

SUBURBAN JOURNALS

KIMMSWICK: Study on equine therapy proves results
Researcher presents findings to Ride-On board

By Trish Wallace
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Gathering evidence on the effectiveness of hippotherapy, researcher Tim L. Shurtleff presented his latest results to the Ride On St. Louis (ROSL) Board of Directors last week.

The goal of Kimmswick-based ROSL is to provide emotional, mental, physical and spiritual benefits through the use of horses in equine-assisted therapy for those who are developmentally and physically disabled.

In his research, Shurtleff wanted to measure the changes in the trunk and head stability and the upper extremity function after 12 weeks of hippotherapy for children with spastic diplegic cerebral palsy. "I never expected to do this for four years," Shurtleff said.

Yet four years and two studies after first diving into his research, Shurtleff is on his way to proving the significant improvements of children who have regular contact with the therapeutic rhythm of a horse's movement. He was quick to add that hippotherapy is indeed therapy and not a riding lesson.

According to Shurtleff, the definition of trunk stability is the ability to keep the head and neck stable while the pelvis is in motion, such as in a basketball player running down the



Researcher Tim L. Schurtleff measured the movements of children with cerebral palsy by using reflective markers to prove the effectiveness of hippotherapy.

court.

"This just provides confirmation through the community that this is therapy," Rick Wassman, ROSL executive director, said.

Shurtleff's pilot study involved six children, two of whom were involved with ROSL throughout the study.

"We wouldn't have been able to do it without groups like you," Shurtleff told the ROSL board.

Before beginning testing, Shurtleff had the daunting task of finding children who had never ridden a horse before, had not undergone Botox or surgery within the six months prior to testing and had to be able to sit upright unaided.

The children involved with the study participated in 12 weeks of 45-minute hippotherapy sessions. The therapy treatments were customized to fit each child's individual needs. Shurtleff tested the participants and a control group of children without disabilities of equivalent ages before the therapy and after the 12 weeks of interaction with the horses.

Shurtleff placed 24 reflective markers on the participants and had each child sit in two positions on a challenge barrel, which allowed them to sit with the posture similar to riding a horse. Six cameras measured the children's trunk and neck positions 60 times per second.

The study tested head angles and anterior/posterior movement. After 12 weeks of therapy, the participants cut unstable movement and wobbling in half, improving their posture, stability, visual focus and walking ability.

"They're moving into the range of normal, which is really exciting," Shurtleff said.

Shurtleff's pilot study earned him enough grant money to continue his research with a second study, for which he is finalizing results now.

In the current study, Shurtleff tested 11 new children with cerebral palsy, three of whom are involved with ROSL, and a control group of eight children without disabilities. Again, Shurtleff tested the participants before and after the 12 weeks of therapy, but this time he also tested the children 12 weeks after the conclusion of the therapy.

"Personally, I don't care if they learn to ride a horse," Shurtleff said. "I want to know if the results stuck."

The results impressed and encouraged Shurtleff. Not only did the children improve their trunk stability and upper extremity function by the same ratio as the children without disabilities improved, but 12 weeks after therapy ended, the children still showed the same improved results.

"This adds a great deal of credibility for us and for this industry," Wassman said.

Now Shurtleff is hoping to obtain a much larger grant to conduct a much larger study. His ultimate goal is to provide enough evidence of effectiveness for insurance companies to agree to cover hippotherapy as a credible therapy.

Source: Suburban Journals, by Trish Wallace