

Curriculum Vitae

Jill Nicole Barnes, Ph.D.

Office Address:

Bruno Balke Biodynamics Laboratory
2000 Observatory Drive
1141 Gymnasium-Natatorium
Madison, WI 53706, USA
Phone: (608) 262-1654
E-mail: jnbarnes@wisc.edu

CURRENT POSITION

Assistant Professor, University of Wisconsin-Madison	01/2015-present
Research Collaborator, Mayo Clinic	03/2015-present
Affiliate Faculty, Division of Geriatrics and Gerontology, School of Medicine and Public Health, University of Wisconsin-Madison	08/2016-present
Faculty Affiliate, Wisconsin Alzheimer's Disease Research Center	01/2018-present

EDUCATIONAL BACKGROUND

Postdoc	2009-2013	Mayo Clinic College of Medicine <i>Human Integrative Physiology</i>
Ph.D.	August 2009	University of Texas at Austin <i>Kinesiology specializing in Exercise Physiology</i>
M.A.	May 2005	University of Texas at Austin <i>Kinesiology specializing in Exercise Physiology</i>
B.S.	April 2003	University of Michigan, Ann Arbor <i>Movement Science (with Distinction)</i>

PROFESSIONAL EXPERIENCE

Mayo Clinic, Department of Anesthesiology <i>Associate Consultant I</i>	10/2013-01/2015
Mayo Clinic College of Medicine <i>Assistant Professor of Physiology</i>	08/2012-01/2015
University of Texas at Austin- Department of Kinesiology <i>Cardiovascular Aging Laboratory Graduate Research Assistant</i>	08/2003-08/2009
<i>Graduate Teaching Assistant</i>	08/2007-12/2007
University of Texas at Austin- School of Biological Sciences <i>Graduate Teaching Assistant</i>	08/2003-08/2008
University of Michigan- School of Kinesiology	

Substrate Metabolism Laboratory Assistant 05/2002-04/2003
University of Michigan- Medical School
Pediatric Endocrinology Laboratory Assistant 02/2000-04/2001

HONORS AND AWARDS

Fellow, American College of Sports Medicine, 2017
International Travel Grant, The Physiological Society, 2016
Penaz-Wessling Award for Systemic Hemodynamics, American Autonomic Society, 2015
Edward C. Kendall Research Award, Mayo Clinic Alumni Association, 2014
New Investigator Award, American Physiological Society, 2014
Outstanding Faculty Poster, Wisconsin Alzheimer's Disease Research Center, 2014
NSBRI Beginning Investigator Award, American Physiological Society, 2013
Travel Award, American Autonomic Society, 2012
Tum Suden/Hellebrandt Professional Opportunity Award, American Physiological Society, 2012
Research Recognition Award, Cardiovascular Section, American Physiological Society, 2011
Professional Development Award, University of Texas at Austin, 2009
Mack Brown Endowed Scholarship, University of Texas at Austin, 2008-2009
Hogg Endowed Fellowship, University of Texas at Austin, 2008-2009
Professional Development Award, University of Texas at Austin, 2008
Student Development Research Award, Texas Regional Chapter of ACSM, 2008
University Continuing Fellowship, University of Texas at Austin, 2007-2008
Professional Development Award, University of Texas at Austin, 2006
Texas Regional Chapter of ACSM Student Manuscript Research Award, 2006
Professional Development Award, University of Texas at Austin, 2004
Alderson Graduate Recruitment Fellowship, University of Texas at Austin, 2003
Joseph L. and Katherine D. Henderson Scholarship, University of Texas at Austin, 2003
University Honors, Class Honors, Dean's List, University of Michigan, 2000-2001
William J. Branstrom Freshman Prize, University of Michigan, 2000
Literature, Science, & Arts Undergraduate Scholarship, University of Michigan, 2000-2001
University of Michigan Regents Merit Scholarship, University of Michigan, 1999-2003
Rackham Undergraduate Scholarship, University of Michigan, 1999-2003
Michigan Competitive Scholarship, State of Michigan, 1999-2003

PROFESSIONAL SERVICE

Society Membership

International Society to Advance Alzheimer's Research and Treatment, 2015-present
Organization for the Study of Sex Differences, 2013-2016
North American Artery Society, 2013-present
Cerebral Autoregulation Network, 2013-present
American Autonomic Society, 2012-present
The Physiological Society, 2011-present
American Heart Association, 2005-present
American Physiological Society, 2004-present

American College of Sports Medicine, 2003-present

Society Service and Activities

Symposium Co-Chair, American College of Sports Medicine Integrative Physiology of Exercise, 2018

How Exercise Promotes Brain Health in Aging

Mentor, Mentoring-on-the-Go, American Physiological Society Annual Meeting, 2018

Exercise and Environmental Physiology Section

Featured Topic Co-Chair-American Physiological Society, 2018

Exploring Novel Mechanisms to Improve Exercise Tolerance in Health and Disease

Program Chair-American College of Sports Medicine, 2016-2017

World Congress on the Basic Science of Exercise and the Brain

Session Chair-American College of Sports Medicine, 2016

Cardiovascular I

Session Chair-American College of Sports Medicine, 2014

Cardiovascular System in Youth and Maturation

Symposium Chair-Experimental Biology Annual Meeting, 2014

Autonomic and other Control of the Cerebral Circulation

Special Symposium-Experimental Biology Annual Meeting, 2014

Refresher Course in Exercise Physiology

Session Chair-American Autonomic Society Annual Meeting, 2013

Autonomic Control of the Cerebral Circulation

Ambassador-NIH Loan Repayment Program, 2011-2013

Assisted in promotion of the LRP program and answered applicant questions

Session Chair-American Autonomic Society Annual Meeting, 2012

Microneurography & Cardiovascular Control in Humans/Cardiovascular Disease, Diabetes, Obesity & Aging

Committee Member-ACSM Student Activities Committee, 2007-2009

Organized student events at national meeting, liaison for student members

Student Representative-Texas Chapter of ACSM, 2007-2009

Organized annual chapter meeting, wrote for news publications, reviewed student projects

Certified Group Fitness Instructor, American Council of Exercise, 1998-2006

House Manager-Delta Delta Delta Sorority, University of Michigan, 2001

Member-Delta Delta Delta Sorority, University of Michigan, 1999-2003

Member-Delta Epsilon Iota Honor Fraternity, University of Michigan, 1999-2003

Team Member-Women's Cheer Club, University of Michigan Athletics, 1999-2001

Peer Review

Reviewer: International Journal of Sports Medicine

Reviewer: Medicine and Science in Sports and Exercise

Reviewer: Journal of Applied Physiology

Reviewer: American Journal of Physiology-Regulatory, Integrative and Comparative Physiology

- *Editorial Board: American Journal of Physiology-Regulatory, Integrative and Comparative Physiology*

Reviewer: Journal of Physiology

Reviewer: Hypertension

Reviewer: American Journal of Hypertension

Reviewer: American Journal of Physiology-Heart and Circulatory Physiology

- *Editorial Board: American Journal of Physiology-Heart and Circulatory Physiology (2016-2018)*

Reviewer: Applied Physiology, Nutrition, and Metabolism

Reviewer: Vascular Health and Risk Management

Reviewer: Clinical Pharmacology in Drug Development

Reviewer: Experimental Physiology

- *Review Editor: Experimental Physiology*

Reviewer: Annals of Behavioral Research

Reviewer: Vascular Medicine

Reviewer: Autonomic Neuroscience: Basic and Clinical

Reviewer: Circulation

Reviewer: Circulation Research

Reviewer: Frontiers in Exercise Physiology

- *Review Editor: Frontiers in Exercise Physiology*

Reviewer: Cerebral Cortex

Reviewer: Ageing Research Reviews

Reviewer: Clinical Interventions in Aging

Reviewer: Neurobiology of Aging

Reviewer: Respiratory Physiology and Neurobiology

Reviewer: Menopause

Reviewer: European Journal of Neuroscience

Reviewer: Exercise and Sports Science Reviews

Reviewer: British Journal of Pharmacology

Reviewer: European Journal of Physiology

Extramural Grant Review

Reviewer: Dairy Research Institute, 2012, 2015

Reviewer: Marsden Fund Council, 2014

Reviewer: Natural Sciences and Engineering Research Council of Canada, 2018

Reviewer: Oregon Partnership for Alzheimer's Research, 2018

Reviewer: American Heart Association, Vascular Sciences Group, 2018-present

Early Career Reviewer: National Institute of Health, ZRG1 HM-A, 2018

Reviewer: Alzheimer's Association, 2018-present

Reviewer: Mayo Clinic Office of Health Disparities Stimulus Grant, 2019-present

Intramural Grant Review

Reviewer: University of Wisconsin-Madison KL2 program, 2015

Reviewer: University of Wisconsin-Madison ICTR Pilot Grant program, 2018

University of Wisconsin-Madison Committee Service

Member: ICTR Scientific Review Committee, 2015-present

Member: Alumni Relations Committee, 2015-2016

Member: Space, Facilities, and Technology Committee, 2015-present

Member: Virginia Horne Henry Committee for Physical Education in Women, 2015-present

University of Wisconsin-Madison Other Service

Co-Investigator: UW 2020: Create a human exercise research core facility to serve the broader campus, 2015

Coordinator: ILM 2016: Proposal for upgrades to exercise physiology laboratory space, 2016

Host: Grandparents University, 2017

Member: Science of Running Workshop Organizing Committee, 2018

T32 Faculty Trainer: UW-Madison Cardiovascular Research Center

EDUCATIONAL ACTIVITIES

Course Instruction

Physiology of Exercise (KIN 314), Course Instructor, 2016-2019

- *Teach 16 - 50 minute lectures per semester to 60-80 undergraduate students*

Cardiorespiratory Adaptations to Exercise and Environment (KIN 773), Course Instructor, 2015, 2017

- *Teach 14 - 2.5 hour lectures per semester to 16-18 graduate students*

Biodynamics Seminar, Course Instructor (KIN 953), 2015, 2017

- *Lead 14 – 50 minute discussions per semester to 16-18 graduate students*

Anatomy and Physiology II Laboratory, Teaching Assistant, 2003-2007, 2008

- *Lead 12 - 3 hour laboratory sessions per semester to 15-18 undergraduate students*

Clinical Exercise Physiology Laboratory, Course Instructor, 2007

- *Teach 12 – 2 hour clinical laboratory sessions per semester for 12 graduate students*

Biological Factors of Human Performance, Graduate Instructor, 2005

- *Lead 14 – 1 hour discussions for 30 undergraduate students*

Course Instruction – Guest Lecturer

Introduction to Kinesiology (KIN 119), Guest Lecturer, 2018

Brain Mapping in Health and Disease (NTP 675), Guest Lecturer, 2016

Clinical Exercise Physiology (KIN 523), Guest Lecturer, 2016, 2017

Laboratory Techniques in Exercise Physiology (KIN 615), Guest Lecturer, 2015-2016, 2018

Undergraduate Exercise Physiology, Guest Lecturer, 2009

Clinical Exercise Physiology, Guest Lecturer, 2006-2008

Advanced Exercise Physiology, Guest Lecturer, 2007

Applied Human Anatomy, Guest Lecturer, 2005

Other Educational Instruction

- NSF-Sponsored Integrated Biological Sciences Summer Research Program Lecturer, 2015, 2016

Educational Professional Development

- Attendee, American Physiological Society Institute of Teaching and Learning, 2016
- Member, Nu Cohort-Madison Teaching and Learning Excellence, 2019

Mentorship

- Jessica Schliefer 2005 Undergraduate Student
MPH, Coordinator at Championship Hearts Foundation

- Casey Hines 2010-2011 Post-Baccalaureate Research Assistant
MSN, CRNA, Nurse Anesthetist at Kaiser Permanente
- Essa Mohamed 2010-2012 Post-Baccalaureate Research Assistant
PhD Student, Mayo Graduate School
- Rachel Troutman 2011-2012 High School Student Experience
Undergraduate Student at the University of Minnesota
- Breann Kluck* 2011-2013 Undergraduate Student
Pediatric Intern at Children's Hospital Cincinnati
- Luke Matzek 2011-2013 Post-Baccalaureate Research Assistant
Anesthesiology Resident at Mayo Clinic
- Jennifer Taylor 2011-2013 Post-Baccalaureate Research Assistant
Pediatric Resident at Cooper University Health
- Sarah Kruse* 2012-2014 Undergraduate Student
Pediatric Resident at Mayo Clinic, starting 2018
- Maja Johnson 2013-2015 Post-Baccalaureate Research Assistant
Medical Student at University of Minnesota-Duluth Medical School
- Ronee Harvey* 2011-2016 MD/PhD Student
Internal Medicine Resident at University of Minnesota, starting 2018
- Athena Golfinos 2015-2017 Undergraduate Research Assistant/Bio 152/Capstone
PhD Student at University of Wisconsin-Madison
- Alexandra Carl* 2015-2018 Undergraduate Research Assistant/Bio 152
 - American Physiological Society Undergraduate Research Fellowship
 - University Bookstore Scholarship*MPH Student at University of North Carolina-Chapel Hill, starting 2018*
- Mackenzie Greisch 2015-2018 Undergraduate Research Assistant
- Lauren Walker 2016 Kinesiology Practicum/Research Assistant
PA/MPH Student at University of Wisconsin-Madison
- Hallie Mueller 2016 Kinesiology Practicum
JD Candidate at Pepperdine University
- Mikaela Schwantz 2016-2017 Kinesiology Practicum/Research Assistant
Physical Therapy Student at University of Wisconsin-Madison
- Emily Hartwig 2016-2018 Undergraduate Research Assistant/Kin 699
Physical Therapy Student at University of Illinois-Chicago, starting 2018
- Allison Tran 2016-2017 Kinesiology Practicum / Research Assistant
Physical Therapy Student at University of Minnesota, starting 2018
- Michael Nuenninghoff 2016-2017 Undergraduate Research Assistant
- Karly Katchen* 2016-2018 Kinesiology Practicum / Research Assistant
- Emma Chapman 2017 Undergraduate Research Assistant
- Samuel Gallo 2017-present Undergraduate Research Assistant/Bio 152
 - Hilldale Undergraduate/Faculty Research Fellowship
- Alyson Zimmerman 2017-present Undergraduate Research Assistant/Kin 699
- Makayla Tuomi 2017-present Kinesiology Practicum/ Research Assistant
- Nicholas Winder 2018 Undergraduate Research Assistant/Kin 699
- Katherine Senese 2018-present Undergraduate Research Assistant/Bio 152
- Carissa Loeper 2018-present Undergraduate Research Assistant

- UW-Madison Entering Research Summer Program Scholarship
- Wesley Yin 2018 High School Student
 - MMSD High School Science Research Internship
- Mark Saari 2018-present Kinesiology Practicum
- Ido Haber 2018-present Bio 152 Student

Thesis & Dissertation Primary Advisor

- Kathleen Miller* 2015-present MS - 2017, PhD student, Kinesiology
 - Marie Carns Fellowship
 - Cardiovascular Research Training Grant (T32 Predoctoral trainee)
- Nicole Eisenmann 2016-present MS Student, Kinesiology
- Adam Corkery* 2016-present MS Student, Kinesiology
- Andrew Pearson 2017-present PhD Student, Kinesiology

Thesis & Dissertation Committee Service

- Ronee Harvey 2012-2016 MD/PhD Student, Mayo Medical School
- Joe Sepe 2013-2015 MS Student, Kinesiology
- Garrett Peltonen 2015-2017 PhD Student, Kinesiology
- Angela Greenman 2016-2017 MS Student, Kinesiology
- Katelyn Norton 2016 PhD Student, University of Western Ontario
- Katrina Carter 2016-present PhD Student, Physiology Training Program
- Kristin Haraldsdottir 2016-2018 PhD Student, Kinesiology
- Michelle Favre 2017-present PhD Student, Rutgers New Jersey Medical School
- Aaron Ward 2018-present PhD Student, Kinesiology
- Ryan Centanni 2018-present MS Student, Kinesiology
- Sarah Hissen 2019-present PhD Student, University of Western Sydney

*These trainees have won major national awards based on their research from the American Physiological Society and/or American College of Sports Medicine.

RESEARCH INTERESTS

My current research interest is to examine the effect of aging on human cerebrovascular regulation. Specifically, I am interested in how age-related changes in arterial stiffness, sympathetic nerve activity, and sex hormones influence cerebral blood flow. In addition, my research focuses on how lifestyle modifications (exercise training, physical activity, stress reduction) prevent and how chronic diseases (lupus) accelerate the negative consequences of aging on cerebral blood flow regulation. As reductions in cerebral blood flow may be a key factor in the cognitive decline observed in aging populations, my future research goals are to examine the functional link between cerebrovascular regulation and cognition. Epidemiological data suggests that lifelong physical activity is a key factor in preventing cognitive decline. My research program focuses on the physiological mechanisms behind this protection.

INVITED PROFESSIONAL PRESENTATIONS

1. University of Wisconsin-Madison Endocrine Grand Rounds Invited Speaker: *“Sympathetic regulation of blood pressure”* Madison, WI, November 2018
2. Barshop Symposium on Aging-Exercise Regulation of Biological Aging Invited Speaker: *“Vascular health and implications for the brain”*, Bandera, TX, October 2018
3. American Physiological Society Cardiovascular, Renal and Metabolic Diseases-Sex Specific Implications for Physiology Invited Speaker: *“Brain blood flow control: Sex differences and sex-specific conditions”*, Knoxville, TN, October 2018
4. University of Kansas Alzheimer’s Disease Center Research Colloquium Invited Speaker: *“Blood pressure, vascular tone, and implications for the brain in women”* Kansas City, KS, September 2018
5. International Conference on Promoting Healthy Brain Aging and Preventing Dementia Plenary Speaker: *“Vascular health and implications for the brain”* Banff, Canada, June 2018
6. National Institute of Health - NHLBI Invited Special Seminar Speaker: *“Blood pressure, vascular tone, and implications for the brain”* Bethesda, MD, June 2018
7. Experimental Biology Annual Meeting, American Association of Anatomists Invited Symposia Speaker: *“Sex-specific conditions affecting vascular tone, cerebral blood flow, and cognition”* San Diego, CA, April 2018
8. Michigan Technological University, Biological Sciences Seminar Invited Speaker: *“Sex-specific factors regulating pressure and flow”* Houghton, MI, March 2018
9. University of Wisconsin-Madison, Geriatrics Didactic Series - ADRC Seminar Invited Speaker: *“Vascular health and implications for the brain”* Madison, WI, March 2018
10. University of Colorado-Boulder, Department of Integrative Physiology Colloquium Invited Speaker: *“Aging, vascular function, and implications for the brain”* Boulder, CO, February 2018
11. University of Kentucky Medical Center, Healthy Hearts for Women Invited Symposia Speaker: *“Sex-dependent factors regulating pressure and flow”* Lexington, KY, February 2018
12. American Physiological Society Cardiovascular Aging Conference, Invited Symposia Speaker: *“Human cerebral artery function”* Westminster, CO, August 2017
13. Experimental Biology Annual Meeting, Physiological Society Invited Symposia Speaker: *“Sex-dependent factors regulating pressure and flow”* Chicago, IL, April 2017
14. Medical College of Wisconsin Medical Grand Rounds Invited Speaker: *“Cerebral blood flow and aging”* Milwaukee, WI, February 2017
15. UW Cardiovascular Research Center Scientific Fair Invited Speaker: *“Is cerebral blood flow the link between vascular risk and cognitive decline?”* Madison, WI, December 2017
16. International Sports Science Network Forum, Invited Plenary Speaker: *“What is the role of exercise in preserving cognition?”* Nagano, Japan, November 2016
17. Okanagan Cardiovascular & Respiratory Symposium, Invited Symposia Speaker: *“Is cerebrovascular regulation the link between vascular risk and cognitive decline?”* Vernon, British Columbia, Canada, March 2016
18. American Autonomic Society Annual Meeting, Selected Speaker: *“Effect of menopausal hormones on cerebrovascular reactivity in women”* Rio Grande, Puerto Rico, November 2014
19. Mayo Clinic Nutrition & Wellness in Health & Disease Plenary Speaker: *“Interval training for the novice”* San Francisco, CA, September 2014
20. Alzheimer’s Association International Conference Imaging Consortium Selected Speaker:

- “Aortic blood pressure is associated with white matter hyperintensity fraction in postmenopausal women with normal blood pressure” Copenhagen, Denmark, July 2014*
21. Mayo Clinic Biomedical Engineering/Physiology Lecture: *“Age Differences in Brain Blood Flow Regulation” Rochester, MN, May 2014*
 22. Mayo Clinic Musculoskeletal Journal Club Speaker: *“Academic Job Search” Rochester, MN, May 2014*
 23. Experimental Biology Annual Meeting, Cerebral Autoregulation in Pathological Conditions Selected Speaker: *“Cerebral blood flow regulation during blood loss compared to lower body negative pressure in humans” San Diego, CA, April 2014*
 24. Experimental Biology Annual Meeting, Exercise Physiology Refresher Course Keynote Speaker: *“Exercise, aging, and cognitive function” San Diego, CA, April 2014*
 25. Dan Abraham Healthy Living Center Retreat Invited Speaker: *“Exercise to challenge the body & mind” Rochester, MN, February 2014*
 26. Building Interdisciplinary Research Careers in Women’s Health Seminar Speaker: *“Preparing for first large external grant” Rochester, MN, February 2014*
 27. American Autonomic Society Annual Meeting Selected Speaker: *“High dose ibuprofen does not alter muscle sympathetic nerve activity in lean or obese adults” Kohala Coast, HI, October 2013*
 28. American Autonomic Society Annual Meeting, Symposia Invited Speaker: *“Sex differences in cerebral blood flow regulation” Kohala Coast, HI, October 2014*
 29. Hamline University Biology Department, Seminar Series Invited Speaker: *“Exercise, cognitive function, and aging” St. Paul, MN, September 2013*
 30. Mayo Clinic Musculoskeletal Journal Club Speaker: *“Age differences in brain blood flow regulation” Rochester, MN, June 2013*
 31. Organization for the Study of Sex Differences, Invited Symposia Speaker: *“Sex differences in cerebrovascular reactivity: Are women protected?” Hoboken, NJ, April 2013*
 32. Experimental Biology Annual Meeting, Brain Strain Selected Speaker: *“Sex differences in age-related changes in cerebral vasodilator responses” Boston, MA, April 2013*
 33. University of Wisconsin-Superior, NSF Women in Science Postdoctoral Invited Seminar Speaker: *“Aging, exercise, and brain blood flow” Superior, WI, March 2013*
 34. University of Wisconsin-Madison, Department of Kinesiology Seminar Speaker: *“Aging, exercise, and brain blood flow” Madison, WI, February 2013*
 35. University of North Texas Health Science Center, Department Seminar Invited Speaker: *“Brain blood flow in aging men and women” Fort Worth, TX, January 2013*
 36. American Autonomic Society Annual Meeting Selected Speaker: *“The change in arterial stiffness during ganglionic blockade is associated with sympathetic nerve activity in humans” Nassau, Bahamas, October 2012*
 37. Experimental Biology Annual Meeting, NCAR section Selected Speaker: *“Greater autonomic support of blood pressure in older women” San Diego, CA, April 2012*
 38. NJ Veteran’s Affairs War-Related Injury and Illness Institute, Grand Rounds Invited Speaker: *“Cerebral vasodilator responses in aging and cognitively impaired humans” East Orange, NJ, February 2012*
 39. Mayo Clinic Musculoskeletal Research Seminar Invited Speaker: *“Cerebral and peripheral vasodilator responses in healthy and cognitively impaired humans” Rochester, MN, October 2010*
 40. Texas American College of Sports Medicine Selected Student Presentation: *“Arterial*

compliance of rowers” Denton, TX, February 2006

COMMUNITY/PUBLIC PRESENTATIONS

1. Wisconsin ADRC, Alzheimer’s Association, and UW Health sponsored Feed your Mind Workshop Invited Speaker: *“Exercise and Healthy Aging” Madison, WI, October 2018*
2. Rock County Alzheimer’s & Related Dementia Update Program Invited Speaker: *“Alzheimer’s Research Updates: Brain blood flow as a target for Alzheimer’s Disease” Janesville, WI, November 2017*
3. Aging & Disability Resource Center of Dane County, Alzheimer’s Association, and Madison School & Community Recreation, Brain Health Workshop Presenter/Organizer: *“Exercise and brain health” Madison, WI, November 2017*
4. UW-Madison Alzheimer’s Disease Research Center Fall Lecture Invited Speaker: *“The role of exercise in healthy aging” Madison, WI, October 2017*
5. South Central Wisconsin Alzheimer’s Association Annual Event Invited Speaker: *“Brain blood flow as a target for Alzheimer’s Disease” Madison, WI, April 2017*

MEDIA & PRESS CONTRIBUTIONS

American College of Sports Medicine Blog: Heart Health Brain Health Connection

Author (Invited): Jill Barnes, February 22, 2019

<https://www.acsm.org/home/featured-blogs---homepage/acsm-blog/2019/02/22/heart-health-brain-health-connection>

Runner’s World: 10 Postpartum Exercises to Help New Moms Return to Running

Author: Kiera Carter, February 19, 2019

<https://www.runnersworld.com/women/a25992324/postpartum-exercises/>

Runner’s World: How Long Does It Take to Benefit From a Hard Workout?

Author: Kiera Carter, January 7, 2019

<https://www.runnersworld.com/advanced/a20784020/how-long-does-it-take-to-benefit-from-a-hard-workout/>

American College of Sports Medicine Blog: How Exercise Promotes Brain Health in Aging.

Author (Invited): Jill Barnes, September 20, 2018

<https://www.acsm.org/all-blog-posts/acsm-blog/acsm-blog/2018/09/20/exercise-promotes-brain-health-aging>

Brava Magazine: Take Your Pulse: High Blood Pressure Just Got Lower.

Author: Candice Wagener, February 1, 2018

http://bravamagazine.com/wp-content/uploads/2018/02/Brava_website_LR.pdf

Pharmastar: Post preeclampsia, different patterns of hypertension. Which monitoring and what actions.

January 4, 2018

<https://www.pharmastar.it/news/cardio/post-preeclampsia-possibili-differenti-pattern-di-ipertensione-quali-monitoraggio-e-quali-interventi-25639>

Brava Magazine: The Science: Researching Alzheimer's Disease.

Author: Lisa Bauer, November 1, 2017

<http://bravamagazine.com/researching-alzheimers-disease/>

Hometown News Group: Fitter Seniors May Have Healthier Brains.

Author: Shari Gasper, July 6, 2017

http://www.hngnews.com/edition/page_2a602985-8616-5fac-be05-8e5d252d40ad.html

Discover Magazine: With an Injection, Mice Nearly Double Their Endurance.

Author: Nathaniel Scharping, May 2, 2017

<http://blogs.discovermagazine.com/d-brief/2017/05/02/exercise-hitting-the-wall-endurance/#.WQi9-FKZPkF>

Mayo Clinic Alumni Association: Alumna Jill Barnes, Ph.D. helps her graduate student get settled at Mayo – for cancer treatment and lab experience.

Author: Melissa Abrams, April 14, 2017

<https://alumniassociation.mayo.edu/jill-barnes-helps-grad-student-mayo/>

Mayo Clinic Alumni Association: New Chapter.

Author: Melissa Abrams, April 10, 2017

<https://alumniassociation.mayo.edu/featured-alumni/featured-alumnijill-barnes/>

NIH NHLBI Spotlight: Vascular Dementia: Exercise, Blood Flow and the Aging Brain.

Author: Isabel Estrada, March 13, 2017.

<https://www.nhlbi.nih.gov/news/spotlight/fact-sheet/vascular-dementia-exercise-blood-flow-and-aging-brain>

Huffington Post: 7 Very Good Reasons to Workout That Don't Involve Weight Loss.

Author: Allison Fox, Lindsay Holmes, November 18, 2016.

http://www.huffingtonpost.com/entry/exercising-not-for-weight-loss_us_582b3d22e4b060adb5706881

Wall Street Journal: Physical Fitness Leads to Mental Fitness.

Author: Jen Murphy, November 14, 2016.

<https://www.wsj.com/articles/physical-fitness-mental-fitness-1479145666>

Modalina Magazine: Move your body, change your mind.

Author: Caroline Roscoe Barr, Fall 2016.

https://static1.squarespace.com/static/575c712f37013b38edb04e26/t/586567f7440243e45d739aee/1483040764112/MODALINA_ThePractitioner.pdf

Sports Illustrated: Get Healthy in 2016: How you can stay active without a formal workout plan.

Author: Michael Joyner, February 18, 2016.

<https://www.si.com/edge/2016/02/18/getting-healthy-in-2016-how-to-be-more-active-outside-the-gym>

American Society of Cell Biology Newsletter: Science as a jigsaw puzzle: a story of sex and blood pressure.

Author: Michael Joyner, November 2015.

<http://www.ascb.org/newsletter/2015-november-newsletter/science-jigsaw-puzzle-story-sex-blood-pressure/>

Mayo Clinic Alumni Association: Diligence and drive propel scientist to take risks and earn awards.

Author: Melissa Abrams, May 2014

https://alumniassociation.mayo.edu/barnes_2014_kendall/

Medscape: Exercise Generally Safe, Beneficial for Patients with Lupus.

Author: Janis C. Kelly, November 13, 2013.

<http://www.medscape.com/viewarticle/815119>

AJP-Heart and Circulatory Podcasts: Age-related Changes in Central Blood Pressure.

Author: Kara Keehan, May 24, 2012.

<http://ajpheart.podbean.com/e/age-related-changes-in-central-blood-pressures/>

National Geographic News: Can Sugar Make You Stupid? High Concern in Wake of Rat Study.

Author: Charles Q. Choi, May 23, 2012.

<https://news.nationalgeographic.com/news/2012/05/120522-sugar-stupid-rats-high-fructose-corn-syrup-health-science/>

ORIGINAL RESEARCH PUBLICATIONS

1. Schenk, S., **J.N. Cook**, A.E. Kaufman, and J.F. Horowitz. Postexercise insulin sensitivity is not impaired after an overnight lipid infusion. *Am J Physiol Endocrinol Metab.* 288:E519-E525, 2005. PMID: 15522993
2. DeVan, A.E., M.M. Anton, **J.N. Cook**, D.B. Neidre, M.Y. Cortez-Cooper, and H. Tanaka. Acute effects of resistance exercise on arterial compliance. *J Appl Physiol.* 98:2287-2291, 2005. PMID: 15718412
3. Anton, M.M., M.Y. Cortez-Cooper, A.E. DeVan, D.B. Neidre, **J.N. Cook**, and H. Tanaka. Cigarette smoking, regular exercise, and peripheral blood flow. *Atherosclerosis.* 185:201-205, 2006. PMID: 16046216
4. **Cook, J.N.**, A.E. DeVan, J.L. Schleifer, M.M. Anton, M.Y. Cortez-Cooper, and H. Tanaka. Arterial compliance in rowers: Implications for combined aerobic and strength training on arterial elasticity. *Am J Physiol Heart Circ Physiol.* 290:H1596-H1600, 2006. PMID: 16284225
5. Anton, M.M., M. Cortez-Cooper, A.E. DeVan, D. Neidre, **J.N. Cook**, and H. Tanaka. Resistance training increases basal limb blood flow and vascular conductance in aging humans. *J Appl*

Physiol. 101:1351-1355, 2006. PMID: 16840576

6. Cortez-Cooper, M.Y., M.M Anton, A.E. DeVan, D.B. Neidre, **J.N. Cook**, and H. Tanaka. The effects of strength vs. stretching on central arterial compliance in older adults. *Eur J Cardiovasc Prev Rehabil.* 15(2):149-55, 2008. PMID: 18391640
7. Dhindsa, M., **J.N. Barnes**, A.E. DeVan, N. Nualnim, and H. Tanaka. Innovative exercise device that simulates horseback riding: cardiovascular and metabolic responses. *Comparative Exercise Physiology.* 5(1):1-5, 2008.
8. Dhindsa, M., S.M. Sommerlad, A.E. DeVan, **J.N. Barnes**, J. Sugawara, O. Ley, and H. Tanaka. Inter-relationships among noninvasive measures of post-ischemic macro- and micro-vascular reactivity. *J Appl Physiol.* 105:427-432, 2008. PMID: 18483158 PMC2519948
9. Trombold, J.R., **J.N. Barnes**, L. Critchley, and E.F. Coyle. Ellagitannin consumption improves strength recovery 2-3 days after eccentric exercise. *Med Sci Sports Exerc.* 42(3):493-498, 2010. PMID: 19952825
10. Tanaka, H., S.M. Sommerlad, C.P. Renzi, **J.N. Barnes**, and N. Nualnim. Postexercise hypotension and blood lipoprotein changes following swimming exercise. *Proceedings from Biomechanics and Medicine of Swimming.* 11:381-383, 2010.
11. **Barnes, J.N.**, J.R. Trombold, M.S. Dhindsa, H.F. Lin, and H. Tanaka. Arterial stiffening following eccentric exercise-induced muscle damage. *J Appl Physiol.* 109(4):1102-1108, 2010. PMID: 20671032
12. Ley, O., M. Dhindsa, S.M. Sommerlad, **J.N. Barnes**, A.E. DeVan, H. Tanaka, and M. Naghavi. Use of temperature alterations to characterize vascular reactivity. *Clinical Physiology and Functional Imaging.* 31(1):66-72, 2011. PMID: 20880350
13. Nualnim, N., **J.N. Barnes**, T. Tarumi, C.P. Renzi, and H. Tanaka. Regular swimming exercise and elasticity of the central artery. *Am. J. Cardiol.* 107(5):783-787, 2011. PMID: 21247521
14. Dhindsa, M.S., **J.N. Barnes**, A.E. DeVan, J. Sugawara, and H. Tanaka. Associations among different methods of measuring augmentation index. *Artery Research.* 5:112-114, 2011.
15. **Barnes, J.N.**, N. Nualnim, J. Sugawara, S.M. Sommerlad, C.P. Renzi, and H. Tanaka. Arterial stiffness, wave reflection, and inflammation in habitually exercising individuals with systemic lupus erythematosus. *Am. J. Hypertens.* 24(11):1194-1200, 2011. PMID: 21833040
16. **Barnes, J.N.**, J.E. Schmidt, W.T. Nicholson, and M.J. Joyner. Cyclooxygenase inhibition abolishes age-related differences in cerebral vasodilator responses to hypercapnia. *J Appl Physiol.* 112:1884-1890, 2012. PMID:22442028 PMC3379157
17. Parkhurst, K., H.F. Lin, A.E. DeVan, **J.N. Barnes**, T. Tarumi, and H. Tanaka. Contribution of blood viscosity in assessment of flow-mediated dilation and arterial stiffness. *Vascular Medicine.*

17(4):231-234, 2012. PMID: 22848085

18. **Barnes, J.N.**, D.P. Casey, C.N. Hines, W.T. Nicholson, and M.J. Joyner. Cyclooxygenase inhibition augments central blood pressure and aortic wave reflection in aging humans. *Am J Physiol Heart Circ Physiol.* 302:H2629-H2634, 2012. PMID: 22505642 PMC3378267
19. **Barnes, J.N.**, L.J. Matzek, N. Charkoudian, M.J. Joyner, T.B. Curry, and E.C. Hart. Association of cardiac baroreflex sensitivity with blood pressure transients: the influence of sex and menopausal status. *Frontiers in Physiology.* 3:187, 2012. PMID: 22701103 PMC3369369
20. Farr, J.N., N. Charkoudian, **J.N. Barnes**, D.G. Monroe, L.K. McCready, E.J. Atkinson, S. Amin, L. J. Melton III, M.J. Joyner, and S. Kholsa. Relationship of sympathetic activity to bone microstructure, turnover, and plasma osteopontin levels in women. *J Clin Endocrinol Metab.* 97(11):4219-4227, 2012. PMID: 22948767 PMC3485606
21. Hart, E.C., N. Charkoudian, M.J. Joyner, **J.N. Barnes**, T.B. Curry, and D.P. Casey. Relationship between sympathetic nerve activity and aortic wave reflection characteristics in postmenopausal women. *Menopause.* 29(9):967-972, 2013. PMID: 23531685
22. **Barnes, J.N.**, J.L. Taylor, B.N. Kluck, C.P. Johnson, and M.J. Joyner. Cerebrovascular reactivity is associated with maximal aerobic capacity in healthy older adults. *J Appl Physiol.* 114:1383-1387, 2013. PMID: 23471946 PMC3656423
23. Pierce, G.L., D.P. Casey, J.G. Fiedorowicz, D.R. Seals, T.B. Curry **J.N. Barnes**, D.R. Wilson, and H.M. Strauss. Aortic pulse wave velocity and reflecting distance estimation from peripheral waveforms in humans: Detection of age- and exercise training-related differences. *Am J Physiol: Heart Circ Physiol.* 305:H135-142, 2013. PMID: 23624628, PMC 3727109
24. **Barnes, J.N.**, N. Nualnim, M. Dhindsa, C.P. Renzi, and H. Tanaka. Lack of macrovascular and microvascular dysfunction in habitually exercising systemic lupus erythematosus patients. *Scand J Rheumatol.* 43(3):209-216, 2014 PMID: 24392783
25. **Barnes, J.N.**, E.C. Hart, T.B. Curry, W.T. Nicholson, J.H. Eisenach, B.G. Wallin, N. Charkoudian, and M.J. Joyner. Aging enhances autonomic support of blood pressure in women. *Hypertension.* 63(2):303-308, 2014. PMID: 24324040, PMC3893094
26. Hart, E.C., B.G. Wallin, **J.N. Barnes**, M.J. Joyner and N. Charkoudian. Relationship of sympathetic nerve activity to peripheral vasodilator responses in young and older men: Implications for blood pressure regulation and aging. *Am J Physiol: Heart Circ Physiol.* 306(6):H904-909, 2014. PMID: 24414063
27. Curry, T.B., C.N. Hines, **J.N. Barnes**, M. Somaraju, R. Basu, J.M. Miles, M.J. Joyner, and N. Charkoudian. Relationship of muscle sympathetic nerve activity to insulin sensitivity in young non-obese individuals. *Clin Auton Res.* 24(2):77-85, 2014. PMID: 24577625, PMC41118723
28. Taylor, J.L., C.N. Hines, W.T. Nicholson, M.J. Joyner, and **J.N. Barnes**. The effect of aging and

- indomethacin on forearm reactive hyperemia in healthy adults. *Exp Physiol*. 99(6):859-867, 2014. PMID: 24706194
29. Harvey, R.E., **J.N. Barnes**, N. Charkoudian, T.B. Curry, J.H. Eisenach, E.C.J. Hart, and M.J. Joyner. Forearm vasodilator responses to a β -adrenergic receptor agonist in premenopausal and postmenopausal women. *Physiol Reports*. 2(6): e12032, 2014. PMID: 24907296, PMC4208635
 30. **Barnes, J.N.**, N. Charkoudian, L.J. Matzek, C.P. Johnson, M.J. Joyner, and T.B. Curry. Acute cyclooxygenase inhibition does not alter muscle sympathetic nerve activity or forearm vasodilator responsiveness in lean and obese adults. *Physiol Reports*. 2(7):1-8, 2014. PMID: 25347862, PMC4187568
 31. Harvey, R.E., E.C. Hart, N. Charkoudian, T.B. Curry, J.R. Carter, Q. Fu, C.T. Minson, M.J. Joyner, and **J.N. Barnes**. Oral contraceptive use, muscle sympathetic nerve activity, and systemic hemodynamics in young women. *Hypertension*. 66(3):590-597, 2015. PMID: 26101348, PMC4537364
 32. Rickards, C.A., B.D. Johnson, R.E. Harvey, V.A. Convertino, M.J. Joyner, and **J.N. Barnes**. Cerebral blood flow regulation during progressive blood loss compared to lower body negative pressure in humans. *J. Appl. Physiol*. 119(6):677-685, 2015. PMID: 26139213 PMC4747890
 33. Ranadive, S.M., R.E. Harvey, B. Lahr, V.M. Miller, M.J. Joyner, and **J.N. Barnes**. Blood pressure responses to metaboreflex in women with a history of hypertensive pregnancy. *Am. J Physiol: Regulatory & Comparative Physiol*, 312:R49-54, 2017. PMID:27927625, PMC5283939
 34. Al-Khateeb A.A., J.K. Limberg, **J.N. Barnes**, M.J. Joyner, N. Charkoudian, and T.B. Curry. Acute cyclooxygenase inhibition and baroreflex sensitivity and lean and obese adults. *Clin Auton Res*, 27(1):17-23, 2017. PMID:27838779, PMC5292066
 35. Harvey, R.E., **J.N. Barnes**, E.C. Hart, W. T. Nicholson, M.J. Joyner, and D.P. Casey. The influence of sympathetic nerve activity on aortic hemodynamics and pulse wave velocity in women. *Am J Physiol:Heart Circ Physiol*, 312(2):H340-346, 2017. PMID: 27923789, PMC5336574
 36. Peinado, A., R.E. Harvey, E.C. Hart, N. Charkoudian, T.B. Curry, W.T. Nicholson, B.G. Wallin, M.J. Joyner, and **J.N. Barnes**. Blood pressure regulation in young and older women: differences in neural control mechanisms. *Clin Auton Res*, 27(3):157-165, 2017. PMID: 28205011, PMC5604236
 37. **Barnes, J.N.**, R.E. Harvey, S.M. Zuk, E.S. Lundt, T.G. Lesnick, J.L. Gunter, M.L. Senjem, L.T. Shuster, V.M. Miller, C.R. Jack, M.J. Joyner, and K. Kantarci. Aortic hemodynamics and white matter hyperintensities in normotensive postmenopausal women. *J Neurol*, 264(5):938-945, 2017. PMID: 28389742, PMC5413519
 38. Harvey, R.E., M.C. Johnson, S.M. Ranadive, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Aortic hemodynamics in postmenopausal women following cessation of menopausal hormone therapy. *Physiol Rep*, 5(23): e13535, 2017. PMID: 29208690, PMC5727285

39. **Barnes, J.N.**, R.E. Harvey, K.B. Miller, M. Jayachandran, K.M. Malterer, B.D. Lahr, K.R. Bailey, M.J. Joyner, and V.M. Miller. Reduced cerebrovascular reactivity and vascular activation in women with histories of preeclampsia. *Hypertension*, 71(1):110-117, 2018. PMID: 29158356, PMC5730492
40. Van Helmond, N. B.D. Johnson, W.W. Holbein, H.G. Petersen-Jones, **J.N. Barnes**, R.E. Harvey, T.B. Curry, V.A. Convertino, and M.J. Joyner. Effect of acute hypoxemia on cerebral blood flow velocity regulation during lower body negative pressure. *Physiol Rep*, 6(4):1-13, 2018. PMID: 29464923, PMC5820424
41. Miller, K.B., A.J. Howery, M. Eldridge, and **J.N. Barnes**. Cerebrovascular reactivity and central hemodynamics in habitually exercising healthy adults. *Frontiers in Physiology*, 9:1096, 2018. PMID: 30174609, PMC6107836
42. **Barnes, J.N.**, R.E. Harvey, N.A. Eisenmann, K.B. Miller, M.C. Johnson, S.M. Kruse, B.D. Lahr, M.J. Joyner, and V.M. Miller. Sustained effects of menopausal hormone treatment on cerebrovascular blood flow regulation in women. *Climacteric*. Jan 21:1-8, 2019. PMID: 30661405

INVITED REVIEWS, INVITED EDITORIALS, AND COMMENTARY

1. **Barnes, J.N.** and H. Tanaka. Commentary: Habitual exercise and vascular function. *J Appl Physiol*. 105:777, 2008. PMID: 18678640
2. Tanaka, H., A.E. DeVan, and **J.N. Barnes**. Commentary: Pick your Poiseuille: normalizing the shear stimulus in studies of flow-mediated dilation. *J Appl Physiol*. 107:1361-1362, 2009. PMID: 19847931
3. **Barnes, J.N.** and B.M. Silva. Ascent to altitude: an integrated cerebrovascular, ventilatory, and acid-base response. *J Physiol*. 588 (11):1815-1816, 2010. PMID: 20516346 PMC2901966
4. Charkoudian, N., E.C. Hart, **J.N. Barnes**, and M.J. Joyner. Commentary: *J Appl Physiol*. 109(6):2005, 2010. PMID: 21188833
5. **Barnes, J.N.** and M.J. Joyner. Invited Editorial: Cerebrovascular challenges in diabetes: the pressure is on to maintain perfusion. *Hypertension*. 57(4):674-675, 2011. PMID: 21357273
6. **Barnes, J.N.** and M.J. Joyner. Sugar highs and lows: the impact of diet on cognitive function. *J Physiol*. 590:2831, 2012. PMID: 22707590 PMC3448146
7. **Barnes, J.N.** Beyond a one-track mind: Understanding blood flow to the brain in humans. *J Physiol*. 590:3217, 2012. PMID: 22826302 PMC3459037
8. Johnson, B.D., R.E. Harvey, and **J.N. Barnes**. Exercise: where the body leads the heart must follow. *J Physiol*. 590:4127-4128, 2012. PMID: 22962034 PMC3473271

9. **Barnes, J.N.** and H. Tanaka. Cardiovascular benefits of habitual exercise in systemic lupus erythematosus. *Physician and Sportsmedicine*. 40(3):43-48, 2012. PMID: 23528620
10. Joyner, M.J. and **J.N. Barnes**. I am 80 going on 18: Exercise and the fountain of youth. *J Appl Physiol*. 114(1):1-2, 2013. PMID: 23139369
11. Joyner, M.J. and **J.N. Barnes**. The medicalization of inactivity. *Physiology News*. 90:18-21, 2013.
12. Miller, V.M., V.D. Garovic, K. Kantarci, **J.N. Barnes**, M. Jayachandran, M.J. Joyner, L.T. Schuster, and W.A. Rocca. Sex-specific risk for cardiovascular disease and cognitive decline. *Biol Sex Differences*. 4(1):6, 2013. PMID: 23537114, PMC3623746
13. **Barnes, J.N.** Blood pressure regulation in women: Differences emerge when challenged by orthostasis. *J. Physiol*. 591:2239, 2013. PMID:23740883, PMC3650689
14. **Barnes, J.N.**, J.L. Taylor, B.N. Kluck, C.P. Johnson, and M.J. Joyner. Letter to the Editor: Response to Pancheva, Panchev, and Pancheva. *J Appl Physiol*. 114:1761, 2013. PMID:23772058
15. Sieck, G.C., C. Mantilla, **J.N. Barnes**, and M.J. Joyner. Physiology's impact: Discovering life. *Physiology*. 28(3):138-139, 2013. PMID: 23636258
16. **Barnes, J.N.** and M.J. Joyner. Physical activity and cardiovascular risk: 10 METs or bust? *Mayo Clinic Proc*. 88(12):1353-5, 2013. PMID: 24290107
17. Joyner, M.J., **J.N. Barnes**, E.C. Hart, B.G. Wallin, and N. Charkoudian. Invited Review: Neural control of the circulation: Sex differences in humans. *Comprehens Physiol*. 5:193-215, 2015. PMID: 25589269, PMC4459710
18. **Barnes, J.N.** Invited Review: Exercise, cognitive function, and aging. *Adv Physiol Education*, 30:55-62, 2015. PMID: 26031719, PMC4587595
19. Hughes, J.M., N. Charkoudian, **J.N. Barnes**, and B.J. Morgan. Revisiting the debate: Does exercise build strong bones in the mature and senescent skeleton? *Frontiers in Physiology*, 7:369, 2016. PMID: 27679578, PMC5020082
20. Charkoudian, N., E.C.J. Hart, **J.N. Barnes**, and M.J. Joyner. Invited Review: Autonomic control of body temperature and blood pressure: Influences of female sex hormones. *Clin Auton Res*, 27(3):149-155, 2017. PMID: 28488202
21. **Barnes, J.N.** Invited Review: Sex specific factors regulating pressure and flow. *Exp Physiol*, 102(11):1385-1392, 2017. PMID: 28799254
22. **Barnes, J.N.** Invited Clinical Implications: Pregnancy history and cerebrovascular reactivity. *Hypertension*. 71(1):2, 2018.

23. **Barnes, J.N.** and Q. Fu. Sex-specific ventricular and vascular adaptations to exercise. *Adv Exp Med Bio.* 1065:329-346, 2018. PMID: 30051394
24. **Barnes, J.N.** and A.T. Corkery. Invited Review: Exercise improves vascular function, but does this translate to the brain? *Brain Plasticity.* 4:65-79, 2018. PMID: 30564547, PMC6296268

BOOK CHAPTERS

1. **Barnes, J.N.** and Q. Fu. Sex-specific ventricular and vascular adaptations to exercise. Editor: Peter Kerkhof *Sex-Specific Analysis of Cardiovascular Function.* (pg: 329-346). Springer International Publisher, 2018.

ABSTRACTS

1. **Cook, J.N.,** O. Gerhart, M. Anton, and H. Tanaka. Age-associated declines in ironman triathlon performance: Sex and event interactions. *Med Sci Sports Exerc.* 2004.
2. Schenk, S. A.E. Kaufman, **J.N. Cook,** and J.F. Horowitz. Post-exercise insulin sensitivity is not impaired after an overnight lipid infusion. *Med Sci Sports Exerc.* 2004.
3. DeVan, A.E., M.M. Anton, **J.N. Cook,** M.Y. Cortez-Cooper, D.B. Neidre, and H. Tanaka. Acute effects of resistance exercise on central arterial compliance. *Med Sci Sports Exerc.* 2005.
4. Anton, M.M., M.Y. Cortez-Cooper, A.E. DeVan, **J.N. Cook,** D.B. Neidre, H. Kawano, N. Seno, M. Okajima, M. Miyachi, and H. Tanaka. Central arterial stiffness and chronic smoking revisited. *FASEB Journal.* 2005.
5. Anton, M.M., M.Y. Cortez-Cooper, A.E. DeVan, D.B. Neidre, **J.N. Cook,** and H. Tanaka. Resistance training increases basal limb blood flow and vascular conductance in aging humans. *FASEB Journal.* 2006.
6. Cortez-Cooper, M.Y., M.M. Anton, A.E. DeVan, D.B. Neidre, and **J.N. Cook.** Effects of strength training vs. stretching on central arterial compliance in older adults. *FASEB Journal.* 2006.
7. **Cook, J.N.,** A.E. DeVan, J.L. Schleifer, M.M. Anton, M.Y. Cortez-Cooper, and H. Tanaka. Arterial compliance in rowers: Implications for combined aerobic and strength training on arterial elasticity. *Med Sci Sports Exerc.* 2006.
8. Neidre, D.B., **J.N. Cook,** M.M. Anton, H. Tanaka, and W.W. Spirduso. The effects of hyperoxia on cognitive performance in younger and older adults. *Med Sci Sports Exerc.* 38(5):S28, 2006.
9. Dhindsa, M., **J.N. Barnes,** A.E. DeVan, N. Nualnim, and H. Tanaka. Innovative exercise device that simulates horseback riding: Cardiovascular responses. *Med Sci Sports Exerc.* 39(5):S352, 2007.
10. **Barnes, J.N.,** M.Y. Cortez-Cooper, M.M. Anton, and H. Tanaka. The effect of resistance training on systemic inflammatory markers in middle-aged and older adults. *FASEB Journal.* 2008.
11. Dhindsa, M. S.M. Sommerlad, A.E. DeVan, **J.N. Barnes,** J. Sugawara, and H. Tanaka. Inter-relationships between noninvasive measures of peripheral vascular reactivity. *FASEB Journal.* 2008.
12. **Barnes, J.N.** Habitual exercise and vascular function in lupus: a research proposal. *Central Texas Clinical Research Forum.* Seton Family Hospitals, 2008.

13. Trombold, J.R., **J.N. Barnes**, L.K. Critchley, J.D. Trinity, M.P. Pahnke, H. Tanaka, and E.F. Coyle. Polyphenol supplementation attenuates strength loss 2-3 days following eccentric damage. *Med Sci Sports Exerc.* 2008.
14. **Barnes, J.N.**, J.R. Trombold, and H. Tanaka. Eccentric muscle damage and macrovascular function: Stiff muscles and stiff arteries? *Med Sci Sports Exerc.* 2009.
15. Nualnim, N. **J.N. Barnes**, and H. Tanaka. Regular swimming exercise and central arterial compliance. *Med Sci Sports Exerc.* 2009.
16. **Barnes, J.N.**, N. Nualnim, J. Sugawara, and H. Tanaka. Habitual exercise is associated with reduced arterial stiffness in systemic lupus erythematosus. *FASEB Journal.* 2010.
17. Sommerlad, S.M., C.P. Renzi, **J.N. Barnes**, N. Nualnim, and H. Tanaka. Postexercise hypotension and blood lipoprotein changes following swimming exercise. *XIth Symposium on Biomechanics and Medicine of Swimming.* 2010.
18. **Barnes, J.N.**, N. Nualnim, M. Dhindsa, and H. Tanaka. Lack of macro- and micro-vascular dysfunction in habitually exercising systemic lupus erythematosus patients. *Integrative Physiology of Exercise Conference,* 2010.
19. Hines, C.N., J.R.A. Shepherd, W.T. Nicholson, J.E. Schmidt, D.P. Casey, M.J. Joyner, and **J.N. Barnes**. The effect of COX inhibition on augmentation index and peripheral wave reflection. *FASEB Journal.* 2011.
20. **Barnes, J.N.**, C.N. Hines, J.E. Schmidt, W.T. Nicholson, and M.J. Joyner. Age-related differences in cerebrovascular reactivity and in response to COX inhibition. *FASEB Journal.* 2011.
21. Nualnim, N., **J.N. Barnes**, and H. Tanaka. Endothelium-dependent vasodilation and baroreflex sensitivity in swimmers, runners, and sedentary. *Med Sci Sports Exerc.* 2011.
22. **Barnes, J.N.**, C.N. Hines, C.P. Johnson, J.E. Schmidt, W.T. Nicholson, and M.J. Joyner. Cerebrovascular reactivity is associated with aerobic fitness. *Med Sci Sports Exerc.* 2011.
23. **Barnes, J.N.**, C.N. Hines, and M.J. Joyner. Cerebrovascular responses during recovery from hypercapnia in young and old healthy humans. The Physiological Society Conference, 2011.
24. **Barnes, J.N.**, N. Charkoudian, M.J. Joyner, and E.C. Hart. Baroreflex sensitivity and blood pressure transients in postmenopausal women. *Clin Auton Res,* 2011.
25. **Barnes, J.N.**, E.C. Hart, T.B. Curry, W.T. Nicholson, J.H. Eisenach, B.G. Wallin, N. Charkoudian, and M.J. Joyner. Greater autonomic support of blood pressure in older women. *Mayo Young Investigators Symposium,* 2012.
26. **Barnes, J.N.**, J.L. Taylor, C.N. Hines, and M.J. Joyner. Effect of Aging and Indomethacin on Forearm Reactive Hyperemia in Healthy Adults. *Med Sci Sports Exerc.* 2012.
27. **Barnes, J.N.**, E.C. Hart, T.B. Curry, W.T. Nicholson, J.H. Eisenach, B.G. Wallin, N. Charkoudian, and M.J. Joyner. Greater autonomic support of blood pressure in older women. *FASEB Journal.* 2012.
28. Matzek, L.J., E.C. Hart, N. Charkoudian, M.J. Joyner, T.B. Curry, and **J.N. Barnes**. Baroreflex sensitivity is associated with blood pressure transients in young men but not young women. *FASEB Journal.* 2012.
28. Kluck, B.N., **J.N. Barnes**, R.E. Harvey, T.B. Curry, E.C. Hart, N. Charkoudian, M.J. Joyner, and D.P. Casey. Higher aortic wave reflection is mediated in part by greater autonomic support in older women. *FASEB Journal.* 2012.
29. Harvey, R.E., D.P. Casey, E.C. Hart, N. Charkoudian, T.B. Curry, M.J. Joyner, and **J.N. Barnes**. Aging and the effect of autonomic blockade on central and peripheral pulse wave velocity. *FASEB Journal.* 2012.
30. Farr, J.N., N. Charkoudian, **J.N. Barnes**, D.G. Monroe, L.K. McCready, E.J. Atkinson, S.

- Amin, J. Melton, M.J. Joyner, and S. Khosla. Bone structure, serum PINP, and plasma osteopontin levels are correlated with sympathetic tone measured by microneurography in humans. *ASBMR Conference*, 2012.
31. Pierce, G.L., D.P. Casey, J. Fiedorowitz, D.R. Seals, **J.N. Barnes**, T.B. Curry, and H.M. Stauss. Validation of aortic pulse wave velocity estimation from brachial artery blood pressure waveforms in humans: Ability to detect age- and exercise training- related differences in effective reflecting distance and aortic pulse wave velocity. *ARTERY Conference*, 2012.
 32. **Barnes, J.N.**, R.E. Harvey, E.C. Hart, N. Charkoudian, T.B. Curry, J.H. Eisenach, W.T. Nicholson, M.J. Joyner, and D.P. Casey. The change in arterial stiffness during ganglionic blockade is associated with sympathetic nerve activity in women. *Clin Auton Res*. 2012.
 33. **Barnes, J.N.**, J.L. Taylor, W.T. Nicholson, and M.J. Joyner. Sex differences in age-related changes in cerebral vasodilator responses. *FASEB Journal*. 2013.
 34. Harvey, R.E., **J.N. Barnes**, N. Charkoudian, T.B. Curry, J.H. Eisenach, E.C.J. Hart, and M.J. Joyner. Forearm vasodilator response to isoproterenol in premenopausal and postmenopausal women. *FASEB Journal*. 2013.
 35. **Barnes, J.N.**, J.L. Taylor, and M.J. Joyner. Cerebrovascular reactivity is associated with central pulse wave characteristics in healthy adults. *IUPS Conference*, 2013.
 36. Peinado, A.B., E.C. Hart, N. Charkoudian, M.J. Joyner, and **J.N. Barnes**. The change in diastolic blood pressure during autonomic blockade is associated with T50 and error signal in young and older women. *IUPS Conference*, 2013.
 37. **Barnes, J.N.**, N. Charkoudian, L.J. Matzek, M.J. Joyner, and T.B. Curry. High dose ibuprofen does not alter muscle sympathetic nerve activity in lean or obese adults. *Clin Auton Res*. 2013.
 38. Harvey, R.E., J.N. Barnes, N. Charkoudian, E.C. Hart, M.J. Joyner. The effect of oral contraceptive pills on muscle sympathetic nerve activity. *Clin Auton Res*. 2013.
 39. Harvey, R.E., E.C. Hart, N. Charkoudian, T.B. Curry, J.R. Carter, Q. Fu, C.T. Minson, M.J. Joyner, and **J.N. Barnes**. The relationship between muscle sympathetic nerve activity and hemodynamics in women taking oral contraceptive pills. *FASEB Journal*, 2014.
 40. Kruse, S.K., S. Ranadive, J.L. Taylor, M.J. Joyner, and **J.N. Barnes**. Age-related differences in carotid and cerebral blood flow regulation. *FASEB Journal*, 2014.
 41. **Barnes, J.N.**, B.D. Johnson, V.A. Convertino, M.J. Joyner, and C.A. Rickards. Cerebral blood flow regulation during hemorrhage compared to simulated hemorrhage in humans. *FASEB Journal*. 2014.
 42. **Barnes, J.N.**, R.E. Harvey, S.M. Zuk, E.S. Lundt, T.G. Lesnick, J.L. Gunter, M.L. Senjem, V.M. Miller, C.R. Jack, Jr. M.J. Joyner, and K. Kantarci. Aortic blood pressure is associated with white matter hyperintensity fraction in postmenopausal women with normal blood pressure. *Alzheimer's Association International Conference*. 2014.
 43. **Barnes, J.N.**, R.E. Harvey, S.M. Kruse, M.J. Joyner, and V.M. Miller. Effect of menopausal hormones on cerebrovascular reactivity in women. *Clin Auton Res*. 2014.
 44. Johnson, M.C., R.E. Harvey, S.M. Kruse, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Aortic hemodynamics following discontinuation of menopausal hormone therapy in postmenopausal women. *American Artery Society*, 2014.
 45. Johnson, M.C., S.M. Kruse, R.E. Harvey, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Effect of prior menopausal hormone therapy on blood pressure responses in women. *FASEB Journal*, 2015.
 46. **Barnes, J.N.**, R.E. Harvey, K.R. Malterer, M.C. Johnson, and M.J. Joyner. Cerebral blood flow velocity responses to an acute cognitive challenge in healthy adults. *FASEB Journal*, 2015.

47. Shepherd, J.R.A., R. E. Harvey, S.M. Ranadive, V.M. Miller, M.J. Joyner, and **J.N. Barnes**. Aortic pulse wave characteristics in postmenopausal women with and without history of hypertensive pregnancy. *FASEB Journal*, 2015.
48. Harvey, R.E., S.K. Laughlin-Tomaso, E.A. Stewart, T.B. Curry, M.J. Joyner, and **J.N. Barnes**. Endothelium-dependent and –independent vasodilation in women at risk of hypertension. *FASEB Journal*, 2015.
49. Ranadive, S.M., R.E. Harvey, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Blood pressure responses to isometric handgrip in women with and without history of hypertensive pregnancy. *FASEB Journal*, 2015.
50. Schneider, A.C., **J.N. Barnes**, M.J. Joyner, and D.P. Casey. Impact of aging on aortic wave reflection during lower body negative pressure. *FASEB Journal*, 2015.
51. **Barnes, J.N.**, R.E. Harvey, S.M. Zuk, E.S. Lundt, T.G. Lesnick, J.L. Gunter, M.L. Senjem, V.M. Miller, C.R. Jack, Jr. M.J. Joyner, and K. Kantarci. Arterial stiffness and white matter hyperintensity load in normotensive postmenopausal women. *Alzheimer's Association International Conference*, 2015.
52. Ranadive, S.M., R.E. Harvey, M.J. Joyner, V.M. Miller and **J.N. Barnes**. Central blood pressure, wave reflection, and subendocardial viability ratio in women with a history of hypertensive pregnancy. *North American Artery Society*, 2015.
53. **Barnes, J.N.**, R.E. Harvey, and M.J. Joyner. Muscle sympathetic nerve activity during hypercapnia in young and older adults. *International Society of Autonomic Neuroscience*, 2015.
54. Ranadive, S.M., R.E. Harvey, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Blood pressure responses to isometric handgrip exercise in women with a history of hypertensive pregnancy. *Cardiovascular, Renal, and Metabolic Diseases: Physiology & Gender*, 2015.
55. Harvey, R.E., J.K. Limberg, W.T. Nicholson, T.B. Curry, **J.N. Barnes**, and M.J. Joyner. Forearm vascular conductance responses to terbutaline, a β_2 -adrenergic receptor agonist, differ in premenopausal vs. postmenopausal women. *Cardiovascular, Renal, and Metabolic Diseases: Physiology & Gender*, 2015.
56. Miller, K.B., R.E. Harvey, M.J. Joyner, and **J.N. Barnes**. Cerebrovascular vasoconstrictor responses in young and older adults: effect of age and exercise. *FASEB Journal*, 2016.
57. Harvey, R.E., S.M. Ranadive, M.J. Joyner, V.M. Miller and **J.N. Barnes**. Cerebrovascular reactivity is reduced in postmenopausal women with a history of hypertensive pregnancy disorders. *FASEB Journal*, 2016.
58. **Barnes, J.N.**, E. Warnert, A.E. Burchell, K.B. Miller, A.K. Nightingale, R.G. Wise, J.F. Paton, and E.C. Hart. Association between cerebrovascular resistance and ageing in men and women. *Physiological Society*, 2016.
59. Harvey, R.E., M.C. Johnson, S.M. Ranadive, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Aortic hemodynamics in postmenopausal women following cessation of hormone therapy. *Mechanisms of Vasodilation*, 2016.
60. Golfinos, A.E., K.B. Miller, R.E. Harvey, V.M. Miller, and **J.N. Barnes**. History of preeclampsia influences cerebrovascular reactivity in postmenopausal women. *Cardiovascular Research Center Research Day*, 2016.
61. Baker, S.E., J.K. Limberg, W.T. Nicholson, T.B. Curry, **J.N. Barnes**, and M.J. Joyner. Aerobic fitness influences autonomic support of blood pressure in premenopausal, but not postmenopausal women. *FASEB Journal*, 2017.

62. Miller, K.B., J.A. Fields, R.E. Harvey, B.D. Lahr, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Aortic hemodynamics and cognition in women with history of hypertensive pregnancy. *FASEB Journal*, 2017.
63. Eisenmann, N.A., K.B. Miller, A.E. Carl, R.E. Harvey, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Long term effects of menopausal hormone therapy on cerebral pulsatility index. *Med Sci Sports Exerc*, 2017.
64. Miller, K.B., R.E. Harvey, A.J. Howery, A.E. Golfinos, A.E. Carl, and **J.N. Barnes**. Cerebral autoregulation and habitual exercise in young healthy adults. *Med Sci Sports Exerc*, 2017.
65. Corkery, A.T., K.B. Miller, R.E. Harvey, A.J. Howery, and **J.N. Barnes**. Cerebral pulsatility and habitual exercise. *Med Sci Sports Exerc*, 2017.
66. Miller, V.M., R.E. Harvey, **J.N. Barnes**, V.D. Garovic, B.D. Lahr, K.R. Bailey, and M. Jayachandran. Associations of vascular activation with cerebral blood flow vary depending upon pregnancy history in menopausal women. *Organization for the Study of Sex Differences*, 2017.
67. **Barnes, J.N.** Human cerebral artery function. *Physiologist*, 2017.
68. Katchen, K.B., K.B. Miller, A.J. Howery, A.T. Corkery, S.C. Johnson, H.A. Rowley, and **J.N. Barnes**. The impact of grey matter normalization on cerebrovascular reactivity. *FASEB Journal*, 2018.
69. Carl, A.E., K.B. Miller, A.J. Howery, N.A. Eisenmann, A.T. Corkery, and **J.N. Barnes**. Cerebral blood flow responses to a memory test in young and older habitual exercisers. *FASEB Journal*, 2018.
70. Pearson, A.G., M. Jayachandran, B.D. Lahr, M.J. Joyner, V.M. Miller, and **J.N. Barnes**. Association between cerebrovascular reactivity and intravascular cellular activation in postmenopausal women following use of menopausal hormone therapy. *FASEB Journal*, 2018.
71. Miller, K.B., R.E. Harvey, A.J. Howery, M.L. Greisch, A.E. Carl, M.J. Joyner, and **J.N. Barnes**. Cerebrovascular reactivity in habitually exercising healthy adults. *FASEB Journal*, 2018.
72. Corkery, A.T., K.B. Miller, A.J. Howery, A.E. Carl, M.L. Greisch, N.A. Eisenmann, and **J.N. Barnes**. Cyclooxygenase inhibition and cerebrovascular reactivity: interaction of aging and aerobic fitness. *FASEB Journal*, 2018.
73. **Barnes, J.N.** Sex-specific conditions affecting vascular tone, cerebral blood flow, and cognition. *FASEB Journal*, 2018.
74. Miller, K.B., A.J. Howery, J. Oh, H.A. Rowley, S.C. Johnson, and **J.N. Barnes**. Global cerebral perfusion and cerebrovascular reactivity in healthy older adults. *Alzheimer's Association International Conference*, 2018.
75. Tsao, F.H.C., A. Amessoudji, **J.N. Barnes**, and K.C. Meyer. Serum albumin unfolding in relationship to Alzheimer's disease. *Alzheimer's Association International Conference*, 2018.
76. **Barnes, J.N.** Brain blood flow control: Sex differences and sex-specific conditions. *American Physiological Association Cardiovascular, Renal and Metabolic Diseases: Sex-specific Implications for Physiology*, 2018.
77. Gallo, S., K.B. Miller, N. Winder, L.A. Rivera-Rivera, O. Wieben, E.C. Hart, and **J.N. Barnes**. Influence of vertebral artery hypoplasia on cerebral blood flow regulation. *FASEB Journal*, submitted.
78. Eisenmann, N.A., A.J. Howery, R.E. Harvey, and **J.N. Barnes**. Muscle sympathetic nerve activity responses to hypercapnia in exercise-trained and sedentary adults. *FASEB Journal*, submitted.
79. Miller, K.B., V.M. Miller, R.E. Harvey, S.M. Ranadive, M.J. Joyner, and **J.N. Barnes**. Cerebral blood flow response to sympathoexcitatory stimulus in postmenopausal women with a history of preeclampsia. *FASEB Journal*, submitted.

80. Pearson, A.G., A.J. Howery, A.E. Carl, M.J. Joyner, and **J.N. Barnes**. The effects of age and cyclooxygenase inhibition on the cerebrovascular response to a metabolic stimulus. *FASEB Journal*, submitted.
81. Corkery, A.T., K.B. Miller, A.J. Howery, and J.N. Barnes. Cerebrovascular reactivity in resistance trained young men. *FASEB Journal*, submitted.
82. Tsao, F.H.C., J.N. Barnes, A. Amessoudji, Z.H. Li, and K.C. Meyer. Aging-related protein misfolding and neurodegenerative diseases. *Alzheimer's Association International Conference*, submitted.
83. Barnes, J.N., K.B. Miller, L.A. Rivera-Rivera, A.J. Howery, S. Gallo, E.C. Hart, and O. Wieben. Adults with vertebral artery hypoplasia have reduced global cerebrovascular reactivity. *Alzheimer's Association International Conference*, submitted.