

**Curriculum Vitae**  
**Anthony Paul MARSH, Ph.D.**  
**Professor**

Department of Health and Exercise Science  
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**EDUCATION**

PhD	1995, Arizona State University Department of Exercise Science and Physical Education
MEd	1989, University of Western Australia Department of Human Movement and Recreation Studies
BPE (Hons)	1986, University of Western Australia Department of Human Movement and Recreation Studies

**PROFESSIONAL EXPERIENCE**

**Wake Forest University, Winston-Salem, NC**

Senior Associate Dean of Faculty, 2019-present  
Associate Dean of Research, Scholarship, and Creativity, 2016-2018  
Professor, Health and Exercise Science, 2012-present  
Associate Professor, Health and Exercise Science, 2001-2012  
Assistant Professor, Health and Exercise Science, 1996-2001

**Cross-Appointment**

Section on Gerontology & Geriatric Medicine, Department of Internal Medicine, 2006-present  
Affiliate Faculty Member  
VT-WFU School of Biomedical and Engineering and Sciences, 2003-present

**California State University, Sacramento, CA**

Lecturer, Health and Physical Education, 1995-1996

**Arizona State University, Tempe, AZ**

Faculty Associate, Dept. of Exercise Science and Physical Education, Spring 1995  
Research Assistant, Fall 1990-Spring 1995  
Teaching Assistant, S '90, Sum '90, S '91, F '91, Sum '94, Sum '95

**University of Western Australia (Jan-Dec academic year), Perth, WA**

Research Assistant, biomechanics, 1987-1989  
Teaching Assistant, biomechanics, 1983-1989

## **COURSES TAUGHT**

### **Wake Forest University – Casa Artom, Venice, Italy**

HES 352 & HES 370: Spring 2014

### **Wake Forest University**

*Research Leave-Sabbatical* – Fall 2014, Spring 2015

HES 370: Biomechanics of Human Movement (2 sections) – Fall 1996- Fall 2015

HES 352: Human Gross Anatomy (3 sections) – Spring 1997- Spring 2013

HES 354: Assessment Techniques (1-week module on EMG) – 1996-2003

FYS 100: Biomechanics: mechanical designs for living and locomotion – Fall 2004- Fall 2007

FYS 100: Explorations in Translational Science (1-week module) – Fall 2011-2013

### **California State University, Sacramento**

PE 151A: Biomechanics, Fall 1995, Spring 1996

PE 254: Introduction to Biomechanics Research Methods, Fall 1995

### **Arizona State University**

EPE 335: Biomechanics, Spring 1995

## **PROFESSIONAL AFFILIATIONS**

Awarded Fellow Status, American College of Sports Medicine (ACSM), 2012

American College of Sports Medicine (ACSM), 1992-

Southeast Chapter of the American College of Sports Medicine (SEACSM), 1996-

Southwest Chapter of the American College of Sports Medicine (SWACSM), 1994-1996

Awarded Fellow Status, Gerontological Society of America (GSA), 2016

Gerontological Society of America (GSA), 2010-

American Society of Biomechanics (ASB), 1991-2003

International Society of Biomechanics (ISB), 1991-2001

## **HONORS**

2014            Team Science Award, Wake Forest School of Medicine: Pepper Center  
2018            Team Science Award, Wake Forest School of Medicine: The LIFE Study

## PUBLICATIONS

### Book Chapters

1. Moore GE, **Marsh AP**, Durstine JL. Ch. 2: Approach to exercise and disease management, in *ACSM's Exercise Management for Persons with Chronic Disease and Disability*. J. Larry Durstine, Geoffrey E. Moore, senior eds. Human Kinetics, Champaign, IL, 2002.

### Journal Articles-Currently Under Review/Revision

### Journal Articles-Peer-Reviewed

1. Rejeski WJ, **Marsh AP**, Fanning J, Ambrosius WT, Walkup MP, Nicklas BJ. Dietary Weight Loss, Exercise, and Inflammation in Older Adults who are Overweight or Obese and have Cardiometabolic Disease. *Obesity*, 2019.
2. Kammire DE, Walkup ME, Ambrosius WT, Lenchik L, Shapses SA, Nicklas BJ, Houston DK, **Marsh AP**, Rejeski WJ, Beavers KM. Effect of weight change following intentional weight loss on bone health in older adults with obesity. *Obesity*, 2019.
3. Gidley AD, **Marsh AP**, Umberger BR. (2019). Performance criteria for generating predictive optimal control simulations of bicycle pedaling. *Computer Methods in Biomechanics and Biomedical Engineering*, 22(1): 11-20.
4. Schoell SL, Beavers KM, Beavers DP, Lenchik L, **Marsh AP**, Rejeski WJ, Stitzel JD, Weaver AA. (2019). Prediction of lumbar vertebral body compressive strength of overweight and obese older adults using morphed subject-specific finite element models to evaluate the effects of weight loss. *Aging Clinical and Experimental Research*, 31(4): 491-501.
5. Wang ZM, Leng X, Messi ML, Choi SJ, **Marsh AP**, Nicklas BJ, Delbono O. (2019). Relationship of physical function to single myofiber contractility in older adults: Effects of resistance training with and without caloric restriction. *Journals of Gerontology: Medical Sciences*, 74(3): 412-419.
6. Wanigatunga A, Gill T, Marsh AP, Hsu F, Yaghjyan L, Woods A, Glynn N, King A, Newton R, Fielding R, Pahor M, Manini T. (2019). Effect of hospitalizations on physical activity patterns in mobility-limited older adults. *Journal of the American Geriatrics Society*, 67(2):261-268.
7. Beavers KM, Walkup MP, Weaver AA, Lenchik L, Kritchevsky SB, Nicklas BJ, Ambrosius WT, Stitzel JD, Register TC, Shapses SA, Marsh AP, Rejeski WJ. Effect of Exercise Modality During Weight Loss on Bone Health in Older Adults With Obesity and Cardiovascular Disease or Metabolic Syndrome: A Randomized Controlled Trial. *J Bone Miner Res*. 2018 Dec;33(12):2140-2149.
8. Bollaert RE, **Marsh AP**, Cutter GR, Motl RW. The Virtual Short Physical Performance Battery: Psychometric properties and validation in older adults with multiple sclerosis. *Journal of Applied Gerontology*, 2017.

9. Vidt ME, Santago AC, **Marsh AP**, Hegedus EJ, Tuohy CJ, Poehling GG, Freehill MT, Miller ME, Saul KR. (2018). Modeling a rotator cuff tear: individualized shoulder muscle forces influence glenohumeral joint contact force predictions. *Clinical Biomechanics*, 60:20-29.
10. Kim S, Neiberg R, Rejeski WJ, **Marsh AP**, Kritchevsky SB, Leng XI, Groban L. (2018). Self-reported Mobility as a Preoperative Risk Assessment Tool in Older Surgical Patients Compared to the American College of Surgeons National Surgical Quality Improvement Program. *Perioperative Medicine*, 7:12.
11. Schoell SL, Weaver AA, Beavers DP, Lenchik L, **Marsh AP**, Rejeski WJ, Stitzel JD, Beavers KM. (2018). Development of subject-specific proximal femur finite element models of older adults with obesity to evaluate the effects of weight loss on bone strength. *Journal of Osteoporosis and Physical Activity*, 6(1):213.
12. Callahan KE, Lovato L, Miller ME, **Marsh AP**, Fielding RA, Gill TM, Groessl EJ, Guralnik J, King AC, Kritchevsky SB, McDermott MM, Manini T, Newman AB, Rejeski WJ. (2018). Self-Reported Physical Function as a Predictor of Hospitalization in the LIFE Study. *Journal of the American Geriatrics Society*, 66(10):1927-1933.
13. Kim S, Miller ME, Lin M, Rejeski WJ, Kritchevsky SB, **Marsh AP**, Groban L. (2018). Self- vs proxy-reported mobility using the Mobility Assessment Tool-short form in Elderly Preoperative Patients. *European Review of Aging and Physical Activity*, 15:5.
14. Henderson RM, Miller ME, Fielding RA, Gill TM, Glynn NW, Guralnik JM, King A, Newman AB, Manini TM, **Marsh AP**, Pahor M, McDermott MM, Rejeski WJ, Tudor-Locke C, Kritchevsky SB, for the LIFE Study Investigators. (2018). Maintenance of Physical Function 1 year After Exercise Intervention in At-Risk Older Adults: Follow up from the LIFE study. *Journals of Gerontology: Medical Sciences*, 73(5):688-694.
15. Miller ME, Magaziner J, **Marsh AP**, Fielding RA, Gill TM, King A, Kritchevsky S, Manini T, McDermott MM, Neiberg R, Orwig D, Santanasto A, Pahor M, Guralnik J, Rejeski WJ, for the LIFE Investigators. (2018). Gait Speed and Mobility Disability: Revisiting Meaningful Levels Across Heterogeneous Clinical Populations. *Journal of the American Geriatrics Society*, 66(5):954-961.
16. Rejeski WJ, Walkup MP, Fielding RA, King AC, Manini T, **Marsh AP**, McDermott M, Miller EY, Newman AB, Tudor-Locke C, Axtell RS, Miller ME for the LIFE Study Investigators. (2018). Evaluating accelerometry thresholds for detecting changes in levels of moderate physical activity and resulting major mobility disability. *Journals of Gerontology: Medical Sciences*, 73(5):660-667.
17. Fanning J, Walkup MP, Ambrosius WT, Brawley LR, IpEH, **Marsh AP**, Rejeski WJ. (2018). Change in Health-Related Quality of Life and Social Cognitive Outcomes in Obese, Older Adults in a Randomized Controlled Weight Loss Trial: Does Physical Activity Behavior Matter? *Journal of Behavioral Medicine*, 41(3):299-308.
18. Cochrane SK, Shyh-Huei Chen S-H, Fitzgerald JD, Dodson JA, Fielding RA, King AC, McDermott MM, Manini TM, **Marsh AP**, Newman AB, Pahor M, Tudor-Locke C, Ambrosius WT, Buford TM for the LIFE Study Research Group. (2017). Association of Accelerometry-Measured Physical Activity and Cardiovascular Events in Mobility-limited Older Adults: The LIFE Study. *JAHA: Journal of the American Heart Association*, 6(12):e007215.

19. Saldana S, **Marsh AP**, Rejeski WJ, Haberl JK, Wu P, Ip EH. (2017). Assessing balance through the use of a low-cost head-mounted display in older adults: a pilot study. *Clinical Interventions in Aging*, 12:1363-1370.
20. Petrie M, Rejeski WJ, Basu S, Laurienti PJ, **Marsh AP**, Norris JL, Kim-Shapiro DB, Burdette JH. (2017). Beet Root Juice: An Ergogenic Aid for Exercise and the Aging Brain. *Journals of Gerontology: Medical Sciences*, 72(9):1284-1289.
21. Fielding RA, Guralnik J, King AC, Pahor M, McDermott MM, Tudor-Locke C, Manini T, Glynn N, **Marsh AP**, Axtell R, Hsu F, Rejeski WJ. (2017). Dose of physical activity, physical functioning and disability risk in mobility-limited older adults: Results from the LIFE study randomized trial. *PLOS One*, 12(8):e0182155.
22. Mankowski RT, Anton SD, Axtell R, Chen S, Fielding RA, Glynn NW, Hsu F, King AC, Layne AS, Leeuwenburgh C, Manini TM, **Marsh AP**, Pahor M, Tudor-Locke C, Conroy DE, Buford TW for the LIFE Investigators. (2017). Device-measured physical activity as a predictor of disability among mobility-limited older adults. *Journal of the American Geriatrics Society*, 65(10):2251-2256.
23. Beavers KM, Ambrosius WT, Rejeski WJ, Burdette JH, Walkup MP, Sheedy JL, Nesbit BA, Gaukstern JE, Nicklas BJ, **Marsh AP**. (2017). Effect of Exercise Type during Intentional Weight Loss on Body Composition in Older Adults with Obesity. *Obesity*, 25(11): 1823-29.
24. Shaltout HA, Eggebeen J, **Marsh AP**, Brubaker PH, Laurienti PJ, Burdette JH, Basu S, Morgan A, Dos Santos PC, Norris JL, Morgan TM, Miller GD, Rejeski WJ, Hawfield AT, Diz DI, Becton JT, Kim-Shapiro DB, Kitzman DW. (2017). Effects of supervised exercise and dietary nitrate in older adults with controlled hypertension and/or heart failure with preserved ejection fraction. *Nitric Oxide*, 69:78-90.
25. Elverman M, Goddard MA, Mack D, Snyder JM, Lawlor MW, Meng H, Beggs AH, Buj-Bello A, Poulard K, **Marsh AP**, Grange RW, Kelly VE, Childers MK. (2017). Long-term effects of systemic gene therapy on gait in a canine model of myotubular myopathy. *Muscle and Nerve*, 56(5):943-953.
26. Kritchevsky SB, Lovato L, Handing EP, Blair S, Botosaneanu A, Guralnik JM, Liu C, King A, **Marsh AP**, Pahor M, Rejeski WJ, Spring B, Manini T. (2017). Exercise's effect on mobility disability in older adults with and without obesity: The LIFE study randomized clinical trial. Exercise's Effect on Mobility Disability in Older Adults With and Without Obesity: The LIFE Study Randomized Clinical Trial. *Obesity*, 25(7):1199-1205.
27. Beavers KM, Beavers DP, Martin SB, **Marsh AP**, Lyles MF, Lenchik L, Shapses SA, Nicklas BJ. (2017). Change in Bone Mineral Density During Weight Loss with Resistance versus Aerobic Exercise Training in Older Adults. *Journals of Gerontology: Medical Sciences*, 72(11):1582-85.
28. Zhang T, Brinkley TE, Liu K, Feng X, **Marsh AP**, Kritchevsky SB, Zhou X, Nicklas BJ. (2017). Circulating miRNAs as Biomarkers of Gait Speed Responses to Aerobic Exercise Training in Obese Older Adults. *Aging*, 9(3):900-913.
29. Gill TM, Beavers DP, Guralnik JM, Pahor M, Fielding RA, Hauser M, Manini TM, **Marsh AP**, McDermott MM, Newman AB, Allore HG, Miller ME. (2017). The effect of intervening hospitalizations on the benefit of structured physical activity in promoting independent mobility

- among community-living older persons: secondary analysis of a randomized controlled trial. *BMC Medicine*, 15(1):65.
30. Rejeski WJ, Ambrosius WT, Burdette, JH, Walkup MP, **Marsh AP**. (2017). Community Weight Loss to Combat Obesity and Disability in at-risk Older Adults. *Journals of Gerontology: Medical Sciences*, 72(11):1547-53.
  31. Santanasto AJ, Glynn NW, Lovato L, Blair SN, Fielding RA, Gill TM, Guralnik JM, Hsu F, King A, Strotmeyer ES, Manini T, **Marsh AP**, McDermott MM, Goodpaster BH, Pahor M, Newman AB. (2017). Effect of Physical Activity versus Health Education on Physical Function, Grip Strength and Mobility. *Journal of the American Geriatrics Society*, 65(7):1427-33.
  32. Manini TM, Beavers DP, Pahor M, Guralnik JM, Spring B, Church TS, King AC, Folta SC, Glynn NW, **Marsh AP**, Gill TM, for the LIFE study investigators. (2017). Effect of Physical Activity on Self-reported Disability in Older Adults: Results from The LIFE Study. *Journal of the American Geriatrics Society*, 65(5):980-988.
  33. Beavers KM, Hire DG, Rapp SR, Miller ME, Houston DK, **Marsh AP**, Leng I, Baker LD, Bray GA, Blackburn GL, Hergenroeder AL, Jakicic JM, Johnson KC, Korytkowski MT, Van Dorsten B, Kritchevsky SB for the Action for Health In Diabetes (Look AHEAD) Movement and Memory Ancillary Study Research Group. (2017). Effects of Longitudinal Glucose Exposure on Cognitive and Physical Function: Results from the Action for Health in Diabetes Movement and Memory Study. *Journal of the American Geriatrics Society*, 65(1):137-145.
  34. Layne AS, Fang-Chi Hsu, Blair SN, Shyh-Huei Chen, Dungan J, Fielding RA, Glynn NW, Hajduk AM, King AC, Manini TM, **Marsh AP**, Pahor M, Pellegrini C, Buford TW, for the LIFE study investigators. (2017). Predictors of change in physical function among older adults in response to long-term, structured physical activity: The LIFE Study. *Archives of Physical Medicine and Rehabilitation*, 98(1):11-24.
  35. Normandin E, Chmelo E, Lyles MF, **Marsh AP**, Nicklas BJ. (2017). Effect of Resistance Training and Caloric Restriction on the Metabolic Syndrome. *Med Sci Sports Exerc*, 49(3):413-419.
  36. Henderson RM, Leng XI, Chmelo EA, Brinkley TE, Lyles MF, **Marsh AP**, Nicklas BJ. (2017). Gait speed response to aerobic versus resistance exercise training in older adults. *Aging Clin Exp Res*, 29(5):969-976.
  37. Gill TM, Guralnik JM, Pahor M, Church T, Fielding R, King AC, **Marsh AP**, Newman AB, Pellegrini CA, Chen S, Allore HG, Miller ME, for the LIFE Study Investigators. (2016). Effect of Structured Physical Activity on Overall Burden and Transitions between States of Major Mobility Disability in Older Persons: Secondary Analysis of a Randomized Controlled Trial. *Annals of Internal Medicine*, 165(12):833-840.
  38. Mokhtari F, Paolini BM, Burdette JH, **Marsh AP**, Rejeski WJ, Laurienti PJ. (2016). Baseline Gray- and White Matter Volume Predict Successful Weight Loss in the Elderly. *Obesity*, 24(12):2475-2480.
  39. Vidt ME, Santago AC, **Marsh AP**, Hegedus EJ, Tuohy CJ, Poehling GG, Freehill MT, Miller ME, Saul KR. (2016). The effects of a rotator cuff tear on activities of daily living in older adults: a kinematic analysis. *Journal of Biomechanics*, 49(4):611-7.

40. Chmelo EA, Beavers DP, Lyles MF, **Marsh AP**, Nicklas BJ, Beavers KM. (2016). Legacy effects of short-term intentional weight loss on total body and thigh composition in overweight and obese, older adults, *Nutrition and Diabetes*, 6, e203.
41. Kim S, **Marsh AP**, Rustowicz L, Roach C, Leng I, Kritchevsky SB, Rejeski WJ, Groban L. (2016). Self-Reported Mobility in Older Patients Predicts Early Postoperative Outcomes after Elective Noncardiac Surgery, *Anesthesiology*, 124(4):815-25.
42. **Marsh AP**, Applegate WB, Guralnik JM, Rejeski WJ, Church TS, Fielding RA, Gill TM, King AC, Kritchevsky SB, Manini TM, McDermott MM, Newman AB, Stowe CL, Walkup MP, Pahor M, Miller ME, LIFE study investigators. (2016). Hospitalizations during a physical activity intervention in older adults at risk of mobility disability: Exploratory analyses from the LIFE Study randomized clinical trial. *Journal of the American Geriatrics Society*, 64(5):933-43.
43. Rejeski WJ, **Marsh AP**, Brubaker P, Buman M, Fielding RA, Hire D, Manini T, Rego A, Wrights A, Miller ME, for the LIFE Study Investigators. (2016). Analysis and Interpretation of Accelerometry Data in Older Adults: The LIFE Study, *Journals of Gerontology: Medical Sciences*, 71(4):521-8.
44. Messi ML, Li T, Wang Z, **Marsh AP**, Nicklas BJ, Delbono O. (2016). Resistance Training Enhances Skeletal Muscle Innervation without Modifying the Number or their Myofiber Association of Satellite Cells in Obese Older Adults, *Journals of Gerontology: Biological Sciences*, 71(10):1273-80.
45. Choi SJ, Files DC, Zhang T, Wang Z, Messi ML, Gregory H, Stone J, Lyles MF, Dhar S, **Marsh AP**, Nicklas BJ, Delbono O. (2016). Intramyocellular Lipid and Impaired Myofiber Contraction in Normal Weight and Obese Older Adults, *Journals of Gerontology: Medical Sciences*, 71(4):557-64.
46. Jefferson ME, Nicklas BJ, Chmelo EA, Crotts CI, Shaltout HA, Diz DI, **Marsh AP**, Brinkley TE. (2016). Effects of Resistance Training With and Without Caloric Restriction on Arterial Stiffness in Overweight and Obese Older Adults, *American Journal of Hypertension*, 29(4):494-500.
47. Vidt ME, Santago AC, Hegedus EJ, **Marsh AP**, Tuohy CJ, Poehling GG, Freehill MT, Miller ME, Saul KR. (2016). Can self-report instruments of shoulder function capture functional differences in older adults with and without a rotator cuff tear? *Journal of Electromyography and Kinesiology*, 29:90-9.
48. Vidt ME, Santago AC, Tuohy CJ, Poehling GG, Freehill MT, Kraft RA, **Marsh AP**, Hegedus EJ, Miller ME, Saul KR. (2016). Assessments of fatty infiltration and muscle atrophy from a single MRI slice are not predictive of 3-dimensional measurements. *Arthroscopy*, 32(1):128-39.
49. Mankowski RT, Aubertin-Leheudre M, Beavers DP, Botosaneanu A, Buford TW, Church T, Glynn NW, King AC, Liu C, Manini TM, **Marsh AP**, McDermott MM, Nocera JR, Pahor M, Strotmeyer E, Anton SD, and the LIFE Research Group. (2015). Sedentary Time is Associated with the Metabolic Syndrome in Older Adults at High Risk for Mobility Limitations - The LIFE Study. *Experimental Gerontology*, 70:32-6.

50. Tyrrell DJ, Bharadwaj M, Van Horn CG, **Marsh AP**, Nicklas BJ, Molina AJA. (2015). Blood-Cell Bioenergetics are Associated With Physical Function and Inflammation in Overweight/Obese Older Adults, *Experimental Gerontology*, 70:84-91.
51. **Marsh AP**, Janssen JA, Ip EH, Barnard RT, Ambrosius WT, Brubaker PR, Burdette JH, Sheedy JL, Rejeski WJ. (2015). Assessing Walking Activity in Older Adults: Development and Validation of a Novel Computer-Animated Assessment Tool. *Journals of Gerontology: Medical Sciences*, 70(12), 1555-61.
52. **Marsh AP**, Wrights AP, Haakonssen EH, Dobrosielski MA, Chmelo EA, Barnard RT, Pecorella A, Ip EH, Rejeski WJ. (2015). The Virtual Short Physical Performance Battery (vSPPB). *Journals of Gerontology: Medical Sciences*, 70(10), 1233-41.
53. Nicklas BJ, Chmelo EM, Delbono O, Carr JJ, Lyles MF, **Marsh AP**. (2015). Effects of resistance training with and without caloric restriction on physical function and mobility in overweight and obese, older adults: A randomized controlled trial, *American Journal of Clinical Nutrition*, 101(5), 991-9.
54. Fitzgerald JD, Johnson L, Hire DG, Ambrosius WT, Anton SD, Dodson JA, **Marsh AP**, McDermott MM, Nocera JR, Tudor-Locke C, White DK, Yank V, Pahor M, Manini TM, Buford TW, for the LIFE Study Research Group. (2015). Association of Objectively-measured Physical Activity with Cardiovascular Risk in Mobility-limited Older Adults. *Journal of the American Heart Association*, 4(2).
55. Chmelo EA, Crotts CI, Newman JC, Brinkley TE, Lyles MF, Leng X, **Marsh AP**, Nicklas BJ. (2015). Heterogeneity of physical function responses to exercise training in older adults. *Journal of the American Geriatrics Society*, 63(3), 462-9.
56. Rejeski WJ, Rushing J, Guralnik JM, Ip EH, King AC, Manini T, **Marsh AP**, McDermott MM, Fielding RA, Newman AB, Tudor-Locke C, Gill TM. (2015). The MAT-sf: Identifying Risk for Major Mobility Disability. *Journals of Gerontology: Medical Sciences*, 70(5), 641-6.
57. Zhang T, Birbrair A, Wang Z-M, Messi ML, **Marsh AP**, Nicklas BJ, Delbono O. (2015). Improved knee extensor strength with resistance training associates with muscle specific miRNAs in older adults. *Experimental Gerontology*, 62, 7-13.
58. Wrights, AP, Fain CW, Miller ME, Williamson JD, Rejeski WJ, **Marsh AP**. (2015). Assessing physical and cognitive function of older adults in continuing care retirement communities: Who are we recruiting? *Contemporary Clinical Trials*, 40, 159-60.
59. Houston DK, Leng X, Bray GA, Hergenroeder AL, Hill JO, Jakicic JM, Johnson KC, Neiberg RH, **Marsh AP**, Rejeski WJ, Kritchevsky SB, for the Action for Health In Diabetes (Look AHEAD) Movement and Memory Ancillary Study Research Group. (2015). A long-term intensive lifestyle intervention and physical function: The Look AHEAD Movement and Memory Study. *Obesity*, 23(1), 77-84.
60. Goddard MA, Burlingame EA, Beggs AH, Buj-Bello A, Childers MK, **Marsh AP**, Kelly VE. (2014). Gait characteristics in a canine model of X-linked myotubular myopathy. *Journal of the Neurological Sciences*, 346(1-2), 221-6.
61. Pahor M, Guralnik JM, Ambrosius WT, Blair S, Bonds DE, Church TS, Espeland MA, Fielding RA, Gill TM, Groessl EJ, King AC, Kritchevsky SB, Manini TM, McDermott MM, Miller ME,



- Newman AB, Rejeski WJ, Sink KM, Williamson JD; LIFE study investigators. (2014). Effect of structured physical activity on prevention of major mobility disability in older adults: the LIFE study randomized clinical trial. *Journal of the American Medical Association*, 311(23), 2387-96.
62. Pamukoff DN, Haakonssen EC, Zaccaria JA, Madigan ML, Miller ME, **Marsh AP**. (2014). The effects of strength and power training on single-step balance recovery in older adults: a pilot study. *Clinical Interventions in Aging*, 9, 697-704.
63. Guerra RO, Oliveira BS, Alvarado BE, Curcio CL, Rejeski WJ, **Marsh AP**, Ip EH, Barnard RT, Guralnik JM, Zunzunegui MV. (2014). Validity and applicability of a video-based animated tool to assess mobility in elderly Latin American populations. *Geriatrics & Gerontology International*, 14(4), 864-73.
64. Grosicki GJ, Miller ME, **Marsh AP**. (2014). Performance variability at submaximal 1RM intensities in younger and older adults. *Clinical Interventions in Aging*, 9, 209-18.
65. Zhang T, Choi SJ, Wang Z-M, Messi ML, Birbrair A, Jin J-P, **Marsh AP**, Nicklas BJ, Delbono O. (2014). Human Slow Troponin T (TNNT1) Pre-mRNA alternative splicing is an indicator of skeletal muscle response to resistance exercise in older adults. *Journals of Gerontology: Biological Sciences*, 69(12), 1437-47.
66. Simpson SL, Lyday RG, Laurienti PJ, **Marsh AP**, Hayasaka S. (2013). A permutation testing framework to compare groups of brain networks. *Frontiers in Computational Neuroscience*, Nov 25;7, 171.
67. Rejeski WJ, Axtell R, Fielding R, Katula J, King AC, Manini T, **Marsh AP**, Pahor M, Rego A, Tudor-Locke C, Newman M, Walkup M, Miller ME, LIFE Study Investigator Group. (2013). Promoting physical activity for elders with compromised function: The LIFE Study physical activity intervention. *Clinical Interventions in Aging*, 8, 1119-31.
68. **Marsh AP**, Janssen JA, Ambrosius WT, Burdette JH, Gaukstern JE, Morgan AR, Nesbit BA, Paolini JB, Sheedy JL, Rejeski WJ. (2013). The Cooperative Lifestyle Intervention Program-II (CLIP-II): Design and methods. *Contemporary Clinical Trials*, Nov;36(2), 382-93.
69. Beavers KM, Beavers DP, Nesbit BA, Ambrosius WT, **Marsh AP**, Nicklas BJ, Rejeski WJ. (2014). Effects of an 18-month physical activity and weight loss intervention on body composition in overweight/obese older adults. *Obesity*, 22(2), 325-31.
70. Barnard RT, **Marsh AP**, Rejeski, WJ, Pecorella A, Ip EH. (2013). Design and implementation of the Mobility Assessment Tool: Software description. *BMC Medical Informatics and Decision Making*, 13, 73.
71. **Marsh AP**, Lovato LC, Glynn NW, Kennedy K, Castro C, Domanchuk K, McDavitt E, Rodate R, Marsiske M, McGloin J, Groessl EJ, Pahor M, Guralnik JM (2013). Lifestyle Interventions and Independence for Elders Study: Recruitment and baseline characteristics. *Journals of Gerontology: Medical Sciences*, 68(12), 1549-58.
72. Rejeski WJ, **Marsh AP**, Anton S, Chen S-H, Church T, Gill TM, Guralnik JM, King A, Rushing J, Ip EH for the LIFE Research Group (2013). The MAT-sf: Clinical relevance and validity. *Journals of Gerontology: Medical Sciences*, 68(12), 1567-74.

73. Ip EH, Rejeski WJ, **Marsh AP**, Barnard RT, Chen S-H. (2013). Psychometric properties of a computerized adaptive test for assessing mobility in older adults using novel video-animation technology. *Quality of Life Research*, 22(8), 1907-15.
74. **Marsh AP**, Shea, MK, Vance RM, Miller ME, Isom S, Miller GD, Nicklas BJ, Lyles MF, Carr JJ, Kritchevsky SB. (2013). Resistance training and pioglitazone leads to improvements in muscle power during voluntary weight-loss in older adults. *Journals of Gerontology: Medical Sciences*, 68(7), 828-36.
75. Ip EH, Church T, Marshall SA, Zhang Q, **Marsh AP**, Guralnik J, King AC, Rejeski WJ. (2013). Physical activity increases gains in and prevents loss of physical function: Results from the Lifestyle Interventions and Independence for Elders Pilot Study (LIFE-P). *Journals of Gerontology: Medical Sciences*, 68(4), 425-32.
76. Daly M, Vidt ME, Eggebeen JD, Miller ME, Simpson WG, **Marsh AP**, Saul KR. (2013). Upper extremity muscle volumes and functional strength following resistance training in older adults. *Journal of Aging and Physical Activity*, 21(2), 186-207.
77. Miller GD, **Marsh AP**, Dove RW, Beavers D, Presley T, Helms C, Bechtold E, King SB, Kim-Shapiro D. (2012). Plasma nitrate and nitrite are increased by a high nitrate supplement, but not by high nitrate foods in older adults. *Nutrition Research*, 32(3), 160-8.
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#### **Journal Articles-Nonpeer-reviewed**

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3. Elliott B, **Marsh T**. (1990). A teaching quandary: The foot-up or foot-back technique? *Tennis Australia*, September, 117.
4. Elliott B, **Marsh T**, Overheu P. (1990). "Bend and go": The key to fast movement around the tennis court. *Westennis*, August, 43.
5. **Marsh T**, Elliott B. (1989). Lower limb drive and the backswing loop in the tennis serve. *Tennis Australia*, December, 67.

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7. Elliott B, **Marsh T**. (1989). Research into practice: The service action. In W.E. Morrison (ed.), *VII<sup>th</sup> International Symposium of Biomechanics in Sports* (pp. 23-31). Victoria, Australia: Footscray Institute of Technology.
8. Elliott B, **Marsh T**, Overheu P. (1988). A teaching primer for tennis stroke production. *ACHPER National Journal*, September, 29-33.
9. **Marsh T**, Elliott B, Overheu P. (1988). Increase your accuracy: Flatten the arc of the swing. *Tennis Australia*, July, 33.
10. **Marsh T**, Elliott B. (1988). The basic elements of topspin. *Tennis Australia*, June, 65.
11. Overheu P, Elliott B, **Marsh T**. (1988). The split-step-A forgotten art. *Tennis Australia*, May, 56.
12. Elliott B, **Marsh T**, Overheu P. (1988). The Lendl and Graf forehands. *Tennis Australia*, April, 56-57.

## RESEARCH GRANTS

### Not Funded

#### Extramural

R01AG051580

**Marsh** (Co-PI)

9/01/15-8/31/20

NIDDK

Weight loss and physical activity in older adults with type 2 diabetes mellitus.

The proposed study design is a three arm, comparative effectiveness, randomized, controlled, 18-month trial comparing weight loss (WL) and home-based aerobic activity, with WL and either aerobic center-based activity or aerobic and resistance center-based activity. The primary aim is to test the main effect for treatment on glycemic control (HbA1c) and lower extremity mobility (Short Physical Performance Battery) in 330 overweight/obese older adults with T2DM.

Total Cost: \$3,654,150

Role: Co-PI

R01AG052419-01

**Kritchevsky/Laurienti** (Co-PI)

12/01/15-11/30/20

NIH

Brain Networks and Mobility Function: B-NET.

B-Net will establish a cohort of 240 community-dwelling older adults (age range 70-85) and measure mobility function at baseline, 6, 18 and 30 months using the extended short physical performance battery (eSPPB). B-NET will apply a new paradigm to understand how aging brain networks affect mobility function to develop novel approaches to prevent age-related mobility decline in older adults.

Total Cost: \$3,848,735

Role: Consultant

**Funded**  
Extramural

- 1U24AR07113-01                      (Pahor et al.)                      12/6/2016 - 11/30/2022  
NIH/Common Fund  
Molecular transducers of physical activity in humans consortium (MoTrPAC) coordinating center  
The goal of the Molecular transducers of physical activity in humans consortium (MoTrPAC) is to assemble a comprehensive map of the molecular changes that occur in response to physical activity and, when possible, relate these changes to the benefits of physical activity. The consortium coordinating center will be comprised of experts from multiple institutions who will provide the organizational framework and overall coordination of the multi-site MoTrPAC study. The coordinating center will facilitate the activities and interactions of the individual Clinical Centers, the Chemical Analysis Sites, the Bioinformatics Center and the steering committee.  
Role: Co-I
- P30 AG021332                      Kritchevsky (PI)                      7/1/18-6/30/23  
NIH/NIA  
Wake Forest School of Medicine Claude D. Pepper Older Americans Independence Center  
The major goals of this project are to develop, test, and disseminate effective strategies for the prevention and treatment of physical disability in later life and to train next-generation leaders in clinical geriatric research.  
Role: Co-I
- R01 AG042411-01                      Houston (PI)                      4/01/13-3/31/18  
NIA  
Trial of vitamin D supplementation and neuromuscular function in older adults.  
The goal of this study is to examine the effect of vitamin D supplementation on neuromuscular functions related to fall risk in older adults.  
Role: Co-I
- R18HL076441-06A1                      **Marsh** (Co-PI)                      3/01/12-2/28/17  
NHLBI  
CLIP-II: Cooperative Lifestyle Intervention Programs-II.  
The proposed study is a randomized clinical trial to evaluate the effects of diet-induced weight loss (WL) on mobility in obese, older adults with cardiovascular disease (CVD) or MetS as compared to WL combined with physical activity (resistance training or aerobic training).  
Role: Co-PI
- U01 AG022376                      **Marsh** (Co-PI)                      9/01/09-11/30/15  
NIH/NIA  
LIFE Study: Lifestyle Interventions and Independence for Elders – WFU Field Center  
A Phase 3 randomized, controlled trial (RCT) that will provide evidence on the use of physical exercise to prevent physical and mobility disability in older persons.  
Role: Co-PI

Extramural Groban (PI) 6/01/12-12/30/13  
Anesthesia Patient Safety Foundation  
Does Preoperative Assessment of Nutritional Status, Mobility, and Frailty Among Geriatric Patients Predict Early Postoperative Morbid Events?  
The goal of this study is to examine physical function, mobility, and nutritional status as predictors of early postoperative outcomes in older patients who are undergoing elective, non-cardiac surgery.  
Role: Co-I

Extramural Childers (PI) 5/01/11-4/30/14  
Muscular Dystrophy Association/Association Française contre les Myopathies  
Gene therapy in canine myotubular myopathy.  
The goal of this study is to examine the effect of gene therapy on muscle function and gait in a canine model of X-linked myotubular myopathy.  
Role: Co-I

P30 AG021332 Kritchevsky (PI) 8/01/08-5/31/13  
NIH/NIA  
Wake Forest School of Medicine Claude D. Pepper Older Americans Independence Center  
The major goals of this project are to develop, test, and disseminate effective strategies for the prevention and treatment of physical disability in later life and to train next-generation leaders in clinical geriatric research.  
Role: Co-I

R01 AG020583-08 Nicklas (PI) 4/01/08-3/31/13  
NIA  
Loss of fat tissue and functional responses to exercise in older, obese adults  
This study will determine whether older, obese men and women who lose weight by dieting during a weight-lifting program will experience greater improvements in muscle strength and physical function as a result.  
Role: Co-I

P30 AG021332 Kritchevsky (PI) 9/01/07-7/31/08  
NIA  
Claude D. Pepper Older Americans Independence Center.  
One-year bridge funding.  
Role: Co-I

M01RR007122 Kritchevsky (PI) 3/1/07-2/29/07  
Claude D. Pepper Older Americans Independence Center  
Optimizing Body Composition for Function in Older Adults (OPTIMA).  
Role: Co-I.

U01AG022376 Pahor (PI) 9/30/03-8/31/08  
NIA  
Lifestyle Interventions and Independence in Elders (LIFE) Pilot Study.  
The major goal of this project is to gather preliminary data that will determine the feasibility of



conducting a Phase 3 randomized, controlled trial (RCT) to provide evidence on the use of physical exercise to prevent physical and mobility disability in older persons.

Role: Co-I.

Extramural                                      **Marsh (Co-PI)**                                      9/30/03-9/29/07  
NIA

Ancillary study to LIFE: Development of a mobility task to identify individuals at risk for mobility disability and functional decline.

Role: Co-PI.

P30AG021332-01                                      **Marsh (PI)**                                      9/01/03-8/31/04  
NIA

Effect of muscle power on disability: Analyses of the InChianti study

Role: PI.

P30AG021332-01                                      **Marsh (PI)**                                      9/01/03-8/31/04  
NIA

Power training in older adults: Mechanisms underlying change in muscle function.

Role: PI.

Extramural                                      **Marsh (Co-PI)**                                      7/26/02-7/25/03  
NIA

Development of a mobility task to identify individuals at risk for mobility disability and functional decline.

Role: Co-PI.

P30AG021332-01                                      Pahor (PI)                                      9/01/02-8/31/07  
NIA

Claude D. Pepper Older Americans Independence Center

Role: Co-I

Extramural                                      **Marsh (Co-PI)**                                      October, 2000  
ZTorque Crank

Energy expenditure during cycling with a modified crank assembly.

Role: Co-PI.

Extramural                                      **Marsh (PI)**                                      October, 1997  
Nike

Footwear grant: shoes for Sticht Center biomechanics lab.

Role: PI.

Extramural                                      **Marsh (PI)**                                      10/1/91-9/30/92  
Cycling Research Association

The relationship between cadence, power output, oxygen consumption, and iEMG in cycling.

Role: PI.

**Funded**  
Intramural

- WFU Internal                      **Marsh (Co-PI)**                      7/1/14-6/30/15  
Translational Science Center  
Eccentric exercise as a means to improve muscle tissue regeneration post injury in aged rats.  
Total Cost: \$20,000  
Role: Co-PI
- WFU Internal                      **Marsh (Co-PI)**                      6/1/12-5/31/13  
Science Research Fund  
The Strength Assessment Study  
Total Cost: \$4,100  
Role: PI.
- WFU Internal                      **Marsh (Co-PI)**                      6/1/10-5/31/12  
Translational Science Center  
Brain Boot Camp: Multisensory training to enhance brain health and functional abilities in aging  
This project aims to assess the effect of long-term physical activity on muscle quality in older adults at risk for mobility disability.  
Total Cost: \$50,000  
Role: Co-PI
- WFU Internal                      **Marsh (Co-PI)**                      6/1/10-5/31/12  
Clinical Research Unit, WFBMC  
Brain Boot Camp: Multisensory training to enhance brain health and functional abilities in aging  
This project aims to assess the effect of long-term physical activity on muscle quality in older adults at risk for mobility disability. This grant supports the collection of MRI data.  
Total Cost: \$22,000  
Role: Co-PI
- WFU Internal                      **Marsh (Co-PI)**                      4/1/08-3/31/09  
Cross-Campus Collaborative Research Award  
Factors influencing upper extremity function in older adults: Muscle mass, strength, and training.  
Total Cost: \$19,600  
Role: PI.
- WFU Internal                      **Marsh (Co-PI)**                      12/1/07-11/30/08  
Science Research Fund  
Factors influencing upper extremity function in older adults: muscle mass, strength, and training.  
Total Cost: \$9,286  
Role: Co-PI.
- WFU Internal                      Rejeski (PI)                      2/1/08-1/31/10  
TSI Translational Team Science Award  
Establishing a partnership with and pilot testing a weight-loss intervention for older adults residing in

senior living communities.

Total Cost: \$50,000

Role: Co-I.

WFU Internal Childers (PI) 2/1/08-1/31/10

TSI Translational Team Science Award

Amniotic fluid-derived stem-cell therapy in a canine model of Duchenne Muscular Dystrophy.

Total Cost: \$124,995

Role: Co-I.

WFU Internal **Marsh** (Co-PI) 1/1/06-12/31/06

Claude D. Pepper Older Americans Independence Center

PAFO: The use of powered ankle foot orthoses to examine how changes in ankle power influence gait speed and walking economy in young and older adults.

Total Cost: \$41,564

Role: Co-PI.

WFU Internal **Marsh** (Co-PI) 8/10/04-8/10/05

WFU Research and Sponsored Programs

Development of a powered foot-ankle orthotic (PAFO) to modify ankle power during activities of daily living.

Total Cost: \$10,000

Role: Co-PI.

WFU Internal **Marsh** (Co-PI) 9/01/03-8/31/04

WFUBMC General Clinical Research Center

Power training in older adults: Mechanisms underlying change in muscle function.

Total Cost: \$23,392

Role: PI

WFU Internal **Marsh** (PI) 2002-2003

Science Research Fund

Power training in older adults: Mechanisms underlying change in muscle function.

Total Cost: \$8,070

Role: PI.

WFU Internal **Marsh** (PI) Summer 2002

Culpepper Teaching Grant

Converting Biomechanics project to digital video format and web-based project submission.

Total Cost: \$4,150

Role: PI.

WFU Internal **Marsh** (Co-PI) 1990-2000

Cross-campus Collaborative Research Support Fund

Understanding the relationship between physical and psychosocial function in assisted-living community-dwellers over time: The feasibility of a mobile assessment unit.

Total Cost: \$10,000  
Role: Co-PI.

WFU Internal                      **Marsh (Co-PI)**                      1990-2000  
Science Research Fund  
Correlates of disability in older adults: A community-based interdisciplinary approach.  
Total Cost: \$7,220  
Role: Co-PI.

WFU Internal                      **Marsh (PI)**                      1998-1999  
Science Research Fund  
The effect of knee OA on knee joint and muscle forces during the stance phase of walking.  
Total Cost: \$3,000  
Role: PI.

WFU Internal                      **Marsh (Co-PI)**                      1998-1999  
Claude D. Pepper Center Pilot Proposal  
Effects of exercise and memory skills training on memory and well-being in persons with mild cognitive impairment.  
Total Cost: \$25,000  
Role: Co-PI.

WFU Internal                      **Marsh (Co-PI)**                      1998-1999  
Office of Research and Sponsored Programs  
The effect of exercise and cognitive behavioral intervention on cognitive function and functional performance in healthy seniors with mild cognitive impairment.  
Total Cost: \$6,000  
Role: Co-PI.

WFU Internal                      **Marsh (Co-PI)**                      1998-1999  
Cross-campus Collaborative Research Support Fund  
The effect of exercise and cognitive behavioral intervention on cognitive function and functional performance in healthy seniors with mild cognitive impairment.  
Total Cost: \$6,000  
Role: Co-PI

CSUS Internal                      **Marsh (Co-PI)**                      1996-1997  
California State University Sacramento, Scholarship and Creative Activity Awards Program  
Central determinants of postural control in the elderly.  
Total Cost: \$4,990  
Role: Co-PI

## **SYMPOSIA, WORKSHOPS, SEMINARS, AND INVITED PRESENTATIONS**

1. **Marsh AP.** Assessment of Physical Function in Older Adults: An Overview of a Rich History and New Approaches. Session Title: Measurement of Physical Function: What We Can Learn From Research in Gerontology". Presented at the American College of Sports Medicine annual meeting. Indianapolis, IN, May 28-June 1, 2013.
2. **Marsh AP.** Recruitment Strategies and Baseline Characteristics of Older Adults Recruited into the LIFE Study. Session Title: First Fruits from the Lifestyle Interventions and Independence for Elders (LIFE) Study. Presented at the Gerontological Society of America's 65<sup>th</sup> Annual Scientific Meeting. San Diego, CA, Nov 14-18, 2012.
3. **Marsh AP.** Muscle Power and Prevention of Falls in Older Adults. Session Title: Muscle Power Training in Older Adults: From the Single Fiber to the Community. Presented at the American College of Sports Medicine annual meeting. San Francisco, CA, May 29-June 2, 2012.
4. **Marsh AP.** Power and Strength Training to Improve the Ability to Recover in a Forward and Lateral Leaning Task in Older Adults. Session Title: Muscle Power: A Distinct and Critical Piece of Muscle Function. Presented at the Gerontological Society of America's 64<sup>th</sup> Annual Scientific Meeting. Boston, MA, Nov 18-22, 2011.
5. **Marsh AP.** Physical Activity Interventions and Prevention of Mobility Disability in Older Adults. Presented at the American College of Sports Medicine annual meeting. Denver, CO, May 31-June 4, 2011.
6. **Marsh AP.** (Symposium Organizer and Presenter) Using Video Animation to Assess Mobility in Older Adults. Session Title: The Use of Video Animation and Item Response Theory to Assess Mobility in Older Adults. Presented at the Gerontological Society of America's 63<sup>rd</sup> Annual Scientific Meeting. New Orleans, LA, Nov 19-23, 2010.
7. **Marsh AP.** The Association between BMI, Strength, and Power and Recovery from a Simulated Trip in Older Adults. Session Title: Body Composition Changes and Muscle Function: Targets for Preserving Health and Function. Presented at the Gerontological Society of America's 63<sup>rd</sup> Annual Scientific Meeting. New Orleans, LA, Nov 19-23, 2010.
8. **Marsh AP.** The Nitrate Kinetics Pilot Study. Presented to administration and staff at the Murdoch Institute, Kannapolis, NC, Aug 16, 2010.
9. **Marsh AP.** Do Interventions Designed to Increase Lower Extremity Muscle Power Lead to Improvements in Physical Function in Older Adults? Evidence from RCTs. Session Title: Muscle Power and Mobility: Measures, Mechanisms, and Interventions. Presented at the Gerontological Society of America's 62<sup>nd</sup> Annual Scientific Meeting. Atlanta, GA, Nov 18-22, 2009.
10. **Marsh AP.** Predictors of Risk for Major Mobility Disability in the Lifestyle Interventions and Independence for Elders Pilot Study. Session Title: Pathways to Mobility Disability: Lessons from the Lifestyle Interventions and Independence for Elders (LIFE) Pilot study. Presented at the Gerontological Society of America's 61<sup>st</sup> Annual Scientific Meeting. National Harbor, MD, Nov 22-24, 2008.
11. **Marsh AP.** Predictors of Risk for Major Mobility Disability in the Lifestyle Interventions and Independence for Elders Pilot Study. Presented at the Sticht Center Conference on Aging, Nov 19, 2008.

12. **Marsh AP.** Improving Physical Function in Older Adults: The Importance of Specificity. Presented at the Sticht Center Conference on Aging, June 13, 2007.
13. **Marsh AP.** The NIH/NIA Claude D. Pepper Older Americans Independence Centers: Focus on Physical Activity Measurement and Interventions for Functionally Limited Older Adults. Presented at the American College of Sports Medicine annual meeting. Denver, CO, May 31-June 3, 2006.
14. Berry MJ, **Marsh AP**, McAuley E, Woods JA. Randomized Clinical Exercise Trials: The New Reality. Mini-symposium presented at the American College of Sports Medicine annual meeting. Indianapolis, IN, June 2-5, 2004.
15. **Marsh AP.** Assessment of Fall-risk from Measures of Postural Stability: A Realistic Goal? Presented to faculty and students at East Carolina University, Oct 27, 1998.
16. **Marsh AP.** Attempts to Understand Cycling Cadence Selection: An Interdisciplinary Approach. Presented to faculty and graduate students of the Human Movement Sciences Department at the Vrije University, Amsterdam, Netherlands, July 16, 1998.
17. **Marsh AP.** Biomechanics of Cycling. Presented to the Orthopedics Resident Teaching Program, Bowman Gray School of Medicine, Winston-Salem, NC, October 8, 1997.
18. **Marsh AP.** Bicycle Biomechanics. Presented at the GET, SET, GO Saturday Science Symposium organized by the Western Triad Science and Math Alliance, Winston-Salem, NC, September 21, 1996.
19. **Marsh AP.** Biomechanical and Physiological Determinants of Cycling Behavior. Presented at the American College of Sports Medicine annual meeting. Cincinnati, OH, May 29 - June 1, 1996.
20. Martin PE and **Marsh AP.** Preferred Cycling Cadence: Economy and Electromyographical Implications. Presented at the Korea Sport Science Institute, Seoul, Korea, Oct 30, 1993.
21. **Marsh AP.** Exercise Physiology: Training for Tennis. Presented at Level I Tennis Coaching Course, Western Australian Lawn Tennis Association, 1987
22. **Marsh AP.** Biomechanics of Athletic Shoe Design. Presented to the Western Australian Podiatry Association, 1987
23. **Marsh AP.** Biomechanics in Tennis. Presented at Level II Tennis Coaching Course, Western Australian Lawn Tennis Association, 1986

#### PRESENTATIONS: PROFESSIONAL MEETINGS

1. Molina AJA, Tyrrell DJ, Bharadwaj M, Van Horn CG, **Marsh AP**, Nicklas BJ. Mitochondrial bioenergetics, inflammation, and physical ability in older adults. Presented at the Gerontological Society of America's 68th Annual Scientific Meeting. Orlando, FL. November 18-22, 2015.
2. Beavers KM, Beavers DP, Martin SB, **Marsh AP**, Lyles MF, Nicklas BJ. Effect of Exercise Modality during Weight Loss on Bone Mineral Density in Overweight and Obese, Older Adults. Presented at the ASBMR 2015 Annual Meeting. Seattle, WA. October 9-12, 2015.
3. Vidt, ME, Santago, AC, Tuohy, CJ, Poehling, GG, Freehill, MT, **Marsh, AP**, Hegedus, EJ,

- Miller, ME, Saul, KR. Assessment of a functional pulling task in older adults with and without a rotator cuff tear: A simulation study using subject-specific models. Presented at the 10th Conference of the International Shoulder Group. Waterloo, Ontario, Canada. July 13-15, 2014.
4. Vidt, ME, Santago, AC, Tuohy, CJ, Poehling, GG, Freehill, MT, Kraft, RA, **Marsh, AP**, Hegedus, EJ, Miller, ME, Saul, KR. Quantitative assessments of rotator cuff muscle morphology: Do clinical assessment techniques capture whole muscle information? Presented at the 7th World Congress of Biomechanics. Boston, MA. July 6-11, 2014.
  5. Vidt, ME, Santago, AC, Tuohy, CJ, Poehling, GG, Freehill, MT, Kraft, RA, **Marsh, AP**, Hegedus, EJ, Miller, ME, Saul, KR. Quantification of muscle volume, fatty infiltration, and strength following a rotator cuff tear in a cohort of older adults. Presented at the 13th Annual School of Biomedical Engineering and Sciences Graduate Student Research Symposium. Winston-Salem, NC. May 15, 2014. \*Third place award, Outstanding Podium Presentation by a PhD Student
  6. Beavers DP, Beavers KM, Chmelo EA, **Marsh AP**, Nicklas BJ. Long-term Effects of a 5-Month Weight Loss Program on Body Composition in Obese, Older Adults. Presented at the Gerontological Society of America's 67th Annual Scientific Meeting. Washington, DC, Nov 5-9, 2014.
  7. Beavers KM, Chmelo EA, Beavers DP, Shapses SA, **Marsh AP**, Kritchevsky SB, Nicklas BJ. Weight Loss Added to Resistance Training Does not Attenuate Positive Effects on BMD in Older Adults. Presented at the Gerontological Society of America's 67th Annual Scientific Meeting. Washington, DC, Nov 5-9, 2014.
  8. Fielding RA, Rejeski, WJ, Manini T, King AC, McDermott M, **Marsh AP**, Glynn N, Tudor-Locke K. The relationship of physical activity "dose" to changes in physical functioning in the LIFE study. Presented at the Gerontological Society of America's 67th Annual Scientific Meeting. Washington, DC, Nov 5-9, 2014.
  9. Gill T, Miller ME, McDermott M, Guralnik JM, Manini T, Pahor M, **Marsh AP**, Kritchevsky, SB. Effect of physical activity on the prevention of serious fall injuries in older persons: The Lifestyle Interventions and Independence for Elders (LIFE) randomized trial. Presented at the Gerontological Society of America's 67th Annual Scientific Meeting. Washington, DC, Nov 5-9, 2014.
  10. **Marsh AP**, Klebous CL, Laurienti PJ, Kim-Shapiro DB, Rejeski WJ, Robertson TP, Redman H. Daily Beet Root Juice Supplement and Exercise Training in Older Hypertensive Adults. Presented at the American College of Sports Medicine annual meeting. Orlando, FL, May 27-31, 2014.
  11. Katula JA, Jennings JM, Beavers D, **Marsh AP**, Rejeski WJ, Kritchevsky SB. Complex mobility and cognitive functioning: Baseline relationships from the LIFE Study. Presented at the Gerontological Society of America's 66th Annual Scientific Meeting. San Diego, CA, Nov 20-24, 2013.
  12. Groban L, Kim S, Edwards A, Rustowicz L, Roach C, **Marsh AP**, Rejeski WJ, Kritchevsky S. Sex Differences in Preoperative Mobility, Nutrition, and Frailty Status Predict Length of Stay in Older Patients for Noncardiac Surgery. Presented at the Annual Meeting of the American Society of Anesthesiologists. San Francisco, CA, October 12-16, 2013.

13. Kim S, Edwards A, Rustowicz L, Roach C, **Marsh AP**, Rejeski WJ, Kritchevsky S, Groban L. Do Sex Differences in Preoperative Mobility, Nutrition, and Frailty Status Predict Length of Hospital Stay Among Older Noncardiac Surgical Patients? Presented at the Annual Scientific Meeting of the American Geriatrics Society. Grapevine, TX, May 3-5, 2013.
14. Manini TM, Tudor-Locke C, Ambrosius WT, Axtell R, Buman M, Fielding R, Glynn N, Haskell W, Hire D, King A, **Marsh AP**, White D, Miller ME, Siddique J, Pahor M.1 for the LIFE Research Group. Comparison of generalized and individualized approaches to estimating physical activity using accelerometers in older adults. Presented at the 3rd International Conference on Ambulatory Monitoring of Physical Activity and Movement. Amherst, MA, June 17-19, 2013.
15. Kim S, Edwards A, Rustowicz L, Roach C, **Marsh AP**, Rejeski WJ, Kritchevsky SB, Groban L. Is mobility disability related to length of stay in elderly patients undergoing elective noncardiac surgery? Presented at Perioperative Medicine Summit. Miami, FL, Mar 7-9, 2013.
16. Edwards A, Kim S, Roach C, Rustowicz L, **Marsh AP**, Rejeski WJ, Kritchevsky SB, Groban L. Do sex differences in preoperative nutritional and frailty status predict early ER or clinic revisits among older noncardiac surgical patients? Presented at Perioperative Medicine Summit. Miami, FL, Mar 7-9, 2013.
17. McNeill, JC, **Marsh AP**. Lower-Extremity Mobility & Quadriceps Strength of Older Overweight Adults: Baseline Data from the I'M FIT Study. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Greenville, SC, Feb 14-16, 2013.
18. Grosicki, GJ, **Marsh AP**. The Strength Assessment Study: Understanding Variability in Muscular Endurance in Older Adults. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Greenville, SC, Feb 14-16, 2013.
19. Vidt ME, Daly M, **Marsh AP**, Saul KR. Assessment of functional reaching tasks in older adults. Presented at the American Society of Biomechanics annual meeting. Gainesville, FL. August 15-18, 2012.
20. Vidt ME, Daly M, **Marsh AP**, Saul KR. Assessment of functional reaching tasks in healthy older adults. Presented at the 11th Annual Graduate Student Research Symposium. Winston-Salem, NC. May 10, 2012.
21. Vidt ME, Daly M, **Marsh AP**, Saul KR. Kinematics for functional reaching tasks in older adults. Presented at the 9th Annual Human Movement Science Research Symposium. Chapel Hill, NC, Feb 17, 2012. \*Outstanding Student Podium Presentation Award.
22. Gómez JF, Guerra RO, Curcio CL, Silva B, Lord C, Ip EH, **Marsh AP**, Rejeski WJ, Zunzunegui MV. Validity of the Life Space Assessment Questionnaire (LSA) and the Late Life Disability Index (LLDI) in older people from Colombia and Brazil. Presented at the 2011 Canadian Association on Gerontology Pan-American Congress on Geriatrics and Gerontology. Ottawa, Ontario, Canada, Oct 21-23, 2011.
23. Guerra, RO; Oliveira, BS; Freire, ANF; Ip EH, Lord C, **Marsh AP**, Rejeski WJ; Alvarado B. Validity and reliability of Portuguese version of the Mobility Assessment Tool - short form (MAT-sf): Results from a Brazilian Study in Elderly Populations. Presented at the 2011 Canadian Association on Gerontology Pan-American Congress on Geriatrics and Gerontology. Ottawa, Ontario, Canada, Oct 21-23, 2011.



24. Curcio CL, Gómez JF, Lord C, Ip EH, **Marsh AP**, Rejeski WJ, Alvarado BE. Validity and reliability of Spanish version of the Mobility Assessment Tool short version: Results from a Colombian study in elderly populations. Presented at the 2011 Canadian Association on Gerontology Pan-American Congress on Geriatrics and Gerontology. Ottawa, Ontario, Canada, Oct 21-23, 2011.
25. Vidt ME, Daly M, Miller ME, Davis CC, **Marsh AP**, Saul KR. Upper limb muscle volume and strength and their relationship in older adults. Presented at the American Society of Biomechanics annual meeting. Long Beach, CA, August 10-13, 2011.
26. Daly M, Vidt ME, **Marsh AP**, Saul KR. Identification of muscle contributions to a forward reaching task using an induced acceleration analysis. Presented at the American Society of Biomechanics annual meeting. Long Beach, CA, August 10-13, 2011.
27. Vidt ME, Daly M, Miller ME, Davis CC, **Marsh AP**, Saul KR. Muscle volume and strength, and their relationship in the upper limb of older adults. Presented at the 10th Annual Graduate Student Research Symposium. Winston-Salem, NC, May 12, 2011.
28. Vidt ME, Daly M, **Marsh AP**, Saul KR. Assessment of functional reaching tasks in healthy older adults. Presented at the 11th Annual Graduate Student Research Symposium, Winston-Salem, NC. May 10, 2012.
29. Vidt ME, Daly M, Miller ME, Davis CC, **Marsh AP**, Saul KR. Characterization of muscle volume in the upper limb of older adults. Presented at the 2011 Wake Forest University Graduate Student & Postdoc Research Day. Winston-Salem, NC. March 22, 2011.
30. Pamukoff DN, Haakonssen EC, Zaccaria JA, Madigan ML, **Marsh AP**. Resistance Training to Improve the Ability to Recover in a Forward Leaning Task. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Greenville, SC, Feb 3-5, 2011.
31. Barnard RT, Babcock DP, Ip EH, Saldana SJ, **Marsh AP**, Rejeski WJ. Mobile MAT-sf: An iPad-Based Video-Animated Tool for Assessing Mobility. Poster Presentation at the mHealth Summit, Washington, DC, Nov 8-10, 2010.
32. Vidt ME, Daly M, Eggebeen JD, Simpson WG, **Marsh AP**, Holzbaur KS. Characterization of Upper Limb Muscle Volume in Female Older Adult Subjects following Resistance Exercise Training. Presented at the American Society of Biomechanics annual meeting. Providence, RI, August 18-21, 2010.
33. Vidt ME, Daly M, Eggebeen JD, Simpson WG, **Marsh AP**, Holzbaur KS. Upper limb muscle Volume Characterization in Female Older Adult Subjects following Resistance Exercise Training. Presented at the SBES Annual Graduate Student Research Symposium. Winston-Salem, NC, May 13, 2010.
34. Vidt ME, Daly M, **Marsh AP**, Holzbaur KS. Characterization of Upper Limb Muscle Volume in Older Adult Subjects. Presented at the Wake Forest University Graduate Student & Postdoc Research Day. Winston-Salem, NC, March 23, 2010.
35. Katula JA, Jennings J, Mihalko SL, **Marsh AP**, Rejeski WJ. Integrating Physical and Cognitive Function: The Walking Decision Making Task (WDMT). Presented at 3<sup>rd</sup> International Congress on Gait and Mental Function, Washington, DC, Feb 26-28, 2010.

36. Haakonssen EC, Wrights AP, Rejeski WJ, **Marsh AP**. A Self-Report Measure of Physical Function in Older Adults Using Computer Animation: The Virtual Short Physical Performance Battery. Presented at the South East chapter of the American College of Sports Medicine annual meeting, Greenville, SC, February 11-13, 2010.
37. Vidt ME, Daly M, **Marsh AP**, Holzbaur KS. Isometric Strength, Muscle Volume, and Upper Extremity Functional Performance in Older Adults. Presented at the Biomedical Engineering Society annual meeting. Pittsburgh, PA, Oct 7-10, 2009.
38. Vidt M, Daly M, **Marsh AP**, Holzbaur K. Upper Limb Muscle Volume Characterization in Elderly Adult Subjects. Presented at the American Society of Biomechanics annual meeting. State College, PA, Aug 26-29, 2009.
39. Vidt ME, Daly M, **Marsh AP**, Holzbaur KS. Upper limb muscle volume characterization in elderly adult subjects Presented at the 8th Annual Graduate Student Research Symposium. Blacksburg, VA. May 14, 2009.
40. **Marsh AP**, Vance RM, Miller ME, Isom SP, Miller GD, Nicklas BJ, Lyles MF, Carr JJ, Kritchevsky SB.. Power Training and Pioglitazone Preserve Muscle Strength and Increase Power During Weight-Loss in Older Women. Presented at the American College of Sports Medicine annual meeting. Seattle, WA, May 27-30, 2009.
41. Dobrosielski DA, **Marsh AP**, Presley TD, Perlegas AS, Kim-Shapiro DB, Rejeski WJ. Change in Plasma Nitrite Following an Acute Bout of Exercise in Older Women. Presented at the American College of Sports Medicine annual meeting. Seattle, WA, May 27-30, 2009.
42. Houston DK, Toozee JA, Neiberg RH, Hausman DB, Johnson MA, Nicklas BJ, Miller ME, **Marsh AP**, Bartali B, Newman AB, Blair SN, Kritchevsky SB. Change in Vitamin D Status Is Associated with Improved Physical Performance Over One Year of Follow-up: The LIFE-P Study. Presented at Experimental Biology (FASEB) Meeting, 2009.
43. Ellis TJ, Leng X, Miller ME, Kitzman DW, Pahor M, Berry MJ, **Marsh AP**, Kritchevsky SB, Nicklas BJ. Chronic Inflammation is Associated with Low Physical Function in Older Adults across Multiple Comorbidities. Presented at the Gerontological Society of America's 61<sup>st</sup> Annual Scientific Meeting. National Harbor, MD, Nov 22-24, 2008.
44. Vestergaard S, Patel KV, Walkup MP, Pahor M, **Marsh AP**, Espeland MA, Studenski S, Gill TM, Church T, Guralnik, JM. Stopping to Rest during a 400-meter Walk and Incident Mobility Disability in Older Persons with Functional Limitations. Presented at the Gerontological Society of America Annual Meeting, November 21-25, 2008 [Symposium: Pathways to Mobility Disability: Lessons from the Lifestyle Interventions and Independence for Elders (LIFE) Pilot study].
45. Houston DK, Hausman DB, Johnson MA, Toozee JA, Nicklas BJ, Miller ME, **Marsh AP**, Bartali B, Newman AB, Blair SN, Kritchevsky SB. Vitamin D Insufficiency Is Associated with Poorer Physical Performance Over One Year of Follow-up: The LIFE-P Study. Presented at the Gerontological Society of America Annual Meeting, November 21-25, 2008 [Symposium: Pathways to Mobility Disability: Lessons from the Lifestyle Interventions and Independence for Elders (LIFE) Pilot study].
46. Kritchevsky SB, Nicklas BJ, Lyles MF, **Marsh AP**, Miller GD, Miller ME, Leng, X. Effect of PPAR $\gamma$  Use During a Hypocaloric Diet for Weight Loss on Reductions in Total and Visceral Fat

- in Older Men and Women. Presented at the American Diabetes Association meeting, San Francisco, CA, June 6-10, 2008.
47. Houston DK, Hausman DB, Johnson MA, Nicklas BJ, Miller ME, **Marsh AP**, Bartali B, Newman AB, Blair SN, Kritchevsky SB. Vitamin D Insufficiency Is Associated with Poorer Physical Performance: The LIFE-P Study. Presented at the American Geriatrics Society Annual Meeting, April 30 - May 4, 2008.
  48. Houston DK, Nicklas BJ, Hausman DB, Johnson MA, Miller ME, **Marsh AP**, Bartali B, Kritchevsky SB. Association between Vitamin D Status and Physical Performance: The LIFE Pilot Study. Presented at the International Academy of Nutrition and Aging (IANA) Symposium– Nutritional Modulators of Physical Function and Aging. Boston, MA, Nov 2007.
  49. Norris JA, **Marsh AP**, Granata KP. Positive Feedback in Powered-exoskeletons: Improved Metabolic Efficiency at the Cost of Reduced Stability? Presented at the American Society of Mechanical Engineers, International Design Engineering Technical Conferences & Computers and Information in Engineering. Las Vegas, NV, Sept. 4-7, 2007.
  50. Ip EH, Rejeski WJ, Pecorella AC, **Marsh AP**, Wong YL. Animation-Enhanced Adaptive Assessment of Patient Reported Outcome in Mobility Disability. Presented at the ISOQOL Conference on Patient Reported Outcomes in Clinical Practice. Budapest, Hungary, June 24-26, 2007.
  51. Norris JA, **Marsh AP**, Granata KP. Local Stability during Swing-phase of Passive Biped Walking. Presented at the American Society of Civil Engineers, 18<sup>th</sup> Engineering Mechanics Division Conference. Blacksburg, VA, June 3-6, 2007.
  52. Chmelo EA, **Marsh AP**, Mihalko SL, Katula JA, Rejeski WJ. WALK+: A Novel Walking Intervention for Older Adults at Risk for Mobility Disability. Presented at the American College of Sports Medicine annual meeting. New Orleans, LA, May 30-June 2, 2007.
  53. **Marsh AP**, Rejeski WJ, Miller ME, Guralnik JM. Changes in Lateral Mobility following 12-months of Physical Activity in Older Adults at Risk for Mobility Disability: The LIFE Study. Presented at the American College of Sports Medicine annual meeting. New Orleans, LA, May 30-June 2, 2007.
  54. Chmelo EA, Mihalko SL, Katula JA, **Marsh AP**, Rejeski WJ. Correlates of Fear of Falling in Older Adults at Risk for Mobility Disability. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Charlotte, NC, Feb 8-10, 2007.
  55. Norris JA, Mitros MR, Byrne EM, **Marsh AP**, Granata KP. Augmenting Plantarflexion Power: Effects on Preferred Walking Speed and Metabolic Cost of Transport. Presented at the American Society of Biomechanics annual meeting. Blacksburg, VA, Sept 6-9, 2006.
  56. Nicklas BJ, Leng XY, Kitzman D, **Marsh AP**, Annex BH, Kraus WE, Lyles M, O'Rourke K, Kritchevsky SB. Relationship of Physical Function to *Vastus Lateralis* Capillarization and Metabolic Enzyme Activity in Elderly Men and Women. Presented at the American Geriatrics Society annual meeting. Chicago, IL, May 5, 2006.
  57. Norris JA, Mitros MR, Byrne EM, **Marsh AP**, Granata KP. Effects of Augmented Push-off Power during Normal Walking. Presented at the Virginia Tech – Wake Forest University School

- of Biomedical Engineering and Sciences 5<sup>th</sup> Student Research Symposium. Winston-Salem, NC, May 11, 2006.
58. Norris JA, Mitros MR, Byrne EM, **Marsh AP**, Granata KP. Effects of Augmented Push-off Power during Normal Walking. Presented at the Dynamic Walking conference. Ann Arbor, MI, May 5-8, 2006.
  59. Byrne EM, Norris JA, Mitros MR, **Marsh AP**, Granata KP. Effect of Powered Ankle Foot Orthoses (PAFOs) on Walking Economy. Presented at the 1<sup>st</sup> annual ACC Meeting of the Minds Conference. Clemson, SC, April 24-25, 2006.
  60. Katula JA, Rejeski WJ, **Marsh AP**. Enhancing Quality of Life in Older Adults: Progressive Resistance vs. Power Training. Presented at the Society of Behavioral Medicine annual meeting. San Francisco, CA, March 2006.
  61. Byrne EM, Norris JA, Mitros MR, **Marsh AP**, Granata KP. Effect of Powered Ankle Foot Orthoses (PAFOs) on Walking Economy. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Charlotte, NC, Feb 9-11, 2006.
  62. Mitros MR, Norris JA, Byrne EM, **Marsh AP**, Granata KP. Influence of Powered Ankle Foot Orthoses (PAFOs) on Preferred Treadmill Walking Speed. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Charlotte, NC, Feb 9-11, 2006.
  63. Norris JA, Mitros MR, Byrne EB, **Marsh AP**, Granata KP. Modifying Ankle Kinematics Using Powered Ankle Foot Orthoses (PAFOs). Presented at the South East chapter of the American College of Sports Medicine annual meeting. Charlotte, NC, Feb 9-11, 2006.
  64. Katula JA, Johnson LA, Rejeski WJ, **Marsh AP**, Pacchia CF, Koury KL. Treadmill vs. Overground Walking in Older adults: Attitudes Towards Training. Presented at the annual conference for the American College of Sports Medicine. Nashville, TN, June 1-4, 2005.
  65. **Marsh AP**, Hutton SL, Devine ER, Miller ME, Pahor M. Power Training in Older Adults: Feasibility and Changes in Lower Extremity Strength and Power. Presented at the American College of Sports Medicine annual meeting. Nashville, TN, June 1-4, 2005.
  66. Pacchia CF, Koury KL, **Marsh AP**, Johnson LC, Rejeski WJ, Katula JA. Changes in Spatiotemporal Gait Characteristics following Treadmill or Overground Walking Interventions in Older Adults. Presented at the American College of Sports Medicine annual meeting. Nashville, TN, June 1-4, 2005.
  67. Norris JA, Mitros MR, **Marsh AP**, Granata KP. Adaptive Control of Powered Ankle Foot Orthoses. Presented at the Virginia Tech – Wake Forest University School of Biomedical Engineering and Sciences 4<sup>th</sup> Student Research Symposium. Chateau Morrisette, Floyd, VA, May 12, 2005.
  68. Nicklas BJ, Leng I, Kitzman D, **Marsh AP**, Annex BH, Kraus WE, Kritchevsky SB. Relationship of Physical Function to *Vastus Lateralis* Capillarization and Metabolic Enzyme Activity in Elderly Men and Women. Presented at the Claude D. Pepper Older Americans Independence Centers Symposium. Bethesda, Maryland, May 2, 2005.
  69. Wenzel EL, Mihalko SL, Wickley KL, **Marsh AP**. Function in Assisted Living: Activity and Efficacy Influences. Presented at the Society of Behavioral Medicine annual meeting. Boston, MA, April 13-16, 2005.

70. Miller AN, Mihalko SL, Wickley KL, **Marsh AP**. Physical Activity and Health-related Quality of Life: A Study of Older Adults Residing in Long-term Care Communities. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Charlotte, NC, Jan 27-29, 2005.
71. Pacchia CF, Koury KL, **Marsh AP**, Johnson LC, Rejeski WJ, Katula JA. Spatiotemporal Characteristics of Treadmill and Overground Walking in Older Adults. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Charlotte, NC, Jan 27-29, 2005.
72. **Marsh AP**, Hutton SL, Devine ER, Miller ME, Pahor M. Power Training in Older Adults: Feasibility and Safety, Changes in Lower Extremity Strength and Power. Presented at the Claude D. Pepper Older Americans Independence Centers Symposium. Harvard Medical School, Boston, Massachusetts, April 26-27, 2004.
73. Norris JA, **Marsh AP**, Smith IJ, Kohut R, Miller ME. Ability of Quiet COP Analysis to Distinguish between Young and Elderly Populations. Presented at the Virginia Tech – Wake Forest University School of Biomedical Engineering and Sciences 3<sup>rd</sup> Annual Graduate Student Research Symposium. Winston-Salem, NC, April 24, 2004. Winner of student research award.
74. Hutton SL, **Marsh AP**, Brown CL, Rejeski WJ, Guralnik JM. The Relationship between Balance and a Novel Lateral Mobility Task. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Atlanta, GA, Jan 29-31, 2004.
75. **Marsh AP**, Hovda TJ III, Mihalko SL, Hutton SL. The Association of Strength with Physical Function and Disability in Older Adults. Presented at the American College of Sports Medicine annual meeting. San Francisco, CA, May 28-31, 2003.
76. Wickley KL, Mihalko SL, **Marsh AP**. Physical Activity and Function: Addressing the Need for Assisted Living Interventions. Presented at the Society of Behavioral Medicine annual meeting. Salt Lake City, UT, March 2003. Presidential Citation Paper.
77. **Marsh AP**, Rejeski WJ, Lang W, Miller ME, Messier SP. Baseline Balance and Functional Decline in Older Adults with Knee Pain: The Observational Arthritis Study in Seniors (OASIS). Presented at the Cooper Institute Conference Series: Physical Activity-Preventing Physical Disablement in Older Adults. Dallas, TX, Oct 17-19, 2002.
78. Wickley KL, Mihalko SL, **Marsh AP**, Penry J. Antecedents of Self-Esteem in Older Adults Living in Long-Term Care. Presented at the Society of Behavioral Medicine annual meeting. Washington, DC, March 2002.
79. Hovda TJ III, **Marsh AP**, Mihalko SL. Lower Extremity Strength and Its Association with Physical Function and Disability. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Atlanta, GA, Feb 2, 2002.
80. Rosenberger EL, **Marsh AP**, Fray BL. The Effects of a Six-month Walking Program on Gait Variability and Spatiotemporal Parameters in Individuals with Mild Cognitive Impairment. Presented at the American College of Sports Medicine annual meeting. Baltimore, MD, May 30-June 2, 2001.
81. **Marsh AP**, Rosenberger EL, Fray BL, Covington JK. The Effects of a Six-month Walking Program on Postural Sway and Functional Performance in Individuals with Mild Cognitive

- Impairment. Presented at the American College of Sports Medicine annual meeting. Baltimore, MD, May 30-June 2, 2001.
82. Janssen TWJ, Jager A, Reynders K, **Marsh AP**, Pringle DD. Effect of Cadence on Efficiency of Electrical Stimulation-induced Leg Cycling. Presented at the American College of Sports Medicine annual meeting. Baltimore, MD, May 30-June 2, 2001.
  83. Covington K, **Marsh AP**. The Effects of a Six-month Exercise Program on Postural Sway and Functional Performance in Individuals with Mild Cognitive Impairment. Presented at the South East chapter of the American College of Sports Medicine annual meeting. Columbia, SC, Jan 27, 2001.
  84. Fray BL, **Marsh AP**. Gait Variability in Individuals with Mild Cognitive Impairment. Presented at the American College of Sports Medicine annual meeting. Indianapolis, IN, May 31-June 3, 2000.
  85. **Marsh AP**, Guhl CG. The Effects of Age and Concurrent Tasks on the Control and Cognitive Demands of Gait and Posture. Presented at the American College of Sports Medicine annual meeting. Indianapolis, IN, May 31-June 3, 2000.
  86. **Marsh AP**, Smith IJ, Bassett AK, Fretz KA. Increased Sway and Reduced Function but No Falls in the Elderly with and without a Vestibular Disorder. Presented at the American College of Sports Medicine annual meeting. Seattle, WA, June 5, 1999.
  87. Guhl CF, **Marsh AP**. Does Mild Cognitive Impairment Affect Variability in Gait and the Cognitive Demands of Posture? Presented at the South East chapter of the American College of Sports Medicine annual meeting. Norfolk, VA, February 6, 1999.
  88. **Marsh AP**, Geel SE, Bradshaw G, Fischer M, White M. Dual Task Paradigm to Assess Central Determinants of Postural Control in Young and Older Adults. Presented at the American College of Sports Medicine annual meeting. Orlando, FL, June 3, 1998.
  89. **Marsh AP**, Foley KO. Influence of Cadence and Power Output on Cycling Efficiency in Trained Cyclists and Runners. Presented at the American College of Sports Medicine annual meeting. Denver, CO, May 30, 1997.
  90. **Marsh AP**, Martin PE, Sanderson DJ. Minimization of a Joint Moment Cost Function and Preferred Cycling Cadence. Presented at the American Society of Biomechanics annual meeting. Atlanta, GA, Oct 17, 1996.
  91. **Marsh AP**, Martin PE. The Effect of Power Output and Maximal Aerobic Power on Aerobic Demand, RPE, and Preferred Cycling Cadence. Presented at the American College of Sports Medicine annual meeting. Minneapolis, MN, June 2, 1995.
  92. Vint PV, DeWitt JK, **Marsh AP**, McLean SP, Seidler RV, Sherwood CP, Hinrichs RN, Martin PE. Differences between One-foot and Two-foot Vertical Jump Performances. Presented at the American Society of Biomechanics annual meeting. Columbus, OH, Oct 14, 1994.
  93. Martin PE, **Marsh AP**, Larish DD. Effect of Strength Training on the Walking Stride Length-Economy Relationship in the Elderly. Presented at the American College of Sports Medicine annual meeting. Indianapolis, IN, June 4, 1994.

94. **Marsh AP**, Martin PE, Burton D, Larish DD. Postural Control and Preferred Walking Speed of Active and Sedentary Elderly Adults: Relationship with Plantar and Dorsi Flexor Strength. Presented at the Arizona Exercise Science Symposium, Phoenix, AZ, Oct 29, 1993.
95. **Marsh AP**, Martin PE, Burton D, Larish DD. Postural Control and Preferred Walking Speed of Active and Sedentary Elderly Adults: Relationship with Plantar and Dorsi Flexor Strength. Presented at the American Society of Biomechanics annual meeting. Iowa City, IA, Oct 23, 1993.
96. Martin PE, **Marsh AP**, Burton D, Larish DD. Effect of Strength Improvement on Postural Control and Preferred Walking Speed of Elderly and Young Adults. Presented at the American Society of Biomechanics annual meeting. Iowa City, IA, Oct 23, 1993.
97. Martin PE, **Marsh AP**, Burton D, Larish DD. Postural Control and Preferred Walking Speed of Elderly Adults: Relationship with Plantar Flexor Strength. Presented at the XIV<sup>th</sup> International Congress on Biomechanics, Paris, France, July 7, 1993.
98. **Marsh AP**, Martin PE. The Relationship between Cadence, VO<sub>2</sub>, and EMG in a Group of Cyclists and Noncyclists. Presented at the 2<sup>nd</sup> North American Congress on Biomechanics. Chicago, IL, Aug 26, 1992.
99. Martin PE, Hreljac A, **Marsh AP**, Rothstein DE. Mechanical Power Response of Old and Young Adults to Walking Stride Length and Cadence Manipulation. Presented at the 2<sup>nd</sup> North American Congress on Biomechanics. Chicago, IL, Aug 26, 1992.
100. **Marsh T**. The Relationship between Cadence and Oxygen Consumption in a Group of Cyclists and Noncyclists. Presented at the Arizona Exercise Science Symposium, Flagstaff, AZ, February 21, 1992.
101. **Marsh T**, PE Martin. The Effect of Stride Length Manipulations on Ground Reaction Forces during Walking. Presented at the XIII<sup>th</sup> International Congress on Biomechanics. Perth, Australia, Dec 9, 1991.
102. McLean S, Hinrichs R, DeWitt J, Heise G, Hreljac A, Joganich T, **Marsh T**, Munkasy BA. Comparison of DLT with and without Extrapolation and NLT 3-D Cinematography Methods. Presented at the American Society of Biomechanics annual meeting. Tempe, AZ, Oct 18, 1991.
103. McLean S, Hinrichs R, DeWitt J, Heise G, Hreljac A, Joganich T, **Marsh T**, Munkasy B. Accuracy of Extrapolation using the DLT Method of 3D Cinematography. Presented at the Arizona Exercise Science Symposium, Tucson, AZ, April 20, 1991.
104. **Marsh AP**, Yamaguchi GT. A 3-D Model of the Lower Limb in a Cycling Movement. Presented at the American Society of Biomechanics annual meeting. Tempe, AZ, Oct 18, 1991.
105. **Marsh T**, Martin PE. The Effect of Stride Length Manipulations on Ground Reaction Forces during Walking. Presented at the Arizona Exercise Science Symposium, Tucson, AZ, April 20, 1991.
106. **Marsh AP**, Elliott B, Overheu P. A Biomechanical Comparison of the Multisegment and Single Unit Topspin Forehand drives in Tennis. Presented at the Arizona Exercise Science Symposium, Tempe, AZ, March 2, 1990.

107. Elliott B, **Marsh T**. Research into Practice: The Service Action. Presented at the VII<sup>th</sup> International Symposium of Biomechanics in Sports. Footscray, Victoria, Australia, 1989.

## PROFESSIONAL SERVICE

### Wake Forest University

#### *Health and Exercise Science Department*

HES Graduate Program Director, Fall 1997-Fall 2013  
Chair, HES Graduate curriculum committee, 1997-2013  
Member, HES Graduate curriculum committee, 2013-present  
Member, HES Undergraduate curriculum committee, 1997-present  
Member, HES Building committee, 2012-2013

#### *University*

Member, WFU Research Advisory Council, 2012-2013  
Chair, WFU Research Advisory Council, 2010-2012  
Member, WFU Research Advisory Council, 2009-2010  
Member, WFU Senate, 2009-2010 (sub for Brad Jones)  
Chair, WFU Center Review Committee, Summer 2010, Summer 2011  
Member, Primate Center Executive Committee. Spring 2010 - 2012  
Member, Graduate School Master's Degree Task Force. Spring 2009-Spring 2010  
Member, Provost's Fund for Academic Excellence Review Committee, Fall 2008- Spring 2011  
Member, WFU eIRB Software Selection Committee, Spring-Summer 2006  
Member, WFU Email Software Selection Committee, Fall 2001-Fall 2002  
Member, Cross-Campus Graduate Education Opportunities Committee, Fall 2000-Spring 2002  
Member, WFU Reynolda Campus Institutional Review Board, Spring 2000-Spring 2006  
Chair, WFU Reynolda Campus Institutional Review Board, Spring 2000-Spring 2005  
Graduate Council, Fall 1998 (sub for Michael Berry)  
Member, Provost's Working Tenure and Promotion Group, Research, 1997  
Member, Search Committee, HES Academic Computer Specialist, 1997-1998

#### *Medical School*

Pepper Center Executive Committee, 2006-present  
Member-Primate Center Executive Committee, Spring 2010-2012  
Pepper Center Research and Development Core Committee, 1997-1998

### Editorial Boards

*Journals of Gerontology: Medical Sciences* (January 2012 - present)  
*Journal of Aging and Physical Activity* (July 2008 - present)



**Ad-Hoc Journal Reviewer**

*Journal of the American Medical Association*  
*Medicine and Science in Sports and Exercise*  
*Journals of Gerontology: Medical Sciences*  
*Journal of the American Geriatrics Society*  
*Journal of Biomechanics*  
*Experimental Brain Research*  
*Obesity*  
*Journal of Applied Biomechanics*  
*International Journal of Sports Medicine*  
*Journal of Biomechanical Engineering*  
*Journal of Rehabilitation Research & Development*  
*Experimental Gerontology*  
*Sports Medicine*  
*PLOS One*

**California State University-Sacramento**

Chair, Undergraduate curriculum committee, 1995-1996  
Member, Graduate committee, 1995-1996

**THESIS ADVISING**

**Wake Forest University – PhD Degree**

2014-2015

Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences  
Anthony Santago, Committee  
WFU Biomedical Sciences  
Melissa Goddard, Committee

2013-2014

Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences  
Meghan E. Vidt, Committee  
Anthony Santago, Committee  
WFU Biomedical Sciences  
Melissa Goddard, Committee

2012-2013

Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences  
Meghan E. Vidt, Committee  
Anthony Santago, Committee  
WFU Biomedical Sciences  
Melissa Goddard, Committee

2011-2012

Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences

Meghan E. Vidt, Committee  
Anthony Santago, Committee

2010-2011

Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences  
Meghan E. Vidt, Committee  
Sara L. Matrangola, Committee  
Anthony Santago, Committee

2007-2011

Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences  
Melissa Daly, Co-Chair

2003-2007

Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences  
James Norris, Co-Chair  
Bradley Davidson, Committee

**Wake Forest University – MS Degree**

2018-2019

Carlo Davids, Chair

2018-2019

Austin Clark, Chair  
Daniel Kammire, Committee

2017-2018

Stephen Powers, Chair

2016-2017

Cate Glendenning, Chair

2013-2014

James Janssen, Chair  
Thomas Robertson, Chair

2012-2013

Greg Grosicki, Chair  
Joseph Paat, Mathematics, Committee

2011-2012

Julie Sorensen, Chair

2010-2011

Derek Pamukoff, Chair  
Edison Munoz-Recuay, Computer Science, Committee

2009-2010

Eric Haakonssen, Chair  
Jennifer Garris, Committee  
Alexander Lucas, Committee

2008-2009

Joel Eggebeen, Chair

2007-2008

Abbie Prescott, Chair  
Shannon O'Malley, Committee

2006-2007

Rachel Vance, Chair  
Elizabeth Chmelo, Committee  
Kelly Shedd, Committee

2005-2006

Melanie Mitros, Chair  
Emily Kolakowski, Committee

2004-2005

Nina Pacchia, Chair  
Lara Johnson, Committee  
Matthew Blouir, Committee

2003-2004

Elizabeth Devine, Chair

2002-2003

Aaron Saikin, Chair

2001-2002

Theodore Hovda, Chair

2000-2001

Erica Rosenberger, Chair  
Jay Penry, Co-chair  
Katie Wickley, Committee  
Chad Hamilton, Committee

1999-2000

Brittney Fray, Chair  
Heather Young, Committee

1998-1999

Christian Guhl, Chair  
Julie Glasser, Committee  
Noel Nicely, Committee

1997-1998

Ian Smith, Chair  
Kristen Jadelis, Committee  
Melinda Dersham, Committee

1996-1997

Gina Maggiano, Committee  
Jason Litt, Committee  
Craig Robinson, Committee

**Wake Forest University – Undergraduate Honors Theses**

2015-2016: Ana Katsafanas

2012-2013: Jacqueline McNeill

2011-2012: David Copeland, Rob Musci

2010-2011: Cristina Fini

2009-2010: Joseph Zaccaria

2008-2009: Greg Simpson

2006-2007: Stephanie Pettus, Morgan McEachern

2005-2006: Tera Frederick, Erica Byrne

2004-2005: Ken Kourey

2002-2003: Cristal Brown

2001-2002: Kara King

2000-2001: Kyle Covington

1998-1999: Kyle Bachmeier

1997-1998: Amy Bassett, Kris Fretz

**California State University, Sacramento – MS Degree**

1995-1996

Kathryn McNamara, Co-Chair, Spring, 1996  
Bruce von Borstel, Committee, Fall, 1995