**CURRICULUM VITAE**

**Michael R. Esco, Ph.D., FACSM, CSCS\*D, EP-C, RCEP**

**Business Address:** The University of Alabama

Department of Kinesiology

  P.O Box 870312

Tuscaloosa, AL 35487-0312

**Business Phone:** Office: (205) 348-2151

Fax: (205) 348-0867

**Business E-mail:**  mresco@bamaed.ua.edu

**EDUCATION**

Auburn University Post-Graduate Certificate 8/2014

Auburn, AL Program Evaluation

Auburn University Doctor of Philosophy 5/2009

Auburn, AL Exercise Physiology

Auburn University at Montgomery Masters of Education 5/2004

Montgomery, AL Exercise Science

Auburn University at Montgomery Bachelor of Science 12/2002

Montgomery, AL Exercise Science

**FACULTY APPOINTMENTS**

The University of Alabama, Department of Kinesiology

* Professor: 8/2020 – Present
* Associate Professor (Tenured): 8/2016 – 8/2020
* Assistant Professor: 8/2014 – 8/2016
* Teach undergraduate and graduate classes in Sport and Exercise Science
* Mentor graduate research
* Conduct a line of research with potential to attract external funding
* Program Director: National Strength and Conditioning Association Educational Recognized Program (ERP): 8/2019 – Present

Auburn University at Montgomery, Department of Physical Education and Exercise Science

* Associate Professor (Tenured): 8/2012 – 8/2014
* Assistant Professor: 8/2009 – 7/2012
* Instructor: 8/2007 – 7/2009
* Founding Director: **WarhawkFit, a service-oriented program that provides health and fitness screenings and services to the Montgomery community, 8/2010 – 8/2014**
* **Co-director: Human Performance Laboratory: 8/2009 – 8/2014**
* Graduate Program Director: National Strength and Conditioning Association Educational Recognized Program (ERP): 8/2011 – 8/2014

Family Medicine Residency, Sports Medicine Baptist Health Montgomery, AL

* Adjunct Clinical Faculty: 12/2010 – 8/2014

Huntingdon College, Department of Sports Sciences and Physical Education Montgomery, AL

* Adjunct Professor: Fall, 2010

**CLASSES TAUGHT**

*Graduate*

The University of Alabama KIN 692 Seminar in Exercise Physiology

The University of Alabama KIN 593 Advanced Fitness Testing and Exercise Prescription

The University of Alabama KIN 592 Physiology of Exercise

The University of Alabama KIN 507 Laboratory Techniques

Auburn University at Montgomery PHED 6003 Advanced Physiology of Exercise

Auburn University at Montgomery PHED 6230 Advanced Scientific Basis of Exercise

Auburn University at Montgomery PHED 6013 Advanced Cardiac Rehabilitation

Auburn University at Montgomery PHED 6043 Advanced Kinesiology

Auburn University at Montgomery PHED 6250 Nutritional Basis of Exercise

Auburn University at Montgomery PHED 6383 Advanced Fundamentals of Athletic Training

Auburn University at Montgomery FNDS 6650 Applied Educational Statistics

*Undergraduate*

The University of Alabama KIN 494 Scientific Basis of Strength and Conditioning

The University of Alabama KIN 493 Exercise Prescription

The University of Alabama KIN 492 Physiology of Exercise

The University of Alabama KIN 366 Measurement and Evaluation

Auburn University at Montgomery PHED 4003 Physiology of Exercise

Auburn University at Montgomery PHED 4230 Scientific Basis of Exercise

Auburn University at Montgomery PHED 4010 Cardiac Rehabilitation

Auburn University at Montgomery PHED 4043 Kinesiology

Auburn University at Montgomery PHED 4250 Nutrition for the Physically Active

Auburn University at Montgomery PHED 4383 Fundamentals of Athletic Training

Auburn University at Montgomery PHED 2203 Wellness

Auburn University at Montgomery PHED 1723 Principles of Exercise and Conditioning

Auburn University at Montgomery PHED 1675 Exercise and Weight Control

Huntingdon College SSPE 499 Senior Capstone

**PROFESSIONAL AFFILIATIONS**

American College of Sports Medicine 2003 – Present

American College of Sports Medicine, Southeast Chapter 2003 – Present

National Strength and Conditioning Association 2004 – Present

Alabama State Assoc. for Health, Physical Education, Recreation, and Dance 2003 – Present

American Association of Cardiovascular and Pulmonary Rehabilitation 2008 – 2010

Clinical Exercise Physiology Association 2008 – 2010

**PROFESSIONAL CERTIFICATIONS, DISTINCTIONS, and FELLOWSHIPS**

American College of Sports Medicine Fellow (FACSM), 2014

Certified Exercise Physiologist (EP-C)

Registered Clinical Exerc. Physiol. (RCEP)

National Strength and Conditioning Association Cert. Strength and Conditioning Specialist

with Distinction (CSCS\*D)

**RESEARCH AND SCHOLARLY INTERESTS**

Measurement and evaluation of health and fitness related programs and products; Validation of field tests that predict various parameters of physical fitness; Monitoring physiological responses to acute exercise and physical training via non-invasive objective measures, such as heart rate variability; Anything that a student or colleague is interested in that I can assist with

**PEER-REVIEWED FULL LENGTH MANUSCRIPTS**

**\* Represents student authorship**

1. \*Cicone ZS, Nickerson BS, Choi YJ, \*Holmes CJ, \*Hornikel B, Fedewa MV, **Esco MR.** Generalized equations for predicting percent body fat from anthropometric measures using a criterion five-compartment model. *Medicine and Science in Sports and Exercise.* (Accepted for Publication).
2. Flatt AA, Allen JR, Keith CM, Martinez MW, **Esco MR.** Season-long heart-rate variability tracking reveals autonomic imbalance in American college football players. *International Journal of Sports Physiology and Performance*. (Accepted for Publication).
3. \*Sullivan K, \*Hornikel B, \*Holmes CJ, **Esco MR,** Fedewa MV. Validity of a 3-compartment body composition model using body volume derived from a novel 2-dimensional image analysis program. *European Journal of Clinical Nutrition* (Accepted for Puhlication).
4. \*Cicone ZS, Fedewa MV, Nickerson BS, **Esco MR.** Prediction of underwater residual lung volume in healthy men and women. *Clinical Physiology and Functional Imaging*. (Accepted for Publication).
5. \*Sherman SR, \*Holmes CJ, Demos AP, Stone TM, \*Hornikel B, Fedewa MV, MacDonald HV, **Esco MR**.Vagally-derived HRV and training perturbations with menses in female collegiate rowers. *International Journal of Sports Physiology and Performance*. (Accepted for Publication).
6. Fedewa MV, \*Sullivan K, \*Hornikel B, \*Holmes CJ, \*Metoyer CJ, **Esco MR**. (2021) Accuracy of a mobile 2D imaging system for body volume and subsequent composition estimates in a three-compartment model. *Medicine and Science in Sports and Exercise* 53, 1003-1009.
7. Boullosa D, Medeiros AR, Flatt AA, **Esco MR**, Nakamura FY, Foster C. (2021) *Journal of Functional Morphology and Kinesiology* 6, 30.
8. Fedewa MV, Nickerson BS, Tinsley GM, **Esco MR**, Dunbar EG, Boucher AG, DeLeon RM. (2021) Examining race-related error in two-compartment models of body composition assessment: A systematic review and meta-analysis. *Journal of Clinical Densitometry* 24,156-168.
9. **Esco MR,** \*Holmes CJ, \*Sullivan K, \*Hornikel B, Fedewa MV (2021) International Journal of Environmental Research and Public Health 18, 2413.
10. Dutra YM, Claus GM, Malta ES, Brisola GMP, **Esco MR,** Ferraresi C, Zagatto AM (2020) Acute Photobiomodulation by LED Does Not Alter Muscle Fatigue and Cycling Performance. *Medicine and Science in Sports and Exercise* 52, 2448-2458.
11. \*Holmes CJ, MacDonald HV, **Esco MR,** Fedewa MV, Wind SA, Winchester LJ. (2020) Comparison of heart rate variability responses to varying resistance exercise volume-loads. *Research Quarterly for Exercise and Sport* 10, 1-10.
12. \*Holmes CJ, Fedewa MV, Winchester LJ, MacDonald HV, Wind SA, **Esco MR**. (2020) Validity of smartphone heart rate variability pre- and post-resistance exercise. *Sensors* 20, 5738.
13. \*Williams TD, **Esco MR**, Fedewa MV, Bishop PA (2020) Bench press load velocity profiles and strength after overload and taper microcycles in male powerlifters. *Journal of Strength and Conditioning Research* 34, 3338-3345.
14. \*Williams TD, **Esco MR,** Fedewa MV, Bishop PA. (2020). Inter- and intra-day comparisons of smartphone-derived heart rate variability across resistance training overload and taper microcycles. International Journal of Environmental Research and Public Health, 18, 177.
15. Marcel-Millet P, Ravier G, **Esco MR**, Groslambert A (2020) Does firefighters’ physical fitness influence their cardiac parasympathetic reactivation? Analysis with post-exercise heart rate variability and ultra-short-term measures. *International Journal of Occupational Safety and Ergonomics* 26, 1-9.
16. \*Snarr RL, \*Tolusso DV, \*Hallmark AV, **Esco MR**. (2021) Validity of wearable electromyographical compression shorts to predict lactate threshold during incremental exercise in healthy participants. *Journal of Strength & Conditioning Research* 702-708.
17. \*Sherman SR, \*Holmes CJ, \*Hornikel B, Fedewa MV, MacDonald HV, **Esco MR**.(2021) Heart rate variability recording time and performance in collegiate female rowers. *International Journal of Sports Physiology and Performance* 16, 550-556.
18. \*Holmes CJ, Fedewa MV, \*Dobbs WC, \*Liu Y, Flatt AA, Nakamura FY, **Esco MR**. (2020) The effects of different body positions on the accuracy of ultra-short-term heart rate variability indexes. *Journal of High Technology Management Research*.
19. \*Holmes CJ, \*Sherman SR, \*Hornikel B, \*Cicone ZS, Wind SA, **Esco MR**. (2020) Compliance of self-measured HRV using smartphone applications in collegiate athletes. *Journal of High Technology Management Research*.
20. Moran R., Murray N, **Esco MR**, Dobbs, W, McAllister-Deitrick J (2020). Effects of exercise on symptoms, Vestibular/Ocular Motor Screening, and postural stability in a college-aged sample. *Concussion* 14, CNC73.
21. Flatt A, Allen J, Bragg A, Keith C, Earley R, **Esco MR**. (2020) Heart rate variability in college football players throughout preseason camp in the heat. *International Journal of Sports Medicine* 41, 589-595.
22. Nickerson BS, **Esco MR**, Fedewa MV, Park KS (2020) Development of a Body Mass Index-based body fat equation: Effect of handgrip strength. *Medicine and Science in Sports and Exercise* 52, 2459-2465.
23. \*Dobbs WC, Fedewa MV, MacDonald HV, \*Tolusso DV, **Esco MR**. (2020) Profiles of heart rate variability and bar velocity following resistance exercise. *Medicine and Science in Sports and Exercise* 52, 1825-1833.
24. Fields J, **Esco MR**, Merrigan J, White J, Jones MT (2020). Internal Training Load Measures During a Competitive Season in Collegiate Women Lacrosse Athletes. *International Journal of Exercise Science* 13, 778-788.
25. Nickerson BS, Fedewa MV, McLester CN, McLester JR, **Esco MR** (2020) Development of a DXA-derived body volume equation in Hispanic adults for administering a 4-compartment model. *British Journal of Nutrition* 123, 1373-1381.
26. Nickerson BS, Tinsley GM, Fedewa MV, **Esco MR** (2020) Fat-free mass characteristics of Hispanic adults: comparisons with non-Hispanic Caucasians and cadaver reference values. *Clinical Nutrition* 39, 3080-3085
27. Fedewa MV, Nickerson BS, **Esco MR.** (2020) The validity of relative fat mass and body adiposity index as measures of body composition in healthy adults. *Measurement in Physical Education and Exercise Science* 137-146.
28. Fedewa MV, Bentley J, Higgins S, Kindler J, **Esco MR**, MacDonald HV. (2020) Celiac Disease and bone health in children and adolescents. A systematic review and meta-analysis. *Journal of Clinical Densitometry* 200-211.
29. Nickerson BS, Fedewa MV, \*Cicone Z, **Esco MR.** (2020) The relative accuracy of skinfolds compared to four-compartment estimates of body composition. *Clinical Nutrition* 1112-1116.
30. Flatt AA, **Esco MR,** Allen JR, Robinson JB, Fedewa MV, Bragg A, Keith CM, Earley, RL (2020) Cardiac-autonomic responses to in-season training among division-1 College football players. *Journal of Strength and Conditioning Research* 1649-1656.
31. Nakamura FY, Antunes P, Nunes C, Costa JAH, **Esco MR**, Travassos B. (2020) Heart rate variability changes from traditional versus ultra-short-term recordings in relation to preseason training load and performance in futsal players. *Journal of Strength and Conditioning Research* 2974-2981.
32. Brisola GMP, Clause GM, Dutra YM, Malta ES, de Poli RAB, **Esco MR**, Zagatto AM (2020) Effects of seasonal training load on performance and illness symptoms in water polo. *Journal of Strength and Conditioning Research*, 34, 406-413.
33. \*Holmes CJ,Winchester LJ, MacDonald HV, Fedewa MV, Wind SA, **Esco MR** (2020). Changes in heart rate variability and fatigue measures following moderate load resistance exercise. *Journal of Exercise Physiology****,*** *23*(5):24-36.
34. Sekulic D, Foretic N, Gilic B, **Esco MR**, Hammami R, Uljevic O, Versic S, Spasic M (2019) Importance of agility performance in professional Futsal players: Reliability and applicability of newly developed testing protocols. *Environmental Research and Public Health* 16, 3246.
35. \*Dobbs WC, \*Tolusso DV, Fedewa MV, **Esco MR** (2019). Effect of post activation potentiation on explosive vertical jump: a systematic review and meta-analysis. *Journal of Strength and Conditioning Research* 33(7):2009-2018.
36. Fedewa, MV, \*Russell, A, \*Nickerson, BS, Fedewa, M, Myrick, J, **Esco MR** (2019). Relative accuracy of body adiposity index and relative fat mass in participants with and without Down syndrome. *European Journal of Clinical Nutrition* 73(8):1117-1121.
37. \*Nickerson BS, Tinsley GM, **Esco MR** (2019) Validity of field and laboratory three-compartment models in healthy adults. *Medicine and Science in Sports and Exercise* 51(5):1032-1039.
38. \*Snarr RL, **Esco MR,** \*Tolusso D, \*Hallmark AV, Earley, RL, Higginbotham JC, Fedewa MV, Bishop P (2019) Comparison of lactate and electromyographical thresholds after an exercise bout. *Journal of Strength and Conditioning Research* 33(12):3322-3331.
39. Coelho AB, Nakamura FY, Morgado MC, \*Holmes CJ, Baldassarre A, **Esco MR**, Rama L. (2019) Heart rate variability and stress recovery responses during a training camp in elite young canoe sprint athletes. *Sports* 7(5).
40. **Esco MR**, Fedewa MV, Freeborn T, Moon J, Wingo J, \*Cicone Z, \*Holmes C, \*Hornikel B, \*Welborn B (2019) Agreement between supine and standing bioimpedance spectroscopy devices and dual-energy X-Ray absorptiometry for body composition determination. *Clinical Physiology and Functional Imagining* 39(5):355-361.
41. Flatt AA, Wilkerson GB, Allen JR, Keith CM, **Esco MR** (2019) Daily heart rate variability before and after concussion in an American college football player. *Sports* 7(5): 97.
42. \*Dobbs WC, Fedewa MV, MacDonald HV, \*Holmes CJ, \*Cicone ZS, Plews DJ, **Esco MR** (2019) The accuracy of acquiring heart rate variability from portable devices: a systematic review and meta-analysis. *Sports Medicine* 49(3): 417-435.
43. Casey, J.C**.**, Herron, R.L., **Esco, M.R**. (2019). Comparison of BMI-based equations and plethysmography for estimating body fat in female collegiate gymnasts. *The Sport Journal*, 21.
44. Fedewa MV, Nickerson BS, **Esco MR** (2019) Associations of body adiposity index, waist circumference, and body mass index in young adults. *Clinical Nutrition* 38(2): 715-720.
45. **Esco MR,** \*Nickerson BS, Fedewa MV, Moon J, \*Snarr R. (2018). A novel method of utilizing skinfolds and bioimpedance for determining body fat percentage via a field-based three-compartment model. *European Journal of Clinical Nutrition* 72(10): 1431-1438.
46. **Esco MR**, Fedewa MV, Sinelnikov O, \*Cicone Z, Sekulic D, \*Holmes C (2018) Field-based performance tests are related to body fat percentage and fat-free mass, but not Body Mass Index, in youth soccer players. *Sports* 6(4).
47. Freeborn TJ, Milligan A, **Esco MR**. (2018). Evaluation of ImpediMed SFB7 BIS Device for Low-Impedance Measurements. *Measurement* 129, 20-30.
48. \*Holmes CJ, Wind SA, **Esco MR**. (2018). Heart rate variability responses to an undulating resistance training program in free-living conditions: A case study in a collegiate athlete. *Sports* 6(4).
49. \*Tolusso D, \*Dobbs W, **Esco MR**. (2018). The predictability of peak oxygen consumption using submaximal ratings of perceived exertion. *International Journal of Exercise Science* 11(4): 1173-1183.
50. \*Cicone Z, Sinelnokiv O, **Esco MR**. (2018) Age-predicted maximal heart rate equations are inaccurate for use in youth male soccer players. *Pediatric Exercise Science* 30(4): 495-499.
51. Nickerson BS, **Esco MR**, Kliszczewicz BM, Bishop PA, \*Welborn BA, Richardson MT. (2018) Time course toward baseline of hand-to-foot BIA measures following an acute bout of aerobic exercise. *International Journal of Exercise Science* 11(2): 640-647.
52. Bisschoff C.A., Coetzee B., **Esco, MR.** (2018) Heart rate variability and recovery as predictors of elite, African, male badminton players’ performance levels. *The International Journal of Performance Analysis in Sport* 18(1): 1-16*.*
53. \*Flatt AA, **Esco, MR,** Allen JR, Robinson JB, Earley, RL, Fedewa MV, Bragg A, Keith CM, Wingo JE. (2018) Heart rate variability and training load among NCAA Division-1 football players during Spring camp. *Journal of Strength and Conditioning Research* 32(11): 3127-3134.
54. **Esco MR**, Williford, HN, Flatt AA, Freeborn, T, Nakamura, FY, Fedewa, MV (2018) Authors' Replay to Medeiros et al.: "Make it easier! Evaluation of the 'vagal-sympathetic effect' in different conditions with R-R intervals monitoring.” *European Journal of Applied Physiology* 118, 1289-1290.
55. \*Stone TM, Wingo JE, \*Nickerson BC, **Esco MR** (2018) Comparison of Bioelectrical Impedance Analysis and Dual Energy X-ray Absorptiometry for Estimating Bone Mineral Content. *International Journal of Sports Nutrition and Exercise Metabolism* 1, 1-5.
56. Flatt AA, **Esco MR**, Nakamura FY (2018) Association between subjective indicators of recovery status and heart rate variability among Division-1 sprint-swimmers. *Sports* 6(3), 93.
57. \*Nickerson BS, **Esco MR,** Bishop PA, Fedewa MV, \*Snarr RL, Kliszczewicz BM, Park KS. (2018) Validity of BMI-based body fat equations in men and women: a four-compartment model comparison. *Journal of Strength and Conditioning Research* 32, 121-129.
58. **Esco MR**, Williford, HN, Flatt AA, Freeborn, T, Nakamura, FY (2018) Ultra-shortened time-domain HRV parameters at rest and following exercise in athletes: An alternative to frequency computation of sympathovagal balance. *European Journal of Applied Physiology* 118:175-184.
59. Fields JB, \*Metoyer CJ, Casey JC, **Esco MR,** Jagim AR, Jones MT (2018) Comparison of body composition variables across a large sample of NCAA women athletes from six competitive sports. *Journal of Strength and Conditioning Research* 32, 2452-2457.
60. \*Nickerson BS, **Esco MR,** Bishop PA, Kliszczewicz BM, Williford HN, Park K-S, \*Welborn BA, \*Snarr RL, \*Tolusso DV (2018) Effects of heat exposure on body water assessed using single-frequency bioelectrical impedance analysis and bioimpedance spectroscopy. *International Journal of Exercise Science* 10, 1085-1093.
61. \*Williams T, \*Tolusso DV, Fedewa, MV, **Esco, MR** (2018) Author’s reply to Nunes et al.: Comment on “Comparison of periodized and non-periodized resistance training on maximal strength: A meta-analysis”. *Sports Medicine* 48, 495-496.
62. \*Nickerson BS, **Esco MR,** Bishop PA, Kliszczewicz BM, Park K-S, Williford HN (2017) Validity of four-compartment model in physically active men and women when using DXA for body volume. *International Journal of Sport Nutrition and Exercise Metabolism* 27, 520-527.
63. Kliszczewicz BK, **Esco MR,** Feito Y, Bechke E, Williamson C, Brown D, Price B. (2017) Venipuncture procedure affects heart rate variability and chronotropic response. *Pacing and Clinical Electrophysiology* 40, 1080-1086.
64. \*Snarr RL, Hallmark AV, Casey JC, **Esco MR**. (2017) Electromyographical comparison of a traditional, suspension device, and towel pull-up. *Journal of Human Kinetics* 58, 5-13.
65. \*Williams T, \*Tolusso DV, Fedewa, MV, **Esco, MR.** (2017) Comparison of periodized and non-periodized resistance training on maximal strength: A meta-analysis. *Sports Medicine* 47, 2083-2100.
66. **Esco, MR,** Nickerson BS, \*Russell AR (2017) Comparison of bioelectrical impedance and DXA for measuring body composition among adults with Down syndrome. *Disability and Health Journal* 31(5):1395-1402.
67. \*Snarr RL, \*Casey JC, \*Hallmark AV, and **Esco MR**. Electromyographical analysis of a traditional and kipping pull-up. *Journal of Australian Strength and Conditioning (Accepted)*
68. \*Flatt, A.A., **Esco, M.R.**, Nakamura, F.Y., Plews, D. (2017) Interpreting daily heart rate variability changes in collegiate female soccer players. *The Journal of Sports Medicine and Physical Fitness* 57, 907-915.
69. \*Nickerson BS., **Esco M.R.**, Kliszczewicz B.M., Freeborn T. (2017) Comparison of bioimpedance and underwater weighing body fat percentage before and acutely after exercise at varying intensities. *Journal of Strength and Conditioning Research* 31, 1395-1402.
70. \*Nickerson, B.S., **Esco, M.R.**, Bishop, PA, Schumacker, R.E., Richardson, M.T., Fedewa, M.V., Wingo, J.E., \*Welborn, B.A. (2017) Impact of measured vs. predicted residual lung volume on body fat percentage via underwater weighing and four-compartment model. *Journal of Strength and Conditioning Research* 31, 2519-2527.
71. \*Nickerson, B.S., **Esco, M.R.,** Bishop, P.A., Schumaker, R.E., Richardson, M.T., Fedewa, M.V., Wingo, J.E., Welborn, B.A. (2018) Validity of selected bioimpedance equations for estimating body composition in men and women: a four-compartment model comparison. *Journal of Strength and Conditioning Research* 32, 121-129.
72. Nakamura, F.Y., Pereira, L.A., Abad, C.C.C., Cruz, I.F., Flatt, A.A., **Esco, M.R.,** Loturco, I. (2017) Adequacy of the ultra-short-term HRV to assess adaptive processes in youth female basketball players. *Journal of Human Kinetics* 56, 73 – 80.
73. Lesnik, B., Sekulic, D., Supej, M., **Esco, M.R.,** Zvan, M. (2017) Balance, basic anthropometric and performance in young alpine skiers: Longitudinal analysis of the associations during two competitive seasons. *Journal of Human Kinetics* 57, 7 – 16.
74. Williford, H.N., Redding, M., **Esco, M.R.,** Reilly, E., Foo, C., Schaefer, G., Allegro, D., Nickerson, B. (2017) Fractionalized walking at self-selected paces in women. *The Scientific Pages of Sports Medicine* 1, 15 – 19.
75. **Esco, M.R.,** \*Flatt, A.A., and Nakamura, F.Y. (2017) Agreement between a smartphone pulse sensor and electrocardiography for determining lnRMSSD. *Journal of Strength and Conditioning Research* 31, 151 – 159.
76. \*Flatt, A.A., Hornikel, B., **Esco. M.R.** (2017) Heart rate variability and psychometric responses to overload and tapering in collegiate sprint-swimmers. *Journal of Science and Medicine in Sport* 20, 606 - 610.
77. **Esco, M.R.**, \*Flatt, A.A., and Williford, H.N. (2017) Postexercise heart rate variability following treadmill and cycle exercise: A comparison study. *Clinical Physiology and Functional Imaging*. 37, 322-327.
78. Zaletel, P., Sekulic, D., Zenic, N, **Esco, M.R.,** Sajber, D., and Kondric, M. (2017) The association between body-build and injury occurrence in pre-professional ballet dancers - separated analysis for the injured body-locations. *International Journal of Occupational Medicine and Environmental Health* 30, 151 – 159.
79. \*Flatt, A.A., **Esco, M.R.,** and Nakamura, F.Y. (2017) Individual heart rate variability responses to preseason training in high level female soccer players. *Journal of Strength and Conditioning Research* 31, 531 – 538.
80. Nakamura, F.Y., Loturco, I., Pereira, L.A., Moraes, J.E., Cal Abad, C.C., \*Flatt, A.A., **Esco, M.R.** (2017)Intraday and interday reliability of ultra-short-term heart rate variability in Rugby Union players. *Journal of Strength and Conditioning Research* 31, 548 – 551.
81. \*Kopec T.J., Bishop, P.A., **Esco, M.R.** (2017) Influence of dynamic stretching and foam rolling on vertical jump. *Athletic Training and Sports Health Care* 9, 33 – 38.
82. **Esco, M.R.**, \*Flatt, A.A., Nakamura, F.Y. (2016) Initial weekly HRV response is related to the prospective change in VO2max in female soccer players. *International Journal of Sports Medicine* 37, 436 – 441.
83. \*Flatt, A.A., **Esco, M.R.** (2016) Monitoring heart rate variability during competition preparation in a national level powerlifter with cerebral palsy: A case report. *Journal of Sport and Human Performance* 4.
84. Bisschoff C.A., Coetzee B., **Esco, M.R.** (2016) Relationship between autonomic markers of heart rate and subjective indicators of recovery status in male, elite badminton players. *Journal of Sports Science and Medicine* 15, 658 – 669.
85. \*Snarr, R.L., \*Hallmark, A.V., \*Nickerson, B.S., **Esco, M.R**. (2016) Electromyographical analysis of pike variations with and without instability devices. *Journal of Strength and Conditioning Research*. 301, 3436-3442.
86. Bisschoff C.A., Coetzee B., **Esco, M.R.** (2016) Relationship between heart rate, heart rate variability, heart rate recovery and global positioning system determined match characteristics of male, elite badminton players. *The International Journal of Performance Analysis in Sport* 16, 881 – 897.
87. Nakamura, F.Y., Loturco, I., Pereira, L.A., \*Flatt, A.A., Berollo, M., Rabelo, F.N., **Esco, M.R.** (2016) Monitoring weekly heart rate variability in futsal players during the preseason: the importance of maintaining high vagal activity. *Journal of Sport Sciences* 34, 2262 – 2268.
88. \*Flatt, A.A., **Esco, M.R.** (2016) Heart rate variability stabilization in athletes: Toward shorter, more convenient data acquisition. *Clinical Physiology and Functional Imaging* 36, 331 – 336.
89. Sekulic, D., Kontic, D., **Esco, M.R.,** Zenic, N., Milanovic, Z., Zvan, M. (2016) Sport-specific conditioning variables predict offensive and defensive performance in high level youth water polo athletes. *Journal of Strength and Conditioning Research* 30, 1316 – 1324.
90. **Esco, M.R.**, \*Nickerson, B.S., Bicard, S.C., \*Russell, A.R., Bishop, P.A. (2016) Agreement of BMI-based equations and DXA for determining body fat percentage among adults with Down syndrome. *Adapted Physical Activity Quarterly* 33, 89 – 96.
91. \*Snarr R.L., \*Hallmark, A.V., **Esco, M.R.** (2016) Core muscle activation during traditional abdominal exercises: An electromyographical comparison. *Journal of Sport and Human Performance* 4, 1 – 7.
92. Kliszczewicz, B., **Esco, M.R.,** Quindry, J, Blessing, D, Oliver, G. (2016) Autonomic Responses to an Acute Bout of High-Intensity Body Weight Resistance Exercise vs. Treadmill Running. *Journal of Strength and Conditioning Research* 30, 1050 – 1058.
93. Flatt, A.A., **Esco, M.R.** (2016) Evaluating individual training adaptation with Smartphone-derived heart rate variability in a collegiate female soccer team. *Journal of Strength and Conditioning Research* 30, 378 – 385.
94. Flatt, A.A., **Esco, M.R.** (2015) Smartphone-derived heart rate variability and training load in a female soccer team. *International Journal of Sports Physiology and Performance* 10, 994 – 1000.
95. Kliszczewicz, B., Quindry, J, Blessing, D, Oliver, G., **Esco, M.R.,** Taylor, J.K. (2015) Acute Exercise and Oxidative Stress: CrossFit vs. Treadmill Bout. *Journal of Human Kinetics* 47, 81 – 90.
96. **Esco, M.R.**, \*Chamberlain, N, \*Flatt, A.A., \*Snarr, R.L., Bishop, P.A., Williford, H.N. (2015) Cross-validation of age-predicted maximal heart rate equations among female collegiate athletes. *Journal of Strength and Conditioning Research* 29, 3053 – 3059.
97. Nakamura, F.Y., Flatt, A.A., Pereira, L.A., Ramirez-Campillo, R., Loturco, I., **Esco, M.R.** (2015) Ultra-short-term heart rate variability is sensitive to training effects in team sports players. *Journal of Sports Science and Medicine* 14, 602-605.
98. Bicard S.C., \*Nickerson B.S., **Esco M.R.**, \*Russell A.R., \*Snarr R.L. (2015) Prompting individuals with Down syndrome to use a treadmill. *ACSM’s Health & Fitness Journal* 19, 19 – 23.
99. \*Nickerson, B.S., **Esco, M.R.,** Bicard, S.C., \*Russell, A.R., Williford, H.N., Schaefer, G. (2015) Validity of the Body Adiposity Index in adults with Down syndrome. *Research in Developmental Disabilities* 38, 92-96.
100. Sattler, T., Sekulic, D., **Esco, M.R.,** Mahmutovic, I., Hadzic, V. (2015) Analysis of the association between isokinetic knee strength with offensive and defensive jumping capacity in high-level female volleyball athletes. *Journal of Science and Medicine in Sport* 18(5), 613-618.
101. **Esco, M.R.**, \*Snarr, R.L., \*Chamberlain, N., \*Leatherwood, M.D., \*Redding, \*M., \*Flatt, A.A., Moon, J.R., Williford, H.N. (2015) Comparison of total and segmental body composition using DXA and multi-frequency bioimpedance in collegiate female athletes. *Journal of Strength and Conditioning Research* 29, 918-925.
102. Taylor, J.K., **Esco, M.R.,** Qian, L., Dugan, K., Jones, K. (2015) A single session of aerobic exercise influences paraoxonase-1 activity and concentration. *RETOS* 27, 222-227.
103. **Esco, M.R.,** \*Snarr, R.L., Flatt, A.A., \*Leatherwood, M.D., \*Whittaker, A. (2014) Tracking changes in maximal oxygen consumption with the Heart Rate Index in female collegiate soccer players. *Journal of Human Kinetics* 42, 103-111.
104. **Esco, M.R.,** \*Flatt, A.A. (2014) Ultra-short-term heart rate variability indexes in athletes: Evaluating the agreement with accepted recommendations. *Journal of Sport Science and Medicine* 13, 535-541.
105. **Esco, M.R., \***Snarr, R.L., Williford, H.N. (2014) Monitoring changes in VO2max via the Polar FT40 in female collegiate soccer players. *Journal of Sports Sciences* 32, 1084-1090.
106. \*Snarr, R.L., **Esco, M.R.** (2014) Electromyographical comparison of plank variations performed with and without instability devices. *Journal of Strength and Conditioning Research* 28(11), 3298-3305.
107. \*Snarr R.L., **Esco M.R.,** Nickerson, B.S.  (2014) Metabolic and cardiovascular demands of a high-intensity interval exercise bout utilizing a suspension device. *Journal of Sport and Human Performance* 2(3).
108. \*Snarr R.L., \*Nickerson B.S., **Esco M.R.** (2014) Effects of hand-grip during the inverted row with and without a suspension device: an electromyographical investigation. *European Journal of Sports & Exercise Science* 3. 1-5.
109. \*Flatt, A.A., **Esco, M.R.** (2014) Endurance performance relates to resting heart rate and its variability: A case study of a collegiate male cross-country athlete. *Journal of Australian Strength and Conditioning* 22, 48-52.
110. Kliszczewicz B., \*Snarr S.L., **Esco M.R.** (2014) Metabolic and cardiovascular responses to the CrossFit workout “Cindy”. *Journal of Sport and Human Performance*, 2.
111. \*Leatherwood, M.D., \*Whittaker, A., **Esco, M.R.** (2014) Exercise Technique: Turkish Get-up with a Kettlebell. *Strength and Conditioning Journal* 36, 107-110.
112. Uljevic, O., **Esco, M.R.,** Sekulic, D. (2014) Reliability, validity and applicability of isolated and combined sport specific tests of conditioning capacities in top level junior water polo athletes. *Journal of Strength and Conditioning Research* 28, 1595-1605.
113. Sekulic, D., Spasic, M., **Esco, M.R**. (2014) Predicting agility performance with other performance variables in pubescent boys: A multiple regression approach. *Perceptual and Motor Skills* 118, 447-461.
114. \*Nickerson, B.S., \*Snarr, R.L., \*Russell, A.R., Bishop, P.A., **Esco, M.R.** (2014). Comparison of BIA and DXA for estimating body composition in collegiate female athletes. *Journal of Sport and Human Performance* 2, 29-39.
115. \*Snarr, R.L., **Esco, M.R.** (2014) Exercise Technique: Lying Hamstring Curl with a Dumbbell. *Strength and Conditioning Journal* 36, 82-84.
116. \*Snarr, R.L., **Esco, M.R.,** Eckert, R.M. (2014) Single-leg squat progressions. *Journal of Australian Strength and Conditioning* 22(4).
117. \*Nickerson, B.S., \*Russell, A.R., Bicard, S.C., \*Snarr, R.L., **Esco, M.R.** (2014) Identifying barriers for people with disabilities that restrict exercise participation. Journal of the Alabama State Association for Health, Physical Education, Recreation, and Dance 34, 8-13.
118. \*Nickerson, B.S., \*Russell, A.R., Bicard, S.C., \*Snarr, R.L., **Esco, M.R**. (2014) Developing a full inclusion exercise facility: implementing strategies for people with disabilities to maximize participation. Journal of the Alabama State Association for Health, Physical Education, Recreation, and Dance 34, 14-19.
119. **Esco, M.R.,** \*Herron R.L., \*Carter, S.J., Flatt, A.A. (2013) Association of body composition and aerobic fitness on heart rate variability and recovery in Black men. *International Journal of Clinical Medicine* 4, 532-538 (Invited Submission).
120. Flatt, A.A., **Esco, M.R.** (2013) Validity of the ithleteTM smart phone application for determining ultra-short-term heart rate variability. *Journal of Human Kinetics* 39, 85-92.
121. \*Snarr, R.L., **Esco, M.R.** (2013) Electromyographic comparison of traditional and suspension push-ups. *Journal of Human Kinetics* 39, 75-83.
122. **Esco, M.R.** (2013) The accuracy of the Body Adiposity Index for predicting body fat percentage in collegiate female athletes. *Journal of Strength and Conditioning Research* 27, 1679-1683.
123. Green, M.S., **Esco, M.R.,** Martin, T.D., Pritchett, R., \*McHugh, A.N., Williford, H.N. (2013) Cross-validation of two field test for predicting VO2max in female collegiate soccer athletes. *Journal of Strength and Conditioning Research* 27, 1520-1528.
124. **Esco, M.R.,** Williford, H.N. (2013) Race influences the relationship between aerobic fitness and heart rate recovery.  Journal of Sports Medicine and Physical Fitness 53, 583-587.
125. **Esco, M.R.,** Williford, H.N.(2013)The relationship between post-exercise heart rate variability and skinfold thickness. *SpringerPlus* 2:389 (Invited Submission).
126. \*Snarr, R.L., **Esco, M.R.,** \*Witte, E.V., \*Jenkins, C.T., \*Brannan, R.M. (2013) Electromyographic activity of rectus abdominis during a suspension push-up as compared to traditional exercises. *Journal of Exercise Physiology* 16, 1-8.
127. \*Snarr, R.L., **Esco, M.R.** (2013)Comparison of Electromyographic Activity When Performing an Inverted Row With and Without a Suspension Device.*Journal of Exercise Physiology* 16, 51-58.
128. \*Snarr, R.L., **Esco, M.R.** (2013) Exercise Technique: Push-up with knee tuck using a suspension device. *Strength and Conditioning Journal* 35, 30-32.
129. \*Snarr, R.L., **Esco, M.R.** (2013) Exercise Highlight: Inverted Row. *Journal of Australian Strength and Conditioning* 22.
130. **Esco, M.R.,** Olson, M.S., Williford, H.N., \*Mugu, E.M., \*Bloomquist, B.E., \*McHugh, A.N. (2012) Cross-validation of two heart rate-based equations for predicting VO2max in white and black men. Journal of Strength and Conditioning Research 26, 1920-1927.
131. \*McHugh, A.N., **Esco, M.R.**, \*Bloomquist, B.E., Williford, H.N. (2012) The effects of a low volume recreational jogging program on cardiovascular-autonomic control. *Journal of Exercise Physiology* 15, 18-25.
132. \*McHugh, A.N., **Esco, M.R**. (2012) The importance of analyzing heart rate recovery in exercise programming. Journal of the Alabama State Association for Health, Physical Education, Recreation, and Dance 32, 32-35.
133. **Esco, M.R.,** Williford, H., Olson, M. (2011) Abdominal skinfold thickness is related to cardiovascular autonomic function as assessed by heart rate variability and heart rate recovery. Journal of Strength and Conditioning Research 25, 2304-2310.
134. **Esco, M.R.,** Olson, M., Williford, H., \*Lizana, S.N., \*Russell, A.R. (2011) The accuracy of hand-to-hand bioelectrical impedance analysis in predicting body composition in college-age female athletes.  Journal of Strength and Conditioning Research 25, 1040-1045.
135. **Esco, M.R.,** Williford, H.N, \*Russell, A.R. (2011) Cross-validation of BMI-based equations for predicting percent body fat in female collegiate athletes.  Journal of Exercise Physiology 14, 43-52.
136. **Esco, M.R.**, \*Mugu, E.M., Williford, H.N., \*McHugh, A.N., \*Bloomquist, B.E. (2011) Cross-Validation of the Polar Fitness TestTM via the Polar F11 Heart Rate Monitor in Predicting VO2max. Journal of Exercise Physiology 14, 43-52.
137. **Esco, M.R.,** Williford, H.N. (2011) Cardiovascular autonomic regulation in collegiate basketball players. Journal of Exercise Physiology14, 35-42.
138. **Esco, M.R.,** Olson, M., Williford H.N., \*Lizana S., Schaefer G. R. (2011) The accuracy of various skinfold equations to predict body fat percentage in college-age female athletes.  Gazzetta Italiana Medica 170, 11-8
139. **Esco, M.R.,** \*McHugh, A.N. (2011) Exercise Technique: Unilateral Supine Dumbbell Fly using a Stability Ball. Strength and Conditioning Journal 33, 90-92.
140. \*Russell, A.R., **Esco, M.R.,** \*Rasbury, A., \*Kim, H. (2011) Resistance training in cardiovascular disease and prevention. Journal of the Alabama State Association for Health, Physical Education, Recreation, and Dance 31, 5-7.
141. **Esco, M.R.,** Olson, M., Williford, H. (2010) The relationship between selected body composition variables and muscular endurance in women.  Research Quarterly for Exercise and Sport 81, 272-277.
142. Schaefer, G.R., **Esco, M.R.,** Gross, M., Williford, H.N. (2010) Cardiopulmonary resuscitation and first aid certification among in-service physical education teachers. National Teachers Education Journal 3, 153-157.
143. **Esco, M.R.,** Olson, M., Williford, H. (2010) Racial differences exist in cardiovascular parasympathetic modulation following maximal exercise. Journal of Applied Research in Clinical and Experimental Therapeutics 10, 24-31.
144. **Esco, M.R.,** Olson, M., Williford, H., Blessing, D., Shannon, D., and Grandjean, P. (2010) The relationship between resting heart rate variability and heart rate recovery.  Clinical Autonomic Research 20, 33-38.
145. **Esco, M.R.,** Olson, M., Williford, H. (2009) Importance of Heart Rate Recovery in At-Risk or Clinical Clients.  Strength and Conditioning Journal, 91-93.
146. Olson, M., **Esco, M.R.,** Williford, H. (2009) Body image concerns in a cohort of active college-aged men: A descriptive inquiry.  Physical Educator, 45-54.
147. **Esco, M.R.,** Olson, M., Williford, H. (2008) Relationship of push-ups and sit-ups tests to anthropometric variables and performance results: A multiple regression study.  Journal of Strength and Conditioning Research 22, 1862-1868.
148. Olson, M., **Esco, M. R.,** Williford, H. (2008) The EMG of conventional abdominal exercise and exercise with a semi-upright commercial device: comparative effects and technique considerations.  Journal of Sports Medicine and Physical Fitness 48, 43-48.
149. **Esco, M. R.,** Olson, M. S., Woollen, E., St. Martin, R., Ellis, M., Williford, H. N., Wheeler, L., Ford, H. T., III (2005) Electromyography of selected Abdominal Exercises: Including Pilates.  Journal of the Alabama State Association for Health, Physical Education, Recreation, and Dance 1, 39-41.
150. **Esco, M. R.,** Olson, M., Williford, H. (2005) Muscle Dysmorphia: An emerging body image concern in men.  Strength and Conditioning Journal 27, 76-79.

**BOOK CHAPTERS**

1. **Esco MR,** Malek MH. (Ongoing) Cardiorespiratory System and Gas Exchange. In Snarr, R. Schoenfeld, B (Eds.), *NSCA’s Essentials of Personal Training*. Champaign, IL: Human Kinetics (Invited).
2. **Esco MR.** Heart Rate Variability between Caucasians and African Americans: A Brief Review. In Walters, S. (Eds.), *Heart rate variability: Prognostic significance, risk factors, and clinical applications*. New York: Nova Publishers, 2015.

**BOOKS**

1. Zagatto AM, Nakamura FY, **Esco MR**, eds. *Muscle Recovery after Exercise, Training and Competition: Physiological Indicators and Non-invasive Monitoring Techniques*. Frontiers Media SA; Lausanne, Switzerland; 2020.

**PATENTS**

1. **Esco MR,** Fedewa MV. Automated aerobic fitness measurement from smartphone technology. Patent Pending 63/159,583. Filed March 11, 2021.
2. **Esco MR**, Wright W. A spotting device for supporting a weightlifting barbell. United States Patent Pending 63/136,351. Filed January 12, 2021.
3. Fedewa MV, Esco MR. Body composition assessment using two-dimensional digital image analysis. United States Provisional Patent 16/841,944. Filed April 8, 2020.

**PROFESSIONAL PRESENTATIONS and PUBLISHED ABSTRACTS**

(\*Represents student co-investigator)

**International and National**

1. \*Fleming AR, Nickerson BS, Winchester LJ, **Esco MR**, Fedewa MV. (2020). Fat and fat-free mass via a novel 2D imaging system provides superior agreement to hydrodensitometry compared to the skinfold method. Poster presentation at the National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
2. \*Holmes CJ, \*Sullivan K, \*Hornikel B, **Esco MR**, Fedewa MV. (2020). Relationship between rowing performance and fat-free mass assessed from a novel 2D image processing system. Poster presentation at the National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
3. \*Hornikel B, \*Sullivan K, **Esco MR**, Fedewa MV. (2020). Body fat percentage estimation from 2-dimensional digital image analysis compared to DXA and a multi-compartment model in competitive D1 swimmers. Poster presentation at the 2020 National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
4. \*Metoyer CJ, \*Hornikel B, \*Sullivan K, \*Holmes CJ, **Esco MR**, Fedewa MV. (2020). Relationship between anaerobic performance and fat-free mass assessed from a 2D image processing system in NCAA D1 female rowers. Poster presentation at the National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
5. \*Metoyer CJ, Nickerson BS, **Esco MR,** Fedewa MV. (2020). Fat mass and fat-free mass derived from a single digital image are associated with field assessments of muscular strength and muscular endurance. Poster presentation at the National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
6. \*Saffold K, \*Sullivan K, \*Hornikel B, \*Holmes CJ, **Esco MR**, Fedewa MV. (2020). Relationship between rowing performance and maximal oxygen consumption relative to fat-free mass assessed from a novel 2D image processing system. Poster presentation at the National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
7. \*Sullivan K, \*Hornikel B, \*Holmes CJ, **Esco MR**, Fedewa MV. (2020). The relative accuracy of body composition assessed via body mass index and a 2-dimensional digital image compared to a 3-compartment model. Presented at the National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
8. \*Sullivan K, \*Hornikel B, Holmes CJ, **Esco MR**, Fedewa MV. (2020). A comparison of anthropometric-based body composition equations. Presented at the National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
9. \*Cicone ZS, \*Hornikel B, \*Holmes CJ, Fedewa MV, **Esco MR**. (2020). The impact of residual lung volume method on multi-compartment model body composition assessment. Poster presentation at the American College of Sports Medicine Annual Meeting, San Francisco, CA.
10. \*Sullivan K, \*Holmes CJ, \*Hornikel B, Cao S, Gan Y, **Esco MR**, Fedewa MV. (2020). Validity of a 3-compartment body composition model derived from a single 2-dimensional digital image. Poster presentation at the American College of Sports Medicine Annual Meeting, San Francisco, CA.
11. Fedewa MV, \*Sullivan K, \*Holmes CJ, \*Hornikel B, Cao S, Gan Y, **Esco MR**. (2020). Test-retest reliability of total body volume derived from a single 2-dimensional digital image. Poster presentation at the American College of Sports Medicine Annual Meeting, San Francisco, CA.
12. Fedewa MV, \*Sullivan K, \*Holmes CJ, \*Hornikel B, Cao S, Gan Y, **Esco MR**. (2020). Validity of a 3-compartment body composition model using body volume derived from a single digital image. Poster presentation at the Southeast American College of Sports Medicine Annual Meeting, Jacksonville, FL.
13. \*Sullivan K, \*Holmes CJ, \*Hornikel B, Cao S, Gan Y, **Esco MR**, Fedewa MV. (2020). Test-retest reliability of total body volume derived from a single 2-dimensional digital image. Poster presentation at the Southeast American College of Sports Medicine Annual Meeting, Jacksonville, FL.
14. \*Cicone ZS, Hornikel B, Holmes CJ, Fedewa MV, **Esco MR**. (2020). The impact of residual lung volume method on multi-compartment model body composition assessment. Poster presentation at the Southeast American College of Sports Medicine Annual Meeting, Jacksonville, FL.
15. \*Hornikel B, \*Cicone ZS, \*Holmes CJ, \*Welborn BA, Esco MR, Fedewa MV, Moon JR, Freeborn TJ. (2019). Agreement between two bioimpedance spectroscopy devices and DXA for body composition. Oral presentation at the Southeast American College of Sports Medicine Annual Meeting, Greenville, SC.
16. Green MS, Allen CR, Hatchett A, **Esco MR,** Fedewa MV, Martin TD. (2019). Association between push-ups and anthropometric variables and upper body strength in women. Oral presentation at the Southeast American College of Sports Medicine Annual Meeting, Greenville, SC.
17. \*Cicone ZS, Holmes CJ, HornikelB, Freeborn TJ, Moon JR, Fedewa MV, **Esco MR.** (2019). Agreement between deuterium oxide and bioimpedance spectroscopy measures of total body water. Oral presentation at the Southeast American College of Sports Medicine Annual Meeting, Greenville, SC.
18. \*Cicone Z, \*Holmes C, \*Welborn B, \*Hornikel B, Moon J, Freeborn T, **Esco MR** (2018) Influence of total body water estimation when measuring body fat percentage with a dual energy x-ray absorptiometry based 4-compartment model. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
19. \*Welborn B, \*Cicone Z, Nickerson B, **MR Esco** (2018) A method of utilizing skinfold and bioelectrical impedance analysis for estimating body fat percentage via four-compartment model. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
20. \*Holmes C, Moon J, **Esco MR,** Tai C, Crowley K, Spradley B (2018) Validity of BodPod and bioimpedance spectroscopy when used along or together in a multi-compartment model for estimating body fat. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
21. \*Hornikel B, Moon J, **Esco MR**, \*Welborn B, \*Cicone Z, \*Holmes C, Freeborn T (2018) Validation of total body water measurements utilizing a novel metal electrode bioimpedance spectroscopy device in comparison to deuterium oxide. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
22. \*Dobbs W, \*Crew K, **Esco MR** (2018) The effect of continuous cooling on heart rate recovery following heat stress in elite tennis players. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
23. \*Crew K, Bishop P, Wingo J, Richardson M, **Esco MR** (2018) Effects of continuous plus intermittent cooling on body temperatures and the impact of shot accuracy in elite tennis players. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
24. \*Sherman S, \*Holmes C, \*Hornikel B, Fedewa MV, MacDonald H, **Esco MR** (2018) Comparison of weekly HRV measures collected from 2 different recording times and their relation to performance in collegiate female rowers. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
25. \*Russell A, Richardson M, Fedewa MV, Conners F, Stran M, **Esco MR** (2018) Agreement between bioelectrical impedance analysis and dual energy x-ray absorptiometry in assessing bone mineral content in adults with Down syndrome. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
26. \*Welborn B, Moon J, Esco MR, \*Cicone Z, \*Holmes C, \*Hornikel B, Freeborn T (2018) Comparing total body water measurements between bioimpedance spectroscopy electrode types and body positions. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
27. \*Dobbs W, \*Tolusso D, \*Holmes C, Fedewa MV, **Esco MR** (2018) Heart rate variability for tracking changes in muscular performance following strenuous resistance exercise. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
28. \*Cicone Z, \*Tolusso D, Fedewa MV, **Esco MR** (2018) The relative accuracy of estimated aerobic capacity in young male athletes: A cross-validation study. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
29. \*Liu Y, **Esco MR**, Fedewa MV (2018) Comparison of heart rate variability in 3 different body positions across a week in sedentary women. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
30. \*Thompson C, Fedewa MV, Sinelnikov O, \*Cicone Z, \*Holmes C, **Esco MR** (2018) Accuracy of a metabolic equation for predicting peak oxygen consumption from a maximal graded running test in youth soccer athletes. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
31. \*Tolusso D, \*Dobbs W, \*Holmes C, **Esco MR** (2018) The utility of perceptual recovery status as a marker of inter-set performance during fatiguing resistance training. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
32. Wright W, Fedewa MV, Robinson J, Bentley B, Hardin B, Esco MR (2018) The accuracy of VO2peak predicted from an arm ergometer metabolic equation in collegiate wheelchair basketball players. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
33. \*Crew K, Bishop P, Wingo J, Richardson M, **Esco MR** (2018) Impact of heat stress on shot accuracy and body temperature in elite tennis players. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
34. \*Tolusso D, \*Dobbs W, \*Holmes C, **Esco MR** (2018) The ability of perceptual recovery status to track daily changes in performance following fatiguing resistance training. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
35. \*Hornikel B, Idrizovic K, Sekulic D, **Esco MR** (2018) The effects of performance level on the response to plyometric training in female youth volleyball players. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
36. Oddi B, Fedewa MV, Sinelnikov O, **Esco MR** (2018) The accuracy of a method to predict body fat percentage from body mass index in youth soccer players. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
37. \*Holmes C, Coelho A, Nakamura F, Rama L, **Esco MR** (2018) Heart rate variability and stress-recovery responses during a training camp in elite young canoe sprint athletes. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
38. \*Sherman S, \*Holmes C, \*Hornikel B, Leeper J, Fedewa MV, MacDonald H, **Esco MR** (2018) The relationship between heart rate variability and performance in collegiate female rowers: Impact of menstrual cycle. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
39. \*Liu Y, **Esco MR,** Fedewa MV (2018) The relationship between heart rate recovery and heart rate variability from averaged weekly values in sedentary women. National Strength and Conditioning Association Annual Meeting, Indianapolis, IN. Abstract published in the *Journal of Strength and Conditioning Research*, 33(2), 2019.
40. Nickerson BS, Moon, JR, **Esco MR**, Tai CY, Crowley K, Spradley B (2017) Effect of total body water estimates via bioimpedance on BodPod-based three-compartment body fat models in athletes. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
41. \*Cicone ZS, Moon JR, **Esco MR,** Tai CY, Crowley K, Spradley B (2017) Comparison of bioimpedance devices for predicting body fat via 3-compartment model in male athletes and the influence of fat-free mass hydration. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
42. \*Welborn BA, Moon JR, **Esco MR,** Tai CY, Crowley K, Spradley B (2017) The accuracy of bioimpedance devices for predicting total body water in female athletes and the influence of fat-free mass hydration. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
43. \*Pennington C, \*Holmes C, \*Cicone Z, Fedewa M, Sinelnikov O, **Esco MR** (2017) Relationship between body composition and performance variables in youth soccer players. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
44. Nickerson BS, \*Welborn BA, \*Tolusso DV, Park KS, Williford HN, **Esco MR** (2017) Comparison of single-frequency bioelectrical impedance and dual energy x-ray absorptiometry for total and segmental body composition. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
45. \*Dobbs WC, Moon JR, **Esco MR,** Tai CY, Crowley K, Spradley B (2017) Accuracy of bioimpedance devices on total body water predictions in male athletes and the influence of fat-free mass hydration. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
46. Snarr RL, **Esco MR**, Moon J, Tai CY, Crowley K, Spradley B (2017) Comparison of 3-compartment model body fat predictions via bioimpedance devices and the influence of hydration in female athletes. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
47. Flatt AA, **Esco MR**, Allen JR, Robinson JB, Earley RL, Wingo JE, Fedewa MV, Keith CM (2017) Daily and chronic HRV responses to training in elite football players during spring camp. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
48. Flatt AA, **Esco MR**, Allen JR, Robinson JB, Bragg A, Keith CM (2017) Heart rate variability monitoring in elite college football players throughout the preparatory and competitive season. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
49. \*Tolusso DV, Snarr RL, Hallmark AV, **Esco MR** (2017) Reliability of lactate threshold following a fatiguing bout of exercise. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
50. \*Holmes CJ, Moon JR, **Esco MR,** Tai CY, Crowley K, Spradley B (2017) Validation of bioimpedance-based body fat methods in male and female athletes. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
51. \*Pennington CG, \*Cicone ZS, \*Holmes CJ, Sinelnikov O, **Esco MR** (2017) Tracking changes in aerobic fitness with the Pacer test in youth soccer players across a competitive season. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*. (Doctoral Student Poster Presentation Award Winner)
52. **Esco MR**, \*Liu Y, \*Holmes C, \*Cicone Z, Flatt AA, MacDonald HV, Fedewa MV (2017) Comparison of manual versus softward-automated calculations of RMSSD heart rate variability. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
53. \*Liu Y, **Esco MR**, \*Cicone ZS, \*Holmes CJ, Flatt AA (2017) The relationship between SDNN:RMSSD and LF:HF measures of heart rate variability in three different body positions. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
54. Fields JB, Jones MT, **Esco MR** (2017) Ultra-shortened HRV segments over a 5-minute period from field recordings in women athletes with and without a prior stabilization period. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
55. Snarr RL, Hallmark AV, \*Tolusso DV, **Esco MR** (2017) Ability of wearable electromyographical compression shorts to predict lactate threshold. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
56. \*Sherman SR, \*Cicone ZS, \*Holmes CJ, Sinelnikov O, **Esco MR**, MacDonald HV (2017) Cross-validation of age-based maximal heart rate equations in youth soccer players. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research*, 31.
57. \*Sherman, SR, Fedewa, MV, MacDonald, HV, **Esco, MR**, Bentley, B, Robinson, JB. (2017) Age is just a number: A case study of changes in fitness and fasting glucose in an NCAA referee. National Strength and Conditioning Association Annual Meeting. Las Vegas, NV. Abstract published in *Journal of Strength and Conditioning Research*, 31, 12.
58. \*Liu Y, **Esco MR**, \*Cicone ZS, \*Holmes CJ, Flatt AA (2017) Inter-day reliability of ultra-shortened RMSSD heart rate variability across three different body positions. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
59. \*Holmes CJ, \*Cicone Z, Flatt AA, **Esco MR** (2017) Observational changes in heart rate variability during acute illness in two collegiate hockey players: A case report. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
60. **Esco MR**, Liu Y, \*Cicone ZS, \*Holmes C, Flatt AA, Fedewa MV, MacDonald HV (2017) Agreement between ultra-shortened RMSSD heart rate variability to traditional recording methods in three different body positions. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract will be published in the *Journal of Strength and Conditioning Research*.
61. **Esco, MR.,** Fedewa, MV, MacDonald, HV. (2017) The accuracy of mobile devices for providing RMSSD under a variety of conditions (Presented by Fedewa and MacDonald). American College of Sports Medicine Annual Meeting, Denver, CO. Abstract published in Medicine and Science in Sports and Exercise.
62. \*Pezzuti, K., \*Nickerson, B., \*Welborn, B., Richardson, M, **Esco, M.R.** (2016). Time course toward baseline of hand-to-foot BIA body fat percentage following an acute bout of aerobic exercise. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
63. \*Nickerson, B., \*Welborn, B., \*Pezzuti, K., Bishop, P., **Esco, M.R.** (2016). Validity of selected bioimpedance equations for estimating body fate percentage: A four-compartment model comparison. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
64. \*Welborn, B., \*Nickerson, B., \*Pezzuti, K., **Esco, M.R.** (2016). Comparison of lean soft tissue measures from hand-to-foot, single-frequency bioimpedance and dual-energy x-ray absorptiometry. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
65. \*Allen, K., \*Metoyer, C., **Esco, M.R.,** Bishop, P. (2016). Impact of a 4-week linear periodization program on Army Physical Fitness Test scores in ROTC cadets. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
66. \*Hallmark, A., \*Snarr, R., **Esco, M.R.** (2016). Determining the relationship between heart rate deflection point and lactate threshold during an incremental cycling test. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
67. \*Fava, A., Bishop, P., **Esco, M.R.,** Tomek, S., \*Truhett, S. (2016). Acute effects of exercise between sets on upper-body power. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
68. \*Flatt, A., \*Hornikel, B., **Esco, M.R.** (2016). The effect of training status on heart rate variability in Division-1 Collegiate Swimmers. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
69. \*Flatt, A., \*Hornikel, B., **Esco, M.R.** (2016). Heart rate variability and perceived recovery responses to overload and taper preceding conference championships in D-1 sprint-swimmers. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
70. \*Williams, T., \*Flatt, A., **Esco, M.R.** (2016). The relationship between heart rate variability and training volume during a peaking block in a competitive female powerlifter. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
71. \*Snarr, R., Fedewa, M., **Esco, M.R.** (2016). Examining the effect of bench press variations on electromyographic activity: A systematic review and meta-analysis. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
72. \*Spencer, S., \*Williams, T., Fedewa, M., **Esco, M.R.** (2016). The effect of BCAA supplementation on the suppression of DOMS: A meta-analysis. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
73. \*Allen, K., \*Metoyer, C., \*Flatt, A., Bishop, P., **Esco, M.R.** (2016). The relationship between HRV and Army Physical Fitness Test scores in ROTC Cadets. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
74. \*Metoyer, C., \*Allen, K., Bishop, P., **Esco, M.R.** (2016). Push-up test predicts 2-mile run performance in ROTC Cadets. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
75. \*Nickerson, B., \*Welborn, B., \*Pezzuti, K., Bishop, P., **Esco, M.R.** (2016). Body fat percentage measures via four-compartment model with predicted residual lung volume. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
76. **Esco, M.R.,** \*Nickerson, B., \*Welborn, B., \*Pezzuti, K., Fedewa, M., Bishop, P. (2016). A novel method of utilizing skinfolds and bioimpedance for determining body fat percentage via three-compartment model. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
77. \*Metoyer, C., \*Casey, J., Jones, M., Oliver, J., Jagim, A., **Esco, M.R.** (2016). Body composition variables from women athletes across six NCAA collegiate sports: A descriptive study. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.
78. \*Williams, T., \*Tolusso, D., Fedewa, M., **Esco, M.R.** (2016). The effect of periodized resistance training on maximal strength: A meta-analysis. National Strength and Conditioning Association Annual Meeting, New Orleans, LA. Abstract published in *Journal of Strength and Conditioning* 30: S1.

1. \*Kopec, T., \*Welborn, B., \*Flatt, A., **Esco, M.R.** (2016) The acute effect of foam rolling on heart rate variability. American College of Sports Medicine Annual Meeting, Boston, MA. Abstract published in *Medicine and Science in Sports and Exercise* 5: S152.
2. \*Allen, K.E., Welborn, B., **Esco, M.R.** (2016) Accuracy of a heart rate monitor-based exercise test for estimating aerobic power in college-aged individuals. American College of Sports Medicine Annual Meeting, Boston, MA. Abstract published in *Medicine and Science in Sports and Exercise* 5: S227.
3. **Esco, M.R.,** \*Flatt, A.A., \*Welborn, B., Nakamura, F. (2016) Agreement between a smartphone pulse sensor and electrocardiography for determining HRV in three different positions. American College of Sports Medicine Annual Meeting, Boston, MA. Abstract published in *Medicine and Science in Sports and Exercise* 5: S229.
4. \*Flatt, A.A., **Esco, M.R.,** Nakamura, F. (2016) Interpreting individual heart rate variability responses to preseason training in high level female soccer players. American College of Sports Medicine Annual Meeting, Boston, MA. Abstract published in *Medicine and Science in Sports and Exercise* 5: S615.
5. \*Metoyer, C., Graham, R., **Esco, M.R.** (2016) The impact of coached breathing on the acute recovery of anaerobic performance in collegiate female athletes. American College of Sports Medicine Annual Meeting, Boston, MA. Abstract published in *Medicine and Science in Sports and Exercise* 5: S832.
6. \*Casey, J.C., \*Casey, K.L., Bishop, P., **Esco, M.R.** (2015) Body composition characteristics of National Championship NCAA Division 1 Football Players. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
7. **Esco, M.R.,** \*Flatt, A.A. (2015) Validity of a smart phone application and finger sensor for evaluating supine and standing HRV in athletes. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
8. \*Casey, K.C., \*Casey, J.C., Bishop, P., **Esco, M.R.** (2015) Body composition changes in female NCAA gymnasts across a preparatory and competitive season. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
9. \*Hallmark, A.V., \*Snarr, R.L., **Esco, M.R.** (2015). The electromyographical comparison of superficial musculature during abdominal exercises. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
10. \*Allen, K., \*Enquist, E.A., Richardson, M., **Esco, M.R.** (2015). No difference in vertical jump relative to total-body and fat-free mass between physically active men and women. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
11. \*Enquist, E.A., Richardson, M., **Esco., M.R.,** \*Lynd, A., \*Snarr, R.L., \*Hallmark, A.V., \*Allen, K., \*Fava, A.W. (2015). The relationship between physical fitness variables, body mass index, and predicted body fat percentage in physically active young adults. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
12. \*Casey, K.L., \*Casey, J.C., Bishop, P., **Esco, M.R.** (2015). Comparison of BMI-based equations and plethysmography for estimating body fat in female competitive collegiate dancers. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
13. \*Baggett, S.A., **Esco, M.R.,** Cosio-Lima, L., Elmore, M., Bishop, P. (2015). Influence of combined anti-inflammatory and nutritional supplements on skeletal muscle recovery in resistance-trained men and women. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
14. \*Flatt, A.A., Esco, M.R. (2015) Early indication of training adaptation with smartphone-derived heart rate variability in collegiate female soccer players. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
15. \*Martinez, A.X., \*Herron, R.L., \*Hornsby, J., \*Ng, J., \*Aldrich, E.K., Bishop, P., **Esco, M.R.** (2015) Time in motion during national competition game-play in collegiate female sand volleyball players: a descriptive investigation. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
16. \*Snarr, R.L., \*Hallmark, A.V., \*Casey, J.C., \*Nickerson, B.S., **Esco, M.R.** (2015) Electromyographical comparison of pull-up variations. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
17. **Esco, M.R.,** \*Flatt, A.A. (2015) Immediate changes in heart rate variability relate to aerobic adaptations following training in female collegiate soccer players. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
18. \*Enquist, E.A., Richardson, M., **Esco, M.R.** (2015) Heart rate response and estimated energy expenditure during a home-based DVD exercise program. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
19. \*Snarr, R.L., \*Hallmark, A.V., **Esco, M.R.** (2015) Electromyographical comparison of an abdominal pike performed with and without instability devices. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
20. \*Casey, J.C., \*Casey, K.L., Bishop, P., **Esco, M.R.** (2015) Body Composition Change Over One Year in NCAA Football Players. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
21. \*Nickerson, B.S., \*Welborn, B.A., Richardson, M., **Esco, M.R.** (2015) Reliability of bioelectrical impedance spectroscopy after an acute exposure of passive heating. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
22. \*Welborn, B.A., \*Nickerson, B.S., Richardson, M., **Esco, M.R.** (2015) Agreement between bioimpedance spectroscopy and single-frequency bioimpedance analysis for assessment of total and compartmental body water. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
23. \*Fava, A.W., \*Nickerson, B.S., \*Welborn, B.A., Richardson, M., **Esco, M.R.** (2015) Reliability of hand-to-foot bioelectrical impedance after an acute period of passive heating. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
24. Flatt, A.A., **Esco, M.R.** (2015) Heart rate variability and wellness responses to high and low training load in collegiate female soccer players. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
25. Oddi, B.T., \*Flatt, A.A., Esco, M.R. (2015) Evaluating performance markers in female soccer players following a 5-week strength and conditioning program. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
26. \*Martinez, A.X., \*Herron, R.L., \*Hornsby, J., \*Ng, J., \*Aldrich, E.K., Bishop, P., Esco, M.R. (2015) Acute changes in body weight and fluid intake of NCAA female sand volleyball players during an official tournament. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
27. \*Kopec, T.J., \*Fava, A.W., \*Liles, B., \*Flemming, M., **Esco, M.R.** (2015) Influence of foam rolling on vertical jump performance. National Strength and Conditioning Association Annual Meeting, Orlando, FL. Abstract published in the *Journal of Strength and Conditioning Research* 30: S1-S171.
28. Williford, H., **Esco, M.R.,** Reilly, E., Herron, R., Schaefer, G., Foo, C., and Walker, A.  (2015) Changes in fire fighter fitness and performance over an 18 year period.  20th annual Congress of the European College of Sport Science, ECSS Malmo, Sweden.
29. **Esco, M.R.,** Reilly, E, Williford, H., Bishop, P., (2015) (Presented by Reilly, E.) Accuracy of predictive maximal heart rate equations in female athletes. 20th annual Congress of the European College of Sport Science, ECSS Malmo, Sweden.
30. \*Russell, A.R., Williford, H.N., Schaefer G., Foo, C.E., **Esco, M.R.** (2014). The relationship between the number of weekly practice hours and competition performance by apparatus of compulsory female gymnasts. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
31. \*Flatt, A.A., and **Esco, M.R.** (2014) Comparing heart rate variability mean values from 7, 5, and 3 days in a team of female collegiate soccer athletes. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
32. **Esco, M.R.**, and \*Flatt, A.A. (2014) Evaluating the agreement between ultra-short-term heart rate variability indexes and accepted recommendations in collegiate athletes. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. (Presented by Flatt, A.A.). Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
33. \*Leatherwood, M.D., Herron, R.L., \*Flatt, A.A., and **Esco, M.R.** (2014). Body position’s effect on the relationship between heart rate variability and heart rate recovery in collegiate female athletes. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
34. Schaefer G., **Esco, M.R.,** \*Russell, A.R., Foo, C.E., \*Nickerson, B.S. (2014) Gender differences in employee safety training among high school athletic and conditioning coaches. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
35. \*Snarr, R.L., and **Esco, M.R.** (2014) Electromyographic comparison of superficial musculature during varying suspension training devices. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
36. Foo, C.E., Schaefer, G., and **Esco, M.R.** (2014) Cultural perceptions between domestic and foreign collegiate athletes: Implications for strength and conditioning practitioners. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
37. \*Flatt, A.A., and **Esco, M.R**. (2014) Heart rate variability responses to first day of sprting season strength and conditioning in female collegiate soccer players. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
38. \*Nickerson, B.S., \*Snarr, R.L., Bishop, P., Williford, H.N., and **Esco M.R.** (2014) Comparison of BIA and DXA for estimating body composition in collegiate female athletes. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
39. \*Snarr R.L., and **Esco, M.R.** (2014) Electromyographic activity of the core musculature during planks performed with and without instability devices. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the *Journal of Strength and Conditioning Research* 28: S1.
40. Feito, Y, and **Esco, MR.** (2014). Colloquium-Exploring the Crossfit Debate. American College of Sports Medicine Annual Meeting, Orlando, FL.
41. Kliszczewicz, B, **Esco, MR,** Blessing, D, Quindry, J, Oliver, G, and Taylor, K. (2014).Differences in Vagal-rebound Following Crossfit Compared To Treadmill Exercise. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
42. Taylor, JK, Kliszczewicz, B, **Esco, MR,** Jones, KW, Dugan,K, and Quan, L. (2014). PON1 Responses Comparing Crossfit Versus Treadmill Running.American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
43. Witte, E, Whittaker, A, Jenkins, CT, Snarr, RL, Williford, HN, and **Esco, MR.** (2014). Relationship Between Total Bone Mineral Density, Body-mass, Fat-mass And Fat-free mass in Collegiate Female Athletes. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
44. Nickerson, BS, Russell, AR, Bicard, SC, Mahurin, AJ, Williford, HN, and **Esco, MR.** (2014). The Accuracy of Hnad-to-Hand Bioelectrical Impedance Analysis in Adults with Down Syndrome. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
45. Herron, RL, Leatherwood, M, Whitaker, A, Chamberlain, N, Snarr, RL, Williford, HN, and **Esco, MR.** (2014). Body Composition Comparisons of Multi-frequency Bioelectrical Impedance and Dual-energy X-ray Absorptiometry in Female Athletes. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
46. Leatherwood, M, Whittaker,M, Chamberlain, N, Witte, E, Jenkins, CT, Redding, ML, Snarr, RL, Williford, HN, and **Esco, MR.** (2014). Comparison of Hand-to-foot Bioelectrical Impedance Analysis An Dual-energy X-ray Absorptiometry in Female Athletes. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
47. Snarr, RL, Williford, HN, and **Esco, MR.** (2014). Air Displacement Plethysmorgraphy Versus Dual Energy X-ray Absorptiometry For Body Composition Assessment in Female Athletes. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
48. Jenkins, CT, Nickerson, BS, Russell, AR, Bicard, SC, Mahurin, Williford, HN, and **Esco, MR.** (2014). The Accuracy of Foot-to-Foot Bioelectrical Impendence Analysis Percentage In Adults With Down Syndrome. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
49. Redding, ML, Leatherwood MD, Whittaker, AM, Witte, EB, Jenkins, CT, Chamberlain, NA, Snarr, RL, Williford, HN, and **Esco, MR.** (2014). Comparison of Foot-to-foot Bioelectrical Impedance Analysis and Dual-energy X-ray Absorptiometry In Female Athletes. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
50. Chamberlain, N, Redding, M, Leatherwood, M, Whittaker, A, Witte, E, Jenkins, CT, Snarr, RL, Wiliford, HN, and **Esco, MR.** (2014). The Accuracy of Selected Age-Predicted Maximal Heart Rate Equations in Collegiate Female Athletes. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
51. Flatt, AA, Williford, HN, and **Esco, MR.** (2014). Time Course for Stabilization of Heart Rate Variability Among Athletes and Non-Athletes During Supine Rest. American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
52. Whittaker, AM, Leatherwood, MD, Chamberlain, N, Witte, E, Jenkins, CT, Redding M, Snarr, RL, Williford, HN, and **Esco, MR.** (2014). Heart Rate Radio Method for Tracking Changes in Aerobic Power in Female Collegiate Soccer Players.American College of Sports Medicine Annual Meeting, Orlando, FL. *Medicine and Science in Sports and Exercise,* 46:5, S471.
53. Williford, H.N., \*Smoak, L., **Esco, M.R.,** Reilly, E., Pugh, S., and Walker, A. (2013) Does sodium bicarbonate loading improve fire fighter performance? 18th Annual Congress of the European College of Sport Science, Barcelona, 2013, Abstract published in the conference proceedings, 293.
54. \*Nickerson, B., \*Russell, A.R., Bicard, S., Mahurin, A.J., and **Esco, M.R.** (2013) Accuracy of the Body Adiposity Index for estimating body fat in individuals with Down syndrome. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
55. \*Russell, A.R., Williford, H.N., Schaefer, G., and **Esco, M.R.** (2013) The relationship between the number of weekly practice hours and competition performance of compulsory female gymnasts. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
56. Schaefer, G., **Esco, M.R.**, \*Russell, A.R., and \*Nickerson, B.S. (2013) Perceived beliefs of safety procedure development among high school athletic and conditioning coaches. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
57. \*Russell, A.R., Williford, H.N., Schaefer, G., and **Esco, M.R.** (2013) Competition performance based on level in compulsory female gymnasts. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
58. \*Herron, R.L., \*Carter, S.J., Williford, H.N., and **Esco, M.R.** (2013) The relationship between fat-mass, fat-free-mass, and heart rate variability. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
59. \*Witte, E., \*Snarr, R.L., \*Jenkins. C., \*Brannan. R., and **Esco, M.R.** (2013) An electromyographic comparison of a modified pull-up with and without a suspension device. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
60. \*Nickerson, B.S., \*Russell, A.R., Bicard, S., Mahurin, A.J., and **Esco, M.R.** (2013) The accuracy of bioelectrical impedance analysis for measuring body fat percentage in individuals with Down syndrome. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
61. \*Snarr, R.L., \*Witte, E., \*Verdy, J., \*Jenkins, C., and **Esco, M.R.** (2013) Cardiovascular and metabolic demands of the TRX Metabolic Blast Workout with Suspension Trainer. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
62. \*Brannan, R., \*Snarr, R.L., \*Witte, E., \*Jenkins, C., and **Esco, M.R.** (2013) Electromyographic activation of superficial musculature during a suspension inverted row as compared to an inverted row. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
63. \*Snarr, R., \*Verdy, J., and **Esco, M.R.** (2013) Accuracy of foot-to-foot bioelectrical impedance analysis in collegiate female soccer players. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
64. \*Kliszczewicz, B., \*Snarr, R., and **Esco, M.R.** (2013) The relationship between aerobic power, fat-free mass, and CrossFit performance. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
65. \*Herron, R.L., \*Carter, S.J., Williford, H., and **Esco, M.R.** (2013) Association of body composition and aerobic fitness on heart rate variability and recovery in black men. National Strength and Conditioning Association Annual Meeting, Las Vegas, NV. Abstract published in the Journal of Strength and Conditioning Research 27:S2.
66. \*Russell, A.R., Williford, H.N., Taylor J.K., Mahurin, A.J., and **Esco, M.R.** (2013) Estimating maximal heart rate with age and resting heart rate. American College of Sports Medicine Annual Meeting, Indianapolis, IN. Abstract published in Medicine and Science in Sports and Exercise 44(5).
67. Taylor, J.K., **Esco M.R.,** Jones K.W., Dugan, K., Qian, L., and Mahurin A.J. (2013) Comparison of PON1 activity and concentration between non-obese and obese men. American College of Sports Medicine Annual Meeting, Indianapolis, IN. Abstract published in Medicine and Science in Sports and Exercise 44(5).
68. \*Snarr, R.L., \*Witte, E.V., \*Jenkins, C.T., \*Brannan, R.M., **Esco, M.R.,** Williford, H.N., and Olson, M.S. (2013) Electromyographic activity of rectus abdominis and pectoralis major during suspension push-up compared to traditional exercises. American College of Sports Medicine Annual Meeting, Indianapolis, IN. Abstract published in Medicine and Science in Sports and Exercise 44(5).
69. \*Kliszczewicz, B.K., \*Snarr, R., Blessing D., and **Esco M.R.** (2013) Metabolic and cardiovascular demand of a named Crossfit workout “Cindy”. American College of Sports Medicine Annual Meeting, Indianapolis, IN. Abstract published in Medicine and Science in Sports and Exercise 44(5).
70. \*Nickerson, \*B.S., Russell, A.R., \*Jenkins, C.T., \*Witte, E., \*Snarr, R.D., Taylor J.K., Mahurin, A.J., and **Esco, M.R.** (2013) The accuracy of bioelectrical impedance analysis for estimating body composition in individuals with developmental disabilities. American College of Sports Medicine Annual Meeting, Indianapolis, IN. Abstract published in Medicine and Science in Sports and Exercise 44(5).
71. \*Herron, R.L., and **Esco, M.R**. (2013) Heart rate variability and cardiorespiratory fitness in African American men. Experimental Biology Annual Conference, Boston, MA. Abstract published in *FASEB J.* 27, 1118.27.
72. Williford, H.N., **Esco, M.R.**, **Reilly, E.,** \*McHugh, A., and \*Bloomquist, B. (2012) Cross-validation of the 20-Meter Multiple Shuttle Test for predicting VO2max in collegiate male basketball athletes.  International Convention on Science, Education & Medicine in Sport, Glasgow, UK. Abstract published in the conference proceeding*.*
73. **Esco, M.R.**, Green, M.S., Martin, T.D., Pritchett, R., \*McHugh, A.N., and Williford, H.N. (2012) Cross validation of two 20 meter shuttle run tests for predicting VO2max in female collegiate soccer players.  National Strength and Conditioning Association Annual Conference, Providence RI.  Abstract published in the conference proceeding*.*
74. **Esco, M.R.**, \*McHugh, A.N., \*Bloomquist, B.E., and Williford, H.N. (2012) The effects of a 7-week low frequency recreational jogging program on heart rate variability. National Strength and Conditioning Association Annual Conference, Providence RI. Abstract published in the conference proceeding*.*
75. \*Snarr, R.L., **Esco, M.R.**, \*Nickerson, B.S., Williford, H.N., Taylor, J.K., and Mahurin, A.J. (2012) The accuracy of bioelectrical impedance analysis for predicting body fat percentage in women. National Strength and Conditioning Association Annual Conference, Providence RI. Abstract published in the conference proceeding*.*
76. \*Snarr, R.L., **Esco, M.R.**, \*Nickerson, B.S., Williford, H.N., and Olson, M.S. (2012)  The accuracy of two heart rate based equations for estimating VO2max in collegiate male basketball players.  National Strength and Conditioning Association Annual Conference, Providence RI. Abstract published in the conference proceeding*.*
77. \*Nickerson, B.S., \*Bloomquist, B.E., Williford, H.N., \*McHugh, A.N., and **Esco, M.R.** (2012) Energy expenditure in dance associated exergaming: A comparison between two systems. National Strength and Conditioning Association Annual Conference. Providence RI. Abstract published in the conference proceeding*.*
78. \*Nickerson, B.S., **Esco, M.R.**, \*Snarr, R.L., Williford, H.N., Taylor, J.K., and Mahurin, A.J. (2012) The accuracy of the body adiposity index for predicting body fat percentage in men.  National Strength and Conditioning Association Annual Conference, Providence RI. Abstract published in the conference proceeding*.*
79. **Esco, M.R.**, Williford, H.N., and Olson, M.S. (2012) Heart rate variability following two different exercise modalities. American College of Sports Medicine. Annual Conference.  San Francisco, CA. Abstract published in Medicine and Science in Sports and Exercise 43(5).
80. Taylor, J.K., **Esco, M.R.**, Williford, H.N., \*McHugh, A.N., \*Bloomquist, B.E., and Mahurin, A.J. (2012) Handgrip strength enhances the utility of traditional body composition parameters with predicting percent body fat. American College of Sports Medicine Annual Conference.  San Francisco, CA. Abstract published in Medicine and Science in Sports and Exercise 43(5).
81. \*McHugh, A.N., Green, M.S., **Esco, M.R.**. Williford, H.N., \*Bloomquist, B.E. and Pritchett, R. (2012) Cross-validation of the 20-meter shuttle test for predicting VO2max in male and female soccer players. American College of Sports Medicine Annual Conference.  San Francisco, CA. Abstract published in Medicine and Science in Sports and Exercise 43(5).
82. \*Bloomquist, B.E., **Esco, M.R.**, \*McHugh, A.N. and Williford, H.N. (2012) Cross-validation of the 20-meter multiple shuttle test for predicting VO2max in basketball and soccer players. American College of Sports Medicine Annual Conference.  San Francisco, CA. Abstract published in Medicine and Science in Sports and Exercise 43(5).
83. **Esco, M.R.,** and Williford, H.N. (2011) Percent body fat and post-exercise heart rate variability. National Strength and Conditioning Association Annual Conference. Las Vegas, NV. Abstract published in the conference proceeding*.*
84. Williford, H.N., **Esco, M.R.,** Martinez, R., and Jordan, C.M. (2011) Body fat can be a detriment to fire fighter performance. National Strength and Conditioning Association Annual Conference. Las Vegas, NV. Abstract published in the conference proceeding*.*
85. Schaefer, G.R., **Esco, M.R.,** Gross, M., and Williford, H.N. (2011) An examination of cardiopulmonary resuscitation and first aid training in interscholastic coaches: A pilot study. National Strength and Conditioning Association Annual Conference. Las Vegas, NV. Abstract published in the conference proceeding*.*
86. \*Bloomquist, B.E., **Esco, M.R.,** Williford, H.N., and \*McHugh, A.N. (2011) The relationship between selected body composition variables and muscular endurance in men. National Strength and Conditioning Association Annual Conference. Las Vegas, NV. Abstract published in the conference proceeding*.*
87. \*McHugh, A.N., **Esco, M.R.,** Williford, H.N., and \*Bloomquist, B.E. (2011) The association of predicted body fat percentage and muscular endurance in women. National Strength and Conditioning Association Annual Conference. Las Vegas, NV. Abstract published in the conference proceeding*.*
88. \*Russell, A.R., **Esco, M.R.,** \*Bloomquist, B.E., Reilly, E.R., Shumack, K.A., and Williford, H.N. (2011) Podcasting for improved skill acquisition and performance in youth gymnastics. National Strength and Conditioning Association Annual Conference. Las Vegas, NV. Abstract published in the conference proceeding*.*
89. **Esco, M.R.,** Williford, H.N., and Olson, M.S. (2011) Resting short-term heart rate variability is different for race and aerobic fitness level. American College of Sports Medicine Annual Conference, Denver, CO. Abstract published in Medicine and Science in Sports and Exercise 42(5).
90. \*McHugh, A.N., **Esco, M.R.,** Williford, H.N., and \*Russell, A.R. (2011) Accuracy of selected field measures for predicting body fat percentage in female athletes. American College of Sports Medicine Annual Conference, Denver, CO. Abstract published in Medicine and Science in Sports and Exercise 42(5).
91. \*Bloomquist, B.E., \*Mugu, E.M., **Esco, M.R.,** Williford, H.N. (2011) Cross-validation Of the Polar F11 for Predicting VO2max. American College of Sports Medicine Annual Conference, Denver, CO. Abstract published in Medicine and Science in Sports and Exercise 42(5).
92. Schaefer, G.R., McGlone, C., Lovett, D.M, and **Esco, M.R.** (2011) The Dissemination of Information: Are Practices Changing? Sports and Recreation Law Association Annual Conference, Savannah, GA. Abstract published in Sports and Recreation Law Association Annual Conference Proceedings.
93. **Esco, M.R.**, Olson, M.S., Williford, H.N., \*Russell, A.R., and \*Gaston K. (2010) Skinfold thickness is related to cardiovascular autonomic control as assessed by resting heart rate variability. National Strength and Conditioning Association Annual Conference, Orlando, FL. Abstract published in the Journal of Strength and Conditioning Research 25(3).
94. **Esco, M.R.**, Williford, H.N., Olson, M.S., \*Russell, A.R., and \*Gaston, K. (2010) The relationship between selected anthropometric variables, VO2max, and heart rate recovery. National Strength and Conditioning Association 2010 Annual Conference. Orlando, FL. Abstract published in the Journal of Strength and Conditioning Research 25(3).
95. Williford, H.N., **Esco, M.R.**, Olson, M.S., \*Gaston, K., and \*Russell A.R. (2010) The accuracy of selected equations to predict maximal heart rate in African American men. National Strength and Conditioning Association Annual Conference, Orlando, FL. Abstract published in the Journal of Strength and Conditioning Research 25(3).
96. \*Russell, A.R., **Esco, M.R.**, \*Lizana, S.N., Williford, H.N., Olson, M.S., and \*Kim, H. (2010) The accuracy of a BMI-based equation in predicting percent body fat in college-age female athletes. National Strength and Conditioning Association Annual Conference, Orlando, FL. Abstract published in the Journal of Strength and Conditioning Research 25(3).
97. \*Kim, H., **Esco, M.R.**, \*Russell, A.R., \*Lizana, S.N., Olson, M.S., Williford, H.N., \*Gaston, K. (2010) Body fat percentage in college-age female athletes as estimated via four selected skinfold equations: A dual-energy X-ray absorptiometry validation. National Strength and Conditioning Association Annual Conference, Orlando, FL. Abstract published in the Journal of Strength and Conditioning Research 25(3).
98. Olson M.S., **Esco, M.R.**, and Williford, H.N. (2010). Body image concerns in African American college women: Athletes versus non-athletes. National Strength and Conditioning Association Annual Conference, Orlando, FL. Abstract published in the Journal of Strength and Conditioning Research 25(3).
99. **Esco, M.R., Olson M.S., and Williford, H.N. (2010)** Heart Rate Recovery and Aerobic Fitness: The Importance of Accounting For Race. American College of Sports Medicine Annual Conference, Baltimore, MD. Abstract published in Medicine and Science in Sports and Exercise 41(5).
100. **Williford, H.N., \*Gaston, K, Esco, M.R., and Olson, M.S. (2010) The acute physiological responses of youth to an interactive video game.** American College of Sports Medicine Annual Conference, Baltimore, MD. Abstract published in Medicine and Science in Sports and Exercise 41(5).
101. **Esco, M.R., Olson M.S., and Williford, H.N. (2009) Influence of race on cardiac autonomic function following maximal exercise. American Association for Cardiopulmonary Rehabilitation Annual Conference, Pittsburgh, PA.** Abstract published in the Journal of Cardiopulmonary Rehabilitation and Prevention 29(4).
102. **Esco, M. R.,** Olson, M., Williford, H. (2008) Sit-ups Performance In Pre-menopausal Women: Association To Waist Circumference And Abdominal Skinfolds.  American College of Sports Medicine Annual Conference.  Indianapolis, IN.  Abstract published in Medicine and Science in Sports and Exercise 40(5).
103. Olson, M., **Esco, M.R.,** and Williford, H. (2008) Prediction of Superficial Versus Deep Abdominal Muscle Activity During Selected Pilates Exercises.  American College of Sports Medicine Annual Conference, Indianapolis, IN.  Abstract published in Medicine and Science in Sports and Exercise 40(5).
104. **Esco, M. R.,** Olson, M., Williford, H., and Corliss, C. (2007) Anthropometrics and performance correlates of push-ups and sit-ups test. American College of Sports Medicine Annual Conference, New Orleans, LA. Abstract published in Medicine and Science in Sports and Exercise 39(5).
105. Olson, M., **Esco, M. R.,** Williford, H., and Corliss, C. (2007) Prediction of selected skinfold measurements from anthropometric and performance variables. American College of Sports Medicine Annual Conference, New Orleans, LA. Abstract published in Medicine and Science in Sports and Exercise 39(5).
106. **Esco, M. R.,** Olson, M., and Williford, H. (2006) Body image perception among active college-aged men. American College of Sports Medicine Annual Conference, Denver, CO. Abstract published in Medicine and Science in Sports and Exercise 38(5).
107. Olson, M., **Esco, M. R.,** and Williford, H. (2006) Body image and muscularity is regionally-based in young men. American College of Sports Medicine Annual Conference, Denver, CO. Abstract published in Medicine and Science in Sports and Exercise 38(5).
108. Williford, H., Olson, M., **Esco, M. R.,** Edwards, P., and Yung, B. (2006) EMG activity of the superficial abdominal musculature using the Core Master Abdominal Trainer. American College of Sports Medicine Annual Conference, Denver, CO. Abstract published in Medicine and Science in Sports and Exercise 38(5).
109. Olson, M. S., Lindsay, A., Williford, H. N., Golding, L., Reilly, E., **Esco, M.,** and Ford, T. (2005) Body image, exercise and substance use in a large sample of incarcerated women. American College of Sports Medicine Annual Conference, Nashville, TN. Abstract published in Medicine and Science in Sports and Exercise 37(5).
110. Olson, M. S., and **Esco, M. R.** (2004) All About Abdominal Training. American College of Sports Medicine Summit Conference. Reno, NV.
111. **Esco, M. R.,** Olson, M. S., St. Martin, R., Woollen, E., Ellis, M., and Williford, H. N. (2004) Abdominal EMG of selected Pilates’ mat exercises. American College of Sports Medicine Annual Conference, Indianapolis, IN. Abstract published in Medicine and Science in Sports and Exercise 36(5).
112. Olson, M. S., Williford, H. N., St. Martin, R., Ellis, M., Woollen, E., and **Esco, M. R. (2004)** The energy cost of a basic, intermediate, and advanced Pilates’ mat workout. American College of Sports Medicine Annual Conference, Indianapolis, IN. Abstract published in Medicine and Science in Sports and Exercise 36(5).

**Regional and State**

1. **Esco, MR** (2019) Physiology of exercise conditioning and the use of to heart rate variability to monitor outcomes. The Southern Association of Cardiovascular and Pulmonary Rehabilitation Annual Meeting. Montgomery, AL.
2. Dobbs, W, Holmes, C, **Esco, MR** (2018). Heart rate variability monitoring in athletes. Southeast American College of Sports Medicine Annual Meeting. Chattanooga, TN.
3. **Esco, MR** (2017). Heart rate variability monitoring in athletes. National Strength and Conditioning Association Georgia State Clinic. Kennesaw, GA.
4. Fedewa, MV, **Esco, MR** (2017). Exercise Science: What can you do with that degree? ASAHPERD Conference, Birmingham, AL.
5. **Esco, M.R.** (2015) Finding the Time for Physical Activity. Manufacture Alabama. Point Clear, AL.
6. **Esco, M.R.** (2015) New Year, New You: Finding the Time for Physical Activity. Executive Women International, Alabama Division. Birmingham, AL.
7. **Esco, M.R.** (2014) Predicting VO2max with heart rate monitors. Alabama State Association for Health, Physical Education, Recreation and Dance. Annual Fall Conference, Birmingham, AL.
8. **Esco, M.R.** (2014) Physiological Adaptions to Resistance Training. Alabama State Association for Health, Physical Education, Recreation and Dance. Annual Fall Conference, Birmingham, AL.
9. **Esco, M.R.** (2014) How to incorporate physical activity into a busy lifestyle. Alabama Council for Association Executives. Annual Convention. Biloxi, MS.
10. Whittaker, A.M., Leatherwood, M.D., Williford, H.N., and **Esco, M.R.** (2014) Predicting body fat with the Womersley and Durnin Body Mass Index equation in female athletes. Alabama State Association for Health, Physical Education, Recreation and Dance. Annual Spring Conference, Orange Beach, AL.
11. Leatherwood, M.D., Chamberlain, N., Whittaker, A.M., Williford, H.N., and **Esco, M.R.** (2014) Accuracy of 220-age equation for predicting maximal heart rate in female athletes. Alabama State Association for Health, Physical Education, Recreation and Dance. Annual Spring Conference, Orange Beach, AL.
12. **Esco, M.R.,** Feito, Y., Klisczewicz, B. (2013) The CrossFit Revolution: Current Issues and Develops. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference, Birmingham, AL.
13. \*Jenkins, C.T., \*Russell, A.R., and **Esco, M.R.** (2013) An adapted fitness program on walking distance in a female with a spinal cord injury: A Case Report. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference, Birmingham, AL.
14. Walker, A.T., and **Esco, M.R.** (2013) The effects of a fitness-based physical education curriculum on selected fitness variables in junior high students. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference, Birmingham, AL.
15. \*Nickerson, B.S., \*Russell, A.R., Bicard, S., and **Esco, M.R.** (2013) Health and Fitness among People with Down Syndrome. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference, Birmingham, AL.
16. \*Leatherwood, M.D., \*Whittaker, A.M., and **Esco, M.R.** (2013) Comparison of Body Composition between Soccer and Basketball Female Collegiate Athletes. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference, Birmingham, AL.
17. \*Whittaker, A.M., \*Leatherwood, M.D., and **Esco, M.R.** (2013) Comparison of maximal oxygen uptake between Soccer and Basketball Female Collegiate Athletes. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference, Birmingham, AL.
18. Flatt, A.A., and **Esco, M.R.** (2013) Suitability of ultra-short-term heart rate variability in collegiate male athletes before and after maximal exercise. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference, Birmingham, AL.
19. \*Snarr, R.L., and **Esco, M.R.** (2013) Electromyographic activity of superficial musculature during suspension training. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference, Orange Beach, AL.
20. \*Witte, E., \*Snarr, R.L., \*Nickerson, B.S., \*Russell, A.R., \*Jenkins, C.T., Taylor, J.K., Mahurin, A.J., and **Esco, M.R.** (2013) The accuracy of the 220-age equation for predicting maximal heart rate. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference, Orange Beach, AL.
21. \*Snarr, R.L., \*Witte, E.V., \*Verdy, J.M., \*Jenkins, C.T., \*Nickerson, B.S., and **Esco, M.R.** (2013) Average caloric expenditure during metabolic conditioning with a suspension device. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference, Orange Beach, AL.
22. \*Kliszczewicz, B.M., \*Snarr, R.L., and **Esco, M.R.** (2013) Maximal oxygen consumption of a typical CrossFit athlete. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference, Orange Beach, AL.
23. **Esco, M.R.**, and Olson, M.S. (2012) Predicting body fat from established field tests in female collegiate athletes. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL.
24. \*Nickerson, B.S., Walker, Z., and **Esco, M.R**. (2012) Health and fitness among individuals with disabilities: A call to awareness. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL. Abstract published in the *ASAHPERD Journal*, 33(1), 2013.
25. **\***Kliszczewicz, B.M., \*Snarr, R.L., and **Esco, M.R**. (2012) Metabolic demands of the named CrossFit workout “Cindy”: A pilot study. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL. Abstract published in the *ASAHPERD Journal*, 33(1), 2013.
26. \*Jenkins, C.T., \*Snarr, R.L., \*Nickerson, B.S., \*Witte, E.V., \*Russell, A.R., and **Esco, M.R**. (2012) The accuracy of predicting body fat percentage via body mass index and body adiposity index in women. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL. Abstract published in the *ASAHPERD Journal*, 33(1), 2013.
27. \*Snarr, R.L., \*Witte, E.V., \*Jenkins, T., \*Brannan, R., and **Esco, M.R**. (2012) Electromyographic activity of rectus abdominis during suspension push-up compared to traditional exercises. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL. Abstract published in the *ASAHPERD Journal*, 33(1), 2013.
28. \*Brannan, R., \*Snarr, R.L., and **Esco, M.R**. (2012) Electromyographic activity of Pectoralis Major during a suspension push-up compared to a standard push up. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL. Abstract published in the *ASAHPERD Journal*, 33(1), 2013.
29. \*Witte, E.V., \*Snarr, R.L., \*Nickerson, B.S., Williford, H.N., Taylor, J.K., Mahurin, A.J., and **Esco, M.R**. (2012) Predicting body fat in women using anthropometry and a simple physical activity rating. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL. Abstract published in the *ASAHPERD Journal*, 33(1), 2013.
30. \*Nickerson, B.S., \*Russell, A.R., Mahurin, A.J., and **Esco, M.R**. (2012) Distribution of adiposity between wheelchair- and non-wheelchair-dependent men: A pilot study.Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL. Abstract published in the *ASAHPERD Journal*, 33(1), 2013.
31. \*Russell, A.R., \*Snarr, E.V., \*Witte, E.V., \*Jenkins, T., \*Nickerson, B.S., Williford, H.N., and **Esco, M.R.** (2012) The effect of body position on body fat percentage determined by hand-to-foot bioelectrical impedance. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL. Abstract published in the *ASAHPERD Journal*, 33(1), 2013.
32. **Esco, M.R.** (2012)The importance of accurately predicting body fat percentage. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference. Orange Beach, AL.
33. \*McHugh, A.N., **Esco, M.R.,** \*Bloomquist, B.E., and Williford, H.N. (2012)Two weekly days of recreational jogging does not improve heart rate recovery after 7 weeks. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference. Orange Beach, AL.
34. \*Bloomquist, B.E., Williford, H.N., **Esco, M.R.**, and \*McHugh, A.N. (2012)Metabolic and Cardiovascular Responses in Dance Associated Exergaming Using the XBOX 360 KinectTM. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference. Orange Beach, AL.
35. \*Nickerson, B., **Esco, M.R.,** and Williford, H.N. (2012) The accuracy of the body adiposity index for predicting body fat percentage in women. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference. Orange Beach, AL.
36. \*Snarr, R.L., **Esco, M.R.**, and Williford, H.N. (2012) The accuracy of the bioelectrical impedance analysis for predicting body fat percentage in men. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference. Orange Beach, AL.
37. **Esco, M.R.** Sudden Cardiac Death in Athletes. (2011) Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL.
38. **Esco, M.R. (2011) Exercise for Weight Loss and Management. Medical Fitness Association’s South Central Meeting. Opelika, AL.**
39. **Esco, M.R. (2011) Physical Activity and Diabetes.** Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference. Orange Beach, AL.
40. **Esco, M.R. (2010) Wellness, Fitness, and Service. Regional conference of Methodist Preachers. Montgomery, AL.**
41. \*Russell, A.R., **M.R.,** **Esco,** M.S., Olson, H.N., Williford, and \*S. Lizana. (2009) The accuracy of selected body fat percentage field estimates in college-age female athletes. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL.
42. **Schaefer, G., and Esco, M.R. (2009)** Risk Management in Physical Education and Sport: Are Coaches, In-service and Pre-service Teachers Ready? Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL.
43. **Olson, M.S., Williford, H.N., and Esco, M.R. (2009) Obesity: What it cost our communities and how we shape our future. The Alabama League of Municipalities Convention. Montgomery, AL.**
44. **Schaefer, G., and Esco, M.R. Heat Can Kill.** (2009) **Southern Sports Management Annual Conference. Troy, AL.**
45. **Esco, M.R. The Timing of Exercise.** (2008)Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL.
46. **Williford, H.W., and Esco, M.R.** (2008) **Heart Rate and Heart Rate Recovery, and Heart Rate Variability Related to Exercise.** Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Spring Conference. Birmingham, AL.
47. **Esco, M. R.,** and Olson, M. S. (2006) Stretching the Truth. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL.
48. **Esco, M. R.,** and Olson, M. S. (2004) The Obesity Crisis. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL.
49. Olson, M. S, and **Esco, M. R.** (2003) Body Image and the Physique. Alabama State Association for Health, Physical Education, Recreation, and Dance. Annual Fall Conference. Birmingham, AL.

**Local**

1. **Esco, M.R. (2013) WarhawkFit Program. River Region Obesity Task Force Meeting. Montgomery, AL.**
2. **Esco, M.R.** (2011) **Exercise and Type 1 Diabetes Mellitus. Athletic Trainer and Physical Therapy Conference. Baptist Family Residence Program. Montgomery, AL.**
3. **Esco, M.R. (2010) Fitness and weight management. Wellness Program at AUM: Scale Back Alabama. Montgomery, AL.**
4. **Esco, M.R. (2009) Core Anatomy and Function. Athletic Trainer and Physical Therapy Conference. Baptist Family Residence Program. Montgomery, AL.**
5. **Esco, M.R. (2009) Periodization of Resistance Training. Huntingdon College. Montgomery.**
6. **Esco, M. R. (**2007) Finding the Time to Exercise. Wellness program at Hyundai, Montgomery, AL.

**GRANTS AND CONTRACTS (Funded)**

Validity of EliteHRV Facial Scanning Technology for Measuring HRV Under Resting Conditions With Changes in Body Position.

Elite HRV

Role: Principle Investigator

Funded: $24,880

Occupational Health, Safety, and Performance of Tactical and Industrial Athletes

University of Alabama, Research Grants Committee, 2018 – 2020.

Role: Co-Investigator (PI, Hayley MacDonald)

Funded: $184,135

Evaluation of Sozo Bioimpedance Measures for Body Composition Determination at Rest and Following Heat Stress

Impedimed, Inc., 2017 - 2019

Role: Principle Investigator (Co-Investigators, Dr. Todd Freeborn and Dr. Jonathan Wingo)

Funded: $349,945

The Psychophysiology of Recovery in Department of Defense Personnel

University of Alabama, Research Grants Committee, 2016 – 2018.

Role: Principle Investigator (Co-Investigators, Dr. Philip Gable and Dr. Philip Bishop)

Funded: $130,000

Wearable Technology Research

MAD Apparel, Inc., 2016

Role: Principle Investigator (Co-Investigator: Ronald Snarr)

Funded: $16,847

Health and Fitness for Individuals with Down Syndrome

Montgomery Area Down Syndrome Outreach Group, 2013

Role: Co-Principle Investigator

Funded: $6,000

WarhawkFit Program Support

Hyundai Corporation, 2013

Role: Principle Investigator

Funded: $2,500

Determining the Accuracy of the InBody720 for Predicting Body Fat Percentage in Individuals with Disabilities

Auburn University at Montgomery, Ida Belle Young Faculty Research Award, 2013

Role: Principle Investigator

Funded: $20,000

WarhawkFit Program for People with Developmental Disabilities

Alabama Council of Developmental Disabilities, 2012 - 2014

Role: Co-Principle Investigator (Primary Project Manager: Kent Crenshaw, Montgomery Center for Independent Living; Co-Investigator, Dr. Sara Bicard, Department of Counselor, Leadership, and Special Education, Auburn University at Montgomery)

Funded: $100,000 (AUM Sub-Award: $51,610)

Body Composition Laboratory Advancement

Auburn University at Montgomery, Office of the Provost, 2012

Role: Principle Investigator

Funded: $70,500

WarhawkFit Program for People with Developmental Disabilities

Auburn University at Montgomery, Office of Outreach, 2012

Role: Co-Principle Investigator

Funded: 8,094

Fire Fighter Training and Fitness Program

Auburn University at Montgomery, Office of the Provost, 2012

Role: Co-Investigator

Funded: $20,351

Start-up Funds Request for WarhawkFit

Auburn University at Montgomery, Office of the Provost, 2012

Role: Principle Investigator

Funded: $5,000

The dissemination of information: Are practices changing?

Auburn University at Montgomery, School of Education Faculty Travel Funds, 2011

Role: Co-Investigator

Funded: $1,000

The relationship between cardiovascular autonomic regulation and pedometer-based walking Auburn University at Montgomery, School of Education Faculty Research Funds, 2011

Role: Principle Investigator

Funded: $10,000

Cardiovascular responses to an acute bout of resistance exercise

Auburn University at Montgomery, Ida Belle Young Faculty Research Award, 2010.

Role: Principle Investigator

Funded: $35,000

The relationship between selected anthropometric variables, VO2max, and heart rate recovery Auburn University at Montgomery, Faculty Research Conference Fund, 2010

Role: Principle Investigator

Funded: $300

Cardiovascular autonomic responses between treadmill and cycle ergometer exercise

Auburn University at Montgomery, Research Council Equipment Grant, 2009

Role: Principle Investigator

Funded: $4,500

Body composition and Laboratory Advancement

Auburn University at Montgomery, Ida Belle Young Faculty Research Award, 2009

Role: Co-Investigator

Funded: $24,000

Research Equipment Grant to Purchase a Moxus Metabolic Cart for the Human Performance Laboratory

Auburn University at Montgomery, Research Council Equipment Grant, 2008

Role: Principle Investigator

Funded: $8,125

Racial differences in heart rate variability after acute bouts of maximal and submaximal aerobic exercise

Auburn University at Montgomery, Research Council New Faculty Grant-in-Aid, 2008

Role: Principle Investigator

Funded: $4,340

**GRANTS AND CONTRACTS (Not Funded)**

Determining Psychophysiological Readiness and Stress Following Physically and Mentally Challenging Events Using Heart Rate Variability

Department of Defense Special Operations Command

Role: Primary Investigator

Not Funded: $700,000

Innovative Wheelchair Setup for Improving Children’s Physical Activity and Quality of Life

Stiftelsen Promobilia

Role: Co-Investigator (PI: Margaret Stran)

Not Funded: $58,007

Improving Physical Activity and Quality of Life through Improved Wheelchair Function

Alabama Council of Developmental Disabilities, 2014

Role: Co-Investigator (PI: Margaret Stran)

Not Funded: $25,000

The effects of a 12-week home-based cycling program on prosthetic mobility and physical fitness variables in individuals with transtibial amputation

National Institute on Disability and Rehabilitation Research, 2013

Role: Co-Investigator (PI: Lee Childres)

Not Funded: $600,000

Cardiac autonomic recovery from acute eccentric resistance exercise

National Strength and Conditioning Foundation, New Investigator Grant, 2011

Role: Primary Investigator

Not Funded: $15,000

**DOCTORAL DISSERTATIONS AND MASTERS THESES**

Ward Dobbs, 2018

Exploring the utility of unobtrusive methods of acquiring heart rate variability at rest and following exercise

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Chair

Angela Russell, 2017

Body composition assessment in adults with Down syndrome

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Chair

Kermit Crew, 2017

Impact of heat stress and cooling strategies on body temperature and performance in elite tennis players

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Co-Chair

Andrew A. Flatt, 2017

Monitoring heart rate variability in elite college football players throughout the preparatory and competitive season

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Chair

Tyler D. Williams, 2017

Monitoring changes in resistance training performance following overload and taper microcycles

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Co-Chair

Ronald Snarr, 2017

Relationship between blood lactate and electromyography during aerobic exercise

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Co-Chair

Christo Bisschoff, 2017

Heart rate variability and heart rate recovery in relation to match results in elite African male badminton players

Doctor of Philosophy, North-West University,Potchefstroom, South Africa

Role: Co-Promotor (Co-Chair)

Brett S. Nickerson, 2016

A critical examination of selected measures of body composition

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Co-Chair

Thomas Kopec, 2016

Performance recovery following exercise induced muscle damage

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Co-Chair

Kimberly Allen, 2016

Evaluation of HRV as a Predictor of Response to a Modified Physical Training in ROTC Cadets

Master of Arts, Human Performance, The University of Alabama

Role: Member

Anthony Fava, 2016

Acute effects of exercise between sets on upper body power

Master of Arts, Human Performance, The University of Alabama

Role: Member

Jason Casey, 2016

Monitoring recovery following an acute bout of extreme conditioning exercise

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Member

Jermaine B. Mitchell, 2015

The effects of interval walking on measures of exercise enjoyment and caloric expenditure

Doctor of Philosophy, Exercise Physiology, The University of Alabama

Role: Member

Brian Kliszczewicz, 2013

Physiological responses to a CrossFit workout

Doctor of Philosophy, Exercise Physiology, Auburn University

Role: Member

James Kyle Taylor, 2013

The acute effects of exercise and exercise plus niacin on paraxonase activity

Doctor of Philosophy, Exercise Physiology, Auburn University

Role: Member

Ronald L. Snarr, 2013

Electromyographic comparison of selected musculature during suspension push-ups versus traditional exercises

Masters of Education, Exercise Science, Auburn University at Montgomery

Role: Chair

Aindrea McHugh, 2012

The effects of a 4-week stretching program on cardiovascular autonomic control in recreational runners

Masters of Education, Exercise Science, Auburn University at Montgomery

Role: Chair

Barbara Bloomquist, 2012

Energy expenditure in dance associated exergaming: Comparison between the Nintendo Wii and the Xbox Kinect

Masters of Education, Exercise Science, Auburn University at Montgomery

Role: Member

Shawn O’Malia, 2009

The Nature and Existence of Mentoring Relationships at the United States Air Force Academy

Doctor of Education, Adult Education, Auburn University

Role: Outside Reader

Kelly Gaston, 2009

The acute physiological responses of youth to an interactive video game

Masters of Education, Exercise Science, Auburn University at Montgomery

Role: Member

Lindy Lunkenhiemer, 2007

The acute effects of stretching on anaerobic power

Masters of Education, Exercise Science, Auburn University at Montgomery

Role: Member

**UNIVERSITY SERVICE**

Faculty Senate (Alternate) University of Alabama

2017 – 2018

Research Grants Committee University of Alabama

2016 - Present

Undergraduate Scholarship Committee University of Alabama

2015 College of Education

Exercise Physiology Faculty Search Committee University of Alabama

2014 – 2018 Department of Kinesiology

Strength and Conditioning Coach Search Committee University of Alabama

2017 Adapted Athletics Program

Strategic Planning Committees and Task Forces Auburn University at Montgomery

2011 – 2012

Provost Search Committee Auburn University at Montgomery

2011 – 2012

Research Council Auburn University at Montgomery

2010 – Current

Health Professions Advisory Committee Auburn University at Montgomery

2009 – Current

Rubric for Evaluating On-Line Courses Committee School of Education

2009 – 2012

NCATE Standard I Committee Member School of Education

2007 – Current

School of Education Luau Entertainment Committee School of Education

2007, 2008, 2009, 2010

Tenure and Promotion Committee: Member Dept. of Phys. Ed. and Ex. Science

2013

Tenure and Promotion Committee: Chair Dept. of Phys. Ed. and Ex. Science

2012

Sports Management Position Search Committee Dept. of Phys. Ed. and Ex. Science

2007

Intramural Director Search Committee Dept. of Phys. Ed. and Ex. Science

2008

**PROFESSIONAL SERVICE**

Editorial Board Membership:

*Journal of ASAHPERD* (Editorial Board) 2012 – 2016

*Sports* (Guest Editor Special Edition)2018

*Frontiers in Physiology* (Guest Editor Special Edition)2018

*Int. Journal of Environmental Research and Public Health* (Editorial Board) 2020 – Present

Manuscript Reviewer:

*European Journal of Applied Physiology*

*Journal of Strength and Conditioning Research*

*The Physician and Sports Medicine*

*Journal of Sports Science*

*Physical Therapy in Sport*

*PlosOne*

*Clinical Physiology and Functional Imagining*

*International Journal of Sport Physiology and Performance*

*Journal of Sport Science and Medicine*

*Age*

*International Journal of Sports Medicine*

*Clinical Autonomic Research*

*European Journal of Clinical Nutrition*

*European Journal of Sports Science*

*European Journal of Sports Medicine*

*Open Access Journal of Sports Medicine*

*Current Cardiology Reviews*

*Vascular Health and Risk Management*

*Anatolian Journal of Cardiology*

*Ethnicity and Disease*

American College of Sports Medicine (ACSM)

Committee on Certification and Registry Boards: Member 2012 - 2016

Reviewer for *Guidelines for Ex. Test. and Presc*, 10th ed 2015

Authored an ACSM Brochure on Resistance Training 2013

Poster Session Chair at the Southeastern Meeting 2010

National Strength and Conditioning Research

Alabama State Division, Director 2016 – current

Alabama State Board Member 2014 – 2016

Alabama State Assoc. for Health, Physical Education, Recreation, and Dance

Executive Director Evaluation Committee 2012 - 2013

ASAHPERD Service Award Selection Committee 2012 - 2013

Vice President of the Sports and Exercise Science Division  2012, 2014

Strategic Planning Committee 2012

Ethnic Minority Award Selection Committee 2012

Vice President-elect of the Sports and Exercise Science Division  2011

Reviewer for McGraw-Hill Higher Education: Exercise Physiology: Theory and 2017

Application to Fitness and Performance, 10th Ed, Powers and Howley

WebMD Expert Reviewer 2008 - 2013

Movement Analysis Video Reviewer for Motion Graphics 2009

Textbook Reviewer for McGraw-Hill 2009

**RELATED PROFESSIONAL EXPERIENCE**

Owner Health Promotion and Exercise Specialists 2003 – 2008

Montgomery, AL

Clinical Exercise Physiologist Montgomery Cardiovascular Associates 2003 – 2006

Montgomery, AL

Strength and Conditioning Coach Velocity Sports 2005

Montgomery, AL

Clinical Exercise Physiologist Baptist Pulmonary Rehab 2004

Practicum Intern 200 hrs Montgomery, AL

Physical Therapy Technician Rehab Associates 2002

Intern 300 hrs Montgomery, AL

**AWARDS and HONORS**

AUM Department of Kinesiology Alumni Award 2017

AUM School of Education: Henry N. Williford Distinguished Research Award 2012

AUM School of Education: The Robert Wiesman Emerging Professional 2010

Marquis Who’s Who 2010

ASAHERD P.R.I.D.E. Award 2009

Cambridge Who’s Who 2008

Phi Epsilon Kappa 2006

Graduate Scholars List 2004

Who’s Who in American Universities and Colleges 2004

Kappa Delta Pi 2004