**Title**

“Comparison of the peak center of mass displacement during hip abduction exercises with differing arm positions while standing on a bosu ball”.

1. Subjects to be used in this project are male and female employees of the YMCA of Boerne that are in good physical health between the ages of 20 and 35 years of age. The researcher will post an announcement for those that wish to participate in the study. No stipends will be given for participation in this study.

2. Subjects will be chosen based on their ability to physically stand on one leg without losing their balance. Subjects chosen will be asked to voluntarily participate in this study and be required to sign a consent form. A recruitment notice will be posted in the wellness office for staff review and decide whether or not to participate. No names or information will included or linked back to the participant that would give away who they are or their identity.

3. Procedures and methodologies used in this study involve a total of 10 participants that will be tested in two separate trials. Each participant will be asked to laterally extend their non-dominate leg one time per trial for a total of two trials. Participants will be videotaped using a digital camcorder with a piece of tape attached to their center of mass for the purpose of measuring the displacement during each trial. The process should take no more than five minutes to complete and there will be no follow up required after the study is completed.

4. Risks associated with this study involve possible injury associated with the loss of balance. The researcher may end the s participation in this study at any time if they feel there may be danger associated with the exercise technique required in this study.

5. Any and all information obtained in this study will be kept confidential and no names or information will be required from you as a participant except in the form of a written consent from you to participate in this study. The results of the testing will be viewed for grading purposes by Dr. Robert Pankey, but your name will not be given or be associated with you during the videotaping process. Any data recorded on videotape may be accessed by Dr. Robert Pankey, for grading purposes and disposed of at the end of the fall 2009 semester. No information will be included that would give away who you are.

6. Potential benefits of participation of this exercise involve the understanding of your own core strength and balance required to use a bosu ball for exercise purposes.

7. No credit or compensation is being providing to subjects for participation in this study.

8. Risk for possible injury is minimal compared to the benefits of knowing the participants individual core strength that is pertinent to one’s physical strength as a fitness professional.

9. Approval has been granted to collect data on site at the Boerne YMCA by the Executive Director, Stephanie Keene. The approval letter is provided along with the synopsis.

10. The proposal for this class project has been approved by Dr. Robert Pankey, the Supervising Professor. This project is a requirement for a graduate minor course in Biomechanics 5309 and is to be completed by December 2009.

11. The participation in this study is entirely voluntary. A summary of the findings will be provided to participants and the Boerne YMCA upon completion of the study, if requested.

12. All individuals who will have access, during or after completion, to the unpublished results of this study include Dr. Robert Pankey, Professor of Kinesiology, Texas State University, San Marcos and Ericka Barajas, primary researcher and graduate student at Texas State University, San Marcos.