

Impact of Adaptive Devices for Horses, Assisting Persons, and Riders with Cerebral Palsy in a Therapeutic Riding Program


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The Independence Saddle was field tested at CHUM for 9 months; areas of consideration were potential for stress behaviors and pain issues in our horses. This led to a 2 year long collaboration with MSU for empirical data on stress behaviors (Kaiser et al) and the pressure exerted on the horses back when using an English Saddle, Independence Saddle, & Bareback Pad measured by Novel Pliance Saddle System (Clayton et al). Also studied were effects on riders by Occupational Therapy, Speech and Language Pathology, Osteopathic Medicine, and on sidewalker exertion.



The Horse Objective:

 To determine the level of stress behaviors exhibited by the horse using each; the Independence Saddle, English Saddle, Bareback Pad with riders with Cerebral Palsy (CP).

 To determine the pressure and forces exerted on the horse's back from the Independence saddle, English saddle, Bareback pad with riders with Cerebral Palsy (CP).

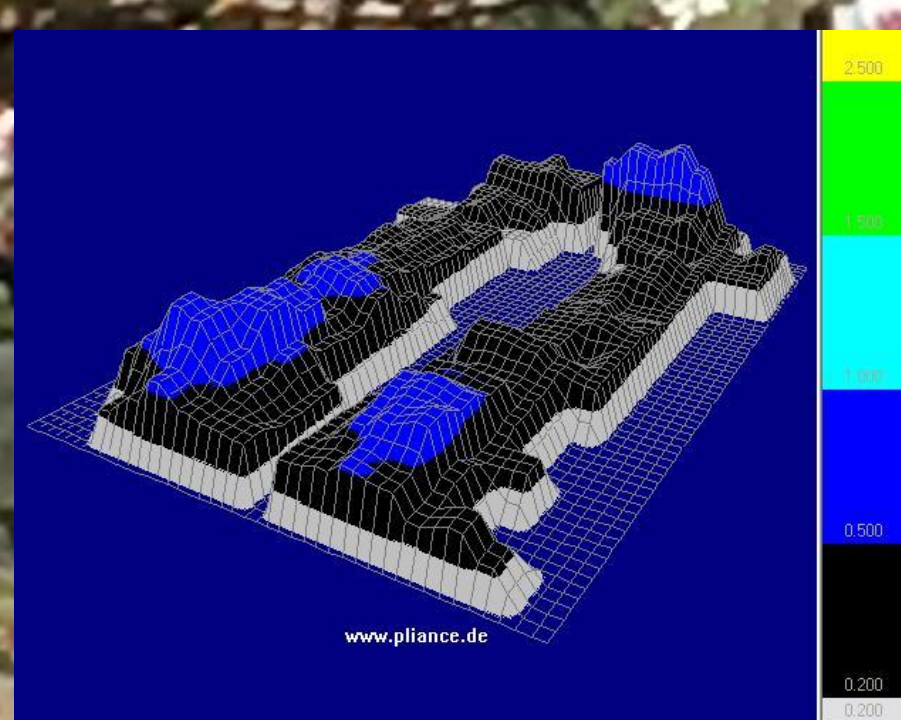


Methods:

 55 Therapeutic Riding (TR) sessions were observed to assess stress behaviors in general and with each device for each rider using the equine ethogram (Kaiser et al)

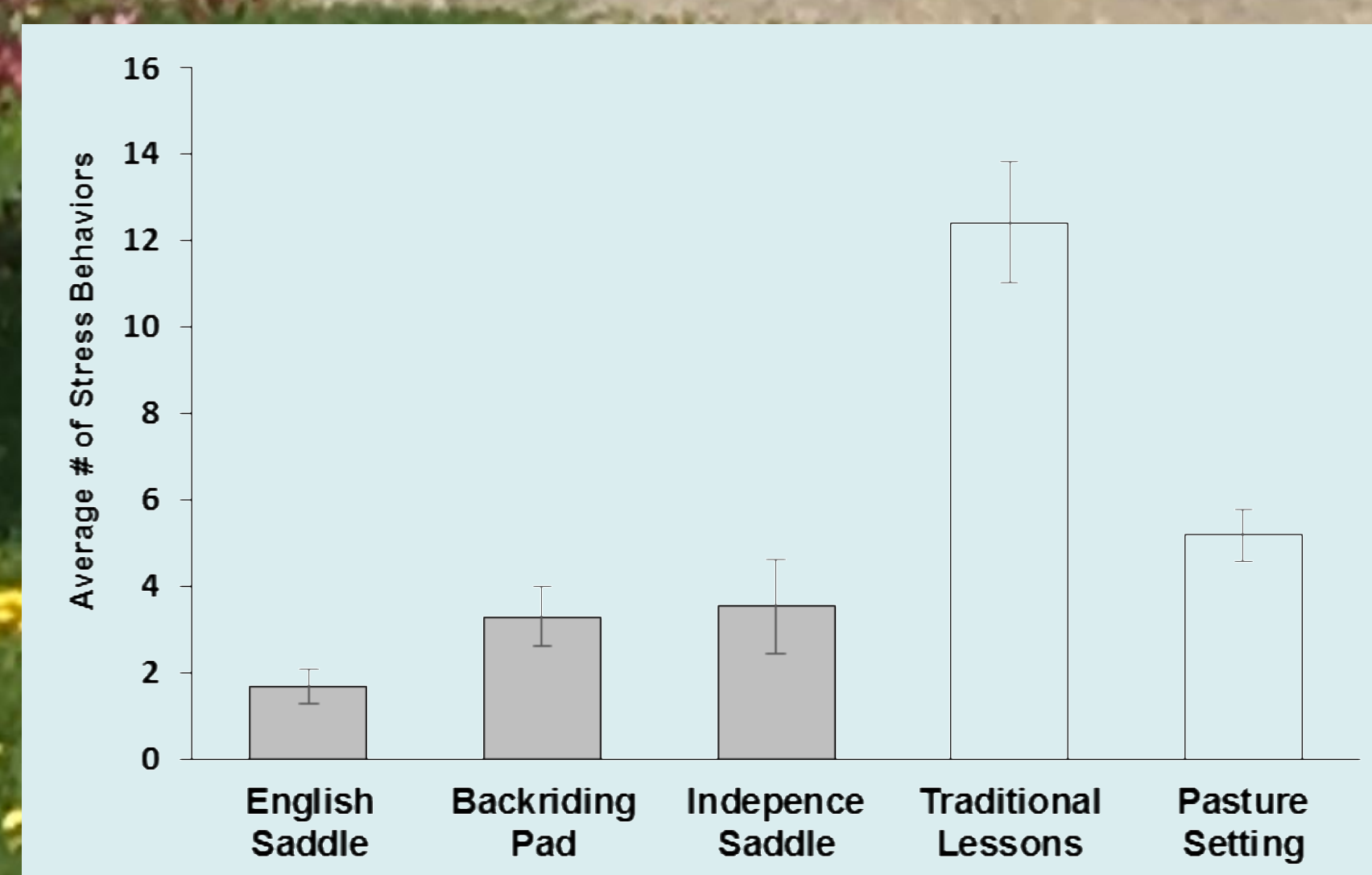
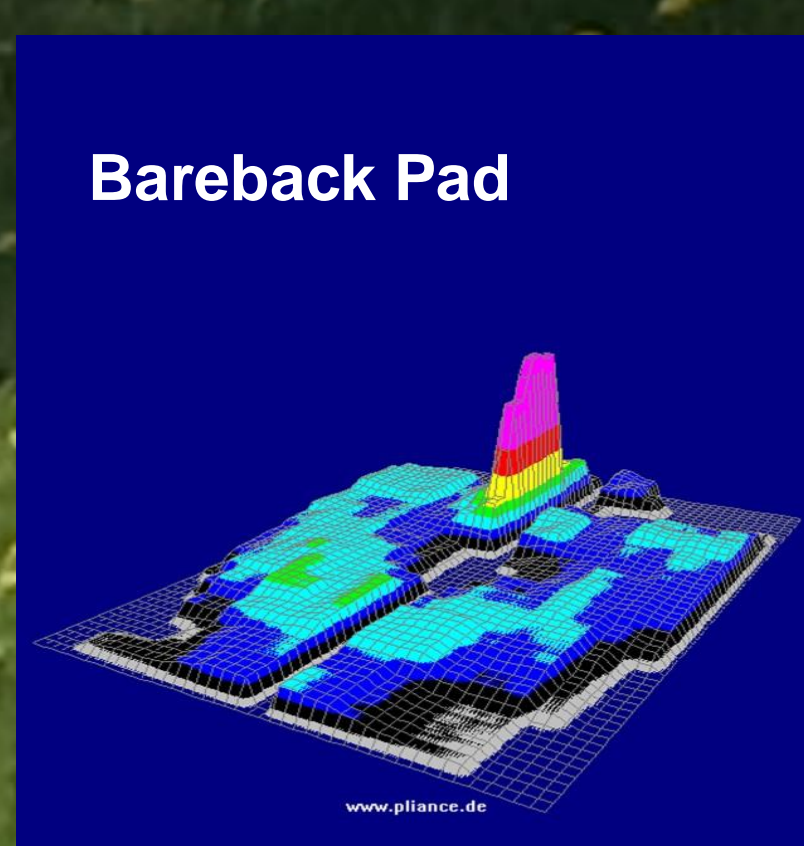
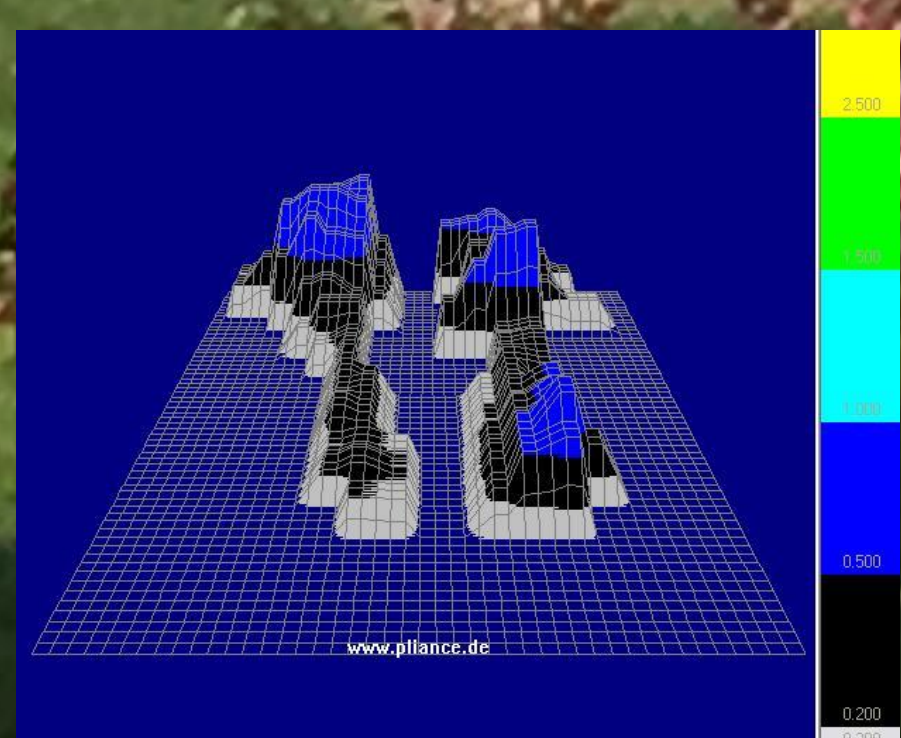
 Ten current riders with CP and six horses who routinely performed with these devices participated

 TR protocol for pressure measuring was done with each rider with each device over a period of time.








Topographical representation of device pressure per the Pliance Pad.

Top: Independence Saddle & rider
Middle: English Saddle & rider
Bottom: Bareback Pad & rider



Graph representation of the Equine Ethogram of stress behaviors comparing CHUM horses to others in community.

Conclusions:

-  TR Horse's should have appropriate confirmation, training and fitness to accommodate the riders and devices
-  Stress Behavior Equine Ethogram demonstrated no difference between the three devices
-  On average more pressure was demonstrated under the front of the English saddle than the Independence saddle
-  The large spike on the Bareback Pad was seen with or without a rider and was seen at the girthing system.
-  In this study, the pressure/forces from these three devices with riders with CP were not significant nor were there significant stress behaviors related to the saddle's use.

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