Testing of the Independence Saddle

- Michigan State University
- May 28, 2008
In September of 2007, the staff of Independent Strides, having developed The Independence Saddle, a patented adaptive saddle for individuals with severe multiple impairments, sought credible feedback from an experienced and respected NARHA (North American Riding for the Handicapped Association) instructor. Their search led them to Bonnie DePue, President of C.H.U.M. Therapeutic Riding, an innovative therapist with both long-standing affiliations with NARHA and research connections to Michigan State University.

Bonnie was given the saddle and a copy of our brochure (see below) with the primary goal of assessing the saddle’s viability as a safe and effective tool for therapy by using it with her riders and therapy horses. Bonnie, ever cognizant of NARHA’s commitment to safety, felt it was important to have formal testing done through Michigan State University to legitimize her findings that the saddle is not only capable of delivering effective therapy to individuals, but also safe for therapy horses to use. It is through both Bonnie’s vision as well as her unrelenting efforts that this collaborative testing took place.

**History of the Collaboration...**

**THE INDEPENDENCE SADDLE**

In the wake of more than six years of research and development, The Independence Saddle offers new functionality for the rider that has never been available before.

A Class II Medical Device, The Independence Saddle presents physical, occupational and psychological therapeutic opportunities. The saddle offers each rider an immovable sense of success and satisfaction, maximizing their quality of life.

The Independence Saddle is an Australian saddle which features a proven saddle construction that gradually adjusts to the needs of each rider. As strength and skills improve, the support prompts may be reduced or replaced to encourage greater independence. The saddle is designed to adapt to the needs of both the rider and the horse.

Promotes the rider’s self-assumption by allowing immediatelyreassurance of a back rider and minimizing the need for substrate assistance, thereby increasing the psychological benefits of equine therapy.

The Independence Saddle has been endorsed by MOVE International, an organization dedicated to helping children and adults with disabilities. For MOVE International’s information online: www.move-international.org.

**THERAPEUTIC BENEFITS**

**COBBIDGE, SADDLE MAKER: "THE HORSE IS HEALER"**

The Independence Saddle is designed for people with severe disabilities based on the AOCD (Aiding Opportunities for Education) principles and concepts.

- Promotes the rider’s independence by allowing immediate reconfirmation of a back rider and minimizing the need for substrate assistance, thereby increasing the psychological benefits of equine therapy.

- The Independence Saddle is a saddle designed for individuals with severe disabilities based on the AOCD (Aiding Opportunities for Education) principles and concepts. It offers a unique design that allows for immediate reconfirmation of a back rider and minimal dependence on substrate assistance, thereby increasing the psychological benefits of equine therapy.

- The saddle is a patented adaptive saddle for individuals with severe multiple impairments, seeking credible feedback from an experienced and respected NARHA instructor. Bonnie DePue, President of C.H.U.M. Therapeutic Riding, an innovative therapist with both long-standing affiliations with NARHA and research connections to Michigan State University, was given the saddle and a copy of their brochure (see below) with the primary goal of assessing the saddle’s viability as a safe and effective tool for therapy by using it with her riders and therapy horses. Bonnie recognized the importance of NARHA’s commitment to safety and felt it was crucial to have formal testing conducted through Michigan State University to legitimize her findings that the saddle is not only capable of delivering effective therapy to individuals, but also safe for therapy horses to use. It was through both Bonnie’s vision and her unrelenting efforts that this collaborative testing took place.

**FEATURES**

- Australian Survivor Relay Saddle with independent designed knee and stirrup branches
- Neoprene girth in shock absorbing material
- English leathers with foot pockets
- Adjustable back and head pieces
- Stainless steel adjustable stirrups
- Recess that is fully adjustable to accommodate back and horses

**Price of the Independence Saddle: $995**

Please expect to change without notice.

**Price list (excluding shipping costs):**

- $995 (including shipping)

**Additional information:**

- The Independence Saddle is designed for individuals with severe disabilities based on the AOCD (Aiding Opportunities for Education) principles and concepts. It offers a unique design that allows for immediate reconfirmation of a back rider and minimal dependence on substrate assistance, thereby increasing the psychological benefits of equine therapy.

- Bonnie DePue, President of C.H.U.M. Therapeutic Riding, an innovative therapist with both long-standing affiliations with NARHA and research connections to Michigan State University, was given the saddle and a copy of their brochure (see below) with the primary goal of assessing the saddle’s viability as a safe and effective tool for therapy by using it with her riders and therapy horses. Bonnie recognized the importance of NARHA’s commitment to safety and felt it was crucial to have formal testing conducted through Michigan State University to legitimize her findings that the saddle is not only capable of delivering effective therapy to individuals, but also safe for therapy horses to use. It was through both Bonnie’s vision and her unrelenting efforts that this collaborative testing took place.
Comprehensive testing of the Independence Saddle, and its effect on the horse took place on May 28th at the Mary Anne McPhail Equine Performance Center, a state-of-the art equine sports and lameness facility on the campus of Michigan State University. Since the center opened in the year 2000, incredible progress has been made, culminating in world-renowned research to benefit performance and soundness of equine athletes. This presentation chronicles the collaborative efforts of visionary members of the staff of MSU and C.H.U.M. Therapeutic Riding to assess the viability of The Independence Saddle.
The Gaide Arena, where the testing of the Independence Saddle took place, is the centerpiece of the McPhail Equine Performance Center. Made possible by a gift from Dale and Irene Gaide, the arena measures 130 feet by 70 feet and has a footing composed of 2 inches of a specially designed sand/rubber mixture on top of a packed limestone base. The arena can be used by clinicians at the College of Veterinary Medicine to evaluate horses lunging on a soft surface and also while being ridden. The Brown runway and the Edwards evaluation alcove run along the south side of the arena, making it possible to utilize the arena during equine gait analysis and lameness evaluation.
The McPhail Equine Performance Center is a multi-disciplinary team of veterinarians, animal scientists, kinesiologists and engineers whom collectively work together to improve the health and well being of sport horses.

**McPhail Chair**

Hilary Clayton, BVMS, PhD, MRCVS- Dr. Clayton received her veterinary degree from Glasgow University, Scotland in 1973. After two years in mixed veterinary colleges in Scotland, she returned to Glasgow University and completed a PhD. She worked at veterinary colleges in the UK, Canada and the Netherlands before coming to MSU in 1997 as the first incumbent of the Mary Anne McPhail Dressage Chair in Equine Sports Medicine. Her research interests are in biomechanics of locomotion and lameness and development of conditioning programs for equine athletes.
Lab Manager
LeeAnn Kaiser, BS. MS (2005-present), LeeAnn earned her bachelors in Exercise Science from Grand Valley State University and her masters in Sports Biomechanics From the University of Delaware. She is responsible for the day-to-day supervisions of The McPhail Laboratory and equipment. She organizes clinics and events for the McPhail center and supports the staff and students in designing, implementing, analyzing and reporting on research in equine biomechanics.

Research Capabilities
The Mary Anne McPhail Equine Performance Center is a well-equipped facility for research in the area of equine gait analysis. Equipment includes a Motion Analysis system, AMTI force plate, Noraxon EMG system, Pliance Saddle Pressure Pad and other custom equipment for making measurements of horses and riders.

LeeAnn adjusts the sensor pad for the Novel Pliance Saddle System which measures the pressure distribution between the rider and the horse.

LeeAnn consults with Dr. Lana Kaiser and Dr. Michael Lavagnino, mechanical engineer, as they collect data from the horse and rider.
Other notable members of the multi-disciplinary Saddle Testing team:

Dr. Camie Heleski - Department of Animal Science, Animal Behavior and Welfare, Coordinator of the 2 year AG Tech Horse Management Program.

Dr. Michael Lavagnino - PhD in mechanical engineering from MSU. Responsible for assisting in all aspects of data analysis.

Dr. Lana Kaiser - MD, PhD, DVM, An expert on the relationship between humans and animals. Directs MSU's Human-Animal Bond Initiative. Dr. Kaiser has recently focused her research on the relationship between humans and animals including the effect of therapeutic riding on both the horse and rider.

Bonnie DePue - OTR, President of C.H.U.M. Therapeutic Riding. Bonnie, a NARHA certified instructor for many years was instrumental in organizing the MSU saddle testing, utilizing her affiliations with various departments within Michigan State University. Bonnie’s interest in research and on-going education, as well as her commitment to providing innovative, cutting-edge therapy led the staff of Independent Strides to contact her to field-test the Independence Saddle in September, 2007. Since that time, Bonnie, recognizing the potential for the Independence Saddle to provide unprecedented therapeutic benefits for riders with severe multiple impairments, has worked tirelessly to build the credibility of the Independence Saddle by testing it with her riders, speaking about it at NARHA and 4-H meetings, and providing valuable feedback to the Independent Strides manufacturers.

Realizing the need for quantitative data determining that the use of the Independence Saddle as a therapy tool would not adversely affect the horse in any way, Bonnie was the primary facilitator and organizer of this multi-departmental testing process. The data gathered during the day-long testing will be analyzed by the team of PhDs from various fields to conclude unequivocally that the Independence Saddle is safe for both horse and rider.
LeeAnn and Bonnie confer with Dr. Kaiser and Dr. Heleski prior to the testing process.

LeeAnn positions the Pliance Saddle pad, prior to putting the Independence Saddle on the horse.

Data from the 224 sensors in the saddle pad is sent wirelessly to the computer for analysis.

Dr. Kaiser, Dr. Clayton, and Dr. Lavagnino monitor the data collection.
Testing the Independence Saddle

Raven and Genelle, riders from C.H.U.M. Therapeutic Riding, wait with their parents for their turn to test the saddle.

Bonnie adjusts the Independence Saddle on top of the Novel Pliance Saddle Pad.

Heather, a C.H.U.M. volunteer, acts as the baseline rider for testing the weight of the saddle on the horse.

Dr. Lana Kaiser times each rider as they walk around the arena in the saddle.
Testing the Independence Saddle

Raven and Genelle have nicknamed the Independence Saddle “The Happy Saddle” and “The Super Saddle”.

Genelle’s part in the testing process is to demonstrate the effects of the Independence saddle on a horse in a real-life riding situation.

Genelle was hesitant to use the Independence Saddle last fall- now she refuses to use any other kind of saddle.

Raven patiently waits for the wireless monitoring equipment to be set up prior to her test ride in the Independence Saddle. Raven’s core strength has improved dramatically in the nine months since she has been using the Independence Saddle.
As Dr. Lana Kaiser looks on, Bonnie DePue adjusts the Rifton fore arm supports for Dr. Hilary Clayton, who took the opportunity to personally ride in the Independence Saddle to gain a better understanding of how it feels for the rider.
Special Thanks to:

Bonnie DePue, C.H.U. M. Therapeutic Riding  
Heather- C.H.U.M. volunteer  
Jules- C.H.U.M. volunteer  
Holly- CH.U.M. volunteer  
Horses – C.J. and Glory  
Genelle and family  
Raven and family  
Dr. Hilary Clayton  
Dr. Lana Kaiser

Dr. Michael Lavagnino  
Dr. Karen Waite  
Dr. Karen Plaut  
Dr. Camie Heleski  
Dr. Roger J. Bresnahan  
Dr. Frank Fear  
LeeAnn Kaiser  
Sherman Gorbis

Power Point Presentation: Ginni Lampe

INDEPENDENT STRIDES  
509 Franklin Avenue  
Grand Haven, MI 49417  
(616) 850-0338  
www.independentstrides.com