

Heath M. Burton, Ph.D.

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EDUCATION

The University of Texas at Austin, Austin, TX 2019
Doctor of Philosophy in Kinesiology
Mentor: Dr. Edward F. Coyle

Dissertation: "Effects of Inactivity on Cardio-Metabolic Responses to Exercise"
(Finding published in both *Medicine & Science in Sport & Exercise* and *Exercise and Sport Science Reviews*)

The University of Texas at Austin, Austin, TX 2016
Master of Science in Kinesiology
Concentration in Exercise Physiology

Furman University, Greenville, SC 2014
Bachelor of Science in Health Sciences

EXPERIENCE

Furman University, Greenville, SC 2024-Present
Associate Professor of Health Sciences
Courses:
- HSC 101: Wellness Concepts
- HSC 210: Anatomy and Physiology I
- HSC 211 Anatomy and Physiology II

Anderson University, Anderson, SC 2019 – 2024
Assistant Professor of Kinesiology
Director- Human Performance Laboratory
Courses:
- KIN 138: Personal Fitness and Wellness
- KIN 289: Measurement and Evaluation in Kinesiology
- KIN 301: Exercise Physiology
- KIN 302: Exercise Physiology Laboratory

- KIN 389: Research Methods in Kinesiology
- KIN 399: Analysis of Human Performance
- KIN 401: Applied Exercise Physiology
- KIN 402: Applied Exercise Physiology Laboratory
- KIN 240: Professionalism in Kinesiology
- AU 101: Transitions and Expectations

The University of Texas at Austin, Austin, TX 2016 –2019

Guest Lecturer in Biology Department & Kinesiology

Lectures:

- Cardiovascular Physiology: Structure and Function
- Cardiovascular Physiology: Blood Pressure Regulation
- Factors Limiting Maximal Oxygen Consumption

The University of Texas at Austin, Austin, TX 2014 –2019

Teaching Assistant (TA) in Kinesiology and Biology Departments

Courses:

- BIO 365: Human Systems Physiology
- KIN 325: Exercise Physiology
- KIN 310: Physiological Basis of Conditioning
- KIN 322: Diagnosis and Evaluation of Fitness

Furman University, Greenville, SC 2013 –2014

Undergraduate Teaching Assistant (UGTA) In Health Sciences Department Courses:

- HSC 230: Analysis of Human Performance
- HSC 311: Exercise Physiology

Furman University, Greenville, SC 2012 –2014

Laboratory Assistant in The Molnar Human Performance Laboratory

PUBLICATIONS

Selected Manuscripts

Leary B.K., **Burton H.M.**, Akins J.D., Chou T.H., and Coyle E.F. Short-term inertial load cycling training and lactate threshold in non-cyclists. *(In Review)*.

Stanforth, D., **Burton H.M.** (2023) Celebrate Success! Veteran Care that Works: THRIVE. *ACSM's Health & Fitness Journal*

Coyle, E. F., **Burton, H.M.**, & Satiroglu, R. (2022). Metabolic Resistance With Inactivity Relates to Low Exercise Energy Expenditure Response. *EXERCISE AND SPORT SCIENCES REVIEWS*, 50(4), 231-231.

Coyle, E. F., **Burton, H.M.**, & Satiroglu, R. (2022). Inactivity Causes Resistance to Improvements in Metabolism After Exercise (vol 50, pg 81, 2022). *EXERCISE AND SPORT SCIENCES REVIEWS*, 50(3), 172-172.

Leary, B. K., **Burton, H.M.**, Vardarli, E., Wolfe, A. S., Crawford, C. K., Akins, J. D., & Coyle, E. F. (2021). Differences in joint power distribution in high and low lactate threshold cyclists. *European Journal of Applied Physiology*, 121(1), 231-238.

Burton, H.M., Wolfe, A. S., Vardarli, E., Satiroglu, R., & Coyle, E. F. (2021). Background Inactivity Blunts Metabolic Adaptations to Intense Short-Term Training. *Medicine & Science in Sports & Exercise*, 53(9), 1937-1944.

Vardarli, E., Satiroglu, R., Allen, J. R., Bjellquist-Ledger, R., **Burton, H.M.**, & Coyle, E. F. (2021). Physiological responses to maximal 4 s sprint interval cycling using inertial loading: the influence of inter-sprint recovery duration. *European Journal of Applied Physiology*, 1-10.

Burton, H.M., & Coyle, E. F. (2021). Daily Step Count and Postprandial Fat Metabolism. *Medicine & Science in Sports & Exercise*, 53(2), 333-340.

Wolfe, A. S., **Burton, H.M.**, Vardarli, E., & Coyle, E. F. (2020). Hourly 4-s sprints prevent impairment of postprandial fat metabolism from inactivity. *Medicine & Science in Sports & Exercise*, 52(10), 2262-2269.

Akins, J. D., Crawford, C. K., **Burton, H.M.**, Wolfe, A. S., Vardarli, E., & Coyle, E. F. (2019). Inactivity induces resistance to the metabolic benefits following acute exercise. *Journal of Applied Physiology*, 126(4), 1088-1094.

Selected Abstracts

Yoder, M., Williams, M., Young, H., (Student Co-Authors) & **Burton, H.M.** (2023). EFFECTS OF MENSTRUAL CYCLE ON MAXIMAL POWER OUTPUT IN BASKETBALL. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 16, No. 2, p. 115).

Tamez, N; Boggs, K; Lake, A; Phillips, J; (Student Co-Authors) , **Burton, H.M.** (2023) Effects Of Plyometric Training With The Tsunami Bar On Running Economy In Recreational Runners.: 163. *Medicine & Science in Sports & Exercise* 55(9S):p 42-43.

Leary, B. K. **Burton, H.M.**, Vardarli, E., Wolfe, A. S., Crawford, C. K., Akins, J. D., & Coyle, E. F. (2019). Lower Extremity Joint Power and Muscle Activation in High and Low Lactate Threshold Cyclists. *Medicine & Science in Sports & Exercise*, 51(6S), 40. (Abstract)

CONFERENCE/POSTER PRESENTATIONS

Burton, H.M., Boyd J., Rettinger V., Wetzel J.B., Lauver. J., Crandall J.
BINGOCIZE: Enhancing Experiential Learning Through Service Learning. 2024 SEACSM Annual Meeting

Wetzel J.B., Boyd J., Keath A., Rettinger V., **Burton, H.M.**, Wetzel J.B., Lauver. J., Crandall J.
Undergraduate Students' Perceptions Of The Older Population After Participating In The Bingocize® Program 2024 SEACSM Annual Meeting

Wetzel J.B., Boyd J., Keath A., Rettinger V., **Burton, H.M.**, Wetzel J.B., Lauver. J., Crandall J.
Using Service Learning to Facilitate Student Growth and Professionalism. 2023 South Carolina Alliance for Health, Physical Education, Recreation and Dance Annual Meeting

Tamez, N. and **Burton H.M.** Effects Of Plyometric Training With The Tsunami Bar On Running Economy. 2023 ACSM Annual Meeting and World Congresses. Denver, CO

Yoder, M. and **Burton, H.M.** Effects of Menstrual Cycle On Power in Division II Women's Basketball Athletes. 2023 SEACSM Annual Meeting. Greenville, SC

Burton, H.M. 2021 *Medicine & Science in Sport & Exercise* Paper of The Year Presentations, 2022 ACSM Annual Meeting and World Congresses. San Deigo, CA

Burton, H.M. Interaction of competing stimuli: Exercise in sedentary populations. *AnMed Sports Medicine Fellowship Lectures 2021*. Anderson, SC

Burton H.M. and K. Schoen. Estimation of Running Velocity Based on Treadmill Speed and Elevation. *FURMAN ENGAGED! 2014*. Greenville, SC

Burton H,M. Comparative analysis of the Cosmed K4b², AEI technologies MOXUS Metabolic System, and Douglas bag gas analysis systems during submaximal exercise. *FURMAN ENGAGED! 2014*. Greenville, SC

Kuhar M., Tant L., and **Burton H.M.** Evaluating the Metabolic Demands and Effect of Cycling Intensity on Subsequent Running Performance. *FURMAN ENGAGED! 2013*. Greenville, SC

Burton H.M. Determination of body composition using Bod Pod and Dual Energy X-ray Absorptiometry. *FURMAN ENGAGED! 2012*. Greenville, SC

RESEARCH INTERESTS

- Metabolic and cardiovascular factors that limit exercise performance.
- Cardiometabolic effects of prolonged inactivity and exercise dose necessary to counteract the consequences of sedentary behavior and aging.
- The efficacy of power training and testing to reduce and diagnose overtraining and injury risk.
- Biomechanics of running and cycling as they relate to performance

MEMBERSHIPS AND CERTIFICATIONS

American College of Sports Medicine (ACSM)
Southeastern Chapter ACSM
National Strength and Conditioning Association (NSCA)
American Physiological Society (APS)
American Red Cross *First Aid CPR and AED Certified*

PUBLIC AND PROFESSIONAL SERVICE

Professional Organizations/Journals

Associate Editor- ACSM's Health & Fitness Journal
ACSM Strength and Conditioning Interest Group Chair
Reviewer- *Medicine & Science in Sports & Exercise*
Reviewer- Journal of Applied Physiology
Reviewer - *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology*
Reviewer- *International Journal of Exercise Science*
ACSM Student Bowl Sponsor

University Service

Anderson University Diversity and Inclusion I AM Mentoring
Athletics Oversight Committee
Athletics Compliance Committee
Faculty Athletics Representative
AU Professionalism Initiative Academic Liaison
Faculty Concerns Committee
Faculty Development Committee
Kinesiology Club Advisor

Scholarship Interviewer
Kinesiology Search Committee Chair
Counseling Director Search Committee

Community Service

Metabolic and Biomechanical Testing

- Furman Institute of Running and Scientific Training Learning Retreats ('13,'14,'16,'17)
- Steadman Hawkins Wounded Warrior Project, Greenville, SC (2013)

Power/Performance Testing

- University of Texas Women's Basketball Team (2014-2017)

Mauldin Miracle League Mentor (2012-2014)

FELLOWSHIPS, SCHOLARSHIPS, AND AWARDS

Micheal Boyle Excellence in Teaching Award Runner-Up	2023
Student Government Association's Second Mile Award Finalist	2023
Medicine & Science in Sports & Exercise® Paper of The Year	2022
The College of Education Spring Dissertation Writing Fellowship	2019
Biology Department's Outstanding TA Award <i>Finalist</i>	2018
Mary Buice Alderson Scholarship for Teaching Excellence	2017 & 2018

FUNDING

Source: SC Centers for Medicare & Medicaid Services

Title: BingoCize

Role: Co-Principal Investigator

Period: 2022-2025

Amount: \$1,302,340, *funded*

Source: Anderson University Faculty Development Committee

Title: Inertial Load Cycling and Instantaneous Power

Role: Primary Investigator

Period: 2020

Amount: \$2,000, *funded*

Source: POM Wonderful, LLC

Title: Utility of Pomegranate Juice to Combat the Deleterious Effects of Prolonged Sitting

Role: Co-Investigator

Period: 2015-2017

Amount: \$60,000 not funded

Source: University of Texas at Austin Internal Grant

Title: Effects of Prolonged Sitting and Exercise on Lipid Metabolism Role:

Co-Investigator

Period: 2016-2017

Amount: \$6,000, funded

Funding Sought \$1,368,540

Funding Received \$1,308,540