

STEPHEN JORDAN CARTER, Ph.D., ACSM-CPT

Postdoctoral Fellow
Department of Nutrition Sciences
Cancer Prevention and Control Training Program
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[Link to PubMed Articles](#)

EDUCATION

Doctor of Philosophy, Human Performance, The University of Alabama, May 2014

Concentration: Exercise Physiology

Dissertation: Oral Ingestion of Acetylsalicylic Acid on Skin Blood Flow and Local Sweat Rate during Heat Stress

Chair: Phillip A. Bishop, EdD

Master of Science, Exercise Science, Central Washington University, June 2010

Concentration: Exercise Physiology

Advisor: Vincent M. Nethery, PhD

Bachelor of Arts, Exercise Science, Willamette University, May 2006

Senior Thesis: Incidence of Hamstring Strain and the Role of Postural Deviations

Advisor: Peter A. Harmer, PhD

RESEARCH INTERESTS

- Vascular health and autonomic function across the spectrum of breast cancer diagnosis and survivorship
- Therapeutic potential of hypoxia and/or heat as an adjunct to optimize exercise in clinical populations
- Health disparities among African American and European American women

PROFESSIONAL EXPERIENCE

2015 – present: Postdoctoral Fellow, Department of Nutrition Sciences
Cancer Prevention and Control Training Program, University of Alabama at Birmingham (UAB), Mentor(s): Laura Q. Rogers, MD, MPH and Lyse A. Norian, PhD

2014 – 2015: Postdoctoral Fellow, Department of Human Studies
Nutrition Obesity Research Center, University of Alabama at Birmingham (UAB),
Mentor(s): Gary R. Hunter, PhD and Laura Q. Rogers, MD, MPH

2011 – 2014: Graduate Teaching Assistant, Department of Kinesiology, College of Education, The University of Alabama

2010 – 2011: ACSM Certified Personal Trainer, University Recreation Center, The University of Alabama

2007 – 2009: Graduate Teaching Assistant, Department of Nutrition, Exercise and Health Sciences, College of Education and Professional Studies, Central Washington University

TEACHING EXPERIENCE

University of Alabama at Birmingham, College of Education, Department of Human Studies

- KIN 638: Physiology of Exercise II (team taught)
- KIN 637: Physiology of Exercise I (team taught)

The University of Alabama, College of Education, Department of Kinesiology

- KIN 492: Physiology of Exercise Laboratory Component
- KIN 352: Psychology of Coaching
- KIN 199: Ecological Approach to Health and Wellness
- KIN 167: Running
- KIN 157: Beginning Weight Training
- KIN 120: Aerobics
- KIN 108: Tennis
- KIN 103: Soccer
- KIN 101: Physical Conditioning

Central Washington University, College of Education and Professional Studies, Department of Nutrition, Exercise and Health Studies

- EXSC 351L: Human Physiology Laboratory Component (team taught)
- EXSC 350L: Gross Anatomy Laboratory Component (team taught)
- PEF 128: Gluteal and Abdominal Training
- PEF 115: Jogging
- PEF 112: Ski Conditioning
- PEAQ 114: Swim Conditioning
- PEAQ 113: Advanced Swimming
- PEAQ 112: Intermediate Swimming

STUDENT COLLABORATIONS

1. **Carter, S. J.**, Goldsby, T. U., Fisher, G., Plaisance, E. P., Gower, B. A., Glasser, S. P., and Hunter, G. R. Exaggerated systolic blood pressure response after high-interval exercise is related to decreased small arterial elasticity in normotensive African American women. UAB Center for Exercise Medicine 3rd Annual Symposium, Birmingham, AL. September 2015.
2. **Carter, S. J.**, Plaisance, E. P., Goss, A. M., Fisher, G., Fernandez, J. R., Gower, B. A., and Hunter, G. R. Racial differences in erythropoietin and hemoglobin before and after weight loss in premenopausal women. UAB Center for Exercise Medicine 2nd Annual Symposium, Birmingham, AL. October 2014.
3. Robinson, A., Heldman, A., Casey, J. C., Ng, J., Herron, R. L., **Carter, S. J.**, Katica, C. P., and Wingo, J. E. Effect of acute fan cooling on maximal oxygen uptake during heat stress. Undergraduate Research and Creative Activity Annual Conference. The University of Alabama, Tuscaloosa, AL. 2014.
4. **Carter, S. J.**, Herron, R. L., Akers, S. Z., and Wingo, J. E. Acute aspirin ingestion does not alter the onset or slope of local sweat rate during passive heat stress. UAB Center for Exercise Medicine 1st Annual Symposium, Birmingham, AL. October 2013.
5. Herron, R. L., **Carter, S. J.**, Akers, S. Z., Flatt, A. A., Williford, H. N., and Esco, M. R. Association of body composition and aerobic fitness on heart rate variability and recovery in Black men. UAB Center for Exercise Medicine 1st Annual Symposium, Birmingham, AL. October 2013.

6. Jones, T. M. V., **Carter, S. J.**, Herron, R. L., and Wingo, J. E. Effect of acute fan cooling on maximal oxygen uptake during heat stress. Undergraduate Research and Creative Activity Annual Conference. The University of Alabama, Tuscaloosa, AL. 2013.

PROFESSIONAL MEMBERSHIPS

2012 – present	Southeast Chapter of the American College of Sports Medicine
2011 – present	American Physiological Society
2010 – present	American College of Sports Medicine

CERTIFICATIONS

2010 – present	American College of Sports Medicine Certified Personal Trainer
2007 – present	American Heart Association CPR/AED

HONORS AND AWARDS

2015	Partnership for Clean Competition New Investigator Award, Environmental and Exercise Physiology Section, American Physiological Society (\$1,325)
2014	Research Poster Award, Center for Exercise Medicine Second Annual Symposium, University of Alabama at Birmingham, Racial Differences in Erythropoietin and Hemoglobin Before and After Weight Loss in Women (\$500)
2014	Creativity is a Decision Award, Nutrition Obesity Research Center, University of Alabama at Birmingham, Out of Thin Air: An Obesity Intervention through Hypoxic Inducible Factor Activation (\$2,500)
2014	Outstanding Doctoral Research Award, College of Education, The University of Alabama
2014	Travel Award, the Graduate School and Department of Kinesiology, The University of Alabama (\$1,100)
2013	Finalist (top 15) Inaugural 3MT Competition, The University of Alabama, Influence of Aspirin on Temperature Regulation in Humans
2013	Research Supplement, The Graduate School, The University of Alabama (\$400)
2013	Travel Award, The Graduate School and Department of Kinesiology, The University of Alabama (\$400)
2012	Research Supplement, The Graduate School, The University of Alabama (\$340)
2012	Travel Award, The Graduate School and Department of Kinesiology, The University of Alabama (\$500)
2011	Travel Award, The Graduate School and Department of Kinesiology, The University of Alabama (\$200)

- 2005 – 2006 Whipple Family Scholarship, College of Liberal Arts, Department of Exercise Science, Willamette University
- 2005 – 2006 George H. Grabenhorst Scholarship, College of Liberal Arts, Department of Exercise Science, Willamette University
- 2003 – 2005 Marguerite Lawson Scholarship, College of Liberal Arts, Department of Exercise Science, Willamette University

PROFESSIONAL SERVICE

Editorial Board:

- 2015 – Journal of Obesity and Weight Loss Therapy

Journal Review (ad hoc):

- 2016 – PLoS One
 2016 – Clinical and Experimental Pharmacology and Physiology
 2014 – Obesity
 2014 – Journal of Strength and Conditioning Research
 2013 – Journal of Medicine and Science in Sport

Obesity and Energetics Offerings (weekly contributor):

- 2014 – University of Alabama at Birmingham; Nutrition Obesity Research Center

F1000 Recommendation

Allison, D. B. and **Carter, S. J.** F1000Prime Recommendation of [Gatterer H et al., Normobaric intermittent hypoxia over 8 months does not reduce body weight and metabolic factors – a randomized, single blind, placebo-controlled study in normobaric hypoxia and normobaric sham hypoxia. *Obesity Facts*. 2015. 8(3): 200-209.] In F1000Prime, 25 October 2015; DOI: 10.3410/f.725782868.793509630.

INVITED/PROFESSIONAL PRESENTATIONS

- Spring 2016 **Carter S. J.** Simulated-Altitude as an Adjunct to Optimize Aerobic Exercise in Obese Breast Cancer Survivors with Limited Ambulatory Function: Pilot Randomized Trial. Presented at University of Alabama at Birmingham Center for Palliative and Supportive Care Center Scholars Meetings, Birmingham, AL.
- Spring 2016 **Carter S. J.** Systolic Blood Pressure Response after High-Intensity Interval Exercise is Independently Related to Decreased Small Arterial Elasticity in Normotensive African American women. Presented at the Experimental Biology Annual Conference, San Diego, CA.
- Summer 2015 **Carter S. J.** and Rogers L. Q. Exercise after Breast Cancer Diagnosis: A Translational Perspective. Presented at the 2nd Monday's Research Meeting for the Department of Nutrition Sciences at the University of Alabama at Birmingham. Birmingham, AL.

- Spring 2015 **Carter S. J.** Improved Insulin Sensitivity following an Acute Bout of High-Intensity Interval Exercise is Race Specific. Presented at the American College of Sports Medicine Annual Conference, San Diego, CA.
- Spring 2014 Collins A. B. and **Carter S. J.** Exercise in the Heat: A Female Perspective. Presented at the Alabama State Alliance of Health Physical Education Recreation and Dance (ASAHPERD) Meeting, Gulf Shores, AL.
- Spring 2014 Mitchell J. B. and **Carter S. J.** The Winding Road to Recovery: Current Knowledge of Adolescent Recovery from Exercise. Presented at the Alabama State Alliance of Health Physical Education Recreation and Dance (ASAHPERD) Meeting, Gulf Shores, AL.
- Winter 2014 **Carter S. J.** Effects of Aspirin on Temperature Regulation during Passive Whole-body Heat Stress in Humans. Presented at the Georgia Prevention Center, Augusta University, Augusta, GA.
- Fall 2013 **Carter S. J.** Influence of Acetylsalicylic Acid on Skin Blood Flow and Local Sweat Rate during Heat Stress. Presented at the University of Alabama at Birmingham Larry Mayes Research Society Meeting, Tuscaloosa, AL.
- Fall 2013 Herron R. L. and **Carter S. J.** Youth Resistance Training: Current Issues and Recommendations. Presented at the Alabama State Alliance of Health Physical Education Recreation and Dance (ASAHPERD) Meeting, Birmingham, AL.
- Spring 2013 Herron R. L. and **Carter S. J.** The Heat is On: Improving Safety and Performance in Alabama Heat. Presented at the Alabama State Alliance of Health Physical Education Recreation and Dance (ASAHPERD) Meeting, Gulf Shores, AL.

GRANT PROPOSAL / FELLOWSHIP FUNDING

- 2015 – National Cancer Institute, Postdoctoral Fellowship, Cancer Prevention and Control Training Program (R25CA47888; PI's: Wendy Demark-Wahnefried & Karen M. Menses), Role: Trainee.
- 2015 – Center for Palliative Research and Supportive Care, Palliative Research Enhancement Project (PREP), University of Alabama at Birmingham, Titled: Optimizing Aerobic Exercise with Simulate-Altitude in Obese Breast Cancer Survivors with Limited Ambulatory Function, Role PI, \$25,000, STATUS: Funded.
- 2014 – 2015 National Institute of Diabetes and Digestive and Kidney Disease, Postdoctoral Fellowship, Obesity Training Program (T32DK062710; PI: David B. Allison), Role: Trainee.
- 2013 American College of Sports Medicine, Predoctoral Student Research Grant, Titled: Altered Skin Blood Flow and Heat Tolerance in Type 2 Diabetics, Role PI, \$5000, STATUS: Not Funded.

MANUSCRIPTS IN PREPARATION

1. Paulsen, J. A., Ptacek, T., **Carter, S. J.**, Morrow, C., Liu, N., Kumar, R., Hyndman, L., Lefkowitz, E. J., and Rogers, L. Q. Changes in gut microbiota composition and psychosocial outcomes among breast cancer survivors participating in a randomized controlled physical activity trial. In Preparation.
2. **Carter, S. J.**, Hunter, G. R., McAuley, E., Courneya, K. S., Anton, P. M., and Rogers, L. Q. Decreased fatigue interference linked to changes in large artery compliance and heart rate recovery among breast cancer survivors. In Preparation.

PEER-REVIEWED PUBLICATIONS

1. Rogers, L. Q., Courneya, K. S., **Carter, S. J.**, Anton, P. M., Verhulst, S., Vicari, S. K., Robbs, R. S., and McAuley, E. Effects of BEAT Cancer on the health status of breast cancer survivors: Secondary outcomes from a randomized controlled trial. *Journal of Clinical Oncology*. In Submission.
2. Hunter, G. R., Plaisance, E. P. **Carter, S. J.**, and Fisher, G. Why Intensity is not a Bad Word: Optimizing Health Status at any Age. *Clinical Nutrition*. In Submission.
3. **Carter, S. J.**, Plaisance, E. P., Fisher, G., Fernandez, J. R., Gower, B. A., and Hunter, G. R. Alterations in hemoglobin and serum 25-hydroxyvitamin D are related before and after weight loss independent of African admixture. *International Journal of Sport Nutrition and Exercise Metabolism*. 2016. (Accepted)
4. **Carter, S. J.**, Hunter, G. R., McAuley, E., Courneya, K. S., Anton, P. M., and Rogers, L. Q. Lower rate-pressure product during submaximal walking: a link to fatigue improvement following a physical activity intervention among breast cancer survivors. *Journal of Cancer Survivorship*. 2016. 1-8.
5. **Carter, S. J.**, Goldsby, T. U., Fisher, G., Plaisance, E. P., Gower, B. A., Glasser, S. P., and Hunter, G. R. Systolic blood pressure response after high-intensity interval exercise is independently related to decreased small arterial elasticity in normotensive African American women. *Applied Physiology, Nutrition, and Metabolism*. 2016. 1-7.
6. Hunter, G. R., Fisher, G., Neumeier, W. H., **Carter, S. J.**, and Plaisance, E. P. Exercise training and energy expenditure following weight loss. *Medicine and Science in Sports and Exercise*. 2015. 47(9): 1950-1957.
7. **Carter, S. J.** Into "thinner" air: A novel strategy to improve clinical outcomes and support weight loss? *Journal of Obesity and Weight Loss Therapy*. 2015. 5(5): e118.
8. Hunter, G. R., McCarthy, J. P., **Carter, S. J.**, Bamman, M. M., Gaddy, E. S., Fisher, G., Katsoulis, K., Plaisance, E. P., and Newcomer, B. R. Muscle fiber type, Achilles tendon length, potentiation, and running economy. *Journal of Strength and Conditioning Research*. 2015. 29(5): 1302-1309.
9. **Carter, S. J.**, Herron, R. L., Akers, S. Z., and Bishop, P. A. Acetylsalicylic acid does not alter thermo-effector responses during mild, whole-body passive heat stress in young men. *International Journal of Hyperthermia*. 2015. 31(4): 319-324.
10. Zhang, Y., **Carter, S. J.**, Schumaker, R. E., Neggers, Y. H., Curtner-Smith, M. D., Richardson, M. T., Green, J. M., and Bishop, P. A. Effect of caffeine on fluid balance during exercise-heat stress and recovery. *South African Journal of Sports Medicine*. 2014. 26(2): 43-47.
11. Esco, M. R., Herron, R. L., **Carter, S. J.**, and Flatt, A. A. Association of body composition and aerobic fitness on heart rate variability and recovery in Black men. *International Journal of Clinical Medicine*. 2013. 4: 532-538.
12. Del Pozzi, A. T., **Carter, S. J.**, Collins, A. B., and Hodges, G. J. Regional differences in the contribution of nitric oxide synthase to skin blood flow at forearm and lower leg sites. *Microvascular Research*. 2013. 90: 106-111.
13. **Carter, S. J.**, and Hodges, G. J. Sensory and sympathetic nerve contributions during cutaneous vasodilator responses from a noxious stimulus. *Experimental Physiology*. 2011. 96(11): 1208-1217.

PUBLISHED ABSTRACTS

1. **Carter, S. J.**, Hunter, G. R., McAuley, E., Courneya, K. S., Anton, P. M., and Rogers, L. Q. Lower rate-pressure product during submaximal walking: a link to fatigue improvement following a physical activity intervention among breast cancer survivors. American College of Sports Medicine Annual Meeting, Boston, MA. (*accepted*)
2. Leatherwood, M. D., Herron, R. L., and **Carter, S. J.** Resting measures of cardiovascular autonomic control are not influenced by energy drink ingestion or postural changes in health adults. Experimental Biology Meeting, San Diego, CA. (*accepted*)
3. **Carter, S. J.**, Goldsby, T. U., Fisher, G., Plaisance, E. P., Gower, B. A., Glasser, S. P., and Hunter, G. R. Exaggerated blood pressure response after high-intensity interval exercise is independently related to decreased small arterial elasticity in normotensive African American women. Experimental Biology Meeting, San Diego, CA. (*accepted*)
4. Herron, R.L., **Carter, S.J.**, Collins, A.B., and Leatherwood, M.D. Reliability of skin blood flow measures by laser-Doppler flowmetry. Experimental Biology Meeting, Boston, MA. FASEB J., March 2015. 29: 1b675.
5. **Carter, S. J.**, Fisher, G., Plaisance, E. P., Gower, B. A., and Hunter, G. R. Improved insulin sensitivity following an acute bout of high-intensity interval exercise is race specific. American College of Sports Medicine Annual Meeting, San Diego, CA. June 2015; 47:5.
6. Herron, R. L., **Carter, S. J.**, Akers, S. Z., and Bishop, P. A. Aspirin ingestion does not influence local sweat responses during continuous exercise or passive recovery in the heat. American College of Sports Medicine Annual Meeting, San Diego, CA. June 2015; 47:5.
7. Hunter, G. R., Fisher, G., **Carter, S. J.**, Bamman, M. M., Moellering, D. R., and Gower, B. A. Sleeping/resting energy expenditure is significantly increased following an acute bout of high-intensity interval exercise. American College of Sports Medicine Annual Meeting, San Diego, CA. June 2015.
8. **Carter, S. J.**, Fisher, G., Plaisance, E. P., Fernandez, J. R., and Hunter, G. R. Race differences in erythropoietin, 25-hydroxyvitamin D, and hemoglobin before and after weight loss in women. Experimental Biology Meeting, Boston, MA. FASEB J., March 2015.
9. Herron, R. L., Collins, A. B., **Carter, S. J.**, Mitchell, J. B., and Bishop, P. A. Forearm skin blood flow responses to Kinesiology tape: a pilot study. National Strength and Conditioning Annual Meeting, Las Vegas, NV. July 2013.
10. Mitchell, J. B., Herron, R. L., **Carter, S. J.**, Collins, A. B., Martinez, A. X., Baggett, S. A., and Bishop, P. A. Lifting performance and indices of recovery 24 hours after exhaustive resistance training bouts in adolescent males. National Strength and Conditioning Annual Meeting, Las Vegas, NV. July 2014.
11. Mitchell, J. B., Herron, R. L., **Carter, S. J.**, Hornsby, J. H., and Bishop, P. A. Upper- and lower-body strength training recovery in male adolescent athletes. American College of Sports Medicine Annual Meeting, Orlando, FL. May 2014. 46:5(S300).
12. Ng, J., Casey, J. C., Herron, R. L., **Carter, S. J.**, Katica, C. P., and Wingo, J. E. Acute cooling does not attenuate the VO₂max reduction associated with cardiovascular drift during heat stress. American College of Sports Medicine Annual Meeting, Orlando, FL. May 2014. 46:5(S542).
13. Herron, R. L., Collins, A. B., **Carter, S. J.**, Mitchell, J. B., and Bishop, P. A. Skin blood flow response following repeated local heating. Experimental Biology Meeting, San Diego, CA. FASEB J., April 2014. 28: 1b803.

14. **Carter, S. J.**, Herron, R. L., Akers, S. Z., Collins, A. B., and Wingo, J. E. Aspirin ingestion does not alter the onset or slope of local sweat rate during whole-body passive heat stress. Experimental Biology Meeting, San Diego, CA. FASEB J., April 2014. 28: 1104.12.
15. Mitchell, J. B., Herron, R. L., **Carter, S. J.**, Hornsby, J. H., and Bishop, P. A. Strength training recovery in adolescent athletes. Southeast Chapter of the American College of Sports Medicine Regional Meeting, Greenville, SC. February 2014.
16. Casey, J. C., Ng, J., Herron, R. L., **Carter, S. J.**, Katica, C. P., and Wingo, J. E. Acute cooling does not attenuate the VO₂max reduction associated with cardiovascular drift during heat stress. Southeast Chapter of the American College of Sports Medicine Regional Meeting, Greenville, SC. February 2014.
17. **Carter, S. J.**, and Hodges, G. J. Contributions of endothelial nitric oxide synthase, norepinephrine, and neuropeptide Y to local warming-induced cutaneous vasodilation in humans. Experimental Biology Meeting, Boston, MA. FASEB J., April 2013. 27: 1201.10.
18. Collins, A. B., **Carter, S. J.**, Del Pozzi, A. T., and Hodges, G. J. Hormone status does not alter noradrenergic sympathetic neurotransmitter involvement during local skin warming in young human females. Experimental Biology Meeting, Boston, MA. FASEB J., April 2013. 27: 1201.15.
19. Herron, R. L., **Carter, S. J.**, Williford, H. N., and Esco, M. R. Association of body composition and aerobic fitness on heart rate variability and recovery in Black men. National Strength and Conditioning Annual Meeting, Las Vegas, NV. July 2013.
20. Herron, R. L., **Carter, S. J.**, Williford, H. N., and Esco, M. R. The relationship between fat-mass, fat-free mass, and heart rate variability. National Strength and Conditioning Annual Meeting, Las Vegas, NV. July 2013.
21. Collins, A. B., **Carter, S. J.**, Del Pozzi, A. T., and Hodges, G. J. Norepinephrine but not neuropeptide Y is involved in the cutaneous vasodilator response in young human females. Experimental Biology Meeting, San Diego, CA. FASEB J., March 2012. 26: 1b751.
22. Del Pozzi, A. T., **Carter, S. J.**, Collins, A. B., and Hodges, G. J. Regional differences in noradrenergic and nitric oxide involvement in the cutaneous vasodilator responses to local heating. Experimental Biology Meeting, San Diego, CA. FASEB J., March 2012. 26: 1b752.
23. **Carter, S. J.**, Del Pozzi, A. T., Collins, A. B., and Hodges, G. J. The involvement of nitric oxide synthase in the die-away phenomenon during prolonged local skin heating. Experimental Biology Meeting, San Diego, CA. FASEB J., March 2012. 26: 1b753.
24. **Carter, S. J.**, and Hodges, G. J. Sensory and sympathetic nerve contributions to the cutaneous vasodilator responses to a noxious heat stimulus. Experimental Biology Meeting, Washington D. C., VA. FASEB J., March 2011. 25: 1b481.
25. Pritchett, K. L., Bishop, P. A., Pritchett, R. C., Green, J. M., Katica, C. P., and **Carter, S. J.** Acute effects of chocolate milk and a commercial recovery beverage on post-exercise muscle damage and endurance cycling performance. American College of Sports Medicine Annual Meeting, Seattle, WA. May 2009.

ADDITIONAL WORKS

1. **Carter S. J.** "Espargaro Closing the CRT Gap" prepared for Crash.net (UK based motorsports website) June 2013: [Article link](#)

2. **Carter S. J.** “Current State and Future of MotoGP: Results” prepared for Crash.net (UK based motorsports website) April 2012: [Article link](#)
3. **Carter S. J.** “Current State and Future of MotoGP: Survey” prepared for Crash.net (UK based motorsports website) March 2012: [Article link](#)