# Informed Consent

**Please read this consent document carefully before you decide to participate in this study. The researcher will answer any questions before you sign this form.**

**CUP-IRB Approved Study#:** [redacted]

**Study Title**: Optimal Rest Time for Post-activation Potentiation (PAP) on Vertical Jump Performance

**Purpose of the Study**: We invite you to participate in a study on the effect of different rest times after a high- intensity warm up activity on Vertical Jump Performance

You have been selected for this study because you meet the physical fitness screening requirements (at least 30 min of moderate intensity physical activity 5d a week, or 20 min of vigorous activity 3d a week), are free of orthopedic, cardiovascular, and/or metabolic contraindications to aerobic exercise as determined by the PARQ+, a self-reported 1 RM max back squat of 1.5kg per 1kg body weight for males and 1.0kg per 1.0kg body weight for females, and have at least six months resistance training experience.

**Procedures**: If you decide to be a part of this study, you will be asked to do the following: attend 5 sessions, the first lasting approximately 30 minutes, and the following 4 sessions will last anywhere from 15 to 35 minutes, depending on the rest time condition for that day, and the length of time the subject jumps for. Your total time commitment for this study will be approximately 130 minutes or less, spread across 5 visits, depending on the number of jumps taken. The visits will be scheduled 3-14 days apart.

On the first visit, demographic data will be collected, including height, body mass, and body composition using the Body Impedance Analysis (BIA) system. You will also be asked to complete a survey on your exercise habits and a questionnaire about your health to ensure you are healthy to participate in the study. Next, you will complete a 5-minute dynamic warm-up including 20 high knees, 20 buttock kickers, 20 lunges, 20 karaoke, 20 side shuffles, 20 walking quad/ hamstring stretch, 10 leg swings, 10 medium arm circles, and 20 large arm circles. Following the dynamic warm-up, then you will have 2 minutes of rest. Next, You will jump as high as possible on a jump mat which assesses jump height via time in the air. Following the maximal vertical jump test, you will perform a 30 second high intensity warm up, wearing a vest that is loaded with 30 percent of your measured bodyweight. During these 30 seconds, you will be asked to jump as high as possible, as many times as possible, in thirty seconds. You will be asked to rate the difficulty of the exercise being performed.

During the next four visits, you will come to Willis Health Professions Lab, have your finger pricked to assess blood lactate, a marker of exercise intensity, complete the same dynamic warm up and 30 second jumping task, and then be given a rest time of either 4, 8, 12, or 16 minutes, depending on the day. You will again be asked to rate the difficulty of the exercise, and your finger will be pricked. After your rest period, your finger will be pricked again, then you will be asked to jump as high as possible one time every minute, for ten minutes, or until you fail to maintain jump height for two jumps. Upon completion, you will again be asked to rate the difficulty of the exercise, and your finger will be pricked, for a total of 4 finger pricks per trial. You will have a self-selected cooldown as desired.

| Session 1- 30 minutes | Sessions 2-5 – 15 to 35 mins each |
|---|---|
| ● Informed Consent<br>● PAR-Q+<br>● Exercise History Questionnaire<br>● Demographic data including body height, weight and composition with BIA<br>● Dynamic Warm-up<br>● Baseline maximal vertical jump<br>● Familiarization trial- 30 seconds of jumping with weighted vest. | ● Finger stick- Lactate assessment<br>● Dynamic Warm-up<br>● 30- seconds of jumping with weighted vest<br>● Finger stick- Lactate assessment<br>● 4,8,12, or 16 mins. of rest<br>● Finger stick- Lactate assessment<br>● One max vertical jump every minute up to 10 minutes or until fatigue.<br>● Finger stick- Lactate assessment |

**Potential Risks of Participating**: Research studies often involve some risk. By participating in this research project, you may experience muscle soreness from the exercise in the study. As with any moderate to high-intensity activity, muscle fatigue, joint pain, cramps, dizziness, cardiorespiratory distress, and even death are all possible situations that could arise. Studies have reported that the absolute risk of sudden cardiac death during vigorous physical activity is one death per year for every 15,000-18,000 people. Finger stick- Lactate testing can cause pain, soreness, bruising, bleeding, infection, or fainting. These events occur occasionally, but will not impact your overall health. In addition, it is possible in any experiment that harmful effects that are not known could occur. Of course, we will take every precaution to watch for and prevent any side effects.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

- There is a possibility of:

| **Potential Risks/Side Effect** | **How Often has it occurred?** | **How serious is it?** | **Can it be corrected?** |
|---|---|---|---|
| Muscle Soreness | It occasionally occurs | It will not impact your overall health | Muscle soreness will go away in 2-3 days as your body recovers from the exercise bout. |
| Cardiorespiratory distress | The absolute risk of sudden cardiac death during vigorous physical activity is one death per year for every 15,000 to 18,000 people. | This can be extremely serious if proper proper medical attention is not given. | Risks will be minimized by following American College of Sports Medicine guidelines for testing protocols, closely monitoring the performance of the testing protocols, and use of qualified technicians. |
| Finger stick- Lactate: pain, soreness, brusining, bleeding, infection, fainting | It occasionally occurs. | It will not impact your overall health | Risks will be minimized by keeping the area clean and covered with a band-aid to reduce risk and ensure quick healing. |

**Potential Benefits of Participating**: If you participate in this study, you will gain the satisfaction that comes with research and discovery. We appreciate your assistance in our research effort and hope you will find the experience rewarding. We do not promise, however, that you will receive any of these benefits.

**Compensation**: You will receive a report on your body composition, which is typically an $85 fee in most laboratories.

**Confidentiality**: We will collect the following identifying information for the research: Your name and email address will be collected so the student investigator can contact you for scheduling purposes. Any information that we learn about you that can be traced to you will be used responsibly and will be protected against release to unauthorized persons. In addition to those who usually have access to this data (Dr. Lesniak), your data record will likely be shown to members of the investigation team. If you sign this form, you have given us permission to release information to these persons. The results of this study may be published in scientific literature, but no publication will contain information that will identify you. Your identity will be kept confidential to the extent provided by law. Your information will be assigned a code number, instead of any personally identifying information. The list connecting your name to this number will be kept in a locked cabinet in Dr. Lesniak's office in the Willis Health Professions Building. When the study is completed and the data has been analyzed, the list will be destroyed. Your name will not be used in any report.

**Where will Data be Stored?** The data will be stored in deidentified folders during data collection and then will be stored electronically on the researcher's computers, with no names attached.

**How Long will it be Kept?** The deidentified data will be stored in a database on the researcher's computer until data analysis and publications are complete.

**Who can See my Data?** Only members of the research team (Isaiah Reed, Dr. Lesniak, Dr. Dixon) will have access to your data. This includes your de-indentified data (using ID numbers), as well as the identifying list connecting your name to your ID number, which will be kept in a locked cabinet in Dr. Lesniak's office in the Willis Health Professions Building.

**Voluntary Participation**:
Your participation in this study is completely voluntary. There is no penalty for not participating. You may also refuse to answer any of the questions we ask you and/or refuse any of the procedures involved in the study.

**Right to Withdraw from the Study**:
You have the right to withdraw from the study at any time without consequence. If you decide to withdraw from the study your data (will/will not) be deleted from the study data.

**Whom to Contact if you Have Questions about the Study**:

**Whom to Contact about your Rights as a Research Participant in the Study**:
Dr. Doreen Jowi, CUP-IRB Chair
Bloomsburg University
400 East 2nd Street
Bloomsburg, PA 17815
Email: BU-IRB-Chair@bloomu.edu
Phone: 570-389-4217

**Agreement**:
I have read this consent document and understand my part in the study described above. I have been given the opportunity to ask questions and have had all my questions answered satisfactorily. I know that if I am uncomfortable with this study, I can stop at any time. I have received a copy of this description. I voluntarily agree to participate in the study.

You will receive an unsigned copy of this form.

**Participant Name (Print)**: _____

**Participant Signature:** _____

**Date**: _____

**Principal Investigator/Research Consenter**: _____

**Date**: _____