PAUL N. WHITEHEAD, PHD, CSCS

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EDUCATION

Doctor of Philosophy, Rehabilitation Science, University of Pittsburgh, Pittsburgh, PA 2017
Concentration: **Sports Medicine and Nutrition**
Dissertation: Comparing Measures of Ankle Proprioception, Strength, and Postural Stability in Soccer Players With and Without Chronic Ankle Instability as a Result of Non-Contact Lateral Ankle Sprains
Advisor: Takashi Nagai, PhD, CSCS

Master of Science, Health and Sport Science, The University of Memphis, Memphis, TN 2012
Concentration: **Exercise and Sport Science**
Thesis: Possible New Modalities for the Navy Physical Readiness Test
Advisor: Brian K. Schilling, PhD, CSCS, FNSCA

Bachelor of Science, Journalism and Electronic Media, University of Tennessee, Knoxville, TN 2007
Concentration: Print Journalism

APPOINTMENTS AND POSITIONS

Assistant Professor, The University of Alabama in Huntsville 2017 – Present
Huntsville, AL
Instruct courses, mentor students, and conduct research in the Department of Kinesiology as a tenure-track faculty member. Additional responsibilities include service to the University and the Huntsville community. Research and education focus is on the Biomechanics portion of the Department, which is in the College of Education.

Sport Science Coordinator, Pittsburgh Penguins 2016 – 2017
Pittsburgh, PA
Work alongside the Director of Sport Science and Performance to monitor player activity before, during, and after practices as a means of prescribing alternative approaches to diet, exercise, sleep, and game preparation. Daily activities include interactions with players, coaches, and staff to learn the dynamic of working with a professional organization that is at the championship level.

Graduate Student Researcher, Neuromuscular Research Laboratory 2012 – 2016
University of Pittsburgh, Pittsburgh, PA
Performed biomechanical, neuromuscular, strength, flexibility, and physiological assessments of athletes, soldiers, and operators; and managed physiological human subject research activities of five laboratories. Independent research related to lower extremity injury prevention resulted in numerous presentations, publications in review, and my dissertation project.

Graduate Assistant/Lab Coordinator, Exercise Neuromechanics Laboratory 2010 –2012
University of Memphis, Memphis, TN
Organized data collection sessions and conducted research studies related to dietary supplements, strength and conditioning, and training in elderly populations. Resulted in multiple abstracts and publications, three of which were first author contributions.

Student Intern, Strength and Conditioning 2009 –2010
University of Memphis, Memphis, TN
Assisted with coaching and coordinating strength and conditioning sessions for various athletic teams at the University of Memphis, including football, baseball, softball, and golf.

PROFESSIONAL CERTIFICATIONS

Certified Strength and Conditioning Specialist – National Strength and Conditioning Association	2010 – Present
CPR/AED Certified for the Professional Rescuer and Healthcare Provider – American Red Cross	2010 – Present
Certified Level 3 Official – USA Hockey	2014 – Present
Certified Level 4 Coach – USA Hockey	2010 – Present

PROFESSIONAL AFFILIATIONS

American College of Sports Medicine (ACSM)	2014 – Present
Mid-Atlantic Regional Chapter (ACSM)	2014 – Present
National Strength and Conditioning Association	2010 – Present

HONORS

SHRS Research Development Grant, University of Pittsburgh	2016
Freddie H. Fu, MD Dissertation Research Award, University of Pittsburgh	2015
Mid-Atlantic Doctoral Student Investigator Award, American College of Sports Medicine	2014
Freddie H. Fu, MD Graduate Research Award, University of Pittsburgh	2014
Freddie H. Fu, MD Graduate Research Award, University of Pittsburgh	2013
Meritorious Achievement, Skeletal Muscle Mechanics and Physiology, University of Memphis	2012
Senior Journalist of the Year, University of Tennessee	2007
Scripps Howard Foundation Internship, Scripps Howard Foundation	2007

TEACHING EXPERIENCE

Instructor, Anatomical Basis of Sports Medicine and Nutrition Spring 2016
University of Pittsburgh, Pittsburgh, PA
Graduate course in the School of Health & Rehabilitation Sciences

Teaching Assistant, Exercise Physiology Lab Spring 2014
University of Pittsburgh, Pittsburgh, PA
Instructed a weekly lab on physiology data collection and methods related to VO2max testing for aerobic capacity, Wingate testing for anaerobic power, and body composition analysis

Guest Lecturer, Dietary Supplements for Health and Performance 2013 – 2015
University of Pittsburgh, Pittsburgh, PA
Lectured on my experiences working with dietary supplements and conducting research studies related to the investigation of the effects of ergogenic aids.

Guest Lecturer, Research Seminar in Sports Medicine 2013 – 2015
University of Pittsburgh, Pittsburgh, PA
Lectured on ideal research practices for graduate students, as well as discussed independent projects of my own.

Guest Lecturer, Laboratory Techniques in Sports Medicine 2013 – 2014
University of Pittsburgh, Pittsburgh, PA
Lectured on various aspects of laboratory data collection including physiology, biomechanical, ultrasound, and strength testing

Instructor, Free Weights and Machines 2011 – 2012
The University of Memphis, Memphis, TN
Undergraduate course in the Department of Exercise and Sport Science

Instructor, Exercise Testing Interpretation Lab 2011 – 2012
The University of Memphis, Memphis, TN
Graduate and Undergraduate course in the Department of Exercise and Sport Science

Guest Lecturer, Biomechanics 2011 – 2012
The University of Memphis, Memphis, TN
Assisted in lectures for undergraduate students in Exercise and Sport Science

MENTORSHIP ACTIVITIES

Joseph Schmitz, University of Pittsburgh, Rehabilitation Science 2015 – 2017
Bachelor of Philosophy PhD Student Advisor and Committee Member
Thesis: Comparison and Correlation of Dynamic Postural Stability Indices Obtained During Different Dynamic Landing Tasks and Footwear Conditions

Michael Tammaro, University of Pittsburgh, Rehabilitation Science Spring 2016
Internship Advisor

Simon Gomez, University of Pittsburgh, Master of Athletic Training 2014 – 2016
Scholarly Paper PhD Student Advisor

Clint Hazen, University of Pittsburgh, Master of Sports Medicine and Nutrition 2012 – 2014
Scholarly Paper PhD Student Advisor

COMMUNITY SERVICE ACTIVITIES

Level 4 Coach, USA Hockey 2010 – Present
Level 3 Official, USA Hockey, Mid-American District 2014 – Present
University of Tennessee Alumni Association, Board of Directors 2013 – Present
Vice President, Co-Founder, University of Memphis Club Hockey 2011 – 2012
Assistant Coach, University of Mississippi Club Hockey 2010
League Treasurer, Volunteer Coach, Memphis Youth Hockey League 2009 – 2010

PROFESSIONAL SERVICES

Manuscript Reviewer, Journal of Science and Medicine in Sport 2017 – Present
Journal of Strength and Conditioning Research 2016 – Present
Medicine and Science in Sports and Exercise 2015 – Present

Research/Education Committee, Graduate Council 2011 – 2012
Department of Health and Sport Science
The University of Memphis, Memphis, TN

Social Committee, Board of Directors 2013 – Present
University of Tennessee Alumni Association – Pittsburgh Chapter

GRANT FUNDING

Ongoing Research Support

Whitehead (PI) 05/2015 – 04/2017
Freddie H. Fu, MD Dissertation Research Award, University of Pittsburgh Role: PI
Measures of Ankle Proprioception, Strength, and Postural Stability in Male Soccer Players With and Without Chronic Ankle Instability as a Result of Non-Contact Lateral Ankle Sprains
The goal of this study is to determine which laboratory measures are able to discriminated differences and highlight neuromuscular deficiencies in athletes with and without chronic ankle instability, and to validate the measures as part of a robust testing battery to be used in clinical trial and rehabilitation settings.

Whitehead (PI) 05/2016 – 04/2017
Research Development Fund, School of Health and Rehabilitation Sciences, University of Pittsburgh Role: PI
Measures of Ankle Proprioception, Strength, and Postural Stability in Male Soccer Players With and Without Chronic Ankle Instability as a Result of Non-Contact Lateral Ankle Sprains

Completed Research Support

Whitehead (PI) 05/2015 – 04/2016
Freddie H. Fu, MD Dissertation Research Award, University of Pittsburgh Role: PI
Validity and reliability of a modified ankle attachment for the Biodex and Comparing measures of ankle proprioception, strength, and postural stability in male soccer players with and without chronic ankle instability as a result of non-contact lateral ankle sprains
The goal of this study was to determine if a modified attachment for ankle testing on the Biodex Isokinetic Dynamometer could be used to more accurately assess strength and proprioception at the ankle compared to the attachment recommended by the company, which creates motion artifact

Whitehead (PI) 05/2014 – 05/2016
Freddie H. Fu Graduate Research Award, University of Pittsburgh Role: PI
Effect of minimalist footwear use on ankle musculature strength and dynamic postural stability in healthy, physically active adults
The goal of this study was to investigate if habitual use of minimalist footwear during strength and conditioning activities has an effect on postural stability, kinematics, muscle activity, and strength.

Whitehead (PI) 05/2013 – 05/2015
Freddie H. Fu Graduate Research Award, University of Pittsburgh Role: PI
Effect of minimalist footwear during tests of dynamic postural stability in healthy, physically active male adults
The goal of this study was to investigate if minimalist footwear postural stability in individuals with no previous experience wearing minimalist footwear

Pending Research Support

Sakr (PI) Pending
Avadim Technologies, LLC Role: Co-I
Pilot Study of the Impact of [pH]UEL 5.0 Foam on Injury Symptoms and Function in Collegiate Athletes With Acute Ankle Injuries
The goal of this research is to determine if a novel means of treating acute ankle sprains with a topical aid can accelerate return-to-play and minimize recovery time for collegiate athletes.

Attempted Research Support

Whitehead (PI) Not Accepted
USA Hockey Foundation, SPEC Grant
Neuromuscular Research Laboratory Ice Hockey Injury Prevention and Performance Optimization

Whitehead (PI) Not Accepted
National Strength and Conditioning Association Foundation Research Grants Program, Graduate Research Grant (Doctoral)
Role of minimalist footwear on ankle strength and postural stability

Whitehead (PI) Not Accepted
American College of Sports Medicine. 2015 ACSM Foundation Doctoral Student Research Grant Program
The role of minimalist footwear on enhancing strength and improving stability in collegiate basketball players

Whitehead (PI) Not Accepted
National Collegiate Athletic Association Research Committee, 2014 Graduate Student Research Grant Program
The role of minimalist footwear on enhancing strength, improving stability, and potentially preventing injuries in collegiate basketball players

Whitehead (PI) Not Accepted
National Strength and Conditioning Association Foundation Research Grants Program. Graduate Research Grant (Master's)
Muscle Activation During Varying Grips of the Pull-down

PUBLICATIONS

Manuscripts – In preparation

Darnell ME, **Whitehead PN**, Heebner NR, Sell TC, Beals K. Effect of carbohydrate-electrolyte feeding on knee biomechanics and postural stability during intermittent high-intensity exercise to fatigue. *Scandinavian Journal of Medicine and Science in Sports*

Whitehead PN, Nagai T, Abt JP, Sell TC, Allison KF. Stratification strategies for ability group training optimization for the Army Physical Fitness Test. *Journal of Strength and Conditioning Research*

Manuscripts – In review

Whitehead PN, Darnell ME, Lovalekar MT, Sell TC, Heebner NR, Abt JP. Positive Effect of Minimalist Footwear on Postural Stability in Healthy Male Adults. *Journal of Sports Sciences*

Akins JS, **Whitehead PN**, Heebner NR, Darnell ME, Lovalekar M, Sell TC. Investigation of laboratory maneuvers that elicit game-like ankle kinematics in football athletes. *Journal of Applied Biomechanics*

Conners RT, **Whitehead PN**, Shimizu TS, Bailey JD. Coaching and technology: Live team monitoring to improve training and safety. *Strategies*

Schmitz JL, **Whitehead PN**, Darnell ME, Akins JS, Lovalekar M, Conley KM, Nagai T. Comparison and Correlation of Dynamic Postural Stability Indices Obtained During Different Dynamic Landing Tasks and Footwear Conditions. *Physical Therapy in Sport*

Manuscripts – Published

Johnson CD, **Whitehead PN**, Pletcher ER, Faherty MA, Lovalekar MT, Eagle SR, Keenan KA. Core Strength as a Predictor of Performance During Three Functional Movement Screens. *Journal of Strength and Conditioning Research*. Epub ahead of print (accepted March 2017).

Whitehead PN, Schilling BK, Stone MH, Kilgore JL, Chiu LZ. Snatch technique of United States national level weightlifters. *Journal of Strength and Conditioning Research*. 2014; 28(3): 587-91.

Whitehead PN, Schilling BK, Peterson DD, Weiss LW. Possible New Modalities for the Navy Physical Readiness Test. *Military Medicine*. 2012; 177(11): 1417-25.

Whitehead PN, Schilling BK, Farney TM, Bloomer RJ. Impact of a Dietary Supplement Containing 1, 3-Dimethylamylamine on Blood Pressure and Bloodborne Markers of Health: a 10-Week Intervention Study. *Nutrition and Metabolic Insights*. 2012; 5: 1-7.

Farney TM, McCarthy CG, Canale RE, Schilling BK, **Whitehead PN**, Bloomer RJ. Absence of blood oxidative stress in exercise-trained men following supra-physiologic bouts of acute exercise. *Medicine and Science in Sports and Exercise*. 2012; 44(10): 1855-63.

Feldmann CR, Weiss LW, Schilling BK, **Whitehead PN**. Association of drop vertical jump displacement with select performance variables. *Journal of Strength and Conditioning Research*. 2012; 26(5): 1215-25.

Abstracts

Johnson CD, **Whitehead PN**, Pletcher ER, Faherty MA, Lovalekar MT, Eagle SR, Keenan KA. Core Strength as a Predictor of Performance During Three Functional Movement Screens. *ACSM's 64th Annual Meeting, 8th World Congress on Exercise is Medicine® and World Congress on the Basic Science of Exercise and the Brain*; May 30 thru June 3, 2017; Denver, CO. (In Review)

Schmitz JL, **Whitehead PN**, Darnell ME, Akins JS, Lovalekar MT, Conley KM, Nagai T. Comparison and correlation of dynamic postural stability indices obtained during different dynamic landing tasks and footwear conditions. *The 12th Annual Atlantic Coast Conference (ACC) Meeting of the Minds Conference, Duke University*; March 31 thru April 2, 2017; Durham, NC.

Whitehead PN, Tammaro MR, Schmitz JL, Darnell ME. Minimalist footwear reduces muscle activity in the lower leg during a jump landing task. *Mid-Atlantic Regional Chapter of the American College of Sports Medicine (MARC-ACSM) – 2016.*

Johnson CD, **Whitehead PN**, Pletcher ER, Faherty MA, Lovalekar MT, Eagle SR, Keenan KA. Core Strength as a Predictor of Performance During Three Functional Movement Screens: A Preliminary Analysis. *Mid-Atlantic Chapter of the American College of Sports Medicine (MARC-ACSM) – 2016.*

Tammaro MR, Schmitz JL, Darnell ME, **Whitehead PN**. Habitual users of minimalist footwear display better dynamic postural stability during a jump landing task. *Mid-Atlantic Regional Chapter of the American College of Sports Medicine (MARC-ACSM) – 2016.*

Schmitz JL, Tammaro MR, Darnell ME, **Whitehead PN**. Effect of minimalist footwear on landing kinematic of the knee in physically active adults. *Mid-Atlantic Regional Chapter of the American College of Sports Medicine (MARC-ACSM) – 2016.*

Whitehead PN, Sell TC, Lovalekar MT, Darnell ME Heebner NR, Abt JP, Lephart SM. Better dynamic postural stability while wearing minimalist footwear in physically-active male adults. *Medicine and Science in Sports and* Exercise. 2016; 48:5 Supplement. *Thematic Poster Presentation at: ACSM's 63rd Annual Meeting, 7th World Congress on Exercise is Medicine® and World Congress on the Basic Science of Energy Balance*; June 1, 2016; Boston, MA.

Whitehead PN, Sell TC, Lovalekar M, Heebner NR, Abt JP, Lephart SM (2015). Better dynamic postural stability while wearing minimalist footwear in physically-active male adults. *International Journal of Exercise Science: Conference Proceedings*. Vol. 9: Iss 3, Article 93. *Presented at: Mid-Atlantic Regional Chapter of the American College of Sports Medicine (MARC-ACSM) 37th Annual Scientific Meeting – 2014;* October 31, 2014; Harrisburg, PA.

Feldmann CR, Weiss LW, Schilling BK, **Whitehead PN**. Association of drop vertical jump displacement with select performance variables. *Presented at: National Strength and Conditioning Association 2011 National Conference*; July 2011; Las Vegas, NV.

Feldmann CR, Weiss LW, Schilling BK, **Whitehead PN**. Stability reliability and precision of select jumping performance variables and indices. *Presented at: National Strength and Conditioning Association 2011 National Conference*; July 2011; Las Vegas, NV.

PRESENTATIONS

Minimalist Footwear Reduces Muscle Activity in the Lower Leg During a Jump Landing Task — November 2016
MARC-ACSM Annual Meeting, Harrisburg, PA (Thematic Poster Presentation)

Minimalist Footwear Reduces Muscle Activity in the Lower Leg During a Jump Landing Task — October 2016
Science 2016 – Game Changers, Pittsburgh, PA (Abstract Presentation)

Habitual Users of Minimalist Footwear Display Better Dynamic Postural Stability — October 2016
Science 2016 – Game Changers, Pittsburgh, PA (Abstract Presentation)

Effect Minimalist Footwear on Landing Kinematics of the Knee in Physically-Active Adults — October 2016
Science 2016 – Game Changers, Pittsburgh, PA (Abstract Presentation)

Better Dynamic Postural Stability While Wearing Minimalist Footwear in Physically-Active Male Adults — June 2016
ACSM Annual Meeting, Boston, MA (Thematic Poster Presentation)

The Role of Ankle Injury History on Measures of Ankle Proprioception, Strength, and Postural Stability — February 2016
Research Seminar, School of Health and Rehabilitation Sciences
Pittsburgh, PA (Invited Speaker)

Ice Hockey Injury Prevention and Performance Optimization — February 2016
UPMC Lemieux Sports Complex/Pittsburgh Penguins Research Roundtable
Pittsburgh, PA (Invited Speaker)

Dietary Supplements: Research Experience — February 2015
Dietary Supplements for Health and Performance, School of Health and Rehabilitation Sciences
Pittsburgh, PA (Invited Speaker)

Activity Monitors — February 2015
Laboratory Techniques, School of Health and Rehabilitation Sciences
Pittsburgh, PA (Invited Speaker)

Better Dynamic Postural Stability While Wearing Minimalist Footwear — October 2014
MARC-ACSM Annual Meeting, Harrisburg, PA (Doctoral Student Investigator Award Presentation)

Role of Footwear on Ankle Strength and Postural Stability — September 2014
Current Research Presentations, School of Health and Rehabilitation Sciences
Pittsburgh, PA (Invited Speaker)

RESEARCH INTERESTS AND SKILLS

- Effect of footwear on postural stability and lower extremity risk factors
- Proprioception testing of the ankle and the effect of injury on performance measures
- Injury prevention and performance optimization in athletic and military populations
- Chronic and functional ankle instability
- Neuromuscular control relating to lower extremity injury prevention
- Performance optimization and sport-specific testing for ice hockey

- VO2max, Metabolic Cart, RMR
- Wingate Anaerobic Power
- Phlebotomy
- Blood lactate analysis
- Isokinetic dynamometry
- Isometric strength testing with handheld dynamometry
- Body composition analysis: BodPod, Skinfold, BodyMetrix
- Surface electromyography
- Biomechanics: Force plates, Vicon Motion Analysis/Kinematics
- Software: MS Office, SPSS, Nexus