

# Spalding University

**Principal Investigator:** Dr. John Nyland

**Student Investigator:** Alysha Buehler

**Title of Study:** Joints Likely to Have the Largest Impact on Back Pain in Adolescent Female Gymnasts

You have been invited to participate in a research project titled " *Joints Likely to Have the Largest Impact on Back Pain in Adolescent Female Gymnastics*” This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

# What are we trying to find out in this study?

The purpose of this study is to create a screening tool that can be used by coaches and athletic trainers to help minimize back pain amongst gymnasts. This tool takes a basic common skill known as a bridge, which is used among various gymnastic skills, and isolates it into the different joint positions involved. The goal is to be able to identify which joint is the most commonly misplaced based on the isolation of the different joints. Then be able to compare that information amongst a group sample to determine which joint could be the underlying cause of back pain based on those who are currently experiencing the pain/ discomfort.

# Who can participate in this study?

Adolescent female competitive gymnasts ages 8-17 years of age who have not yet started their menstrual cycle. The gymnast will need to be able to hold a bridge for a minimum of 30 seconds.

# Where will this study take place?

The study will take place in the gym during normal gymnastics practice.

# What is the time commitment for participating in this study?

This study should take about 5 minutes to complete.

# What will you be asked to do if you choose to participate in this study?

You will first be asked to complete a brief questionnaire about your child. The questionnaire will determine if your child will be chosen for participation in the study. If your child is chosen, she will be brought to the side during practice and shown a picture of the ideal bridge, as shown below. Your child will then be asked to replicate the skill to the best of their ability. Once your child feels that she is in the position to the best of her ability, a picture will then be taken to be used for grading based on joint angles. To perform the skill perfectly the gymnast will need to have her hands flat on the ground, parallel to her body. She will need to have extended elbows with her shoulders flexed passed the wrists. She also needs to have her knees together and extended with feet together and flat on the ground. This combination makes up the 5-point bridge screening created to identify weather or not the gymnast was correctly replicating the ideal bridge. After grading is done, the coaches will then be asked to grade your child to compare results for reliability.



# What information is being measured during the study?

The picture of your child doing a bridge will be used for grading to determine if there is a correlation among those who experience back pain/ discomfort and a common joint lacking mobility. Each joint that does not correspond to the one in the picture will be recorded for the research. Coaches will also record if your child’s joints do not correspond to those in the picture to test the reliability of this screening method.

**What are the risks of participating in this study and how will these risks be minimized?**

There are no risks involved in this study outside of what your child normally does during gymnastics practice.

# What are the benefits of participating in this study?

We are hoping this new screening tool will identify a correlation amongst those who have back pain/ discomfort and lack of mobility in a specific joint. Being able to identify the main joint that predisposes a child to back pain can help coaches and athletic trainers prevent this from occurring by screening for it early on and throughout the career of the sport.

# Are there any costs associated with participating in this study?

There are no costs associated with participating in this study.

# Is there any compensation for participating in this study?

There is no compensation for participating in this study.

# Who will have access to the information collected during this study?

The information collected can be accessed by students and staff of the Masters of Science in Athletic Training at Spalding University, also the Research Ethics Committee at Spalding University. Data will be housed in a locked filing cabinet in the office of the principal investigator, Dr. John Nyland. If the results of the study are to be presented at a conference of published in any form, your child’s identity will be kept confidential.

# What if you want to stop participating in this study?

The decision to stop participating in this study will not affect you or your child in any way.

Should you have any questions prior to or during the study, you can contact the primary investigator, Alysha Buehler at [ajacobs01@spalding.edu](mailto:ajacobs01@spalding.edu), or the faculty advisor, Dr. John Nyland at 502-873-4224 or [jnyland@spalding.edu](mailto:jnyland@spalding.edu). You may also contact the Chair, Research Ethics Committee at 502-873-4217 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Research Ethics Committee [REC]

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I have read this informed consent document. The risks and benefits have been explained to me. I agree for my child to take part in this study.

Please Print Your Child’s Name

Please Print Guardian’s Name

Guardian’s signature Date