Neuromuscular Research Laboratory

The Neuromuscular Research Laboratory exhibit will be focused on performing tasks that are common testing procedures in our laboratory. Handheld dynamometer measurements will be taken to evaluate the isometric force output of volunteers. This versatile instrument can be utilized to measure force in dozens of different muscles. Range of motion measurements of the shoulder, knee and ankle will also be taken on volunteers, utilizing a goniometer or inclinometer. Additionally, landing ground reaction forces will be taken on individuals in workout clothes and body armor, to simulate the additional joint stressors that Soldiers feel during common activities like jumping down from a Humvee. Postural control assessments will also be conducted on volunteers with and without body armor. Kim Beals, PhD, RD, CSSD, Kevin Conley, PhD, ATC, Matthew Darnell, PhD, RD, CSSD, SCCC, Shawn Eagle, MAT, ATC, CSCS, and Anne Beethe, MA, ATC, CSCS will be presenting.

Kim Beals, PhD, RD, CSSD

Dr. Beals is an Assistant Professor in the Department of Sports Medicine and Nutrition within the School of Health and Rehabilitation Sciences at the University of Pittsburgh. She is also an Associate Director of the University of Pittsburgh's Neuromuscular Research Laboratory (NMRL). Dr. Beals completed her PhD in Exercise Physiology at the University of Pittsburgh. She is a registered dietitian and certified specialist in sports dietetics. Her research interests include nutrition and exercise strategies to modify body composition and to enhance physical performance. In addition, she is interested in the evaluation of dietary constituents and their role in reducing systemic inflammation due to exercise stress, recovery and long-term health.

Kevin Conley, PhD, ATC

Dr. Conley is an Associate Professor and Chair of the Department of Sports Medicine and Nutrition in the School of Health and Rehabilitation Sciences. He has over 20 years of clinical and academic experience, having spent the previous 17 years as the director of the Athletic Training Education Program. Dr. Conley also serves as Associate Dean for Undergraduate Studies at SHRS, where his responsibilities include providing support and oversight related to common policies and procedures for the six undergraduate programs in the school. As Department Chair, Dr. Conley is responsible for overseeing the productivity of more than 40 faculty and six staff across the academic disciplines of Athletic Training, Sports Medicine, Nutrition and Dietetics and Wellness and Human Performance, as well as the research efforts being conducted at the Neuromuscular Research Laboratory/Warrior Human Performance Research Center. This federally funded research supports five United States Department of Defense studies to develop models for injury prevention and performance optimization, and is carried out in Pittsburgh as well as at six remote sites around the country. Dr. Conley's research interests include neuromuscular control and dynamic stabilization of the ankle and the contribution to injury prevention provided by external ankle supports. His service includes volunteering with Special Olympics where he was as a member of the management team for Special Olympics Pennsylvania/Allegheny County for 17 years. He also served as a member of the medical staff for Team USA at the Special Olympics World Summer Games in Athens, Greece in 2011 and as Medical Director for Team USA at the Special Olympics World Winter
Games in PyeongChang, Republic of Korea in 2013. Dr. Conley earned his PhD in Rehabilitation Science as well as his Master's degree in Sports Medicine at the University of Pittsburgh. He holds a Bachelor’s degree in Health Education from the State University of New York at Cortland.

Matthew Darnell, PhD, RD, CSSD, SCCC

Dr. Darnell is an Assistant Professor within the Department of Sports Medicine and Nutrition at the University of Pittsburgh. He is the Director of Graduate Studies in Wellness and Human and Performance. Matt has a Doctorate degree in Rehabilitation Science. He earned his bachelor's and master's degrees in Clinical Dietetics and Nutrition at the University of Pittsburgh, where he also competed on the wrestling team. Matt is a Registered Dietitian, Board Certified Specialist in Sports Dietetics, and Strength and Conditioning Coach Certified. His research interests include nutrition and exercise approaches for improved athletic performance, injury prevention, and rehabilitation.

Shawn Eagle, MAT, ATC, CSCS

Shawn is a doctoral student at the Neuromuscular Research Laboratory. Prior to returning to school, Shawn worked as a remote laboratory faculty member for the NMRL at the Naval Amphibious Base in Coronado, CA and Camp LeJeune-Stone Bay in Sneads Ferry, NC. He has previously earned a Masters of Athletic Training degree from Texas Tech University and a Bachelor of Arts in Athletic Training from Denison University. Shawn’s research interests include enhancing human performance and application of strength training and conditioning programs to prevent injuries to athletes and military personnel.

Anne Beethe, MA, ATC, CSCS

Prior to starting in the Neuromuscular Research lab, Anne worked as an athletic trainer at Belmont Abbey College. She worked with the school's Division II Men's Soccer, Women's Basketball, and Baseball team. She earned her undergraduate degree in Exercise Science at Creighton University. She then went to earn her Master's degree at the University of Nebraska Omaha in Athletic Training. Her research interests include upper extremities, specifically the glenohumeral joint in overhead athletes. Other interests include proprioception, injury prevention, the biomechanics of the lower extremities as they might effect the upper extremity through the kinetic chain, and weight programs to decrease the incidence of injury.