

Health and Exercise Science Senior Thesis Projects Spring 2014

Title of Thesis:

Effect of a Four-Week Core and Back Strengthening and Lower Extremity Stretching Exercise Intervention on the Skidmore College Equestrian Team

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Abstract

Equestrians are at an increased risk for postural health issues because horseback riding causes microtrauma to the bones, ligaments, and muscles of various regions of the spine. **Purpose:** The purpose of this study was to examine the effect of a four-week exercise intervention on members of the Skidmore College Equestrian Team's core and back strength, hip and back range of motion (ROM), low back pain, standing posture, and horseback riding position at the sitting trot. **Participants:** Participants were 14 healthy females who were 18-21 years of age and had an average of 12 years of riding experience. **Methods:** Participants were randomly assigned into either the experimental group (n = 7) or the control group (n = 7). The experimental group performed a series of strengthening and stretching exercises three times a week for four weeks. The control group was asked not to do any additional exercise aside from team trainings. **Results:** The results indicated a significant improvement in left hip flexion and left and right hip abduction as a result of the exercise intervention ($p = 0.048$, $p = 0.016$ and $p = 0.028$, respectively). All other variables, except for absolute right thigh riding position angle, showed no significant changes from pre- to post-exercise intervention between the control and experimental groups ($p > 0.05$). **Conclusion:** These