**Consent Form**

You are being asked to participate in a research study that is being conducted by Adrian Chavez in order to satisfy his thesis requirement for a Master’s degree in Physical Education. You have been chosen because of your previous basketball playing experience. The purpose of the study is to evaluate the effect of fatigue from a simulation basketball on lower body movement patterns during landing and compare the changes in landing patterns to changes resulting from a functional (landing and squatting) and general (resistance exercise) fatigue protocol.

If you agree to participate in the study you will be required to report for three testing sessions on the same day of three consecutive weeks in which we will measure your vertical jump height and 3-D hip and knee angles during a landing task before and after the administration of a fatigue protocol. Your Heart rate will also be measured continuously throughout the 3 testing sessions.

On the testing days you will be asked to report to the lab and complete a warm-up followed by measurement of your maximum vertical jump using a Vertec vertical jump testing device (Sports Imports,Inc., Columbus, OH, USA). After that you will be required to complete 5 pre-fatigue 1-leg and 2-leg landing trials. You will have to jump and touch a point that is 50% of your maximum vertical jump and land onto a force plate (AMTI force plate; OR6-6-1, AMTI corp., Watertown, MA) that is located a distance of 70 cm from the starting position. The landing you will need to do will be signaled by a light switch that will be triggered when you take off and will signal you to either land on one or two feet. A successful trial will require you to touch the point marked 50% of maximum vertical jump and land onto the force plate using the correct signaled landing followed by a vertical jump. Then you will be required to complete 1 of 3 fatiguing exercises. After the fatigue activity the landing trials will be completed again just like before fatigue. Prior to these landings 3 electromagnetic sensors (Ascension’s Flock of Birds; Ascension Technologies Inc, Burlington, VT) will be attached to your body on the sacrum, thigh and shank with elastic bands. Your hip and knee joint angles will be recorded using the Monitor for Research (Innovative Sports Training, Inc., Chicago, IL). The experiment should take a maximum of an hour and a half each testing session, on three occasions for a maximum total time commitment of four and a half hours.

The fatigue protocols will consist of : (1) a simulation basketball game that is designed to represent participation in a college basketball game, (2) a general fatigue protocol that consists of continuous maximal voluntary concentric contractions of the hamstrings and quadriceps on a isokinetic dynamometer (Biodex System 4 Pro, Biodex, Inc, Shirley, NY) until fatigue, and (3) a functional fatigue protocol that consist of alternating unilateral landings with bilateral squats until squats can no longer be completed.

There is a very small risk for injury during this study. These fatiguing activities have been used in previous studies (Borotikar et al., 2008; Madigan & Pidcoe, 2003; McLean & Samorezov, 2009; Nyland et al., 1999; Thomas et al., 2010) with no reported injury during testing. The tasks you will be asked to complete are common during basketball competition. Since, you are an experienced basketball player with no history of reported injury it can be concluded that your risk for suffering an injury during this experiment is minimal. As a result of participation you in this study you will be contributing to the advancement of knowledge on the effect of fatigue on ACL injury risk, and may possibly aid in the prevention of future injuries.

You will have access to all data recorded throughout the collection process and a copy of the results will be provided to you upon completion of the study. The data will be kept on file and will be available at your request anytime. Your personal information will remain confidential with the exception of your name which will be included in the acknowledgements section of the paper should this experiment progress to publication.

Participation in this study is voluntary and you may withdraw from the study at any point in which you do not feel that you can continue. Questions regarding research, research participant’s rights, and/or research-related injuries to participants should be directed to the IRB chair, Dr. Jon Lasser (512-245-3413 – [lasser@txstate.edu](mailto:lasser@txstate.edu)), or to Ms. Becky Northcut, Compliance Specialist (512-245-2102).

**Statement of Consent:** I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Researcher’s Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_