LAUNCH AND INFORMATION SESSION
What is WURJHNS?

- **STUDENT RUN**
  - A journal created and run by Western students for Western undergraduate students and their research

- **PEER REVIEWED**
  - Articles are reviewed by trained students and Faculty members to ensure scientific integrity in all publications

- **OPEN ACCESS**
  - The WURJHNS is available online and open to anyone and can be found at http://ir.lib.uwo.ca/wurjhns/
WURJHNS Goals

• Encourage undergraduate students to pursue research
• Provide opportunities for students to showcase their research endeavours
• Assist students in finding summer placement opportunities
• Assist undergraduate students with the publication process
The Peer Review Process

Submit your article → Manuscript submission to Editors-in-Chief

Associate Editors

2 Undergraduate and 1 Faculty Reviewers

Editorial Board Decision

Accept → Revise and Resubmit

Reject Article

Publish
Types of Accepted Submissions

• We Accept:
  ▫ Research Article
  ▫ Short Communication
  ▫ Mini-Review Article
  ▫ Students in the Field Report
  ▫ Briefing Notes
  ▫ Letters to the Editor & Letter in Reply
  ▫ Original Course work

The FIRST author of all manuscripts submitted to WURJHNS must be an undergraduate student at Western.

Articles from Health Sciences and Natural Sciences are accepted for publication.
Research Article

• Describe and report the finding from a complete research project

Short Communication

• Research is still in progress, but an opportunity to present preliminary research results
Mini-Review Article

• Investigates and summarizes the current state of literature about a specific issue and reports the status

Students-in-the-Field Report

• To encourage students to write about any experience they have had in the area of health and natural sciences bridge the gap between theory and practice
Letters to the Editor

• Provide critical and constructive commentary and/or analysis on a WURJHNS publication, or a health or natural science article published elsewhere

Briefing Note

• Short, concise policy document that informs decision makers about a current healthcare issue
Other Articles We Publish

• Faculty Profiles

• Department Research Day Abstracts
http://ir.lib.uwo.ca/wurjhnns
Examples of Published Articles

Original Research Article: Effect of Plantar Flexor Muscle Fatigue on Postural Control

Tyler Grey, Daren Redguard, Rebecca Wengle, Peter Wegscheider
School of Kinesiology, The University of Western Ontario, London, Ontario, Canada

Abstract
Objective. Previous studies have demonstrated that various factors affect postural stability. Our aim was to examine the effect of plantar flexor fatigue on postural stability in quiet standing.

Methods. Fifteen healthy male university students (age, 21.3 ± 1.7; height, 1.83 ± 0.06; weight, 81.8 ± 9.4 kg) were instructed to stand on a force plate before and after calf fatigue exercise. The sensory systems were controlled by blindfolding subjects and having them stand on a flat firm surface without moving their feet. Fatigue was achieved through repetitive weight-bearing plantar flexions. This was assessed by using a force plate to calculate Center of Pressure (CoP) displacement.

Results. Plantar flexor fatigue led to significant (p<0.05) postural control impairments in the frontal and sagittal planes compared to non-fatigue control. Fatigue led to significant changes in MA (1.0 ± 0.5, 3.36 ± 1.79mm for control and fatigue, respectively) and AUP (4.48 ± 1.79mm and 8.89 ± 3.74 for control and fatigue, respectively).

Conclusion. Lower limb muscle fatigue is speculated to be a leading factor in ankle joint athletic injuries. Understanding how fatigue impacts individuals and families is therefore important, because there is a high probability that those who do not undergo surgery will become disoriented.

Introduction

Postural sway can be described as the displacement of the center of mass (CoM) relative to the base of support (BOS), and is directly related to postural stability control and balance (1). Postural sway is increased (indicating diminished stability) by many factors, including both muscular fatigue and impaired vision (2,3).

Muscular fatigue is a complex phenomenon and has been defined as a reduction in the force-generating capacity, regardless of the performed task (1). Lower limb muscle fatigue is speculated to be a leading factor in ankle joint athletic injuries (4). Since many of these injuries occur at the end of an activity when the athlete is fatigued (2). There are two main fatigue-related mechanisms that can contribute to the diminished force-generating capacity: somatosensory activity and muscular strength. During fatigue, somatosensory activity (afferent and efferent signals) is less successful in transmitting neural signals, and as a result, the muscle is stimulated to a lesser extent (1). This will lead to reduced motor control and therefore decreased stability. Strength is also diminished during fatigue as the proprioceptive and somatosensory properties of the joints are altered through increased threshold of muscle spindle discharge, disrupting sensor feedback, and consequently limiting the muscle’s ability to control the joint (2). Therefore, fatigue of postural muscles, such as the gastrocnemius and soleus, has led to diminished postural control and increased difficulty to maintain balance (3).

Fatigue may also lead to a loss of postural muscle control due to diminished use of sensory information (1,3,4,6,7). It is understood that visual

Background

My name is Lawrence Yau and I am in my 5th year doing an Honours Specialization in Medical Sciences. My decision to pursue this degree was based on my interest in learning more about human diseases. Although I gained a lot of knowledge through my studies, it was a challenge to put a face on the diseases that I learned about at school. Consequently, I started volunteering at Rotaract’s Juvenile Diabetes Camp (JD Camp) three years ago. JD Camp is a week long camp operating during the month of March and is open to both children and families affected by Type 1 diabetes. The camp offers a great deal of fun activities for the children and also provides many networking and educational opportunities for parents. As the site coordinator, in addition to planning and preparing meals for roughly 60 people each year, I have the opportunity to interact with both the children and their parents.

Through my experiences at the camp, I gained a greater appreciation and understanding of not only the physical implications of Type I diabetes on the child but also its impact on the emotional, social, and financial well-being of the entire family. I believe that one challenge facing future medical research lies in improving the quality of life for patients affected with Type 1 diabetes and their families.

In North America, diabetes remains one of the most prevalent forms of chronic disease affecting both children and adults. In fact, the rate of this disease is growing throughout the world, especially in impoverished countries. Understanding how diabetes impacts individuals and families is therefore important, because there is a high probability that those who do not undergo surgery will become disoriented.

Students in the Field: Juvenile diabetes: Understanding its impact beyond the pancreas

Lawrence Yau, Natasha Lapore
Brock University, Faculty of Education (BSED), School of Medicine and Dentistry. The University of Western Ontario, London, Ontario, Canada M8K 3K7
4 Great Reasons to Submit

• Gain publication experience
• Disseminate your research globally - Open-Access Publication
  • In talks with EBSCO Publishing
• Recognized by faculty members and the research community
• Great addition to your CV when applying to graduate/professional schools
“The WURJHNS provides an extremely valuable resource for undergrad students.

We were exposed to the submission process for publication, as well as the review process, revisions, and responding to reviewers.

This experience has not only helped my work as a graduate student but also strengthened my curriculum vitae and scholarship application.”

Chantelle Nielson
Workshops

• How to get a summer research position
• November 2013 and January 2014
  • How and when to contact a Research Supervisor (ex: a professor, scientist)
  • How to create a cover letter and resume
  • Typical responsibilities of an undergraduate research student
• The benefits of a research position
• Western professor will be a guest speaker
Getting Involved

• First Year Representatives
  ▫ Applications due October 14th
  ▫ Sign-up list after the presentation

• Workshop
  ▫ November 2013 and January 2014

• Application for next year’s executive positions
  ▫ March/April 2013
SUBMIT!

We look forward to receiving your articles!

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