Abbie E. Smith-Ryan, PhD

Associate Professor
Exercise Physiology; Nutrition
Director, Applied Physiology Laboratory
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EDUCATION

The University of Oklahoma, Norman, OK	August, 2008 – May, 2011
Doctor of Philosophy, Exercise Physiology	
Metabolic & Body Composition Laboratory Coordinator	

The University of Oklahoma, Norman, OK	August, 2006 – May, 2008
Master of Science; Health and Exercise Science	
Concentration in Exercise Physiology & Sports Nutrition	

Truman State University, Kirksville, MO
Bachelor of Science; Health and Exercise Science
Concentration in Exercise Physiology

PROFESSIONAL EXPERIENCE

NC Translational & Clinical Sciences, School of Medicine

University of North Carolina, Chapel Hill, NC Associate Professor, Department of Exercise and Sport Science	July, 2017 - Present
Adjunct Associate Professor, Department of Nutrition, Public Health	2019-Present
Adjunct Associate Professor; Allied Health Sciences, College of Medicine	2013-Present
Core Faculty Member, Doctoral Human Movement Sciences Curriculum	2011- Present
Co-Director, Human Performance Center	2014- Present
Director, Applied Physiology Laboratory	2016- Present
University of North Carolina, Chapel Hill, NC	
Assistant Professor in the Department of Exercise and Sport Science	2011-2017
NIH KL2 Scholar, Chapel Hill, NC	May, 2014 – April, 2017

CERTIFICATIONS

Certified strength and conditioning specialist with distinction (CSCS*D)	2008-present
Certified International Society of Sports Nutrition (CISSN)	2009-present

HONORS

Outstanding Sport Scientist Award, National Strength and Conditioning Association (2022)

Nominated for the University Award for the Advancement of Women (2021)

Nominated for the NSCA Sports Scientist of the Year Award (2021)

Women's Advance Leadership Training (2020)

Chancellor's Faculty Entrepreneurship Attendee (2019)

Fellow Distinction, National Strength & Conditioning Association (2016)

Fellow Distinction, American College of Sports Medicine (2016)

National Strength & Conditioning Association, Terry J. Housh Young Investigator of the Year Award (2015)

National Strength & Conditioning Association, Nutrition Researcher of the Year Award (2014)

National Strength & Conditioning Association, Finalist for the NSCA Young Investigator of the Year Award (2014)

National Strength & Conditioning Association, Member Spotlight (2013)

Fellow Distinction, International Society of Sports Nutrition (2013)

Elected Chair for Research & Education Committee, National Strength & Conditioning Association (2013)

University of Oklahoma Doctoral Research Award (2010)

National Strength & Conditioning Association. Student Research Award (2009)

National Strength & Conditioning Association. Student Research Award (2008)

International Society of Sports Nutrition Student Research Award (2008)

University of Oklahoma Michael G. Sims Health & Exercise Science Masters Student Award (2008)

University of Oklahoma, College of Arts & Sciences Corrine Price Scholarship (2008)

University of Oklahoma, College of Arts & Sciences Robert E & Mary B. Sturgis Scholarship (2008)

National Strength & Conditioning Association Challenge Scholarship Recipient (2007)

Truman State Undergraduate Exercise Science Major of the Year (2006)

Missouri Association for Health, Physical Activity, Recreation, and Dance Outstanding Exercise Science Major of the Year (2006)

National Association for Sport and Physical Education, Exercise Science Major of the Year (2006)

BIBLIOGRAPHY

PEER-REVIEWED BOOKS (1) & CHAPTERS (14)

Abbie E. Smith-Ryan, Katie R. Hirsch, Hannah E. Cabre. Chapter 2: Physiology of Menopause. Sex Hormones, Exercise and Women, 2e. Anthony C. Hackney (Ed). Springer Nature. In Review. 2022.

Susan Kleiner, **Abbie E. Smith-Ryan**, Cassandra Forsythe. Sports Nutrition. Sports Medicine: Study Guide and Review for Boards. Second Edition. Mark Harrast and Jonathon Finnoff (Eds). Demos Medical. 2020.Pg 115-126.

Anthony C Hackney, **Abbie E Smith-Ryan**, Julius E. Fink. Methodological Considerations in Exercise Endocrinology. Sports Endocrinology. 3rd Ed. Endocrinology of Physical Activity and Sport. Anthony C. Hackney and Naama W. Constantini and (Eds). Humana Press, Springer. Switzerland. *2020. Pg 1-17*.

Abbie E. Smith-Ryan and Cassandra Forsyth York. Clients with nutritional and metabolic concerns. Chapter 9. Essential of Personal Training, National Strength and Conditioning Association. Human Kinetics. In Print. 2021

Abbie E. Smith-Ryan, Colin D. Wilborn, Eric T. Trexler. Ergogenic Aids. Essentials of Tactical Strength and Conditioning, National Strength and Conditioning Association. Human Kinetics. February 2017.

Sports Supplements and Nutrition. **Abbie E. Smith-Ryan** and Jose Antonio (Eds). Linus Publishing. *July 2013. 404 pages*

Anthony C. Hackney and **Abbie E. Smith**. Methodological considerations in exercise endocrinology. Sports Endocrinology, 2nd Ed. Naama Constantini and Anthony C. Hackney (Eds). Humana Press, Springer. Switzerland. *2013*. *Pg 1-21*

Abbie E. Smith, Jose Antonio, David H. Fukuda. Carbohydrates: What we know about low vs. high levels for athletes. Nutritional Guidelines for Athletic Performance: The Training Table. L. Taylor (Ed) CRC Press. March 2012. *Pg* 277-300.

Colin Wilborn, Lem Taylor, **Abbie Smith**, Jose Antonio. Nutrition. Conditioning for Strength and Human Performance, 2e. TJ Chandler and L. Brown (Eds) Lippincott Williams & Wilkins. 2012. Pg 143-155.

Lem Taylor, Colin Wilborn, **Abbie Smith**, Jose Antonio. Ergogenic Aids. Conditioning for Strength and Human Performance, 2e. TJ Chandler and L. Brown (Eds) Lippincott Williams & Wilkins. 2012. *Pgs. 521-532*

Abbie E. Smith, Joel T. Cramer. Endurance Training and Program Design. J. Hoffman (Ed). Human Kinetics, 2012. *Pgs.131-142*.

Jay R. Hoffman, Lee E. Brown, **Abbie E. Smith.** Training Program Implementation. NSCA's Guide to Program Design. J Hoffman (Ed). Human Kinetics, 2012. Pg. 259-270.

Susan Kleiner, **Abbie E. Smith**, Cassandra Forsythe. Sports Nutrition. Sports Medicine: Study Guide and Review for Boards. Mark Harrast and Jonathon Finnoff (Eds). Demos Medical. 2011.Pg 115-126.

Abbie E. Smith, Sarah E. Tobkin, Jeffrey R. Stout, Christopher M. Lockwood. Ergogenic Aids. Nutritional Concerns in Recreation, Exercise, and Sport. J.A. Driskell and I. Wolinsky (Eds.) CRC Press, pg. 235-280. *April*, 2009 Pg. 235-250.

Abbie E. Smith, David H. Fukuda, Jennifer L. Graef, Jeffrey R. Stout. Beta-Alanine and other amino acids. Sports Supplements. J.A. Antonio (Ed). July, 2009, *pg. 5-17*.

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In Review

- 1. Emily L. Gascoigne, Carolyn Webster, Anne West-Honart, Penny Wang, **Abbie E. Smith-Ryan**, Tracy A. Manuck. Physical activity and pregnancy outcomes: An expert review. American Journal of Obstetrics & Gynecology. 2022. In Review.
- 2. Hannah E. Cabre*, Lacey M. Gould, Amanda N. Gordon, Hayden K. Dewig, Sam R. Moore, Eric D. Ryan, Abbie E. Smith-Ryan. Differences in lower-body strength, leg lean mass, and protein intake between pre and peri-menopausal women. *Menopause*. February 2022. In Review.
- 3. Sam R. Moore*, Hannah E. Cabre, Amanda N. Gordon, Abbie E. Smith-Ryan. Characterization of the relationship between menarche and body composition in elite collegiate gymnasts. *Journal of Strength and Conditioning Research*. January 2022. In Review.
- 4. Malia N.M. Blue*, **Abbie E. Smith-Ryan**, Hope C. Davis, B. Troy Blackburn, Brian Pietrosimone. Association between quadriceps strength and self-reported physical activity in individuals with knee osteoarthritis. In Review.

In Press

1. **Abbie E. Smith-Ryan**, Hannah E. Cabre, Sam R. Moore. Women Athletes: Fit for Purpose Functional Ingredients. *Sports Medicine*. June 2022, In Press.

- 2. Darren G. Candow, Scott C. Forbes, Michael D. Roberts, Brian D. Roy, Jose Antonio, **Abbie E. Smith-Ryan**, Eric S. Rawson, Bruno Gualano, Hamilton Roschel. Creatine O'Clock: Does timing ingestion really influence muscle mass and performance? Frontiers in Sports and Active Living. 2022. In Press.
- 3. Hannah E. Cabre*, Katie R. Hirsch, Malia M.M. Blue, Alyson G. Nelson, **Abbie E. Smith-Ryan**. Characterization of Physical Activity and sedentary time across college years. *Journal of American College of Health*. September 2021. In Press

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- 1. Katie R. Hirsch*, Hannah E. Cabre, Lacey M. Gould, Malia NM Blue, **Abbie E Smith-Ryan**. Effects of essential amino acids on high intensity interval training performance, fatigue, outcomes, and workload progression. Journal of the American Nutrition Association. 2022. Apr 22:1-7. Online ahead of print.
- 2. Amanda N. Gordon*, Malia NM Blue, Hannah E Cabre, Lacey M Gould, **Abbie E. Smith-Ryan**. Body composition of NCAA Division I football players pre- and post-COVID 19 quarantine. *Journal of Sports Medicine and Physical Fitness*. 2022. Apr 12. Online ahead of print.
- 3. Regan L. Bailey, Tieraona Low Dog, **Abbie E. Smith-Ryan**, Sai Krupa Das, Fiona C. Baker, Zeynep Madak-Erdogan, Billy R. Hammond, Howard D. Sesso, Alex Eapen, Susan H. Mitmesser, Andrea Wong, Haiuyen. Sex differences across the life course: a focus on unique nutritional and health considerations among women. *The Journal of Nutrition*. 2022 Mar 16. Online ahead of print.
- Lacey M Gould*, Amanda N Gordon, Andrew T Hoyle, Hannah E Cabre, Eric D Ryan, Anthony C Hackney, Abbie E Smith-Ryan. Metabolic effects of menopause: a cross-sectional characterization of body composition and exercise metabolism. *Menopause*. 2022 Feb 28. Online ahead of print. DOI: 10.1097/GME.0000000000001932
- Malia NM Blue*, Katie R Hirsch, Gabrielle J Brewer, Hannah E Cabre, Lacey M Gould, Grant T. Tinsley, Bennett Ng, Eric D. Ryan, Darin A Padua, Abbie E Smith-Ryan. The validation of contemporary body composition methods in various races and ethnicities. *British Journal of Nutrition*. 2022 Feb 3;1-11. Online ahead of print. DOI: 10.1017/S0007114522000368
- 6. Hannah E. Cabre*, Casey E. Greenwalt, Lacey M Gould, Katie R. Hirsch, Malia N.M. Blue, Abbie E. Smith-Ryan. Exploring the "Athlete Paradox": Comparison of muscle characteristics between Division I cross country runner and normal weight young adults. *Journal of Strength and Conditioning Research*. 2021 Sep 1. DOI: 10.1519/JSC.0000000000004127. Online ahead of print.
- Katie R. Hirsch*, Casey E. Greenwalt, Hannah E. Saylor, Lacey M. Gould, Gabrielle J. Brewer, Malia N.M. Blue, Arny A. Ferrando, Kim M. Huffman, Elizabeth J. Mayer-Davis, Eric D. Ryan, Abbie E. Smith-Ryan. Metabolic effects of high intensity interval training and essential amino acids. European Journal of Applied Physiology. 2021 Aug 24. Online ahead of print. DOI: 10.1007/s00421-021-04792-4
- 8. Ann F. Brown, Christopher J Alfiero, Samantha J. Brooks, Shiloah A. Kviatkovsky, **Abbie E. Smith-Ryan**, Michael J. Ormsbee. Prevalence of normal weight obesity & health implication for the female collegiate dancer. *Journal of Strength Conditioning Research*. 2021 Aug 1; 35(8):2321-2326. DOI: 10.1519/JSC.00000000000004064
- 9. **Abbie E. Smith-Ryan**, Gabrielle J. Brewer, Lacey M. Gould, Malia N.M. Blue, Katie R. Hirsch, Casey E. Greenwalt, Courtney Harrison, Hannah E. Saylor, Eric D. Ryan. Acute feeding has minimal effect on the validity of body composition and metabolic measures: dual energy x-ray absorptiometry and a multi-compartment model. *British Journal of Nutrition*. 2021 Aug 16:1-39. Online ahead of print. DOI: 10.1017/S0007114521003147
- 10. Yvonne M Golightly, **Abbie E. Smith-Ryan**[†], Malia N.M. Blue, Carolina Alvarez, Kelli D. Allen, Amanda E. Nelson. High-intensity interval training for knee osteoarthritis. A pilot study. *ACR Open* Rheumatology. 2021 Aug 7. Online ahead of print. DOI: 10.1002/acr2.11318
- 11. **Abbie E. Smith-Ryan**, Mark A. Weaver, Anthony J Viera, Morris Weinberger, Malia N.M. Blue, Eric T. Trexler, Katie R. Hirsch. Promoting exercise and healthy diet among primary care patients: feasibility, preliminary outcomes, and lessons learned from a pilot trial with high intensity interval exercise. *Front Sports Act Living*. 2021 Jul 16;3-690243. ecollection 2021. DOI: 10.3389/fspor.2021.690243

- 12. Amy R. Lane, Anthony C. Hackney, Abbie E Smith-Ryan, Kristen Kucera, Johna K Register-Mihalik, Kristin Ondrak. Energy Availability and RED-S risk factors in competitive, non-elite male endurance athletes. *Translational Medicine and Exercise Prescription*. 2021;1(1):25-32. Epub 2021 Jun 7. PMID: 34296227. PMCID: PMC8294781
- 13. Lacey M Gould*, Hannah E. Cabre, Gabrielle J Brewer, Katie R Hirsch, Malia NM Blue, **Abbie E Smith-Ryan**. Impact of follicular menstrual phase on body composition measures and resting metabolism. *Medicine and Science in Sports and Exercise*. 2021 Jul 16. Online ahead of print. DOI: 10.1249/MSS.00000000000002702
- 14. Malia N.M. Blue*, Katie R. Hirsch, Gabrielle J. Brewer, **Abbie E. Smith-Ryan**. Abdominal adiposity in collegiate football linemen: a study of race and position. *International Journal of Sports Medicine*. 2021 Jul 12. Online ahead of print. DOI: 10.1055/a-1518-8003
- 15. Abigail J Trivisonno, Megan R Laffan, Hayden K Giuliani, Jacob A Mota, Gena R Gerstner, **Abbie E. Smith-Ryan**, Eric D Ryan. The influence of age on the recovery from worksite resistance exercise in career firefighters. *Experimental Gerontology*. 2021 Sep;152:111467. Epub 2021 Jul 6. DOI: 10.1016/j.exger.2021.111467
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- 18. **Abbie E. Smith-Ryan**, Joan M. Eckerson, Darren C. Candow, Hannah E. Cabre. Creatine supplementation in women's health: A lifespan perspective. *Nutrients*. 2021. Mar 8; 13(3):877. DOI: 10.3390/nu13030877
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- 20. Gabrielle J. Brewer*, Malia N.M. Blue, Katie R. Hirsch, Hannah E. Saylor, Lacey M. Gould, Alyson G. Nelson, Abbie E. Smith-Ryan. Validation of InBody 770 bioelectrical impedance analysis compared to a four-compartment model criterion in young adults. *Clinical Physiology and Functional Imaging*. 2021 Jul;41(4):317-325. Epub 2021 Apr 1. DOI: 10.1111/cpf.12700
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- 22. Jose Antonio, Darren Candow, Scott Forbes, Bruno Gualano, Andrew Jagim, Richard Kreider, Eric Rawson, Abbie E. Smith-Ryan, Trisha Vandusseldorp, Darryn Wiloughby, Tim Ziegenfuss. Common questions and misconceptions about creatine supplementation: what does the scientific evidence really show? *Journal of the International Society of Sports Nutrition*. 2021 Feb 8;18(1):13. DOI: 10.1186/s12970-021-00412-w
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- 24. Nancy S. Guest, Trisha A. VanDusseldorp, Mike T. Nelson, Jozo Grgic, Brad J. Schoenfeld, Nathaniel D.M. Jenkins, Shawn M. Arent, Jose Antonio, Jeffrey R. Stout, Eric T. Trexler, Abbie E. Smith-Ryan, Erica R. Goldstein, Douglas S. Kalman, Bill I. Campbell. International society of sports nutrition position stand: caffeine and exercise performance. *Journal of the International Society of Sports Nutrition*. 2021 Jan 2;18(1):1. DOI: 10.1186/s12970-020-00383-4
- 25. Katie R. Hirsch*, Casey E. Greenwalt, Hannah E. Saylor, Lacey M. Gould, Courtney H. Harrison, Gabrielle J. Brewer, Malia N.M. Blue, Arny A. Ferrando, Kim M. Huffman, Elizabeth J. Mayer-Davis, Eric D. Ryan, Abbie E. Smith-Ryan. High-intensity interval training and essential amino acid supplementation: effects on muscle characteristics & whole-body protein turnover. *Physiological Reports*. 2021 Jan;9(1):e14655. DOI: 10.14814/phy2.14655

- 26. Hannah E. Cabre*, Malia M.N. Blue, Katie R. Hirsch, Gabrielle J. Brewer, Lacey M. Gould, Alyson G. Nelson, Abbie E. Smith-Ryan. Validity of a three-dimensional body scanner: comparison against a 4-compartment model and dual x-ray absorptiometry. *Applied Physiology, Nutrition and Metabolism*. 2021 Jun;46(6):644-650. Epub 2020 Dec 15. DOI: 10.1139/apnm-2020-0744
- 27. **Abbie E. Smith-Ryan**, Malia N.M. Blue, Katie R. Hirsch, Gabrielle J. Brewer. Application of a dual energy x-ray absorptiometry derived 4-compartment body composition model: non-discriminatory against leanness and sex. *Clinical Nutrition ESPEN*. 2020 Dec;40:401-405. Epub 2020 Oct 13. DOI: 10.1016/j.clnesp.2020.09.033
- 28. **Abbie E. Smith-Ryan**, Malia MN Blue, Kara C. Anderson, Katie R. Hirsch, Kelli D Allen, Janet L Huebner, Michael J. Muehlbauer, Olga R Ilkayeva; Victoria Byers Kraus, William E. Kraus, Yvonne M. Golightly, Kim M. Huffman. Metabolic and physiological effects of high intensity interval training in patients with knee osteoarthritis: a pilot and feasibility study. *Osteoarthritis and Cartilage Open*. 2020 Dec;2(4):100083. https://doi.org/10.1016/j.ocarto.2020.100083
- 29. William A. Wood, Mark A. Weaver, **Abbie E. Smith-Ryan**, Erik Hanson, Thomas C. Shea, Claudio L. Battaglini. Lessons learned from a pilot randomized clinical trial of home-based exercise prescription before allogeneic hematopoietic cell transplantation. Support Care Cancer. 2020 Nov;28(11):5291-5298. DOI: 10.1007/s00520-020-05369-1
- 30. Kara C. Anderson*, Katie R. Hirsch, Austin M. Peterjohn, Malia N.M. Blue, Alexis A. Pihoker, Dianne S. Ward, Kristin S. Ondrak, Abbie E. Smith-Ryan. Characterization and prevalence obesity among normal weight college students. International Journal of Adolescent Medicine and Health. 2020 Nov 6. Online ahead of print. DOI: 10.1515/ijamh-2020-0240
- 31. **Abbie E. Smith-Ryan**, Katie R. Hirsch, Hannah E. Saylor, Lacey M. Gould, Malia N.M. Blue. Nutritional considerations and strategies to facilitate injury recovery and rehabilitation. *Journal of Athletic Training*. 2020 Sep 1;55(9):918-930. DOI: 10.4085/1062-6050-550-19
- 32. Grant M. Tinsley, **Abbie E. Smith-Ryan**, Youngdeok Kim, Malia N M. Blue, Brett S. Nickerson, Matthew T. Stratton, Patrick S. Harty. Fat-free mass characteristics vary based on sex, race, and weight status in U.S. adults. *Nutrition Research*. 2020 Sep;81:59-70. Epub 2020 Jul 12. DOI: 10.1016/j.nutres.2020.07.002
- 33. Eric D. Ryan, Gena R. Gerstner, Eric T. Trexler, Jacob A. Mota, Hayden K. Giuliani, Malia N.M. Blue, Katie R. Hirsch, **Abbie E. Smith-Ryan**. The acute effects of a novel combination of herbal extracts on performance fatigability. *Journal of Dietary Supplements*. 2020;18(5):507. Epub 2020 Jul 29. DOI: 10.1080/19390211.2020.1790709
- 34. Scott C. Forbes, Darren G. Candow, **Abbie E. Smith-Ryan**, Katie R. Hirsch, Michael D. Roberts, Trisha A. VanDusseldorp, Matthew T. Stratton, Mojtaba Kaviani, Jonathan P. Little. Supplements and nutritional interventions to augment high intensity interval training physiological and performance adaptations— a narrative review. *Nutrients*. 2020 Jan 31;12(2):390. DOI: 10.3390/nu12020390
- 35. Ralf Jager, Alex E. Mohr, Katie C. Carpenter, Chad M. Kerksick, Martin Purpura, Adel Moussa, Jeremy R. Townsend, Manfred Lamprecht, Nicholas P. West, Katherine Black, Michael Gleeson, David B. Pyne, Shawn D. Wells, Shawn M. Arent, Abbie E. Smith-Ryan, Richard B. Kreider, Bill I. Campbell, Laurent Bannock, Jonathan Scheiman, Craig J. Wissent, Marco Pane, Douglas S. Kalman, Jamie N. Pugh, Jessica A. Ter Haar, Jose Antonio. (2019). International Society of Sports Nutrition Position Stand: Probiotics. *Journal of the International Society of Sports Nutrition*. 2019 Dec 21;16(1):62. DOI: 10.1186/s12970-019-0329-0
- 36. Nick B. Tiller, Justin D. Roberts, Liam Beasley, Shaun Chapman, Jorge M. Pinto, Lee Smith, Melanie Wiffin, Mark Russell, S. Andy Sparks, Lauren Duckworth, John O'Hara, Louise Sutton, Jose Antonio, Darryn S. Willoughby, Michael D. Tarpey, **Abbie E. Smith-Ryan**, Michael J. Ormsbee, Todd A. Astorino, Richard B. Kreider, Graham R. McGinnish, Jeffrey R. Stout, JohnEric W. Smith, Shawn M. Arent, Bill I. Campbell, Laurent Bannock. International Society of Sports Nutrition Position: Nutritional considerations for single-stage ultra-marathon training and racing. *Journal of the International Society of Sports Nutrition*. 2019 Nov 7;16(1)50. DOI: 10.1186/s12970-019-0312-9
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- 38. Amy R Lane, Anthony C. Hackney, **Abbie E. Smith-Ryan**, Kristen Kucera, Johna Registar-Mihalik, Kristin Ondrak. Prevalence of low energy availability in competitively trained male endurance athletes. *Medicina*. 2019. Oct 1;55(10) DOI: 10.3390/medicina55100665
- 39. Lee Stoner, Nicholas Castro, Anna Kucharska-Newton, **Abbie E. Smith-Ryan**, Sally Lark, Michelle A. Williams, James Faulkner, Paula Skidmore. Food patterns and body composition in pre-adolescents: moderating effects of prop taster status. *Nutrients*. 2019 Aug 31;11(9):2037. DOI: 10.3390/nu11092037
- 40. Gabrielle J Brewer*, Malia M.N. Blue, Katie R Hirsch, Austin M. Peterjohn, **Abbie E. Smith-Ryan**. Appendicular body composition analysis: validity of bioelectrical impedance analysis with dual energy x-ray absorptiometry in division I college athletes. *Journal of Strength Conditioning Research*. 2019 Nov;33(11):2920-2925. DOI: 10.1519/JSC.00000000000003374
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- 42. Katie R. Hirsch*, Malia N. M. Blue, Eric T. Trexler, **Abbie E. Smith-Ryan**. Visceral adipose tissue normative values in adults from the United States using GE lunar iDXA. *Clinical Physiology and Functional Imaging*. 2019 Nov;39(6):407-414. Epub 2019 Oct 1. DOI: 10.1111/cpf.12593
- 43. Eric T. Trexler*, Dale S. Keith, Todd A. Schwartz, Eric D. Ryan, Lee Stoner, Adam M. Persky, **Abbie E. Smith-Ryan**. Effects of citrulline malate and beetroot juice supplementation on blood flow, energy metabolism, and performance during maximal leg extension exercise. *Journal of Strength and Conditioning Research*. 2019 Sep;33(9):2321-2329 DOI: 10.1519/JSC.000000000000003286
- 44. **Abbie E. Smith-Ryan**, Katie R. Hirsch, Malia N.M. Blue, Meredith G. Mock, Eric T. Trexler. High-fat breakfast meal replacement: implications on body composition, metabolic markers, and satiety. *Nutrients*. 2019 Apr 17;11(4): 865. DOI: 10.3390/nu11040865
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- 48. **Abbie E. Smith-Ryan**, Meredith G. Mock, Eric T. Trexler, Malia M. Blue, Katie R. Hirsch. Influence of a multi-strain probiotic on body composition and mood in female occupational shift workers. *Applied Physiology Nutrition and Metabolism*. 2019 Jul;44(7):765-773. Epub 2018 Dec 19. DOI: 10.1139/apnm-2018-0645
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- 161. Chris M. Lockwood, Jordan R. Moon, Sarah E. Tobkin, Ashley A. Walter, **Abbie E. Smith**, Vincent J. Dalbo, Joel T. Cramer, and Jeffrey R Stout. Minimal nutrition intervention with high-protein/low-carbohydrate and low-fat, nutrient-dense food supplement improves body composition and exercise benefits in overweight adults: A randomized controlled trial. *Nutrition and Metabolism.* 5:11, 2008. (*BioMed Central "Highly Accessed" Article*)
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REFEREED ABSTRACT PUBLICATIONS & PRESENTATIONS

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- 1. Sam R. Moore*, Amanda N. Gordon, Hannah E. Cabre, **Abbie E. Smith-Ryan**. Changes in fluid distribution across the menstrual cycle in active females with creatine supplementation. NSCA National Conference. New Orleans. Submitted. 2022
- 2. Hannah E. Cabre*, Amanda N. Gordon, Lacey M. Gould, Sam R. Moore, **Abbie E. Smith-Ryan**. Evaluation of preworkout and recovery formulations on performance after a six-week high intensity training program in untrained males and females. NSCA National Conference. New Orleans. Submitted. 2022
- 3. Amanda N. Gordon*, Sam R. Moore, Maggie E. Hostetter, Noah D. Patterson, Jillian B. Vordick, Hannah E. Cabre, **Abbie E. Smith-Ryan**. Effect of short-term creatine monohydrate supplementation on exercise performance and recovery throughout the menstrual cycle. NSCA National Conference. New Orleans. Submitted. 2022

- 4. Jillian B. Vordick*, Hanna E. Cabre, Sam R. Moore, Amanda N. Gordon, **Abbie E. Smith-Ryan**. Prevalence of potential performance altering side effects of contraceptive use among women. NSCA National Conference. New Orleans. Submitted. 2022
- 5. Noah D. Patterson*, Hannah E. Cabre, Amanda N. Gordon, Maggie E. Hostetter, Sam R. Moore, **Abbie E. Smith-Ryan**. The effect of high intensity interval training after high intensity resistance training on cardiorespiratory outcomes in untrained males and females. NSCA National Conference. New Orleans. Submitted. 2022
- 6. Hannah E. Cabre, Lacey M. Gould, Amanda N. Gordon, Sam R. Moore, Hayden K. Dewig, **Abbie E. Smith-Ryan**, Eric D. Ryan. Characterizing strength, protein intake, and physical activity in pre- and post-menopausal women. SEACSM, 2022. Poster Presentation.
- 7. Sam R. Moore, Hannah E. Cabre, Amanda N. Gordon, **Abbie E. Smith-Ryan**. Characterization of the relationship between menarche and body composition in elite collegiate gymnasts. SEACSM, 2022. Poster Presentation.
- 8. Amanda N. Gordon, Hannah E. Cabre, Taylor E. Morrison, Sam R. Moore, Maggie E. Hostetter, Noah D. Patterson, **Abbie E. Smith-Ryan**. Tracking body composition changes in collegiate basketball players: comparison of methods. SEACSM, 2022. Poster Presentation.
- 9. Maggie E. Hostetter, Hannah E. Cabre, Amanda N. Gordon, Lacey M. Gould, Sam R. Moore., Noah D. Patterson, **Abbie E. Smith-Ryan**. Effect of carbohydrate to protein ratio on metabolic flexibility in women across the menopause transition. SEACSM, 2022. Poster Presentation.
- 10. Noah D. Patterson, Amanda N. Gordon, Hannah E. Cabre, Sam R. Moore, Maggie E. Hostetter, **Abbie E. Smith-Ryan**. Body composition of division I basketball players pre and post 8-week strength and conditioning program. SEACSM, 2022. Poster Presentation.
- 11. Hannah E. Cabre, Lacey M. Gould, Amanda N. Gordon, Andrew T. Hoyle, **Abbie E. Smith-Ryan**. Characterization of early and late menopause transition on body composition, cardiovascular disease risk, and metabolic flexibility. 2021, St. Pete FL. Poster Presentation.
- 12. Lacey M. Gould, Hannah E. Cabre, Amanda N. Gordon, Andrew T. Hoyle, Katie R. Hirsch, Arny A. Ferrando, **Abbie E. Smith-Ryan**. Characterizing protein metabolism and muscle characteristics across the menopause transition. 2021, St. Pete FL. Poster Presentation.
- 13. Taylor E. A. Morrison, Hannah E. Cabre, Amanda N. Gordon, **Abbie E. Smith-Ryan**. Accounting for total body water in body composition assessment in division I collegiate athletes: validity & application. ISSN, 2021, St. Pete FL. Poster Presentation.
- 14. Hannah E Cabre*, Malia NM Blue, Lacey M Gould, Katie R Hirsch, Alyson G Nelson, Casey E Greenwalt, Gabrielle J Brewer, **Abbie E Smith-Ryan**. (2021). Validity of Dual Energy X-Ray Absorptiometry-Derived 4-Compartment Model in A Multi-Ethnic Sample. *NSCA National Conference*. Orlando, FL. Accepted
- 15. Andrew T Hoyle*, Lacey M Gould, Hannah E Cabre, Amanda N Gordon, **Abbie E Smith-Ryan**. (2021). Characterizing the effect of the menopause transition on muscle size and muscle quality. Accepted. NSCA national conference. Orlando, FL. Accepted.
- 16. Amanda N Gordon*, Lacey M Gould, Andrew T Hoyle, Hannah E Cabre, Hayden K Giuliani, Eric D Ryan, **Abbie E Smith-Ryan**. (2021). Differences in lower-body strength and leg lean mass in pre, peri and post-menopausal women. NSCA national conference. Orlando, FL. Accepted
- 17. Katie R. Hirsch*, Gabrielle J. Brewer, Lacey M Gould, Casey E Greenwalt, Alyson G Nelson, Hannah E Cabre, Malia NM Blue, **Abbie E Smith-Ryan**. (2021). Effects of essential amino acids on high-intensity interval training fatigue outcomes and workload progression. *NSCA National Conference*. Orlando, FL. Accepted.
- 18. Lacey M. Gould*, Gabrielle J. Brewer, Malia N.M. Blue, Katie R. Hirsch, Hannah E. Saylor, Amanda N. Gordon, Andrew T. Hoyle, **Abbie E Smith-Ryan**. (2021) Impact of menstrual cycle on body composition measures and resting metabolism. ACSM National Conference. Virtual Presentation. Accepted
- Amanda N. Gordon, Malia NM Blue, Hannah E Cabre, Lacey M Gould, Katie R Hirsch, Andrew T Hoyle, Abbie E Smith-Ryan. (2021). Body Composition of NCAA Division I Football Players Pre and Post COVID-19 Quarantine. ACSM National Conference. Virtual Presentation. Accepted
- 20. Hannah E. Saylor*, Casey E. Greenwalt, Lacey M. Gould, Amanda N. Gordon, Andrew T. Hoyle, **Abbie E Smith-Ryan**. (2021). Relationship Between Maximal Fat Oxidation and Ventilatory Threshold in Endurance Trained Males. ACSM National. Virtual Presentation. Accepted

- 21. Andrew T. Hoyle*, Gabrielle J Brewer, Lacey M. Gould, Hannah E Cabre, Amanda N Gordon, **Abbie E Smith-Ryan** (2021). Effect of acute feeding on bioelectrical impedance vector analysis calculated phase angle in healthy subjects. Accepted. ACSM National Conference. Virtual Presentation. Accepted
- 22. Lacey M Gould*, Amanda N. Gordon, Andrew T Hoyle, Hannah E Cabre, **Abbie E Smith-Ryan**. (2021). Impact of menopausal status and BMI on metabolic flexibility. *UNC Center for Women's Health Research*. Chapel Hill, NC. Accepted.
- 23. Amanda N. Gordon*, Malia NM Blue, Hannah E Cabre, Lacey M Gould, Katie R Hirsch, Andrew T Hoyle, **Abbie E Smith-Ryan**. (2021). Body Composition of NCAA Division I Football Players Pre and Post COVID-19 Quarantine. SEACSM regional conference. Virtual Presentation. Accepted
- 24. Andrew T. Hoyle*, Gabrielle J Brewer, Lacey M. Gould, Hannah E Cabre, Amanda N Gordon, **Abbie E Smith-Ryan** (2021). Effect of acute feeding on bioelectrical impedance vector analysis calculated phase angle in healthy subjects. Accepted. SEACSM regional conference. Virtual Presentation. Accepted
- 25. Hannah E. Saylor*, Casey E. Greenwalt, Lacey M. Gould, Amanda N. Gordon, Andrew T. Hoyle, **Abbie E Smith-Ryan**. (2021). Relationship Between Maximal Fat Oxidation and Ventilatory Threshold in Endurance Trained Males. SEACSM Regional Conference. Virtual Presentation. Accepted
- 26. Lacey M. Gould*, Gabrielle J. Brewer, Malia N.M. Blue, Katie R. Hirsch, Hannah E. Saylor, Amanda N. Gordon, Andrew T. Hoyle, **Abbie E Smith-Ryan**. (2021) Impact of menstrual cycle on body composition measures and resting metabolism. SEACSM regional conference. Virtual Presentation. Accepted
- 27. Samuel R. Walton, Zachary Y. Kerr, Benjamin L. Brett, Avinash Chandran, J.D. Defreese, **Abbie E. Smith-Ryan**, Lee Stoner, Ruben J. Echemendia, Michael McCrea, William P Meehan III, Kevin M. Guskiewicz. The influences of concussion history and current health-promoting behaviors on health-related quality of life in former professional American football players. (2020). CISG- Paris. Accepted.
- 28. Katie R. Hirsch*, Casey E. Greenwalt, Hannah E. Saylor, Courtney H. Harrison, Lacey M. Gould, Alyson G. Nelson, Dalton W. Wheeless, Gabrielle J. Brewer, Malia N.M. Blue, **Abbie E. Smith-Ryan**. (2020) Metabolic effects of high intensity interval training and essential amino acid supplementation. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Podium Presentation. Accepted.
- 29. Lacey M. Gould*, Gabrielle J. Brewer, Hannah E. Saylor, Malia N.M. Blue, Katie R. Hirsch, Casey E. Greenwalt, Courtney H. Harrison, **Abbie E. Smith-Ryan**. Effects of acute feeding on the validity of dual-energy x-ray absorptiometry in young healthy adults. (2020). National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Podium Presentation. Accepted.
- 30. Skand Shekhar, Helen F. Leka, Anne E. Kim, Bona P. Purse, Katie R. Hirsch, Christopher McGee, John McGrath, **Abbie E. Smith-Ryan**, Janet E. Hall. (2019). The effect of energy deprivation on metabolic hormone responses to meals. *Endocrine Society Annual Meeting*. San Francisco, CA. Poster Presentation.
- 31. Katie R. Hirsch*, Gabrielle J. Brewer, Malia N.M. Blue, **Abbie E. Smith-Ryan**. (2020). Estimation of visceral adipose tissue: a device comparison. *ACSM Annual Meeting*. San Francisco, CA. Poster Presentation.
- 32. Gabrielle J. Brewer*, Malia N.M. Blue, Katie R. Hirsch, Alyson G. Nelson, **Abbie E. Smith-Ryan**. (2020). Comparison of waist and hip circumference measures from 3-dimensional technology and manual measurements. *ACSM Annual Meeting*. San Francisco, CA, USA. Poster Presentation.
- 33. Lacey M. Gould*, Gabrielle J. Brewer, Katie R. Hirsch, Malia N.M. Blue, Hannah E. Saylor, **Abbie E. Smith-Ryan**. (2020). Effects of adiposity and body composition on adjusted resting energy expenditure in women. *ACSM Annual Meeting*. San Francisco, CA, USA. Poster Presentation.
- 34. Katie R. Hirsch*, Gabrielle J. Brewer, Malia N.M. Blue, **Abbie E. Smith-Ryan**. (2020). Estimation of visceral adipose tissue: a device comparison. *SEACSM Regional Conference*. Jacksonville, FL. Poster Presentation.
- 35. Malia N.M. Blue*, Katie R. Hirsch, Gabrielle J. Brewer, Hannah E. Saylor, Lacey M. Gould, **Abbie E. Smith-Ryan**. (2020). The association between body mass index and body fat percentage: A comparison between races. SEACSM Regional Conference. Jacksonville, FL. Poster Presentation. Doctoral poster award finalist.
- 36. Casey E. Greenwalt*, Katie R. Hirsch, Malia N.M. Blue, Gabrielle J. Brewer, **Abbie E. Smith-Ryan** FACSM. (2019). Comparing body composition between Division I cross country runners and normal weight young adults. SEACSM Regional Conference. Jacksonville, FL. Poster Presentation.

- 37. Hannah E. Saylor*, Katie R. Hirsch, Gabrielle J. Brewer, Malia N.M. Blue, Alyson G. Nelson, **Abbie E. Smith-Ryan**. (2020). Characterization of physical activity and sedentary time across college years. SEACSM Regional Conference. Jacksonville, FL. Poster Presentation.
- 38. Gabrielle J. Brewer*, Malia N.M. Blue, Katie R. Hirsch, Alyson G. Nelson, **Abbie E. Smith-Ryan**. (2020). Comparison of waist and hip circumference measures from 3-dimensional technology and manual measurements. *SEACSM Regional Conference*. Jacksonville, FL, USA. Poster Presentation. Masters poster award finalist.
- 39. Lacey M. Gould*, Gabrielle J. Brewer, Katie R. Hirsch, Malia N.M. Blue, Hannah E. Saylor, **Abbie E. Smith-Ryan**. (2020). Effects of adiposity grade and body composition on adjusted resting energy expenditure in women. SEACSM Regional Conference. Jacksonville, FL. Poster Presentation.
- 40. Alyson G. Nelson*, Kara C. Anderson, Katie R. Hirsch, Malia N.M. Blue, Gabrielle J. Brewer, **Abbie E. Smith-Ryan** (2020). Muscle characterization among normal weight obese young adults. SEACSM Regional Conference. Jacksonville, FL. Poster Presentation.
- 41. Katie R. Hirsch*, Gabrielle J. Brewer, Malia N.M. Blue, Austin M. Peterjohn, **Abbie E. Smith-Ryan**. (2019). Validation of a 3-dimensional body scanner against dual-energy x-ray absorptiometry and a 4-compartment body composition measurement model. *ISSN Annual Conference*. Las Vegas, NV. Poster Presentation. Award winning poster.
- 42. Katie R. Hirsch*, Malia N.M. Blue, Austin M. Peterjohn, Gabrielle J. Brewer, **Abbie E. Smith-Ryan**. (2019). Comparison and validation of bioelectrical impedance and air displacement plethysmography against a 3-compartment body composition measurement model. *NSCA National Conference*. Washington D.C., USA. Poster Presentation. *Award winning poster.
- 43. Malia N.M. Blue*, Katie R. Hirsch, Austin M. Peterjohn, Gabrielle J. Brewer, **Abbie E. Smith-Ryan**. (2019). Validity of the 4-compartment model utilizing DXA-derived body volume in normal weight individuals. *NSCA National Conference*. Washington D.C., USA. Poster Presentation.
- 44. Gabrielle J. Brewer*, Malia N.M. Blue, Katie R. Hirsch, Austin M. Peterjohn, **Abbie E. Smith-Ryan**. (2019). Validation of bioelectrical impedance analysis compared to a four-compartment model criterion. *NSCA National Conference*. Washington D.C., USA. Poster Presentation.
- 45. Katie R. Hirsch*, Malia N.M. Blue, Gabrielle J. Brewer, Austin M. Peterjohn, **Abbie E. Smith-Ryan**. (2019). Seasonal body composition changes in division I cross country runners. *HMSC Research Symposium*. Chapel Hill, NC. Poster Presentation.
- 46. Gabrielle J. Brewer*, Malia N.M. Blue, Katie R. Hirsch, Austin M. Peterjohn, Samantha A. Kelchner, **Abbie E. Smith-Ryan**. (2019). Body composition characteristics and knee injury prevalence of NCAA division I women's soccer and lacrosse. *HMSC Research Symposium*. Chapel Hill, NC. Poster Presentation.
- 47. Malia N.M. Blue*, Katie R. Hirsch, Austin M. Peterjohn, Gabrielle J. Brewer, **Abbie E. Smith-Ryan**. (2019). The effect of race and position on abdominal adiposity in football linemen. *HMSC Research Symposium*. Chapel Hill, NC. Poster Presentation.
- 48. Katie R. Hirsch*, Malia N.M. Blue, Gabrielle J. Brewer, Austin M. Peterjohn, **Abbie E. Smith-Ryan**. (2019). Seasonal body composition changes in division I cross country runners. *ACSM Annual Meeting*. Orlando, FL. Poster Presentation.
- 49. Gabrielle J. Brewer*, Malia N.M. Blue, Katie R. Hirsch, Austin M. Peterjohn, Samantha A. Kelchner, Darin A. Padua, **Abbie E. Smith-Ryan**. (2019). Body composition characteristics and knee injury prevalence of NCAA division I women's soccer and lacrosse. *ACSM Annual Meeting*. Orlando, FL. Poster Presentation.
- 50. Anne E. Kim, Bona P. Purse, Katie R. Hirsch, Annette B. Rice, John A. McGrath, **Abbie E. Smith-Ryan**, Janet E. Hall. (2019). The effects of the menstrual cycle and caloric restriction on sleep in young women. Annual Endocrine Society Meeting. New Orleans, LA. Poster Presentation.
- 51. Katie R. Hirsch*, Malia N.M. Blue, Gabrielle J. Brewer, Austin M. Peterjohn, **Abbie E. Smith-Ryan**. (2019). Seasonal body composition changes in division I cross country runners. *SEACSM Regional Conference*. Greenville, SC. Poster Presentation.
- 52. Malia N.M. Blue*, Katie R. Hirsch, Eric T. Trexler, Austin M. Peterjohn, Gabrielle J. Brewer, **Abbie E. Smith-Ryan**. (2019). The effect of race and position on abdominal adiposity in football linemen. *SEACSM Regional Conference*. Greenville, SC. Poster Presentation.

- 53. Gabrielle J. Brewer*, Malia N.M. Blue, Katie R. Hirsch, Austin M. Peterjohn, Samantha A. Kelchner, **Abbie E. Smith-Ryan**. (2019). Body Composition Characteristics and Knee Injury Prevalence of NCAA Division I Women's Soccer and Lacrosse. *SEACSM Regional Conference*. Greenville, SC. Poster Presentation.
- 54. Malia N.M. Blue*, Kara C. Anderson, Katie R. Hirsch, Yvonne M. Golightly, **Abbie E. Smith-Ryan**. High intensity interval training, pain, and physical function in individuals with knee osteoarthritis. (2018) Obesity Week, Nashville, TN.
- 55. Katie R. Hirsch, Malia N.M. Blue, **Abbie E. Smith-Ryan**. Prediction of visceral adipose tissue from common clinical measures. (2018) Obesity Week, Nashville, TN.
- 56. **Abbie E. Smith-Ryan**, Katie R. Hirsch, Malia N.M. Blue, Eric T. Trexler, Robert Wildman. Provision of a ready to drink protein shake post bariatric surgery: a pragmatic clinical trial. (2018) Obesity Week, Nashville, TN.
- 57. Eric T. Trexler*, Kara C. Anderson, Alexis A. Pihoker, Gena R. Gerstner, Katie R. Hirsch, Malia N. M. Blue, Austin M. Peterjohn, Eric D. Ryan, **Abbie E. Smith-Ryan** (2018). Utility of a 4-Compartment dual-energy x-ray absorptiometry-derived body composition estimate in normal-weight and overweight adults. NSCA National Conference. Indianapolis, IN
- 58. Austin M. Peterjohn*, Kara C. Anderson, Katie R. Hirsch, Malia N. M. Blue, Alexis A. Pihoker, Eric T. Trexler, **Abbie E. Smith-Ryan**. (2018). Extracellular Fluid Volume as a Predictor of Obesity Among College Students. NSCA National Conference. Indianapolis, IN
- 59. Alexis A. Pihoker*, Austin M. Peterjohn, Eric T. Trexler, Katie R. Hirsch, Malia N.M. Blue, Kara C. Anderson, **Abbie E. Smith-Ryan**. (2018). Nutrient Timing in Resistance-Trained Females and Its Effects on Strength, Body Composition, and Acute Metabolic Adaptations. NSCA National Conference. Indianapolis, IN
- 60. Katie R. Hirsch*, Malia M. Blue, Eric T. Trexler, Kara C. Anderson, Alexis A. Pihoker, Austin M. Peterjohn, **Abbie E. Smith-Ryan**. (2018). Visceral adipose tissue norms in adults ages 18-75 years measured using dual energy x-ray absorptiometry. NSCA National Conference. Indianapolis, IN
- 61. Malia N. M. Blue*, Katie R. Hirsch, Eric T. Trexler, Alexis A. Pihoker, Austin M. Peterjohn, Kara C. Anderson, **Abbie E. Smith-Ryan**. (2018). Establishing Normative Fat Free Mass Index Values in Female Athletes. NSCA National Conference. Indianapolis, IN
- 62. Katie R. Hirsch*, Kara C. Anderson, Alexis A. Pihoker, Meredith G. Mock, Malia M.N. Blue, Austin M. Peterjohn, Eric T. Trexler, **Abbie E. Smith-Ryan**. (2018). The relationship between absolute and relative lean mass with cardiometabolic outcomes. *ISSN Annual Conference*. Clearwater, FL. Poster Presentation. <u>PhD poster award winner</u>.
- 63. Malia N. M. Blue*, Katie R. Hirsch, Eric T. Trexler, Kara C. Anderson, Alexis A. Pihoker, Austin M. Peterjohn, **Abbie E. Smith-Ryan**. (2018). Bone mineral density in NCAA Division I female athletes. *ISSN Annual Conference*. Clearwater, FL. Poster Presentation.
- 64. KC Anderson*, KR Hirsch, MNM Blue, AM Peterjohn, GL Nuckols, ET Trexler, AA Pihoker, **AE Smith-Ryan**. The Characterization of Normal Weight Obesity in College Students. *ACSM National Conference*. Minneapolis, MN
- 65. GL Nuckols*, KC Anderson, AM Peterjohn, KR Hirsch, MNM Blue, AA Pihoker, ET Trexler, **AE Smith-Ryan**. Influence of sex on the relationship between two estimates of visceral adipose tissue. *ACSM National Conference*. Minneapolis, MN
- 66. AA Pihoker*, ET Trexler, AM Peterjohn, GL Nuckols, MNM Blue, KR Hirsch, KC Anderson, **AE Smith-Ryan**. Characterization of Fat-Free Mass Index and Body Fat Mass Index: Relationship to Strength Performance in Resistance-Trained Females. *ACSM National Conference*, Minneapolis, MN. 2018
- 67. Katie R. Hirsch*, Malia N.M Blue, Kara C Anderson, Eric T Trexler, Brittney A Luc-Harkey, Hope C Davis, Brian Pietrosimone, **Abbie E Smith-Ryan**. The Use of Dual Energy X-Ray Absorptiometry for the Identification of Knee Osteoarthritis. ACSM National Conference. Minneapolis, MN, 2018
- 68. Kara C. Anderson*, KR Hirsch, MNM Blue, AM Peterjohn, GL Nuckols, AA Pihoker, ET Trexler, **Abbie E Smith-Ryan**. The association between waist to hip ratio and android to gynoid fat ratio in college women with a normal BMI. *SEACSM Regional Conference*. Chattanooga, TN
- 69. Greg L. Nuckols*, Kara C. Anderson, Austin M. Peterjohn, Katie R. Hirsch, Malia N.M. Blue, Alexis A Phioker, Eric T. Trexler, **Abbie E Smith-Ryan**. No relationship between dual-energy X-ray absorptiometry and ultrasound estimates of visceral adipose tissue in collegiate women with normal BMI. *SEACSM Regional Conference*. Chattanooga, TN

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- 166. Jerry L. Mayhew, W.F. Brechue, **Abbie E. Smith**, Alex J. Koch. Effect of heavy resistance training on low- and high-intensity upper-body work capacity in college men. *National Strength and Conditioning Association*. Orlando, FL 2010, 25 (Suppl 1), S72-S73.
- 167. Jordan R. Moon, **Abbie E. Smith**, Kristina L. Kendall, Jennifer L. Graef, David H. Fukuda, Travis W. Beck, Joel T. Cramer, Marshall L. Rea, Jeffrey R. Stout. Concerns and limitations of dual-energy x-ray absorptiometry (DXA) for

- the evaluations of fat and fat-free mass in older men and women. *Journal of Strength and Conditioning Research*. 24: P1, 2010.
- 168. **Abbie E. Smith**, David H. Fukuda, Kristina L. Kendall, Jennifer L. Graef, Jordan R. Moon, Jeffrey R. Stout. Acute pre-exercise supplementation improves times to exhaustion during high-intensity running in men and women. *Journal of Strength and Conditioning Research*. 24: P1, 2010.
- 169. David H. Fukuda, **Abbie E. Smith**, Jennifer L. Graef, Kristina L. Kendall, Jordan R. Moon, Jeffrey R. Stout. Acute effects of a pre-exercise supplement on critical velocity and anaerobic running capacity in college-aged men and women. *Journal of Strength and Conditioning Research*. 24: P1, 2010
- 170. Kristina L. Kendall, Jennifer L. Graef, David H. Fukuda, **Abbie E. Smith**, Jordan R. Moon, Travis W. Beck, Joel T. Cramer, and Jeffrey R. Stout. The effects of four weeks of high-intensity interval training and creatine supplementation on critical power and anaerobic working capacity in college-aged men. *Journal of Strength and Conditioning Research*. 24: P1, 2010
- 171. Jennifer L. Graef, Kristina L. Kendall, David H. Fukuda, **Abbie E. Smith**, Jordan R. Moon, Travis W. Beck, Joel T. Cramer, Jeffrey R. Stout. The effects of four week of high-intensity interval training and creatine supplementation on cardiorespiratory fitness in college-aged men. *Journal of Strength and Conditioning Research*. 24: P1, 2010
- 172. **Abbie E. Smith**, Jordan R. Moon, Christopher M. Lockwood, Kristina L. Kendall, David H. Fukuda, Joel T. Cramer and Jeffrey R. Stout. Low-calorie thermogenic beverage and exercise improves body composition and lipid profile in overweight and obese women. *American College of Nutrition*. Fort Lauderdale, FL. 2009
- 173. Jordan R. Moon, **Abbie E. Smith**, Kristina L. Kendall, Jennifer L. Graef, David H. Fukuda, Christopher M. Lockwood, Travis W. Beck, Joel T. Cramer, Marshall L. Rea, and Jeffrey R. Stout. Analysis of total body and segmental muscle mass in elderly men and women using bioimpedance: a dual-energy x-ray absorptiometry comparison. *American College of Nutrition*. Fort Lauderdale, FL. 2009
- 174. **Abbie E. Smith**, David H. Fukuda, Kristina L. Kendall, Jennifer L. Graef, Jordan R. Moon, Jeffrey R. Stout. The combined effects of a pre-workout supplement and three-weeks of high-intensity interval training on anaerobic and aerobic performance and body composition in men and women. *Journal of the International Society of Sports Nutrition*. 2009, 6 (Suppl 1): P16
- 175. Jordan R. Moon, **Abbie E. Smith**, Sarah E. Tobkin, Christopher M. Lockwood, Kristina L. Kendall, Jennifer L. Graef, Michael D. Roberts, Vincent J. Dalbo, Chad M. Kerksick, Joel T. Cramer, Travis W. Beck, and Jeffrey R. Stout. Tracking changes in body fat using commercially available BIA devices compared to a four-compartment model. *Medicine & Science in Sports & Exercise*. 41(5) Supplement: S320, May 2009.
- 176. Jerry L. Mayhew, Alexander J. Koch, Bryant England, **Abbie E. Smith**. *Medicine & Science in Sports & Exercise*. 41(5) Supplement: S387, May 2009.
- 177. **Abbie E. Smith**, Ashley A. Walter, Kristina L. Kendall, Jennifer L. Graef, Christopher M. Lockwood, Jordan R. Moon, Travis W. Beck, Joel T. Cramer, Jeffery R. Stout. Beta-alanine supplementation and high-intensity interval training augments metabolic adaptations and endurance performance in college-aged men. *Journal of the International Society of Sports Nutrition*. 2008, 5(Suppl 1):P5
- 178. Jeffrey R. Stout, Jordan R. Moon, Sarah E. Tobkin, Christopher M. Lockwood, **Abbie E. Smith**, Jennifer L. Graef, Kristina L. Kendall, Travis W. Beck, Joel T. Cramer. Pre-workout consumption of Celsius® enhances the benefits of chronic exercise on body composition and cardiorespiratory fitness. *Journal of the International Society of Sports Nutrition*. 2008, 5(Suppl 1):P8
- 179. Sarah E. Tobkin, Jordan R. Moon, Ashley A. Walter, **Abbie E. Smith**, Christopher M. Lockwood, Travis W. Beck, Joel T. Cramer, and Jeffery R. Stout. Tracking percent fat changes in overweight men and women participating in a weight loss intervention: An evaluation of laboratory methods. *Journal of Strength and Conditioning Research*. 22(6): P31-32, 2008.
- 180. **Abbie E. Smith**, Jennifer L. Graef, Ashley A. Walter, Kristina L. Kendall, Christopher M. Lockwood, Jordan R. Moon, Travis W. Beck, Joel T. Cramer, and Jeffery R. Stout. Effects of 3 weeks of high-intensity interval training and β-alanine supplementation on endurance performance and aerobic metabolism in college-aged men. *Journal of Strength and Conditioning Research*. 22(6): P50, 2008.
- 181. Ashley A. Walter, Kristina L. Kendall, **Abbie E. Smith**, Jennifer L. Graef, Sarah E. Tobkin, Christopher M. Lockwood, Jordan R. Moon, Travis W. Beck, Joel T. Cramer, and Jeffery R. Stout. Short-term, high-intensity

- interval training and β -alanine loading enhances performance and metabolic adaptations in women. *Journal of Strength and Conditioning Research*. 22(6): P51, 2008.
- 182. Jerry L. Mayhew, Evonne Bird, **Abbie E. Smith**, Scott Roberts, Alexander J. Koch. Changes in muscular endurance following resistance training in college women. *Journal of Strength and Conditioning Research*. 22(6): P51, 2008
- 183. Jordan R. Moon, Sarah E. Tobkin, Ashley A. Walter, **Abbie E. Smith**, Christopher M. Lockwood, Travis W. Beck, Joel T. Cramer, and Jeffrey R. Stout. A new simplified method for tracking body volume changes using digital image plethysmography (DiP). *International Journal of Body Composition Research*. 6(2) 3-OR: p.62, 2008.
- 184. **Abbie E. Smith**, Ashley A. Walter, Kristina L. Kendall, Jennifer L. Graef, Jordan R. Moon, Christopher M. Lockwood, Travis W. Beck, Joel T. Cramer, Jeffrey R. Stout. The relationships among endurance performance measures as estimated from VO2peak, ventilatory threshold and electromyographic fatigue threshold. *Medicine & Science in Sports & Exercise*. 40(5) Supplement: S270-S271, May 2008.
- 185. Ashley A. Walter, **Abbie E. Smith**, Kristina L. Kendall, Jennifer L. Graef, Jordan R. Moon, Christopher M. Lockwood, Travis W. Beck, Joel T. Cramer, Jeffrey R. Stout. Relationships among maximal oxygen consumption, ventilator threshold, and electromyographic fatigue threshold as performance assessments in college women. *Medicine & Science in Sports & Exercise*. 40(5) Supplement: S270-S271, May 2008.
- 186. Jordan R. Moon, Sarah E. Tobkin, Ashley A. Walter, **Abbie E. Smith**, Travis W. Beck, Joel T. Cramer, and Jeffrey R. Stout. A simplified method for estimating body volume in men and women using digital image plethysmography (DiP). *Medicine & Science in Sports & Exercise*. 40(5) Supplement: S270-S271, May 2008.
- 187. Christopher M. Lockwood, Sarah E. Tobkin, Jordan R. Moon, Ashley A. Walter, **Abbie E. Smith**, Joel T. Cramer, Travis W. Beck and Jeffrey R. Stout. Minimal Nutrition Intervention with Meal Replacement Improves Body Composition and Exercise Benefits in Overweight Adults. *Medicine & Science in Sports & Exercise*. 40(5) Supplement: S324, May 2008.
- 188. Jennifer L. Graef, Kristina L. Kendall, **Abbie E. Smith**, Ashley A. Walter, Travis W. Beck, Joel T. Cramer, Jeffrey R. Stout. The effects of acute high-intensity interval endurance training in men and women. *Medicine & Science in Sports & Exercise*. 40(5) Supplement: S324, May 2008.
- 189. Jordan R. Moon, Sarah E. Tobkin, Ashley A. Walter, **Abbie E. Smith**, Vincent J. Dalbo, Joel T. Cramer, Jeffrey R. Stout. Validity of Laboratory and Field Methods for estimating percent body fat in college female athletes: A multiple component approach. *Journal of Strength and Conditioning Research*. 21(4):e18, 2007.
- 190. **Abbie E. Smith**, Ashley A. Walter, Trent J. Herda, Eric D. Ryan, Jordan R. Moon, Joel T. Cramer, Joel T. Stout. Effects of creatine loading on electromyography fatigue threshold during cycle geometry in college-aged women. *Journal of Strength and Conditioning Research*. 21(4):e40, 2007.
- 191. Ashley A. Walter, **Abbie E. Smith**, Trent J. Herda, Eric D. Ryan, Jordan R. Moon, Joel T. Cramer, Joel T. Stout. Effects of creatine loading on electromyography fatigue threshold during cycle geometry in college-aged men. *Journal of Strength and Conditioning Research*. 21(4):e40, 2007
- 192. **Abbie E. Smith**, Ashley A. Walter, Jordan R. Moon, Sarah E. Tobkin, Christopher M. Lockwood, Joel T. Cramer, Jeffrey R. Stout. The effects of a 10-week minimal nutritional intervention with a meal replacement (FullStrength®) and exercise on cardiovascular fitness. *International Society for Sports Nutrition*. Las Vegas NV 2007.
- 193. Jordan R. Moon, Sarah E. Tobkin, Ashley A. Walter, **Abbie E. Smith**, Christopher M. Lockwood, Joel T. Cramer, Jeffrey R. Stout. Effects of a 10-week minimal nutritional intervention with a meal replacement (FullStrength®) and exercise on body composition and strength changes. *International Society for Sports Nutrition*. Las Vegas, NV. 2007.
- 194. Ashley A. Walter, Eric D Ryan, **Abbie E Smith**, JR Moon, VJ Dalbo, HR Hull, M Karabulut, M Roberts, SE Tobkin, M Teramoto, SJ Kim, JT Cramer, and JR Stout. Validity of laboratory and field methods for estimating percent fat in college aged Caucasian women. *Medicine & Science in Sports & Exercise*. 39(5) Supplement: S373, May 2007.
- 195. **Abbie E. Smith**, Jay A. Hur, Holly R. Hull, David A. Fields, Chad Kerksick. Varying doses and composition of a popular energy drink on resting energy expenditure and body composition. *Medicine & Science in Science in Sports and Exercise*. Oral Presentation. 2007.
- 196. **Abbie E. Smith**, Jerry L. Mayhew, D. Louber, W. Kemmler. Comparison of free weights and machine weights for enhancing bench press strength in young women. *Journal of Strength and Conditioning Research*. 20(4):e32, 2006.
- 197. **Abbie E. Smith**, Jerry L. Mayhew, Blair D. Johnson. Specificity and generality of strength development in the bench press of college men. *Journal of Strength and Conditioning Research*. 20(4):e37, 2006.

- 198. **Abbie E. Smith**, Jerry L. Mayhew, Alexander J. Koch. Scott B. Roberts. Urine specific gravity and osmolality measurements in a college football team. *Medicine and Science in Sports and Exercise*. 38(5) Supplement:S26, May 2006
- 199. Scott B. Roberts, **Abbie E. Smith**, Liz Jorn, Jerry L. Mayhew. Assessing body composition using different measurement techniques in college wrestlers. *Medicine and Science in Sports and Exercise* 38(5) Supplement: S26, May 2006.
- 200. Calie Fulmer, Allison M. Blyth, **Abbie E. Smith**, Alexander J. Koch. Correlation among upper respiratory tract infections and exercise performance across a season of competitive swimming. *Journal of Strength and Conditioning Research*. 19(4):e16, 2005.
- 201. Blair D. Johnson, S.A. Lumpp, Abby M. Souders, **Abbie E. Smith**, Dyane E. Tower, Jerry L. Mayhew. Anthropometric prediction of absolute and relative bench press strength in adult women. *Journal of Strength and Conditioning Research*. 19(4):e21, 2005.
- 202. Dyane E. Tower, Abby M. Souders, **Abbie E. Smith**, Jerry L. Mayhew. Differences in the oxygen cost and caloric expenditure of squats and leg presses in women. *Journal of Strength and Conditioning Research*. 19(4):e36, 2005.
- 203. **Abbie E. Smith**, Scott B. Roberts, Alexander J. Koch, Jerry L. Mayhew. Time of day effect on urine specific gravity and osmolality measurements. *Medicine and Science in Sports and Exercise*. 37(5) Supplement:S26, May 2005
- 204. **Abbie E. Smith**, Jerry L. Mayhew. Correlation between stress fractures in female track athletes and daily dietary habits. *Missouri Association for Physical Recreation and Dance*, Lake of the Ozarks, MO, 2004.
- 205. **Abbie E. Smith**, Evonne Bird, Jerry L. Mayhew. Skinfold reliability investigation on large male athletes. *Missouri Association for Physical Recreation and Dance*, Ozarks, MO 2003.

INVITED SCHOLARLY PRESENTATIONS

- 1. **Abbie E. Smith-Ryan**. Creatine supplementation for women across the lifespan. *International Creatine Conference* Mar 2022
- 2. **Abbie E. Smith-Ryan**, Nutritional Considerations for Active Women. *Counsel for Responsible Nutrition*

Laguna Nigel, CA, Oct 2021

- 3. Abbie E. Smith-Ryan, Dietary Supplements for Women: time for more than the pink it and shrink it approach
 - International Society of Sports Nutrition Symposium Virtual Oct 2021
- 4. **Abbie E. Smith-Ryan**, Women Athletes: Fit for Purpose Functional Ingredients. *Gatorade Sports Science Institute Expert Panel*Virtual, Sept 2021
- 5. **Abbie E. Smith-Ryan**, Macronutrients and Supplements for Women, *Pepsi Co Research & Development* Virtual, July 2021
- 6. **Abbie E. Smith-Ryan**, High intensity interval training- an update on old school sprints.

National Strength & Conditioning Association National Conference Orlando FL, July, 2021

- 7. **Abbie E. Smith-Ryan**, Maximizing body composition & metabolism with exercise and nutrition.
 - MySportsRD Symposium Virtual, June 2021
- 8. **Abbie E. Smith-Ryan**, Nutrition for Athletic Women, *Naturally Informed*

- Virtual, June 2021
- 9. **Abbie E. Smith-Ryan** & Shawn Arent, Nutritional consideration for Surgery. *American Society of Nutrition* Virtual, June 2021
- 10. **Abbie E. Smith-Ryan**, Nutrient Timing for Sport and Exercise *North Carolina Dietetics Association* Virtual, Apr 2021
- 11. **Abbie E. Smith-Ryan**, COVID-19- Using DXA to understand the uncertain physiological effect so quarantine & remote training. *Collegiate Professional Sports Dietetics Association.* Virtual, Mar 2021
- 12. **Abbie E. Smith-Ryan**, High intensity interval training, a rehabilitative approach. *University of Central Florida Human Performance Seminar*. Virtual, Mar 2021
- 13. **Abbie E. Smith-Ryan**, Nutritional Considerations for Injuries. *Southeast Athletic Training Association* Virtual, Feb 2021
- 14. **Abbie E. Smith-Ryan**, Physiological considerations for males and females in exercise and nutrition research, *Texas Regional American College of Sports Medicine*. Virtual, Feb 2021
- 15. **Abbie E Smith-Ryan**, Body Composition: An Update to technology, *ISSN International Conference* Virtual, Feb 2021

- 16. **Abbie E. Smith-Ryan**, Nutrition for injury prevention. *Major League Baseball Winter Training, CPSDA* Virtual, Dec 2020
- 17. **Abbie E. Smith-Ryan**, High intensity interval training in type 1 diabetes. *NC Diabetes Research Center*. Virtual, Sep 2020
- Abbie E Smith-Ryan, Evidence based application of dietary supplements. Collegiate Professional Sports Dietetics Association Annual Meeting Virtual, May 2020
- 19. Abbie E. Smith-Ryan. Dietary Supplements. Ft. Bragg United States Special Operations Command

Ft. Brag, NC Dec 2019

- 20. **Abbie E. Smith-Ryan** Dietary Supplements: Application to Special Operators. *United States Special Operations Command Symposium* CO Springs, July 2019
- 21. **Abbie E. Smith-Ryan**. Therapeutic Approaches to Nutrition. *Seattle Sounders Performance*. Seattle, WA June 2019
- 22. **Abbie E. Smith-Ryan**. Body composition: A whole body approach to performance and injury prevention. *Jacksonville Human Performance Symposium*. Feb 2019
- 23. **Abbie E. Smith-Ryan.** High intensity interval training for athletic populations. *Chinese Olympic Committee*, Chapel Hill, NC Dec 2018
- 24. **Abbie E. Smith-Ryan**. Prevalence of the 'skinny fat' phenotype among young adult men and women. *Obesity Week*. Nashville, TN November 2018
- 25. Abbie E. Smith-Ryan. High intensity exercise; evidence-based rehabilitation approach. UAB Exercise is Medicine, Sep 2018
- 26. Abbie E. Smith-Ryan. Maximizing body composition and metabolism with nutrition and exercise. NSCA National, IN, 2018
- 27. **Abbie E. Smith-Ryan**. Maximizing performance and injury prevention: key nutritional considerations. *Chinese Olympic Committee*, Chapel Hill NC, Jan, Mar, Apr 2018.
- 28. Abbie E. Smith-Ryan. Nutrition and exercise strategies to modify body composition. NSCA State Clinic. Raleigh, NC Nov 2017
- 29. **Abbie E. Smith-Ryan**. Provision of RTD protein post bariatric surgery: compliance and efficacy. Food & Nutrition Conference & Expo. Chicago, IL October 2017
- 30. Abbie E. Smith-Ryan. Nitrates and Exercise Performance. Dymatize-ISSN Sports Nutrition Summit. Dallas, TX. January 2017
- 31. **Abbie E. Smith-Ryan**. Supplements and Nutrition for the Active Female. *Women's Fitness Summit*. Kansas City, KS. August 2016.
- 32. **Abbie E. Smith-Ryan**. Lifestyle and Nutritional Considerations for women. *International Society of Sports Nutrition Symposium*. London, UK. April 2016.
- 33. **Abbie E. Smith-Ryan**. Body Composition Measurements: Recent scientific findings & insights into injury prevention and quality of life. *Collegiate Professional Sports Dietetics Association Human Kinetics Webinar*. January 2016.
- 34. **Abbie E. Smith-Ryan**. High-intensity interval training. *Texas Regional American College of Sports Medicine*. Austin, TX. February 2015.
- 35. **Abbie E. Smith-Ryan**. Body composition- applications for the professional. *National Strength and Conditioning Association Coaches Conference*. Durham, NC. January 2015.
- 36. **Abbie E. Smith-Ryan**. The potential of pomegranate to enhance blood flow. *Dymatize Nutrition Summit*. Dallas, TX January 2015.
- 37. **Abbie E. Smith-Ryan**. Nutritional Considerations for Women. *National Strength and Conditioning Association Personal Trainers Conference*. Washington, DC. October 2014.
- 38. **Abbie E. Smith-Ryan**, Dominic D'Agostino, Layne Norton, Bill Campbell. Metabolic Adaptation Roundtable. *International Society of Sports Nutrition National Conference*. Clearwater Beach, FL. June 2014.
- 39. **Abbie E. Smith-Ryan**. Beta-Alanine Supplement testing and Safety. *International Society of Sports Nutrition Europa University*. Orlando, FL. April 2014.
- 40. **Abbie E. Smith-Ryan**. Science of Supplementation for Women. *Rutgers Sports Science Summit*. New Brunswick, NJ. March 2014.
- 41. **Abbie E. Smith-Ryan**. Building a Better Athlete. *Florida State University Sports Nutrition Conference*. Tallahassee, FL. January 2014.

- 42. **Abbie E. Smith-Ryan**. Nutrition and Supplement Education. *Dynatize Nutrition Summit*. Dallas, TX. January 2014.
- 43. **Abbie E. Smith-Ryan**. Evidenced-based supplementation. *University of Tampa- International Society of Sports Nutrition Conference*. Tampa, FL. February 2013.
- 44. **Abbie E. Smith-Ryan**. Is it in you? Optimal nutrition for promoting physical activity in obese youth. *Pediatric Obesity Summit: East Carolina University*. Greenville, NC. November 2012.
- 45. **Abbie E. Smith-Ryan**. Exercise and Nutritional Strategies for Weight loss. *National Strength and Conditioning Association National Conference*. Baltimore, MD July 2012.
- 46. **Abbie E. Smith-Ryan** and Colin D. Wilborn. Use of Nutritional supplements in sport. *National Strength and Conditioning Association National Conference*. Baltimore, MD July 2012.
- 47. **Abbie E. Smith-Ryan**. Beta-alanine and Exercise Performance. *Carnosine Congress*. Ghent, Belgium. July 2011.
- 48. **Abbie E. Smith-Ryan**. The Spine Tingling World of Beta-Alanine. *International Society of Sports Nutrition National Conference*. Las Vegas, NV. June 2011.
- 49. **Abbie E. Smith-Ryan**. Training & Nutritional Strategies to Delay Fatigue. *National Strength and Conditioning Association Personal Trainers Conference*. Las Vegas, NV. March 2011.
- 50. **Abbie E. Smith-Ryan**. The Science of Supplementation. *National Strength and Conditioning Association National Conference*. Orlando, FL. July 2010.
- 51. **Abbie E. Smith-Ryan**. Fundamentals of Beta-Alanine. *Grupo Sobre Entrenamiento International Sports Nutrition Symposium*. Online Symposium. June 2010.
- 52. **Abbie E. Smith-Ryan**. Beta-Alanine: Guidelines & Use. *Grupo Sobre Entrenamiento International Sports Nutrition Symposium*. Online Symposium. May 2010.
- 53. Abbie E. Smith-Ryan. Amino Acids. International Society of Sports Nutrition Workshop. Scottsdale, AZ. February, 2010.
- 54. Abbie E. Smith-Ryan. Protein- mind over money. Arnold Classic Sports Summit. Columbus, OH. March 2010.

Teaching Activities

Fall 2021

EXSS 360 Sports Nutrition: n=36

*reduced course load due to grant funding

Spring 2021

*Research and Study Leave

Fall 2020

EXSS 360 Sports Nutrition: n=34

*reduced course load due to grant funding

Spring 2020

EXSS 360 Sports Nutrition: n=31

EXSS 792 Nutrition in Exercise: n=5

HMSC 877 Independent Study in HMSC n=1

NUTR 295 UG Research Experience in Nutrition n=1

Fall 2019

EXSS 360 Sports Nutrition: n=38

EXSS 990 Research in EXSS n=1

NUTR 295 UG Research Experience in Nutrition n=1

Spring 2019

EXSS 360 Sports Nutrition: n=33

HMSC 877 Independent Study n=2

Fall 2018

EXSS 360 Sports Nutrition: n=36

EXSS 376 Physiology of Human Performance n=41

EXSS 693H Seniors Honors Thesis: n=1

Doctoral Dissertation Committees – Advisor (4)

Samantha Moore. Human Movement Science Curriculum, UNC-Chapel Hill, Expected May 2025

Hannah E. (Saylor) Cabre. Human Movement Science Curriculum, UNC-Chapel Hill, Expected May 2023.

Malia N.M. Blue. Validity of Body Composition Assessment in Racial and Ethnic Minority Populations. Human Movement Science Curriculum, UNC- Chapel Hill. May 2020

Katie R. Hirsch. Metabolic effects of high-intensity interval training and essential amino acid supplementation. Human Movement Science Curriculum, UNC- Chapel Hill. May 2020

Eric T. Trexler. Performance effects of citrulline malate and beetroot juice supplementation. Human Movement Science Curriculum, UNC-Chapel Hill. *Royster Fellow. December 2019

Doctoral Dissertation Committees – Member

Jacob Mota. Neuromuscular time course effects of high intensity interval training. Human Movement Science Curriculum, UNC-Chapel Hill. May 2020.

Gena Gerstner. The influence of obesity and stress on muscle fatigability and steadiness in career firefighters. Human Movement Science Curriculum, UNC-Chapel Hill. May 2019.

Amy Lane. Low energy availability prevalence and impact on endocrine status and bone health in male endurance athletes. Human Movement Science Curriculum, UNC-Chapel Hill. May 2019.

Carleigh Boone, Noninvasive myographical assessments following unaccustomed resistance exercise. University of Central Florida. May 2019.

Rachel McMullan. Exercise and Genetics. Department of Genetics. School of Medicine. UNC- Chapel Hill. May 2018.

Eric Sobolewski. The time course changes in neuromuscular function during and following creatine loading. Human Movement Science Curriculum. UNC- Chapel Hill. May 2014.

Master's Thesis Committees – Advisor (16)

*Department of Exercise and Sport Science at UNC- Chapel Hill, unless otherwise specified.

Amanda Gordon, Effects of creatine monohydrate loading on recovery and performance outcomes in healthy women throughout the menstrual cycle. May 2022 (Anticipated)

Andrew Hoyle, May 2022 (TBD)

Lacey M. Gould. Metabolic effects of menopause: implications for body composition and exercise capacity. May 2021.

Gabrielle Brewer. Acute feeding: influence on the validity of dual-energy x-ray absorptiometry body composition measurement. May 2020

Austin Peterjohn. Changes in body composition and cardiometabolic health observed in normal weight college students across each college year. May 2019

Alexis Pihoker. Nutrient timing in resistance trained women. May 2018

- Kara Anderson. Evaluation of normal weight obesity in college students. May 2018
- Meredith Mock. The effects of probiotics on body composition, exercise tolerance, and mood in shift workers. May 2017.
- Katie Hirsch. Hormones associated with body composition and satiety in overweight men and women. May 2016.
- Eric Trexler. Combinatory effects of caffeine and creatine on exercise performance and uptake. May 2015.
- Erica Roelofs. The effects of pomegranate extract on anaerobic performance, repeated sprint ability and blood flow. May 2015.
- Hailee Wingfield. Energy expenditure and respiratory exchange ratio differences between high intensity interval training, high intensity resistance training, and aerobic training, with or without carbohydrate and protein pre-ingestion, in women. May 2014.
- Malia Melvin. Muscle quality and body composition of NCAA Division I Football Players. May 2014
- Sarah Fultz. Validity of a-mode ultrasound compared to a 3-compartment criterion in overweight and obese adults. May 2013.
- Mary Woessner. The effect of beta-alanine supplementation on physical working capacity at heart rate threshold. May 2013.

Master's Thesis Committees – Member (13)

James Merritt. Test-retest Reliability of a Peripheral Quantitative Computed Tomography Scanner for Measuring Muscle Size and Composition in Young and Older Men and Women. August 2022.

- Kealey Wohlgemuth. Changes in health and fitness in firefighter recruits. May 2021
- Alyssa Hammock. Training volume and body composition in field hockey. May 2019.
- Abbie Trivisonno. The influence of age on the recovery from worksite resistance exercise. May 2019.
- Nicolas Shea. Effects of acute supine rest on mid-thigh cross-sectional area and echo intensity as measured by ultrasonography. May 2017.
- Taylor Saimeri. The relationship between injuries and body composition in cross country athletes. May 2017.
- Andrew Tweedell. The effect of a meal replacement shake on body composition, blood lipids, and skeletal muscle characteristics in overweight and obese firefighters. May 2016.
- Joseph Rosenberg. Age-related differences in rapid torque production: influence of muscle size, quality, architecture, and activation. May 2015.
- Elizabeth Walz. The Effect of Estrogen on Inflammatory Markers Following Prolonged Aerobic Exercise in Eumenorrheic Women. May 2014.
- Dustin Buttars. A Comparison Between Estimated and Direct Measurements Of Oxygen Uptake In Breast Cancer Survivors. May 2013.
- Jamie Simmerly. The effect of email communication on adherence and compliance in a cardiac rehabilitation exercise program. May 2013.

Deanna Babcock. The Effect of Psychological Stress, Training Load, and Energy Availability on the Prevalence of Athletic Amenorrhea in NCAA DI and DIII Distance Runners. May 2012.

Cecily Lehman. The Effect of Estradiol on Insulin Concentration in Response to an Acute Bout of Exercise. May 2012.

Stephanie Bomberger. Clinical balance assessments for older adults: an analysis of cognitive load. May 2012.

Undergraduate Thesis Committees

Pinyu Chen. May 2020 (Committee)

Shawn Ahuja. The effect of exercise modality on appetite. May 2019 (Primary mentor)

Yana Ginzburg. The influence of lower extremity biomechanics and body composition on lower extremity stress fracture risk. May 2016

Caroline Campbell. Injury and biomechanics among female collegiate gymnasts. May 2015.

Jonathan Alex Miles. Relationship between perceived and objective health-related physical fitness among female university students. May 2013.

Undergraduate Research Mentees

Jillian Vordick 2021-present
Noah Patterson 2021-present
Maggie Hostetter 2021-present
Katie Culpepper 2020
Alyson Nelson 2018-2021
Matt Mckenna 2020
Kendall Kanakanui 2020
Dalton Wheeless, 2020
Casey Greenwalt 2019
Shawn Ahuja 2016-2019

Emily Gascoigne, 2019

Miles Salvatore, 2019

Liz Thompson, 2018

CONTRACTS

National Football Players Association, The Trust

Jan 2014-Current

PI: Kevin Guskiewicz, Kevin Carneiro

• Co-Investigator (2% effort), **Abbie E. Smith-Ryan**: Member of the brain body and health clinical team. Body composition and nutritional analysis for retired NFL athletes.

GRANTS, FUNDING, AND ACQUIRED EQUIPMENT

CURRENT SUPPORT

Federal

NIH R21 CA235029-01

Title: High intensity interval training as an innovative therapeutic intervention for obesity-driven endometrial cancer

Role: Lead PI (20%) Period: Jan 2019-Dec 2022 Amount: **\$425,582.00**

NIH 1DP3DK113358

Title: Advancing Care for Type I Diabetes and Obesity Network (ACT1on) DP3 Smart Trial

Role: Co-Investigator (2%) Period: July 2018-May 2022 Amount: **\$2,154,388.00**

North Carolina Diabetes Research Center (P30 KD124723)

Title: Metabolic, hormonal, & physiological characterization of isoenergetic high intensity interval training moderate

intensity continuous training in adults with type 1 diabetes.

Role: Lead PI (20%)

Period: September 2020-August 2022

Amount: \$100,000.00

NIOSH Small Research Grant Program (R03)

Title: Feasibility of a train-the-trainer delivered exercise intervention in firefighters

Role: Co-Investigator (2.5%)

Period: September 2019-August 2021

Amount: \$152,293.21

Non-Federal

Kyowa Hakko Bio Co., LTD

Title: The effects of l-citrulline + glutathione on endurance performance

Role: Principal Investigator (3%) Period: August 2019-April 2022

Amount: \$111,072.00

Nuskin International, Inc (NSEP)

Title: A randomized, double-blind, placebo controlled single center study to evaluate the effect of pre-workout and recovery

formulations on soreness, performance, tolerance and safety in healthy adults.

Role: Principal Investigator (5%) Period: August 2019-May 2022

Amount: \$208,858.56

IN REVIEW

Federal

American Heart Association, Career Development Award

Title: Applying low-load blood flow restriction to mitigate cardiovascular disease in postmenopausal women

Role: Mentor (10%)

Period: May 2022-August 2024

Amount: \$231,000.00

National Institutes of Health F31 NIDDK

Title: Characterizing the effect of peri-exercise protein intake on glycemic excursions

Role: Co-Principal Investigator/Mentor (2.6%)

Period: Sep 2022-Aug 2024

Amount: \$95,849.00

National Institutes of Health R01

Title: Optimizing telehealth-delivery on a weight loss intervention in older adults with multiple chronic conditions: a

 $sequential, \ multiple \ assignment, \ randomized \ trial.$

Role: Co-Investigator (10%) Period: Jan 2023-Aug 2024 Amount: \$3,864,181.67

National Institutes of Health R01

Title: Promoting physical activity in overweight or obese young adults with type 1 diabetes in a hypocaloric context: a pilot

and feasibility trial

Role: Co-Investigator (3%) Period: Dec 2022-Nov 2025 Amount: **\$929.066.32**

Department of Defense

Title: The Female Warfighter: a comprehensive study of female performance and physiology

Role: Co-Principal Investigator (23%)

Period: July 2022-Sep 2024 Amount: **\$3,086,017**

Non-Federal

National Strength and Conditioning Association

Title: Hormonal contraception effects on protein turnover, maximal strength, and muscle quality across the hormone cycle.

Role: PI/Faculty Advisor Period: July 2022-July 2023

Amount: \$15,000

Nutrasource

Title: A Prospective Randomized, Double-Blind, Placebo Controlled Study to Evaluate Supplemental Astaxanthin in

Healthy Adult Subjects Role: Principal Investigator Period: Aug 2021-July 2023 Amount: \$225,400.00

Nutrasource

Title: A Randomized Double-Blind Placebo Controlled Trial To Evaluate a Standardized

CBD Product as Compared to Placebo for Feelings of Stress and Quality of Life in Healthy Adults Who Complain of Stress

Impacting Their Quality of Life Role: Principal Investigator Period: Aug 2021-July 2023 Amount: \$136,000.00

Nutrasource

Title: A Randomized Double-Blind Placebo Controlled Trial to Evaluate a Dietary Supplement Formula on Quality of Life,

Stress Levels and Feelings of Well-Being in Adult Females that Complain of Stress Impacting Their Daily Lives.

Role: Principal Investigator Period: Aug 2021-July 2023 Amount: **\$100,000.00**

Hologic

Title: The science of building and nurturing an athlete

Role: Principal Investigator

Period: November 2021-December 2025

Amount: \$145,000.00

Lonza

Title: Clinical study to evaluate dose dependent ingredient on joint discomfort and physical function.

Role: Co-Principal Investigator Period: Aug 2021-July 2023 Amount: **\$800,000.00**

Foundation for Women's Wellness

Title: Metabolic effects of the menopause transition: a cross-sectional metabolomic evaluation

Role: Principal Investigator Period: Aug 2021-July 2022

Amount: \$25,000

Duke-UNC Joint Pilot Grant

Title: Metabolic effects of high-intensity interval training and essential amino acid supplementation: an innovative

metabolomic investigation. Role: Principal Investigator Period: June 2021-May 2022

Amount: \$25,953

FUNDED/COMPLETED

Federal

NIH R21HD088852 – NICHD/NCMRR

Title: *High intensity interval training for knee osteoarthritis*

Role: Co-Principal Investigator (20%)

Period: July 2017-June 2019 Amount: **\$418,000.00**

NIH R21

Title: Interval exercise training in cancer survivors before allogenic stem cell transplant.

Role: Co-Investigator (8%) Period: August 2015-July 2019

Amount: \$418,000.00

NIEHS Intramural Program ZID ES103323-01

Title: Caloric Restriction, Environment, and Fitness: Reproductive Effects Evaluation Study (CaREFREE Study)

Role: Co-Investigator (10%)

Period: October 2015-September 2019

NIH R01

Title: Sensitive and specific detection of BAT tissue and activity by magnetic resonance with hyperpolarize Xe-129

Role: Co-Investigator (3%) Period: August 2015-July 2019

Amount: \$1,821,849.20

NIH KL2 Career Development Award (1KL2TR001109)

Title: A translational approach to home-based high-intensity interval training in UNC Family Medicine patients.

Role: Principal Investigator (75%) Period: May 2014 – May 2017

Amount: 75% salary support; \$25,000 research funds per year

Rehabilitation Research Resource to Enhance Clinical Trials

Title: High intensity interval training for knee osteoarthritis

Role: Principal Investigator (20%) Period: May 2016-January 2018

Amount: \$40,000.00

Nutrition Obesity Research Center Pilot & Feasibility

Title: Genetic determinants on the physiological response to exercise: a sex evaluation

Role: Co-Principal Investigator (20%)

Period: April 2016-April 2017

Amount: \$19,331.00

UNC Nutrition Obesity Research Center (DK056350)

Title: The acute effects of high intensity interval training on body composition and metabolic and cardiovascular health in

overweight/obese men and women Role: Principal Investigator (20%) Period: March 2013-March 2014

Amount: \$13,000.00

UNC Nutrition Obesity Research Center (DK056350)

Title: The acute effects of high intensity interval training on body composition and metabolic and cardiovascular health in

overweight/obese men and women Role: Principal Investigator (20%) Period: March 2012-March 2013

Amount: \$20,000.00

Non-Federal

Carolina Women's Center

Title: Metabolic Effects of Menopause: Implications for Body Composition and Exercise Capacity

Role: Principal Investigator Period: August 2020-July 2021

Amount: \$9,999

National Strength and Conditioning Association

Title: Metabolic effects of dietary protein and high-intensity interval training: an acute and chronic evaluation

Role: Advisor/PI

Period: August 2018-July 2019

Amount: \$15,000

National Strength and Conditioning Association

Title: Validity of body composition assessment in racial and ethnic minorities

Role: Advisor/PI

Period: June 2019-July 2020

Amount: \$15,000

Omniactives Health Inc.

Title: A Randomized, Double-Blind, Placebo Controlled Study to Evaluate the Effects of a Dietary Supplement on Sexual

Health Performance, Function and Quality of Life.

Role: Principal Investigator Period: January 2017-July 2019

Amount: \$75,000.00

Naturex

Title: The acute and chronic influence of a botanical supplement on muscle strength and size.

Role: Co-Principal Investigator Period: May 2015-May 2016

Amount: \$348,714.72

National Strength and Conditioning Association

Title: Influence of probiotics on body composition and health in high-stress, sleep-deprived workers

Role: Faculty mentor; Graduate Student Submission

Period: August 2016-August 2017

Amount: \$7,500.00

Premier Nutrition

Title: Effects of protein supplementation following bariatric surgery: a feasibility study

Role: Principal Investigator

Period: September 2016-August 2017

Amount: \$43,200.00

Scivation, Inc.

Title: Breakfast meal replacement use on body composition and health related quality of life in overweight men and women

Role: Principal Investigator Period: March 2015- March 2016

Amount: \$115,500.00

Scivation Inc.

Title: Effect of a mushroom blend on oxygen kinetics and exercise performance.

Role: Principal Investigator Period: June 2014-May 2015 Amount: **\$103,952.00**

Biolayne Foundation

Title: An Evaluation of Physiological Post-Competition Changes in Physique Athletes

Role: Co-Principal Investigator/Faculty Advisor

Period: August 2014-June 2015

Amount: \$10,000.00

National Strength and Conditioning Association

Title: Effects of creatine, coffee, and caffeine on strength and sprint performance.

Role: Faculty Advisor, Masters Student Award

Period: June 2014-July 2015

Amount: \$7,500.00

Stiebs Inc

Title: The effects of a low-dose pomegranate extract on flow mediated dilation and salivary nitrate

Role: Principal Investigator

Period: February 2015-August 2015

Amount: \$16,870.00

UNC Junior Faculty Development Award

Title: Portable measurement of maximal oxygen consumption for an interval exercise intervention.

Role: Principal Investigator

Period: January 2014-December 31st, 2014

Amount: \$7,500.00

Rhodia, Inc

Title: Effect of the Far infrared emitting fabric on Recovery from Exercise-Induced Muscle Damage

Role: Co-Principal Investigator Period: August 2013-January 2015

Amount: \$131,000.00

Dymatize Enterprises

Title: The acute effects of pomegranate juice on aerobic and anaerobic performance and flow mediated dilation.

Role: Principal Investigator Period: May 2013-May 2014

Amount: \$20,000.00

National Strength and Conditioning Association

Title *An acute metabolic evaluation of an exercise and nutrition intervention* Role: Co-Principal Investigator/Faculty Advisor for Masters Student Award

Period: June 2013-July 2014

Amount: \$5,000.00

IntelaMetrix, Inc

Title: Validity and reliability of the BodyMetrix ultrasound for estimating fat and muscle in healthy subjects.

Role: Principal Investigator Period: August 2012

Amount: \$3,000.00 (Equipment Grant)

Muscle Pharm, Inc

Title: The effects of MusclePharm AssaultTM and high-intensity interval training on aerobic and anaerobic power, repeated

sprint ability, body composition and training volume

Role: Co-Investigator

Period: August 2010-May 2011

Amount: \$60,000.00

Vital Pharmaceuticals, Inc

Title: Exercise-induced oxidative stress: examining the antioxidant capabilities of beta-alanine

Role: Co-Principal Investigator

Period: July 2010-May 2011

Amount: \$10,000.00

Abbott Nutrition, Abbott Laboratories

Title: A pilot study to evaluate the effect of beta-hydroxy-beta-methylbutyrate in elderly subjects.

Role: Co-Investigator; Study Coordinator Period: January 2008-Decebmer 2010

Amount: \$366,145.20

Corr-Jensen Labs, Inc.

Title: The effects of GameTimeTM and High-intensity training on critical velocity, aerobic power, endurance capacity and

safety.

Role: Co-Investigator; Study Coordinator

Period: June 2008-July 2009 Amount: **\$50,251.00**

Celsius, Inc.

Title: The acute effects of different Celsius formulas on resting energy expenditure in healthy adults.

Role: Co-Investigator; Study Coordinator

Period: August 2009-July 2010

Amount: \$24,424.00

Biospace Co., Ltd.

Title: Tracking changes in body composition, muscle mass, and total body water in elderly compared to deuterium oxide

and a four-compartment model

Role: Co-Investigator Period: May 2009

Amount: \$15,000.00 (Equipment Grant)

Celsius, Inc.

Title: The effects of an energy drink and exercise on cardiovascular fitness, strength, body composition and nutritional

profile in healthy adult men and women

Role: Co- Investigator

Period: August 2008-July 2009

Amount: \$181,522.00

Phillips Performance Nutrition, LLC

Title: The effects of a meal replacement and exercise on cardiovascular fitness, strength, body composition, and nutritional

profile in healthy adult men and women.

Role: Co-Investigator

Period: January 2007-January 2008

Amount: \$122,090.00

NOT FUNDED

Federal

National Institutes of Health, NIA R01

Title: ME3: Muscle and metabolic alterations across the menopause transition

Role: Lead Principal Investigator (22%) Period: October 2021-September 2026

Amount: \$3,828,910.00

National Institutes of Health, NHLBI R01

Title: Comprehensive, longitudinal interrogation of stress in pregnancy, preeclampsia and cardiometabolic dysfunction, and

oxidative stress pathways

Role: Co-Principal Investigator (20%) Period: October 2021-September 2026

Amount: \$3,887,491.00

National Institutes of Health, NIA R01

Title: Optimizing telehealth-delivery of a weight loss intervention in older adults with multiple chronic conditions: a

sequential, multiple assignment, randomized trial.

Role: Co-Investigator (7.5%) Period: April 2022-March 2027

Amount: \$3,864,210.64

National Cancer Institute, NCCU-LCCC U54 Pilot Project

Title: Supporting Health and Physical Activity in Endometrial cancer survivors (SHAPE)

Role: Principal Investigator (10%) Period: September 2021-August 2024

Amount: \$450,000.00

Department of Defense

Title: The Female Warfighter: a comprehensive study of female performance and physiology

Role: Co-Principal Investigator (23%)

Period: Oct 2021-Sep 2024 Amount: **\$3,086,017**

National Institutes of Health NIDDK R01

Title: Promoting physical activity in overweight and obese young adults with type 1 diabetes in a hypocaloric context – a

pilot and feasibility trial. Role: Co-Investigator (1%) Amount: \$950,641.85

National Institutes of Health NIDDK R01

Title: Validity and reliability of laboratory and field-based body composition technologies in a multi-ethnic sample

Role: Principal Investigator (33%) Period: July 2020-June 2025 Amount: \$1,929,875.00

National Institutes of Health R01

Title: PFAS exposure in pregnancy, oxidative stress, and maternal cardiometabolic health

Role: Co-Investigator (14%) Period: April 2021-March 2024

Amount: \$2,301,057.00

NC Diabetes Research Center

Title: Metabolic effects of High Intensity Interval training and Moderate Intensity Continuous Training in individuals with

type 1 diabetes.

Role: Principal Investigator Period: August 2020-July 2022

Amount: \$99,948

NC Diabetes Research Center

Title: Chemical fingerprints of skeletal muscle health in children with type 1 diabetes

Role: Co-Investigator

Period: August 2020-July 2021

Amount: \$41,624

Southeast Center for Integrated Metabolomics

Title: Metabolic effects of high-intensity interval training and essential amino acid supplementation: A metabolomics

evaluation

Role: Principal Investigator Period: August 2020-July 2021

Amount: \$28,000

NIH R01

Title: Heartbeat-impact of pregnancy and postpartum on women's cardiometabolic health

Role: Co-Investigator (5%) Period: July 2020-June 2025 Amount: \$1,228,436,45

National Aeronautics and Space Administration (NASA)

Title: Self-powered, wearable multi-sensor health monitoring of deep space astronauts using evidence-based metrics

Role: Subcontractor (12.5%)

Period: January 2020-December 2021

Amount: \$119,379.38

NIH R01 NIDDK

Title: Bihormonal bionic pancreas pivotal trial ancillary study: evaluation of change in diet, physical activity and body

composition.

Role: Co-Investigator (5%)

Period: September 2019-August 2021

Amount: \$2,431,798.55

DOD Uniformed Services University of the Health Sciences

Title: Assessing & Tracking Tactical (ATTAC) Forces Initiative.

Role: Co-Investigator (2%)

Period: October 2018-September 2019

Amount: \$2,523,933.06

Retirement Research Foundation

Title: Mitigating dynapenia with low frequency high intensity interval training

Role: Co-Investigator (4.5%)

Period: January 2020-December 2021

Amount: \$174,999.50

NIOSH Small Research Grant Program (R03)

Title: Feasibility of a train-the-trainer delivered exercise intervention in firefighters

Role: Co-Investigator (7%)

Period: September 2019-August 2021

Amount: \$152,293.21

NIH R01

Title: Enabling accurate identification and quantification of brown adipose tissue by dual energy xenon-enhanced CT

Role: Co-Investigator (16.67%) Period: September 2018-August 2019

Amount: \$2,474,941.67

American Institute for Cancer (AICR)

Title: High intensity interval training as a therapeutic strategy in obesity-driven endometrial cancer

Role: Co-PI (0%)

Period January 2019-December 2020

Amount: \$164,647

NIH R21

Title: Training the Trainer: Facilitating the implementation of evidence-based exercise to reduce fire service injuries

Role: Co-investigator (6%)

Period: December 2018-November 2020

Amount: \$392,319.23

NIH R01

Title: Enabling accurate identification and quantification of brown adipose tissue by dual energy xenon-enhanced CT

Role: Co-Investigator (16.67%) Period: September 2018-August 2019

Amount: \$2,474,941.67

NIH R21 11951391 - NIAMS

Title: High intensity interval training for knee osteoarthritis

Role: Co-Principal Investigator

Period: October 2015-September 2018

Amount: \$604,360.00

NIH R21 – NIOSH

Title: Training the Trainer: Facilitating the Implementation of Evidence-Based Exercise to Reduce Fire Service Injuries

Role: Co-Investigator

Period: February 2016-February 2018

Amount: \$385,534.00

Federal Emergency Management Agency (FEMA)

Title: Training the Trainer: Improving the Implementation and Fidelity of Evidence-Based Exercise to Reduce Fire Service

Injuries

Role: Co-Investigator (15%) Period: Applied March 2016 Amount: \$819,924.00

Federal Emergency Management Agency (FEMA)

Title: Developing long-term implementation strategies with variable exercise routines (DELIVER)

Role: Co-Principal Investigator (20%)

Period: Applied March 2014

Amount: \$926,387.00

Federal Emergency Management Agency (FEMA

Title: Firefighter interval training (FIT): A practical exercise intervention to improve health, fitness and performance.

Role: Co-Investigator (20%)

Period: Applied March 2013 Amount: **\$702,495.00**

Non-Federal

Nutrasource

Title: A Prospective Randomized, Double-Blind, Placebo Controlled Study to Evaluate Supplemental Astaxanthin in

Healthy Adult Subjects Role: Principal Investigator Period: Aug 2021-July 2023 Amount: \$225,400.00

Nutrasource

Title: A Randomized Double-Blind Placebo Controlled Trial To Evaluate a Standardized

CBD Product as Compared to Placebo for Feelings of Stress and Quality of Life in Healthy Adults Who Complain of Stress

Impacting Their Quality of Life Role: Principal Investigator Period: Aug 2021-July 2023 Amount: \$136,000.00

Nutrasource

Title: A Randomized Double-Blind Placebo Controlled Trial to Evaluate a Dietary Supplement Formula on Quality of Life,

Stress Levels and Feelings of Well-Being in Adult Females that Complain of Stress Impacting Their Daily Lives.

Role: Principal Investigator Period: Aug 2021-July 2023 Amount: **\$100,000.00**

Lonza

Title: Clinical study to evaluate dose dependent ingredient on joint discomfort and physical function.

Role: Co-Principal Investigator Period: Aug 2021-July 2023 Amount: \$800,000.00

Foundation for Women's Wellness

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Title: Metabolic effects of the menopause transition: a cross-sectional metabolomic evaluation

Role: Principal Investigator Period: Aug 2021-July 2022

Amount: \$25,000

Duke-UNC Joint Pilot Grant

Title: Metabolic effects of high-intensity interval training and essential amino acid supplementation: an innovative

metabolomic investigation. Role: Principal Investigator Period: June 2021-May 2022

Amount: \$25,953

Hartwell Foundation

Title: Targeting skeletal muscle health in children with type 1 diabetes

Role: Co-Investigator

Period: August 2020-July 2023

Amount: \$119.980

National Strength & Conditioning Foundation

Title: Metabolic effects of Menopause

Role: Faculty Mentor Period: July 2020-June 2021

Amount: \$15,000

NBA & GE Orthopedics and Sports Medicine Collaboration Bone Stress Injury

Title: Effects of jump-landing biomechanics on changes in bone and muscle quantity and quality during an athletic season in

elite division I college athletes. Role: Co-Investigator (5%) Period: May 2017-May 2019

Amount: \$199,140.00

UNC-CH Lineberger Comprehensive Cancer Center

Title: High intensity interval training a novel translational approach for improving endometrial cancer; an obesity-driven

disease Role: Co-PI

Period: July 2018-June 2020

Amount: \$200,000

CTSA Duke/UNC Pilot Award

Title: High intensity interval training for knee osteoarthritis

Role: Co-Investigator (20%)

Period: October 2015-September 2016

Amount: \$50,000.00

Dannon Yogurt and Probiotics Fellowship

Title: Effect of probiotics on body composition, exercise, and mood in shift workers

Role: Faculty Advisor, Masters student fellowship

Period: March 2016-May 2017

Amount: \$25,000.00

MusclePharm Inc.

Title: Effect of a hydration beverage on recovery and total body water

Role: Principal Investigator

Period: September 2014-August 2015

Amount: \$85,164.48

National Football League Players Association

Title: Advancing the Frontiers of Research in Professional Football: The NFLPA UNC Clinical Research Network

Role: Co-Investigator Period: December 2012 Amount: \$99,767,940.00

UNC College of Arts & Sciences Interdisciplinary Award

Title: Quantifying the benefits of intercollegiate athletics participation: an interdisciplinary mind and body approach.

Role: Co-Principal Investigator

Period: April 2012 Amount: **\$10,000.00**

UNC CTSA KL2/BIRCWH Career Development Award

Title: An evaluation of exercise prescription for post-menopausal women: an influence on metabolic, cardiovascular,

hormone, and body composition status. A pilot trial.

Role: Principal Investigator

Period: March 2012

Amount: 75% salary support; \$25,000 research funds per year

PROFESSIONAL SERVICE

Leadership and Service to Profession	
Scientific Programs Sub-Committee, Sports Nutrition American Society of Nutrition	2021-present
Foundation Board Member, National Strength & Conditioning Association	2021-present
Scientific Advisor, Pepsi Co	2021-present
Scientific Expert, Gatorade Sports Science Institute	2021-present
Advisory Board Member, Hologic Inc	2019-present
Advisory Board Member, AlzChem	2020-present
Advisory Board Member, Ladder Co./BeachBody	2018-present
Advisory Board Member, LabSaavy	2019-present
Chair, Research & Education Committee, National Strength & Conditioning Association	2011-2016
Chair, Foundation Grant Review Committee, National Strength & Conditioning Association	2011-2016
Co-Chair, Scientific Programs Co-Chair, National Strength and Conditioning Association	2011-2013
Advisory Board Member, Dymatize Nutrition	2014-2018
Grant Review Elected Panel Member, National Strength & Conditioning Association	2020-Present
Complementary and Alternative Medicine Study section member, Veterans Affairs	2018-present
Grant Reviewer, NIH General Medicine, SCORE Special Emphasis Panel	2019
Grant Reviewer, Translational clinical Sciences Career Development Awards	2017
National Institutes of Health, Early Career Reviewer	2017
Grant Review Committee Member, American College of Sports Medicine	2014-Present
Grant Reviewer, National Strength and Conditioning Association	2011-Present
Expert Panel Member, US Pharmacopeia: Dietary Supplements Review	2011-2016
Advisory Board Member for the International Society of Sports Nutrition	2009-Present
Advisory Board Member for the Center for Applied Health Sciences	2011-Present
Advisory Board Member for the International Physique Professional Association	2009-2011
Advisory Board Member for the National Strength and Conditioning Assoc, Nutrition Group	2010-2011
Journal Editorial Board	
Associate Editor, Journal of the International Society of Sports Nutrition	2013-2016
Associate Editor, Journal of Strength and Conditioning Research	2013-Present
Nutrition Editor, Strength and Conditioning Journal	2013-2014
Editor-in-Chief for the online Sports Supplement Journal for the ISSN	2010-2011
Journal Reviewer	
Manuscript Reviewer for <i>Obesity</i>	2018-Present
Manuscript Reviewer for <i>Journal of Applied Physiology</i>	2017-Present
Manuscript Reviewer for Journal of Epidemiology Manuscript Reviewer for Journal of Epidemiology	2017-Tresent 2016-Present
Manuscript Reviewer for <i>Journal of Applied Physiology</i>	2016-Present
Manuscript Reviewer for European Journal of Sports Science	2015-Present
Manuscript Reviewer for Journal of Sports Science	2015-Present
Manuscript Reviewer for Journal of Sports Science	2013-F168611t

Manuscript Reviewer for Journal of Endocrinology	2015-Present
Manuscript Reviewer for <i>Open Heart</i>	2014-Present
Manuscript Reviewer for Ultrasound Medicine and Biology	2014-Present
Manuscript Reviewer for Journal of Science and Medicine in Sport	2014-Present
Manuscript Reviewer for Medicine and Science in Sport and Exercise	2014-Present
Manuscript Reviewer for the British Journal of Nutrition	2013-Present
Manuscript Reviewer for PLOS one	2013-Present
Manuscript Reviewer for Medicine and Science in Sport and Exercise	2013-Present
Manuscript Reviewer for Clinical Physiology and Functional Imaging	2012-Present
Manuscript Reviewer for Applied Physiology Nutrition and Metabolism	2012-Present
Manuscript Reviewer for the American Journal of Human Biology	2011-Present
Manuscript Reviewer for the Amino Acids Journal	2011-Present
Manuscript Reviewer for the FASEB Journal	2011-Present
Manuscript Reviewer for the Journal of Athletic Training	2011-Present
Manuscript Reviewer for the Journal of Aging and Health	2011-Present
Manuscript Reviewer for the International Journal of Sport Nutrition & Exercise Metabolism	2009-Present
Manuscript Reviewer for the Journal of Strength and Conditioning Research	2009-Present
Manuscript Reviewer for the Strength and Conditioning Journal	2009-Present
Manuscript Reviewer for Journal of Sports Science and Medicine	2009-Present
Manuscript Reviewer for the Journal of the International Society of Sports Nutrition	2008-Present
Manuscript Reviewer for Nutrients	2008-Present

UNIVERSITY SERVICE

Advisory Board Member, Center for Women's Health Research	Spring 2021-Present
Faculty Athletics Committee Elected member	July 2019-Present
UNC Department of Physical Therapy, Nutrition Instructor	Spring 2017-Present
Institutional Review Board Member	July 2018- August 2021
Working on Women in Science Liaison, College of Arts & Science	July 2019-July 2021
Open Access Review Committee	October 2019-May 2021
Guest lecture: Nutr 600 Exercise Metabolism	Fall 2019
Online Lecture Series: Sports Nutrition – Department of Nutrition	April 2019
Guest lecture: Nutr 240. Nutrition and Exercise	Fall 2018, Fall 2019
Guest lecture: Nutr 175. Nutrition and supplementation	Fall 2018
Invited lecture: Department of Physical Therapy: Nutrition for Rehab	Spring 2017, 2018, 2019
UNC Hypertension Research Group Member, led by Dr. Anthony Viera	2013-2018
UNC liaison for National Exercise Clinical Trials Network , Appointed by Dr. John Buse	2013-Present
Invited Lecture: Thurston Arthritis Research Center	Spring 2015
Invited Lecture: Nutrition Obesity Research Center, School of Public Health	Spring 2015
UNC Academic Day, Faculty ambassador	Fall 2014
Sports Medicine Physician Lecture: Body Composition and Application	Spring 2014
UNC FEMMES Outreach Program Faculty ambassador	Fall 2013
Guest lecture for: Nutr (EPID) 801: Physical Activity and Health	Spring 2013, 2015
Guest Lecture for Nutr 700: Maternal and Childhood Nutrition	Fall 2013
Faculty Advisor for the Carolina Marathon Club	2011-2015
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DEPARTMENT SERVICE

Director, Applied Physiology Laboratory
Co-Director, Human Performance Center
Chair, EXSS Cluster Faculty Hire

Spring 2017-Present
Fall 2015-Present
Fall 2020-Spring 2021

Guest Speaker for the First Year Leadership Program-Carolina Leadership Development

October 2011

Lifetime Fitness Committee

Exercise Behavior Search Committee

Earey Award Committee

Exercise Physiology Search Committee

Guest Lecture: EXSS 101 Chair Nominating Committee Blyth Lecture Committee

Public Relations Committee: EXSS

Ronald Hyatt Scholarship Selection Committee

Member of the Admissions Committee for the UNC HMSC Doctoral Program Human Movement Sciences Research Symposium Abstract Reviewer-UNC

Spring 2018-Present

2018-2019 Spring 2015-16 2016-2017 Spring 2013 Spring 2013

Spr 2013, 2016, 2017,2018

Fall 2012-2017 Spr 2012-2016 2011- 2016 2012-2014

Undergraduate Poster Presentations

- 1. Alyson G. Nelson, Gabrielle J. Brewer, Lacey M. Gould, Hannah E. Saylor, Malia N.M. Blue, Katie R. Hirsch, Amanda N. Gordon, Andrew T. Hoyle, Abbie E Smith-Ryan. Effects of acute feeding on resting metabolic rate and respiratory quotient. UNC Celebration for Undergraduate Research & State of NC Research Symposium. Oct 2020.
- 2. Kendall G. Kanakanui, Katie R. Hirsch, Malia N.M. Blue, Alyson G. Nelson, Abbie E. Smith-Ryan. Comparison of nutrition, body composition, and perceived quality of health in adults with high or low perceived stress. UNC Celebration for Undergraduate Research. May 2020.
- 3. Casey E. Greenwalt*, Katie R. Hirsch, Malia N.M. Blue, Gabrielle J. Brewer, Abbie E. Smith-Ryan FACSM. (2019). Comparing body composition between Division I cross country runners and normal weight young adults. SEACSM Regional Conference. Jacksonville, FL. Poster Presentation.
- 4. Alyson G. Nelson*, Kara C. Anderson, Katie R. Hirsch, Malia N.M. Blue, Gabrielle J. Brewer, Abbie E. Smith-Ryan (2020). Muscle characterization among normal weight obese young adults. SEACSM Regional Conference. Jacksonville, FL. Poster Presentation.
- 5. Shawn Ahuja, Gabrielle J. Brewer, Austin M. Peterjohn, Alyson Nelson, Casey E. Greenwalt, Katie R. Hirsch, Miles Salvatore, Emily Gascoigne, Abbie E. Smith-Ryan. (2019). Influence of body composition and metabolism on appetite and food preference. University of North Carolina at Chapel Hill.
- 6. Emily Gascoigne, Austin M. Peterjohn, Alyson Nelson, Miles Salvatore, Gabrielle J. Brewer, Katie R. Hirsch, Malia N.M. Blue, Abbie E. Smith-Ryan. (2019). The influence of academic year, living arrangements, and alcohol on body composition in college students. University of North Carolina at Chapel Hill.
- 7. Alyson Nelson, Emily Gascoigne, Austin M. Peterjohn, Katie R. Hirsch, Miles Salvatore, Shawn Ahuja, Abbie E. Smith-Ryan. (2019). Variation of weekend vs weekday diet on body composition among young adults. University of North Carolina at Chapel Hill.
- 8. Casey E. Greenwalt, Malia N.M. Blue, Katie R. Hirsch, Gabrielle J. Brewer, Abbie E. Smith-Ryan. (2019). Body composition, protein intake, and performance in Division I collegiate gymnasts. University of North Carolina at Chapel Hill.
- 9. Shawn Ahuja. (2018). Characterization of bariatric surgery patients: evaluation of body composition and metabolism. University of North Carolina at Chapel Hill.
- 10. Liz Thompson, Meredith G Mock., Alexis A. Pihoker, Kara C. Anderson, Abbie E. Smith-Ryan. The relationship between caloric intake and body composition in shift-working health care employees. University of North Carolina at Chapel Hill.

COMMUNITY SERVICE

Guest Lecturer, Duke University Physical Therapy – Sports Nutrition

June 2019, May 2020

Guest Speaker, Taking Control of Your Diabetes - Exercise is for everybody	May 2019
Guest Speaker, Carolina Meadows Retirement Community – Nutrition for Aging	Spring 2015
Guest Speaker, Carolina Meadows Retirement Community – Exercise & Aging	Spring 2015
Keynote Speaker: Fully Armored Girls in Sports Camp, Raleigh, NC	Summer 2014
Guest Speaker: Nutritional Implications for Aging, Glenaire Assisted Living, Cary, NC	Spring 2014
Guest Speaker: Sport Nutrition & Nutrition Basics, Athletic Labs, Cary, NC	Spring 2013
Guest Speaker on Nutrition and Exercise. Phoenix High School, Chapel Hill, NC	Spring 2013
Guest Speaker on Self-worth for the Young Women's Christian Group, Chapel Hill	Spring 2012