides the benefits of mass practice in an activity that forces a client to develop and refine motor patterns with concurrent practice in integrating sensory information in a controlled environment as a whole- task activity.” Source A

**A5:** “The use of hippotherapy is a viable treatment option for improving balance problems in children with a variety of diagnoses, including cerebral palsy, down syndrome, developmental coordination disorders, and autism spectrum disorders.” Source A

**A6:** “ Hippotherapy is an intervention strategy provided by rehabilitation professionals and has goals and purposes different form adaptive (therapeutic) horseback riding” Source A

**A7:** “Research published within the past 5 years suggests that hippotherapy improves factors related to functional skills of children, including standing posture, symmetry of the truck and upper-leg muscles during standing and walking, dynamic head and truck stability, and reaching skills as well as decreased energy expenditure during walking.” Source A

**B1:** Therapeutic riding can benefit individuals with a wide range of challenges, be it cognitive, physical, emotional, social, or a combination. Source B

**B2:** Riders feel a freedom of movement and mobility that they may never experience before, if they have been in a wheel chair for many years. Improvements are often rapid because the riders are having fun-hardly noticing that they are performing repetitive therapy exercise. Source B

**B3:** The ability to ride these magnificent animals gives tremendous physical and psychological benefits to those previously denied the usual scope of outdoor activities. SourceB

**B4:** Horseback riding lends independence and mobility to a person with disabilities who may be otherwise restricted. Source B

**B5:** Students ride specially trained horses with our certified instructors in weekly sessions to develop increased balance and muscle control, improve concentration and shot-term memory, and enhance their confidence and self-esteem. Source B

**B6:** Research as shown that they rhythm and symmetry of a horse’s movement are perfect tools for a riders posture, balance, verbal communication, and muscle tone. Source B

**B7:** Riding also improves concentration, memory, and sequential thought processing, and even helps emotionally disabled riders articule their feelings. Source B

**B8:** Hypertonia (Source B)

* 1. Hypertonia is an increase in muscle tone, usually seen in the limbs. Hypertonia may be seen in cerebral palsy, stroke, multiply scierosis, spinal cord injury or traumatic brain injury. The movement of the horse naturally mirrors our own motion at the walk, and the act of riding the horse can help the rider’s muscles to relax, increasing balance and flexability. Riding a narrowly- built horse with smooth gaits, these riders can increase the control they have over their limbs while enjoying the freedom and confidence building therapeutic riding can give.

**B9:** Hypotonia (source B)

* 1. Hypotonia is characterized by a decrease in muscle tone, particularly in the trunk of the body. Hypotonia many exist in rider with ataxic or hypotonic cerebral palsy, down syndrome, multiple sclerosis, or traumatic brain injury. These riders usually ride on wider horses, for satiability, with bigger gaits in order to greater stimulated weakened muscles. Many times, riders with very weakend core muscles due to hypotonia will not be able to support themselves during the initial rides. However they find out that just after a few months of lessons, they are able to support themselves nearly on their own.

**B10:** Cognitive Impairment (source b)

* 1. Refers to any abnormal development or impairment in the social or mental processes involved in interaction, communication, gaining knowledge, planning, etc. This is seen in riders diagnosed with down syndrome, autism, and fragile X syndrome, among others. Through interactions with the instructors, volunteers, and the horse, riders with cognitive impairments see both physical and cognitive improvements. Practicing riding skills and games on horseback allows these riders to increase their balance, as well as their body awareness and spatial relationship. Achieving these skills provides the rider with self-confidence and a sense of independence, communication, and task analysis skills, are expanded and improved as the rider his or her horse through the daily paces of the lessons, working not just will their instructors and volunteers, but often with their classmates as well.

**B11:** Sensory Impairments (source B)

* 1. Encompasses a wide range of disabilities, from visual and hearing impairments to dyspraxia and sensory integration/ processing dysfunction. The type of horse used will depend greatly on the impact senses. Riders with a visual impairment benefit form a horse with very even, consistent, yet distinctive gaits, allowing them to develop their sense of where in the arena. A rider whose sensory integration disorder gives them a heighted sense of touch and feel would benefit from a horse with very smooth gaits and a fleece pad on the saddle to ensure their comfort during the ride.

**B12:** Learning Disabilities (Source B)

* 1. The individuals with disabilities education at defines a learning disability as “…a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.” It can be seen in a wide variety of diagnoses such as attention deficient disorder, attention deficit/hyperactivity disorder, or dyslexia. The planning and execution of riding skills, taking place in a patient and supportive environment, can give these riders the confidence to excel in other “areas” of learning. The movement of the horse itself, along with helping build correct muscle tone in riders, with physical disabilities, has been shown to improve cognitive skills as well, such as concentration and short-term memory.

**B: 13**The therapeutic riding program illustrates the meaning of the Center’s motto, “People helping animals and animals helping people.” (Source B)

**C1:** Horseback riding is normally enjoyed by able-bodied people but for a mentally or physically disabled person, just the ability to control an animal much larger and stronger than oneself is a great challenge, and great confidence builder.

**C2:** Riding for the disabled has become a well-recognized and acclaimed method of improving lives of those who refuse to let their disabilities limit them.

**C3:** Horseback riding for the disabled is one of the more modern forms of therapy.

**C4:** Best of all, it is a thoroughly enjoyable experience, which creates a special relationship between rider and a horse.

**C5:** Riding a horse also requires a great deal of coordination and since the horse provides instant feedback to every action by the rider, it is easy to know when you have given the correct cue.

**C6:** Repetition of movement required in controlling a horse helps to quicken the rider’s reflexes.

**C7:** Therapeutic horseback riding is a special world that brings together horses, disabled children and adults, caring volunteers, and physical therapists, occupational therapists, psychologists, speech therapists and others.

**C8:** From the beginning, riders learn balance, coordination and self-confidence while receiving muscle stimulation.

**C9:** As the horse moves, the rider is constantly thrown off-balance, requiring that the rider’s muscles contact and relax in an attempt to re-balance. This exercise reaches deep muscles that regular physical therapy cannot treat.

**C10:** The rocking movement of the horse is similar to the human motion of walking, and strengthens the muscles of the legs and trunk.

**C11:** By placing the rider in different position on the horse, different sets of muscles can be worked.

**C12:** Stopping and starting the horse, changing speech and direction also makes the rider work harder.

**C13:** The rider is usually expected to take part in the care of the horses and equipment.

**C14:** Since the horse has a mind of its own, the rider learns patience as he or she attempts to perform skills on the horse when the horse is not co-operating.

**C15:** Horseback riding for the disabled it not new. It was used by the Greeks 2000 years ago. At the turn of the century, England offered riding therapy for wounded soldiers at the Oxford Hospital during World War I. By the 1950s, British psychotherapists were exploring the possibilities of riding as therapy for all types of mental and emotional handicap’s.

**C16:** The British Riding for the Disabled Association (RDA) was founded in 1969 with the enthusiastic support of the Royal Family.

**C17:** NARHA (North American Riding for the Handicapped Association) runs therapeutic riding centers across the United States and Canada.

**C18:** Accredited centers must meet strict standards, which include having certified instructors, providing a safe environment, caring properly for horses and equipment, and keeping accurate records.

**C19:** The handicapped person who learns to ride a horse feels like a winner. The horse becomes the legs of the crippled child; it becomes the feeling of accomplishment for the mentally challenged person; and for the autistic child, riding a horse becomes their contact with the outside world.

**D1:** Hippotherapy is useful for addressing issues that stem from a wide variety of medical conditions, such as cerebral palsy, Down syndrome, sensory integrative dysfunction and learning disabilities. (D)

**D2:** When a rider is on horseback, the horse’s movement provides both sensory and motor input.

**D3:** Most children are placed on a “natural ride” atop the horse, which uses stirrups but no saddle, to allow for maximum proprioceptive input. This makes it easier for the child to learn to coordination.

**D4:** The therapist map change the horse’s gait in order to change input to the riders, or may change horses all together to give the child a different sensory and motor experience.

**D5:** Hippotherapy gives countless opportunities for socialization and language activities both on and off the horse.

**D6:** Sometimes several riders are in the ring at the same time, each with their own therapist. Together they may play games, such as basketball, or have relay races on horseback.

D7: Children who are unable to stop their movements on the ground have newfound success at playing games such as Red Light, Green Light using the horse to aid inhibition of movement.

**D8:** The upright posture that is necessary for horseback riding helps a child with low tone learn to use his diaphragm, which leads to improved speech.

**D9:** Focused language activities, like finding letters and pictures spread out throughout the ring, aid language comprehension and speech. Learning to interact with the other riders under the guidance of a therapist improves social skills.

**D10:** The stables also afford a multitude of therapeutic experiences. Children may use grooming equipment to work on grooming the horses.

**D11:** This activity teaches sequencing, and gives both gross and fine motor stimulation. Sweeping and shoveling the barn is “heavy work” to improve muscle tone. Additonally, these tasks serve as transition to the “on-horse” time.

**D12:** In addition to the therapists, volunteers are utilized. Every rider has a therapist at her side and a volunteer as a “side walker.” Some children may also have a second side walker.

**D13:** The volunteers range from retirees to teenagers.

**D14:** The comprehensiveness of the treatment can lead to raid results. Once on the horse and moving, the children are getting sensory input, their pelvises are being stimulated and their trunks are being strengthened.

**D15:** Not all children take to horses, however. New smells, new people and being moved by a horse can be difficult or frightening for some children.

**E:1** Using the movement of the horse as the strategy of choice has resulted in improved functional outcomes for a wide of pa**tients.**

**E2:** The organized movement of the horse is an effective treatment strategy used to improve function in patients with neuromusculoskeletal dysfunction.

**E3:** Hippotherapy is the official publication of the American Hippotherapy Association. The magazine is published twice a year and features a variety of high-quality articles related to the practice of hippotherapy. ( The magazine is available through membership only)

**E4:** HPCS- a therapist who carries the AHCB Board Certification in Hippotherapy. Hippotherapy Clinical Specialists names are followed by ‘HPCS’ on this list.

**E5:** 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 (6000 hours) and have 100 hours of hippotherapy practice within the three year prior to application for the exam.

**E6:** AHCB Certified Therapist- A therapist who carries an AHCB certification and had met this minimum criterion.

**E7:** Level 1 Hippotherapy Treatment Principles:

* Day 1 activities provide hands-on course information targeting therapists interested in including equine movement in their practice. The focus on the course is on non-mounted equine skills, quality horse handling, coaching volunteers and team members and horse selection/retirement issues. Participants will work with horses in teams of two to four demonstration, practice and individualized feedback and instruction.

**E8:** Level 2 Hippotherapy Treatment Principles

* These recommends therapists have at least 2 years clinical experience in their field treating and handling patients incorporating a variety of treatment strategies in a non-hippotherapy setting.

**E9:** Postural Control and Core Stability are believed to be crucial for normal function, whether it is balance, reaching or walking (typical PT goals), upper extremity control or ADL performance (typically OT), or speech production and oral motor control (typically areas for SLPs).

**E10:** Without good trunk control, even attention, arousal or interaction with the immediate surrounding is made more difficult.

**E11:** Listed amongst the many benefits of Hippotherapy is the ability to influence Postural Control and Core Strength. After all, the horse directly impacts the pelvis and spine when we sit on his back. His movement brings sensory information proximally and causes motor responses at the pelvis and trunk.

**E12:** Just as the stones in a pillar are different sizes and shapes, various kinds of research studies investigating the effect of hippotherapy are necessary to support the use of the movement of the horse as a therapy treatment stragegy.

**E13:** Budget- the grant review committee will determine the about of award funds based on the projected budget. Grants may not exceed $1000 per research study.

**E14:** Funding Criteria- Expenses that may be covered by this grant include but are not limited to outcome measures, data collection, treatment phase, statistical analysis, treatment cost for subjects.

**E15:** Researchers should specify exactly how they intend to use granted funds from AHA. Funding will not be granted for travel, housing or living expenses.

**E16:** The variability of the horse’s gait enables the therapist to grade of sensory input to the patient, and then utilizes this movement in combination with other treatment strategies to achieve desired results.

**E17:** Hippotherapy is a physical, occupational, or speech and language therapy treatment strategy that utilizes equine movement.

**E18:** Hippotherapy literally means “treatment with the help of the horse” from the Greek word “hippos” meaning horse.

**E19:** The therapist directs the movement of the horse; analyzes the client’s responses; and adjusts the treatment accordingly. –this strategy is part of an integrated treatment program to achieve functional outcomes

**E20:** Pre-mounted warm up exercises: Balance and coordination can be addressed when the client sits on the stretching bench and performs. Using a mirror allows them to see themselves and they can be guided in visual perceptual activities to correctly identify body parts and follow verbal directions. The game “Simon says” or “Mancarena” works great so they get visual stimuli to follow themselves in the mirror and improved kinesthesia during ROM.

**E21:** Mounted work: Initially implementing an equine assisted therapy or hippotherapy technique by doing a couple laps around the arena will allow the client to adapt their posture using primarily the input of the horses movement. Part of the treatment strategy is based on effective sensory processing and the vestibular and proprioceptive input of being on the back of a horse and can profoundly affect the client. Along swinging walk or quick stops and starts have significant effects on overall tone, especially in the trunk. Monitoring the client’s posture and ability to focus is very important and determines activities are used to optimize them for the sessions.

**E22:** Mounting: A ramp with 2 different heights gives therapists the choice to select the one that will allow the client to do most of the work to get on the horse. For example, a small child might work on walking up to the lower level of the ramp and use a two-step block to get on the horse to expand on the preparatory BMC activity we did on the ground. For someone else, to increase their weight shifting during standing and transitional movements using a step aerobics bench (about 5 feet tall) on the ramp will encourage them to do a single step up, then weight shit onto their left leg to stabilize while lifting the right. It is easy to facilitate leg extension on the left and guide the right leg over the back of the horses.

**E23:** Dynamic Upper Body Exercise: The moving horse provides the surface for AROM using rain sticks, pull tubes, theraband or weighted bars encourage the person to try different arm positions and have some resistance for the client to work against. Adding wrist weights to the rain sticks will increase the amount of effort the client uses when they shake them. Pulling or shaking cab be done in a pattern to their rhythmic coordination and following verbal directions. For example, “Shake 2 times over your head and one tine over our knee” or “twist two times right and three times left” for trunk rotation.

**E24:** Stereognosis and Fine Motor: To increase the clients perceptual and tactile abilities, enhance manipulative skills and improve dextenily, use a small cloth bag and put various shapes, plastic letter, or animal inside. Depending on the level of the client, they can see the object beforehand or not. As the horse walks, the client reaches into the bag and identifies the object. Verbal descriptions are very helpful, comparing the differences. An example, the client might say, “This much be the star, not the circle, because it has points.”

**E25:** Functional Reach: To improve and measure functional reach, you can put colored clothes pins on the horse’s main at measure intervals and have the client reach for a specific color. This is an activity that you can build on each week and have an observable goal for your client. Also, for the appropriate client to work on reaching after dismounting, you can use bright blue painters tape to mark a spot for reaching to the side. For example, to get a client to laterally flex and brush the horses shoulder, it is helpful to have a visual marker for them to use. Again, each week they can learn a little farther. For small hands, a shoe polishing brush fits very well and looks like a miniature grooming brush.

**E26:** To present a challenge, choose the method that encourages the most from your client. The motor planning opportunities are great! Once on the ground, they can help with untacking by opening buckles, carrying tack and brushing the horse with as much assistance as needed. If they are able, they can help open the arena gate which is a great time for the therapist to facilitate walking while the client is pushing against a weighted object, plus it is functional the horse and leader need to leave the arena. Following the session, some slow stretches can be a great transition so spend a few minutes on the stretching bench or repeat a couple of the Brain Gyms figure 8’s before walking out to the car.

**E27:** Being on the back of a horse provides the client with a dynamic platform in a rich sensory environment. This dynamic surface puts a person into a saddle posture with hips and knee flexed, legs abducted with the trunk and upper body able to move in space in response to input from the horses movement.

**E28:** In addition to the unique value of the movement, there are some significant factors I the barn settings that can enhance the benefits of natural surroundings. Comparing the barn to the clinic it is easy to see that the barn offers more natural light and sounds, fresh air, interesting scenery, unusual smells, and the opportunity for meaningful activities in their context, while the person is on a rhythmic, potentially variable surface with a wide variety of movement options.

**F1:** Success Stories: For Maryellen, congenital rubella adversely affected her sight, hearing and speech, and severely limited muscle function all for limbs. When Maryellen started riding in 1993, she required a leader and two side walkers and lacked enough neck strength to support her head while riding. By patiently working with her, Maryellen now rides independently, both at the walk and the trot!

**F2:** Sensory Integration- While enjoying, students with sensory sensitive can be slowing introduced to various textures, sounds, smells, and sights. Many therapeutic riding programs integrate various items, as well as activities, that promote and encourage positive sensory interactions.

**F3:** Social Skills- Depending on the student’s level of core strength and familiarity of the horse, volunteers may be used, along with an instructor, in order to create the safest environment for that individual. While safely is usually the main concern, these extra helpers can create a more complex social environment for the student to interact with. Throughout a riding lesson, each student should have the opportunity to be engaged in conversation that aims to further the process of social skills and language needs. The horse also provides social interactions since students should always be asked who to respect their horse and praise its behavior.

**F4:** Core Strength Impairments- horses have a 3- dimensional movement that is unique and unable to be replicated in any other way. While the horse moves forward it also ways side to side. When a student is properly seated on the horse, this movement cause the student to involuntarily use many more core muscles than they typically would when walking or sitting on their own.

**F5:** Increase gross motor skills: Gross motor skills are the ability to move large muscle groups. Example walking, running and, standing. Getting on and off the horse: posting, putting weight in the stirrups and lifting the body out of the saddle have positive influences on gross motor skills.

**F6:** Balance and Coordination: Sitting up straight and even on the horse, keeping your feet in the stirrups, properly holding reins, steering your horse and posting may look easy to onlookers, but anyone who has ever been on a horse can tell you otherwise. This is the true test of balance and coordination.

**F7:** Most insurance carriers do not yet cover the cost of therapeutic riding lessons. Hippotherapy sessions conducted by a physical therapist may be covered under some policies.

**F8:** Most riders stay in their lessons for a few moths up to a year. Many young riders leave the program as they get older and their interests change. Other riders stay and continue to see improvement for many, many years.

**F9:** Each horse comes to us from a wide variety of background and experiences, but one thing is the same amongst them all: they are all gifted when it comes to this work

**F10:** Each horse had gone through a stringent evaluation process to ensure that they have the necessary physical abilities and movement, as well as a calm and patient temperament.

**F11:** Each rider meets with a licensed physical therapist for a new rider evaluation prior to beginning lessons. During this evaluation, it is determined whether the rider would benefit most from Therapeutic Riding of Hippotherapy.

**F12:** No special tack or equipment is used. We use the same kind of English and Western saddles used for everyday riding.

**F13:** The amazing part of hippotherapy is that each step the horse takes challenges the riders balance and sensory system- and that the horse takes thousands of steps during a 45 min. treatment session. Having help of a horse or pony is a powerful motivator, helping the children work harder and stay engaged in activities and the children reap the emotional rewards of coming to know their 4-legged therapists as their friend.

**F14:** The difference between therapeutic riding lessons focus on teaching the rider the sport of riding. Hippotherapy is conducted by a licensed physical therapist, occupational therapist or speech therapist. Hippotherapy focuses on using the horses as a therapeutic tool to help treat a rider’s disability.

**F15:** The therapist uses the movement of the horse to help address and improve a variety of deficits, including but limited to deficits in sensory processing, gross motor, fine motor, balance, speech production, and language.

**F16:** Uses team building exercises with our horses and facilitators to develop leadership, communication, personal growth, corporate culture, and positive team development. We will tackle real world challenges.

**F17:** Families include those with a member with a disability, mental illness, domestic violence, divorce, estrangement, trauma, adoption/foster care, high level of parental stress and many other issues.

**F18:** Troubled students in school; this can help improvements in social interaction, self-esteem, reading/writing/language/math skills, character education, concentration, conceptual skills. Decreases in absenteeism, aggressive/oppositional behaviors, self-destructive behaviors, and issues with peers/teachers/ family members.