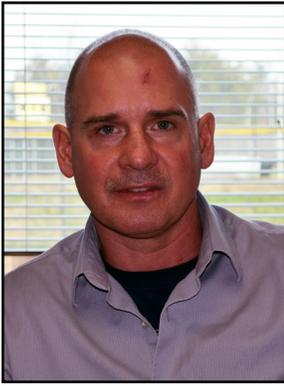


# Health & Exercise Science

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## **Gregory Blake Biren**

Associate Professor  
Health & Exercise Science

[biren@rowan.edu](mailto:biren@rowan.edu)

### **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  
Health & Exercise Science

[chaloupka@rowan.edu](mailto:chaloupka@rowan.edu)

### **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

[freidenreich@rowan.edu](mailto:freidenreich@rowan.edu)

### 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

[mannd@rowan.edu](mailto:mannd@rowan.edu)

### **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

[pletcher@rowan.edu](mailto:pletcher@rowan.edu)

### **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.



## Peter Rattigan

Associate Dean, College of Science & Mathematics  
Professor, Health & Exercise Science

[rattigan@rowan.edu](mailto:rattigan@rowan.edu)  
<http://users.rowan.edu/~rattigan/new>

### Education:

BEd (Physical Education), Avery Hill College, London, UK  
MA (Physical Education), University of Minnesota, Minneapolis  
PhD (Kinesiology), University of Minnesota, Minneapolis

### Research Expertise:

Cooperative Learning/Goal Structure | Skill and Fitness Development | Teen Driver Safety | Video Modeling

My research interests all involve pedagogical best practices, primarily in Physical Education.

I have studied goal structures (cooperative, competitive and individual learning) with David and Roger Johnson at the University of Minnesota. They are internationally renowned experts in the area. My focus has been improving learning in physical education through effective use of goal structures. I am also interested in skill, knowledge and fitness development in Physical Education, including using exercise physiology and kinesiology as a STEM area in K-12 schools. I work with two colleagues on presenting teen driver safety programs in NJ schools, and study the data from pre- and post surveys to gauge its effectiveness.

I have recently begun to look into the effectiveness of video modeling as a teaching and learning tool for diverse learners, both for K-12 students (to improve physical skills) and for teacher candidates (to improve pedagogical skills).

### Honors and Awards:

New Jersey Association for Health, Physical Education, Recreation & Dance (NJAPERD) Outstanding Teacher of Higher Education, 2010

### Member of:

Society of Health & Physical Educators (SHAPE) ([www.shapeamerica.org](http://www.shapeamerica.org))  
New Jersey Association For Health, Physical Education, Recreation & Dance ([www.njahperd.org](http://www.njahperd.org))

### Recent Academic Projects:

Development of [www.sportscienceK20](http://www.sportscienceK20) with Greg Biren and Jim McCall. This website will provide resources including unit and lesson plans, study guides, quizzes, videos and links that help teachers incorporate STEM/STEAM in Health and Physical Education classes, and help college students in understanding exercise science & kinesiology concepts.

### Recent Publications:

Obrusnikova I, Rattigan P (2016) Using Video-Based Modeling to Promote Acquisition of Fundamental Motor Skills in Diverse Learners. *Journal of Health, Physical Education, Recreation & Dance*. In press.

Willis S, Rattigan P, Gooding J, Syed R, Barbadero J (2013) Activities That Engage Students in Driver Education Distracted Driving Lessons. *The Chronicle for Driver Education Professionals*. American Driver and Traffic Safety Education Association (ADTSEA).



## Leslie Spencer

Professor  
Health & Exercise Science

[spencer@rowan.edu](mailto:spencer@rowan.edu)

### Education:

BBA (Computer Information Systems), James Madison University  
MS (Health Promotion and Wellness Management), Springfield College  
PhD (Health Education), Temple University

### Research Expertise:

Wellness Coaching and Behavior Change | Intellectual and Developmental Disabilities

My research interests are in two major areas: 1) wellness coaching/motivational interviewing and 2) designing fitness and nutrition programs for people with intellectual and developmental disabilities.

I began my behavior change research with an extensive review of the Transtheoretical Model (TTM), which culminated in a series of published systematic literature reviews, in which I evaluated the TTM as applied to the following areas: tobacco use, cancer screening behavior, dietary behavior and exercise behavior. More recently, I and my colleagues developed a program for medical residents in which they were trained to use Motivational Interviewing strategies with patients. My next goal is to develop and study a wellness coaching intervention using Motivational Interviewing strategies with special populations.

My research in the area of creating fitness and nutrition programs for people with intellectual and developmental disabilities (IDD) is ongoing and is unique in that it also involves the caregiver as a recipient of the programs. My colleagues and I have created a model for both fitness programming that is appropriate for people with IDD and a model for family-based nutrition counseling which uses a Motivational Interviewing strategy.

### Honors and Awards:

Distinguished Undergraduate Program Award, National Wellness Institute

### Member of:

National Wellness Institute ([nationalwellness.org](http://nationalwellness.org))

### Recent Academic Projects:

Creation of a Master of Arts in Wellness and Lifestyle Management

### Recent Publications:

DiRosa L, Gupta AK, DeBonis S, Spencer L (2017) Effectiveness of a Clinically Oriented Motivational Interviewing Training Program in Increasing Skills & Changing Perceptions. *Osteopathic Family Physician* 9:0-17.

DiRosa L, Pote T, Wilhite B, Spencer L. (2013) Get FIT (Fitness Integration Training): A Program to Reduce Obesity and Metabolic Syndrome in People with Intellectual and Developmental Disabilities and their Caregivers. *J Health Care Poor Underserved*, Fall Issue.



## **Robert Sterner**

Associate Professor & Department Chair  
Health & Exercise Sciences

[sterner@rowan.edu](mailto: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

[uygurm@rowan.edu](mailto:uygurm@rowan.edu)

<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-Abhoff 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.



## Nicole A. Vaughn

Assistant Professor  
Health & Exercise Science

[vaughnn@rowan.edu](mailto:vaughnn@rowan.edu)

### Education:

BS (Psychology), Morgan State University  
MS (Medical Psychology), Uniformed Services University of the Health Sciences  
PhD (Medical Psychology), Uniformed Services University of the Health Sciences  
Post-doctoral (Cardiovascular Behavioral Medicine & Health Disparities),  
Uniformed Services University of the Health Sciences

### Research Expertise:

Chronic Disease Prevention | Community-based Participatory Research | Health Disparities | Trauma-Informed Programs

My research interests include using community based participatory research methods to address chronic disease prevention (diabetes, overweight, obesity) as well as trauma informed programs that enhance resilience in underserved and urban settings with ethnic minority adults and youth (i.e., African American). Additionally, I am focused on identifying evidence-based and evidence-informed practices to disseminate and implement in these settings.

My research includes working with community partners to implement evidence-based and evidence informed strategies in their local settings (i.e., churches, after school settings, community centers) to promote healthy lifestyles. Additionally, I have training in health behavior strategies and trauma-informed practices for youth and families. My dissemination and implementation research projects are at the intersection of public health, health promotion, health education and community/industry partnerships.

### Honors and Awards:

2016-2018 Fellow for National Cancer Institute's Mentored Training for Dissemination and Implementation Research in Cancer (MT-DIRC)

### Member of:

Society of Behavioral Medicine (<http://www.sbm.org/>)  
American Public Health Association (<http://www.apha.org/>)

### Recent Academic Projects:

Getting People In Sync: Working with Communities to Implement an Evidence-Based Prediabetes Prevention Program

Understanding the Health Profile of First Generation College Students

### Recent Publications

Noland C, Vaughn NA, Sun S, Schlecht H (2015) Understanding patients' perspectives on opt-out, incentivized, and mandatory HIV testing health communication, *Int J Health Sci (Qassim)*. 9:294-303.

Vaughn NA, Jacoby S, Williams T, Guerra T, Thomas N, Richmond T (2012) Digital animation as a method to disseminate research findings to the community using a community-based participatory approach. *Am J Community Psychol*. 51:30-42.

McDonald CC, Richmond TS, Guerra T, Thomas NA, Walker A, Branas CC, TenHave TR, Vaughn NA, Leff SS, Hausman AJ (2012) Methods for linking community views to measureable outcomes in a youth violence prevention program. *Prog Community Health Partnersh*. 6:499-506.



## Robert R. Weaver

Professor  
Health & Exercise Science

[weaverr@rowan.edu](mailto:weaverr@rowan.edu)

### Education:

BA (Sociology), SUNY Cortland  
MA (Sociology), University of Connecticut  
PhD (Sociology), University of Connecticut

### Research Expertise:

Sociology of Health & Illness | Social determinants of health | Qualitative methods

My research examines various social conditions shape our health and healthcare. This includes characterizing how economic, social, cultural, and technological resources influence health, wellness, and the management of health conditions for various populations (most recently, for students). I also examine how myriad the uses of information tools to inform people about their health, while shaping how health and clinical decisions are made.

### Member of:

American Sociological Association ([www.asanet.org](http://www.asanet.org))

### Recent Academic Projects:

Currently, I am a PI on four projects related to health and health practices of university students: (1) student hunger on campus, (2) health and acculturation of first-generation university students, (3) nutrition information and dietary choices, and (4) disordered eating behaviors among students. I also am co-Investigator on a study that examines the prevalence and correlates of anxiety, stress, and depressive symptomatology among university students (in Ontario, Canada).

### Recent Publications:

Mustafa N, Zaidi AU, Weaver RR (2017) Conspiracy of silence: Cultural conflict as a risk factor for the development of eating disorders among second generation Canadian South Asian women. South Asian Diaspora. Epub ahead of print.

Weaver RR (2015) Reconciling evidence-based medicine and patient-centered care: Defining evidence-based inputs to patient-centred decisions. J Eval Clin Pract. 21:1076-80.

Weaver RR (2015) Seeking high reliability in primary care: Leadership, tools, and organization. Health Care Manage Rev. 40:183-192.

Weaver RR, Lemonde M, Payman N, Goodman WM (2014) Health capabilities and diabetes self-management: The impact of economic, social, and cultural resources. Soc Sci Med. 102:58-68.



## **Shari Willis**

Associate Professor  
Health & Exercise Science

[williss@rowan.edu](mailto:williss@rowan.edu)

### **Education:**

BS (Exercise Science), Northeast Missouri State  
MS (School and College Health & Safety Education), Indiana University  
PhD (Health Promotion and Education), University of Utah

### **Research Expertise:**

Driver Education

My recent research has been in Driver Education. Along with other faculty members we are considering the parental influence on driving. We have brought parents and teens together to discuss the Graduated Drivers License and benefits of working with their teen during the driving process. The project is currently funded by State Farm Insurance.

Currently, I am working as the technical advisor with a team of other driving professionals on standards for driver education that should be implemented within the next two years in the State of New Jersey. The document is titled New Jersey Driver Education Curriculum Guide.

This past year I taught a research methodology course to undergraduates. The students and I completed a class research project on food insecurity and college students as did another professor and his class. We were very interested in the results from our classes that a study on a larger scale was initiated. Along with other Rowan University faculty and personnel the research at the college level has been approved and will begin this school year. College students across the country are being impacted by the food they choose and the food they can afford. The research investigates the choices students make and possible solutions.

### **Member of:**

American Driver Training Safety Education Association