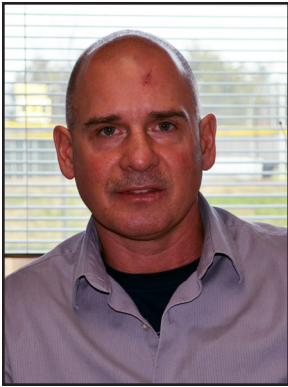


Injury Prevention



Gregory Blake Biren

Associate Professor
Health & Exercise Science

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Education:

BA (Psychology), Shippensburg University
MEd (Exercise Physiology), Temple University
PhD (Exercise Physiology), Temple University

Research Expertise:

Strength and Conditioning

My early research interests focused on exercise conditioning, nutrition, and fatigue. While these areas will remain a primary focus, I currently am directing my efforts to improving the knowledge and skills of K-12 students in the areas of Science, Technology, Engineering, Art, and Mathematics (STEAM) as it relates to Exercise Science. The goal is to improve youth's desire to learn, understand, and apply STEAM related topics by experiencing the science behind human movement.

Supported by a grant received in 2015, we are creating a program entitled Sport Science K-20. The purpose is to develop partnerships with K-12 school systems to expose students to the science behind human movement. Our vision is for all youth to be inspired to care for the body through understanding the science behind physical activity, nutrition, and health. It will include interactive workshops both in the K-12 setting along with those performed at Rowan University. In addition, a Sport Science K-20 website will provide video lessons on a variety of exercise science related topics that can be utilized to apply STEAM and health related concepts into the K-12 setting.

Member of:

National Strength and Conditioning Association
American College of Sports Medicine
New Jersey American Alliance for Health, Physical Education, Recreation, and Dance

Recent Publications:

Mastrangelo MA, Chaloupka EC (2013) Childhood obesity, an international problem with a local solution. *International Journal of Food, Nutrition and Public Health*. 6: 25-35.

Mastrangelo MA, Chaloupka EC (2011) Childhood obesity, an international problem with a local solution in *World Sustainable Development Outlook*. Ahmed A, Busler M, ed. pp. 389-400.

Scibilia GJ, Chaloupka EC, Mastrangelo MA (2011) A literature review of rehabilitation programs after total shoulder arthroplasty. *Hand Rehabilitation Journal*. American Physical Therapy Association. 28:3-8.



Edward C. Chaloupka

Professor
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Education:

BS (Health and Physical Education), Queens College, City University of New York

MS (Education), Queens College, City University of New York

Graduate Certificate of Proficiency (Physical Therapy),

Hahnemann Medical College and Hospital

PhD (Exercise Physiology/Human Gross Anatomy/Human Physiology),

The Ohio State University

Postdoctoral Fellowship, Naval Aerospace Medical Research Center-Pensacola FL

Research Expertise:

Exercise physiology | Physical rehabilitation | Sports medicine

My research interests are primarily metabolic, cardiovascular, and muscle responses to exercise.

The majority of my research has investigated the metabolic responses (primarily maximal oxygen uptake) during exercise bouts of different durations and intensities. This research has involved pediatric and adult populations of subjects including subjects considered to be either well or not well endurance trained. Other areas of focus have been muscular strength and power responses to exercise and nutritional supplementation and perceived exertion responses to long duration exercise.

My current research interest focuses on childhood obesity and the role of exercise in combating this international problem.

Member of:

American College of Sports Medicine—Elected Fellow (FACSM)

Recent Publications:

Mastrangelo MA, Chaloupka EC (2013) Childhood obesity, an international problem with a local solution. *International Journal of Food, Nutrition and Public Health*. 6: 25-35.

Mastrangelo MA, Chaloupka EC (2011) Childhood obesity, an international problem with a local solution in *World Sustainable Development Outlook*. Ahmed A, Busler M, ed. pp. 389-400.

Scibilia GJ, Chaloupka EC, Mastrangelo MA (2011) A literature review of rehabilitation programs after total shoulder arthroplasty. *Hand Rehabilitation Journal*. American Physical Therapy Association. 28:3-8.



Daniel Freidenreich

Assistant Professor
Health & Exercise Science

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Education:

BS (Exercise Science), Rutgers University
MA (Kinesiology), The University of Connecticut
PhD (Kinesiology), The University of Connecticut
Postdoctoral (Kinesiology), The Ohio State University

Research Interests:

Nutrition | Metabolism | Low Carbohydrate Diets | Athletic Performance | Metabolic Disease | Immune Function

I have two areas of research interest which include: 1) the study of low carbohydrate diets on athletic performance and metabolic disease such as overweight/obesity and metabolic syndrome 2) the effects of exercise on the innate immune system and how immune cells and the muscle communicate to coordinate recovery from exercise. There are several opportunities to merge my two fields of interest by studying how a low carbohydrate diet in either athletic, healthy or metabolically diseased populations alters immune cell function.

Member of:

International Society for Exercise and Immunology (ISEI) (<http://www.isei.dk/>)
National Strength and Conditioning Association (NSCA) (<https://www.nasca.com/>)
American College of Sports Medicine (ACSM) (<http://www.acsm.org/>)
International Society for Advancement of Cytometry (ISAC) (<http://isac-net.org/>)
International Clinical Cytometry Society (ICCS) (<http://www.cytometry.org/web/index.php>)

Recent Publications:

Volek JS, Freidenreich DJ, Saenz C, Kunces LJ, Creighton BC, Bartley JM, Davitt PM, Muno CX, Anderson JM, Maresh CM, Lee EC, Schuenke MD, Aerni G, Kraemer WJ, Phinney SD (2016) Metabolic characteristics of keto-adapted ultra-endurance runners. *Metabolism*. 65:100-10.

Volk BM, Kunces LJ, Freidenreich DJ, Kupchak BR, Saenz C, Aristizabal JC, Hernandez ML, Bruno RS, Maresh CM, Kraemer WJ, Phinney SD, Volek JS (2014) Effects of step-wise increases in dietary carbohydrate on circulating saturated Fatty acids and palmitoleic acid in adults with metabolic syndrome. *PLoS One*. 9:e0113605.

Aristizabal JC, Freidenreich DJ, Volk BM, Kupchak BR, Saenz C, Maresh CM, Kraemer WJ, Volek JS (2015) Effect of resistance training on resting metabolic rate and its estimation by a dual-energy X-ray absorptiometry metabolic map. *Eur J Clin Nutr*. 69:831-36.

Kunces LJ, Cusack LK, Kupchak BR, Volk BM, Freidenreich DJ, Aristizabal JC, Saenz C, Pei R, Guo Y, Fernandez ML, Bruno RS, Maresh CM, Kraemer WJ, Pronczuk A, Hayes KC, Volek JS (2013) Triglyceride recrystallized phytosterols in fat-free milk improve lipoprotein profiles more than unmodified free phytosterols in hypercholesterolemic men and women. *J Am Coll Nutr*. 32:234-42.

Volek JS, Volk BM, Gómez AL, Kunces LJ, Kupchak BR, Freidenreich DJ, Aristizabal JC, Saenz C, Dunn-Lewis C, Ballard KD, Quann EE, Kawiecki DL, Flanagan SD, Comstock BA, Fragala MS, Earp JE, Fernandez ML, Bruno RS, Ptolemy AS, Kellogg MD, Maresh CM, Kraemer WJ (2013) Whey protein supplementation during resistance training augments lean body mass. *J Am Coll Nutr*. 32:122-35.



Douglas Mann

Associate Professor
Health & Exercise Science

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Education:

BA (Psychology) University of Miami (Fla)
MS (Education, Athletic Training) Old Dominion University
DPE (Physical Education) Springfield College

Research Interests:

Athletic Injury Prevention

My area of interest is in athletic injury prevention, particularly flexibility programs and injury prevention, life stress and injury prevention, and cognitive reserve and neuroplasticity.

Honors and Awards:

2016 Rowan University Athletic Training Hall of Fame
2008 Joe Blankowitsch Eastern Athletic Trainers Association Presidential Award

Member of:

Eastern Athletic Trainers Association
Athletic Trainers Society of New Jersey
National Athletic Trainers Association
USA Swimming Coach

Recent Academic Projects:

Conference Presentation (2016) Cooper Healthcare Symposium. Neuroplasticity and Rehabilitation

Presentation (2015 and 2016) Philadelphia Marathon. Stress and Anxiety and Running

Presentation (2016) Broad Street Run. Stress and Anxiety and Running

Exhibitor and Organizer (2015 and 2016). Organized "Psyching Team" Philadelphia Marathon. Spoke with runners individually who were nervous about upcoming race.



Erin Pletcher

Assistant Professor
Health & Exercise Science

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Education:

BS (Rehabilitation Science), University of Pittsburgh
MS (Sport & Recreation Administration, James Madison University
PhD (Rehabilitation Science), University of Pittsburgh

Research Expertise:

Injury Prevention | Performance Optimization

Research interests include understanding the processes involved and formulating approaches for improved injury prevention, performance optimization and rehabilitation in an athletic and military population. Previous work has included assessment of modifiable musculoskeletal risk factors for injury in an athletic and military population and coordination patterns and variability in the softball windmill pitch.

Member of:

National Strength and Conditioning Association
National Athletic Trainers' Association

Recent Publications

Allison KF, Keenan KA, Wohleber MF, Perlsweig KA, Pletcher ER, Lovalekar M, Beals K, Coleman LC, Nindl BC (2017) Greater ankle strength, anaerobic and aerobic capacity, and agility predict Ground Combat Military Occupational School graduation in female Marines. *J Sci Med Sport*. 20 (Suppl 4):S85-S90.

Pletcher ER, Williams VJ, Abt JP, Morgan PM, Parr JJ, Wohleber MF, Lovalekar M, Sell TC (2017) Normative data for the NeuroCom Sensory Organization Test in the United States Military Special Operations Forces. *J Athl Train*. 52:129-136.



Robert Sterner

Associate Professor & Department Chair
Health & Exercise Sciences

sterner@rowan.edu

Education:

BS (Physical Education), East Stroudsburg University

MS (Health, Physical, and Recreational Education), University of Pittsburgh

PhD (Applied Biomechanics), The University of Toledo

Research Expertise:

Fatigue and Neuromuscular Control

My research interests are to assess how fatigue affects the neuromuscular system during physical activity.

Member of:

National Athletic Trainers' Association, Member

Eastern Athletic Trainers' Association, Member

Athletic Trainers' Society of New Jersey

Recent Publications:

Thompson C, Fanok S, Harrington D, Heller A, Hannah E, Grugan C, Sterner R. A Case of a Catastrophic Knee Injury in a Collegiate Football Player. *J Athl Train (Supplement)*. In press.

Seacrist T, Saffioti J, Balasubramanian S, Kadlowec J, Sterner R, García-España JF, Arbogast KB, Maltese MR (2011) Passive Cervical Spine Flexion: The Effect of Age and Gender. *Clin Biomech*. 27:326-333.



Mehmet Uygur

Assistant Professor
Health & Exercise Science

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<http://www.rowan.edu/colleges/sbshp/facultystaff/profiles/uygur.html>

Education:

BS (Physics), Middle East Technical University, Turkey
MS (Exercise Physiology), Middle East Technical University, Turkey
MS (Biomechanics), University of Delaware
PhD (Motor Control), University of Delaware
Postdoctoral (Neurophysiology), University of Delaware

Research Expertise:

Force coordination through object manipulation | Neuromuscular quickness | Effects of exercise on the cognitive and motor functions in clinical populations

My research interests include the assessment of hand function and neuromuscular quickness through object manipulation in healthy and neurological populations. I am developing a non-invasive measurement technique that quantifies both neuromuscular quickness and force coordination simultaneously. I also am interested in the effects of high speed, low resistance exercise on different aspects of cognitive and motor functions in neurological populations including people with schizophrenia and multiple sclerosis.

Honors and Awards:

Young investigator award, European College of Sports Science
Graduate fellow competitive award, University of Delaware

Member of:

Society for Neuroscience (<http://www.sfn.org>)
Gerontological Society of America (<https://www.geron.org>)
European College of Sports Science (<http://www.sport-science.org>)

Recent Publications:

Uygur M, Bellumori M, Knight CA (2017) Effects of a low-resistance, interval bicycling intervention in Parkinson's Disease. *Physiother Theory and Pract*. Epub ahead of print.

Haberland K, Uygur M (2017) Simultaneous assessment of hand function and neuromuscular quickness through a static object manipulation task in healthy adults. *Exp Brain Res*. 235:321-329.

Daniel F, Jelaska I, Uygur M, Jaric S. (2017) Effects of unilateral muscle fatigue on performance and force coordination in bimanual tasks. *Motor Control* 21:26-41.

Bellumori M, Uygur M, Knight CA (2017) High-speed cycling intervention improves rate-dependent mobility in older adults. *Med Sci Sports Exerc*. 49:106-114.

Uygur M, Bellumori M, LeNoir K, Poole K, Pretzer-Aboff I, Knight CA (2015) Immediate effects of high speed cycling intervals on bradykinesia in Parkinson's disease. *Physiother Theory and Pract* 31:77-82.

Emge N, Uygur M, Kaminski TW, Royer T, Jaric S (2014) Selective effects of arm proximal and distal arm muscles on force coordination in static manipulation tasks. *J Mot Behav* 46:259-265.