Hippotherapy

Effective: February 1, 2018

Next Review: January 2019
Last Review: January 2018

IMPORTANT REMINDER

Medical Policies are developed to provide guidance for members and providers regarding coverage in accordance with contract terms. Benefit determinations are based in all cases on the applicable contract language. To the extent there may be any conflict between the Medical Policy and contract language, the contract language takes precedence.

PLEASE NOTE: Contracts exclude from coverage, among other things, services or procedures that are considered investigational or cosmetic. Providers may bill members for services or procedures that are considered investigational or cosmetic. Providers are encouraged to inform members before rendering such services that the members are likely to be financially responsible for the cost of these services.

DESCRIPTION

Hippotherapy describes physical therapy using a horse, and consists of riding horseback in various positions.

MEDICAL POLICY CRITERIA

Hippotherapy is considered investigational for all indications.

NOTE: A summary of the supporting rationale for the policy criteria is at the end of the policy.

CROSS REFERENCES

None

BACKGROUND

Hippotherapy, also referred to as equine movement therapy, describes physical therapy using a horse and consists of riding horseback in various positions. Hippotherapy has been proposed as a technique for muscle and neurological reeducation in patients with lower
extremity spasticity secondary to neuromuscular disorders (e.g., cerebral palsy, spinal cord injury). The natural swaying motion of the horse induces pelvic movement in the rider that simulates human ambulation while variations in the horse’s movements may prompt natural equilibrium movements in the rider.

Horseback riding is also being investigated as a social therapy for children with profound social and communication deficits, including autism spectrum disorder and other developmental disorders such as Down syndrome.

Simulated hippotherapy using a new device has been studied in European centers. Therapeutic interventions using such a device would be conducted in the physical/occupational therapy setting and are outside the scope of this policy.

**EVIDENCE SUMMARY**

In order to determine whether hippotherapy results in sustained improvements in clinically meaningful health outcomes, comparisons to conventional therapies in well-designed comparative studies (ideally randomized controlled trials) are needed using standardized functional measurement tools. Appropriate non-riding therapeutic comparisons to hippotherapy could include conventional physical/occupational therapy programs or simulated riding experiences.

The focus of the following evidence summary is on systematic reviews (SRs) and randomized controlled trials (RCTs).

**SYSTEMATIC REVIEWS**

Stergiou (2017) published a SR to evaluate equine-assisted therapies, one of which was hippotherapy to see if this treatment could improve balance, motor function, gait, muscle symmetry, pelvic movement, psychosocial factors and overall quality of life. Sixteen studies met the inclusion criteria, but only eight (four for children with CP, three for adults with MS, one for post-stroke patients, and two for elderly patients with multiple health concerns) had enough data to be included in the analysis. The authors stated studies are lacking, the included studies had methodological limitations e.g. small sample size and that the analysis could not be divided between separate conditions. Although hippotherapy may be a treatment option to improve health outcomes for some patients, more research is needed.

Rigby (2015) evaluated peer review articles to evaluate health outcomes from three different types of horse assisted therapies, one of which was hippotherapy. The authors state that the studies show improved physical outcomes, but do not provide objective data on why the improvements occurred. The methods used for searching and including studies was completely clear, but in general the authors conclude that more studies are needed.

Anestis (2015) published results from a SR that examined equine-related treatments for mental disorders. Fourteen studies were included in the review, and more than half of the studies were small case series studies. All of the studies included in the review had multiple limitations, and the authors concluded that “the current evidence base does not justify the marketing and utilization of equine-related treatments for mental disorders”. Furthermore, the authors concluded that “such services should not be offered to the public unless and until well-designed studies provide evidence that justify different conclusions.”

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The majority of SRs on THR have been for children with cerebral palsy (CP).\cite{3-10}. All of these reviews reported inconsistency in study findings with some studies reporting evidence of possible therapeutic effect in gross motor function in these children while others found no significant effect. Current studies were reported to have significant methodologic limitations that preclude conclusions, including but not limited to, lack of a non-riding control group, lack of randomized treatment allocation, small sample size, heterogeneity of subjects and treatment protocols, and lack of blinded assessment in those studies that included a control group. All of the systematic SRs trials.

Bronson (2010) published results from a SR on hippotherapy for patients with multiple sclerosis (MS).\cite{11} Three small nonrandomized trials were included in the review. One was a case control study\cite{12} with nine subjects, and the other studies, both case series,\cite{13,14} had 11 subjects each. The authors concluded that the studies provided emerging, but limited, evidence that hippotherapy improves balance in persons with MS, acknowledging limitations of small sample size, lack of randomization especially given the variable nature of MS, and lack of controls in two studies.

**RANDOMIZED CONTROLLED TRIALS**

Borgi (2016) evaluated equine-assisted therapy (EAT) in relationship to adaptive and executive functioning outcomes in children with autism spectrum disorder.\cite{15} Twenty-eight male children 6-12 years old were randomly assigned to attend equine assisted therapy (n = 15) or to a control group (n = 13). Children in both the control and experimental groups had comparable age and IQ. Participants attended EAT sessions, in groups of 3-4 once a week for six months. Each subject was evaluated at baseline and at the end of the study, using the Vineland Adaptive Behavior Scale. The authors reported improvements in adaptive and executive functioning but that additional studies are needed with larger sample sizes and long-term follow-up.

Kwon (2015) published an RCT of hippotherapy in children (age range, 4-10 years) with CP.\cite{16} Ninety-one subjects were randomized to hippotherapy (30 minutes twice weekly) or home-based aerobic exercise, both for 8 consecutive weeks. Significant differences in composite measures of gross motor function improvement using the GMFM-88 and -66 were observed between groups. The authors stated the RCT could not prove hippotherapy was solely responsible for improved motor function and balance and did not evaluate long-term outcomes.

Frevel (2015) compared an Internet-based home training program to hippotherapy in 18 patients with MS.\cite{17} In this study, hippotherapy was considered to be the control intervention and the home training program to be the experimental intervention. Although both intervention groups showed significant improvement in static and dynamic balance capacity, no significant difference was seen between groups. The study had weak statistical power to detect a difference between treatments. The study cannot determine whether hippotherapy is effective compared to standard physical therapy.

The focus of previous RCTs included: post-stroke patients\cite{18,19}, community-dwelling older adults with balance deficits\cite{20,21}, adolescents and adults with behavior challenges\cite{22,23}, adult female survivors of breast cancer\cite{24}, patients with MS\cite{17}, and children with autism\cite{25}. These studies did not permit conclusions about the impact of hippotherapy due to methodologic limitations, including but not limited to, the lack of description of randomization scheme, small
sample size, study populations not representative of the broader U.S. population, heterogeneity between subjects and therapies, missing data, and moderate to large loss to follow-up.

### PRACTICE GUIDELINE SUMMARY

No clinical practice guidelines with recommendations for hippotherapy were identified.

### SUMMARY

There is not enough research to show that hippotherapy (horseback riding therapy) improves health outcomes for people with a variety of conditions. In addition, no practice guidelines recommend hippotherapy. Therefore, hippotherapy techniques for any condition is considered investigational.

### REFERENCES


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<td>HCPCS</td>
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*Date of Origin: February 2013*