

## CURRICULUM VITAE

### **Donald E. Watenpaugh, Ph.D.**

#### WORK ADDRESS

Sleep Consultants, Inc.  
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#### PERSONAL

Married with 3 children

#### CITIZENSHIP

United States of America

#### EDUCATION

- 1995 **Ph.D.**, physiology; minor: ecology; University of California, Davis, CA
- 1989 **M.A.**, physiology, University of Texas Southwestern Medical Center, Dallas, Texas
- 1984 **M.S.**, biology, North Texas State University (now University of North Texas), Denton, Texas
- 1982 **B.S.**, biology; minor: chemistry; North Texas State University (now University of North Texas), Denton, Texas

#### CERTIFICATIONS

2005 **Clinical Sleep Disorders**, American Board of Sleep Medicine, # 3237

National provider identifier (NPI) number 1134528169

#### PROFESSIONAL EXPERIENCE

- 2005-present **Director**, Sleep Consultants, Inc., Fort Worth, Texas
- 2006-2008 **Director**, Sleep Center, Cook Children's Medical Center, Fort Worth, Texas
- 2004-2005 **Associate Director**, Sleep Consultants, Inc., Fort Worth, Texas

- 2001-2004      **Research Scientist**, Naval Submarine Medical Research Laboratory, Groton, CT
- 1999-2001      **Research Assistant Professor**, Department of Integrative Physiology, University of North Texas Health Science Center, Fort Worth, Texas
- 1997-2000      **Clinical Sleep Study Data Analyst/Scorer**, Sleep Consultants, Inc., Fort Worth, Texas
- 1996-1999      **Research Associate**, Department of Integrative Physiology, University of North Texas Health Science Center, Fort Worth, Texas
- June-Sep. 1996      **Guest Scientist**, Danish Aerospace Medical Centre of Research A/S, Copenhagen, Denmark
- 1989-1996      **Manager**, Space Physiology Laboratory, Life Science Division, NASA Ames Research Center, Moffett Field, CA
- 1987-1989      **Research Associate**, Space Medicine Laboratory, University of Texas Southwestern Medical Center, Dallas, Texas
- 1987              **Lecturer**, Allied Health Sciences Physiology Course, University of Texas Southwestern Medical Center, Dallas, Texas
- 1985-1986      **Teaching Assistant** (Mammalian Physiology), Department of Physiology, University of Texas Southwestern Medical Center, Dallas, Texas
- 1982-1984      **Teaching Assistant** (Human Biology and Zoology), Department of Biological Sciences, University of North Texas, Denton, Texas
- 1981-1982      **Research Technician**, Institute of Applied Sciences, University of North Texas, Denton, Texas

#### ADJUNCT FACULTY APPOINTMENTS

- 2006-present      Biomedical Engineering Joint Graduate Studies Committee; University of Texas, Arlington; University of Texas, Dallas; and University of Texas Southwestern Medical Center, Dallas, Texas
- 2005-present      Institute for Cardiovascular and Metabolic Diseases, University of North Texas Health Science Center, Fort Worth, Texas

OFFICES AND BOARD MEMBERSHIPS

Vice president, Texas Society of Sleep Professionals, 2015-present.

Board of Directors, Challenger Learning Center of Southeastern Connecticut, 2003-2004.

SOCIETIES AND COUNCILS (year of initial membership)

Fellow, American Academy of Sleep Medicine (2005)

Member, American Physiological Society (1996)

Charter Member, American Society for Gravitational and Space Research (formerly American Society for Gravitational and Space Biology) (1984)

Member, American College of Sports Medicine, including Texas Chapter (1997)

Charter Member, International Society for Gravitational Physiology (1997)

Member, Gerson Lehrman Group Healthcare Council (2009)

Member, J.K.G. Silvey Society (1982)

Member, Sleep Research Society (2004)

Member, Texas Society of Sleep Professionals (2011)

GRANTS (role in project)

The role of reactive oxygen species in intermittent hypoxia induced sympathoexcitation (co-investigator). National Institutes of Health, PI: PB Raven, University of North Texas Health Science Center, 2011-2013.

Exercise within a lower body negative pressure chamber to load cardiovascular and musculoskeletal systems in microgravity (co-investigator), National Aeronautics and Space Administration, PI: AR Hargens, \$350,000/yr, 1991-2006.

Cardiovascular responses to lower body positive pressure and negative pressure breathing at rest and during dynamic exercise (co-investigator), Office of Naval Research, PI: D Fothergill, Naval Submarine Medical Research Laboratory, \$150,000/yr, 2002-2004.

Testing and evaluation of a low cost retractable needle safety syringe for naval healthcare (principal investigator), Congressionally-mandated project in collaboration with Safety Medical International, Inc., \$1,000,000/yr, 2002-2004.

Submariner bone turnover and vitamin D supplementation (co-investigator), Office of Naval Research, PI: E Harris, Naval Submarine Medical Research Laboratory, \$150,000/yr, 2002-2003.

Determination of supplies and equipment required for successful submarine disaster survival and escape (co-investigator), Naval Sea Systems Command, PI: W Horn, Naval Submarine Medical Research Laboratory, \$70,000/yr, 2001-2002.

Assessment of chest compression efficacy for CPR in weightlessness (co-investigator), National Aeronautics and Space Administration, PI: G Pantalos, University of Louisville, 2000-2002.

Vestibular modulation of autonomic responses to orthostasis (co-investigator), National Aeronautics and Space Administration, PI: M Smith, University of North Texas Health Science Center, \$175,000/yr, 2000-2002.

- Peripheral cardiovascular reflexes in humans during space flight (co-investigator), European Space Agency, PI: A Gabrielsen, Danish Aerospace Medical Centre for Research, Copenhagen, Denmark, 1997-2000.
- Sympathetic control during sleep apnea (principal investigator), Research Fellowship, National Institutes of Health, \$32,000/yr, 1998-2000.
- Virtual environments for simulation of altered gravity (co-investigator), National Aeronautics and Space Administration, PI: R Welch, NASA Ames Research Center, \$40,000/yr, 1996-1999.
- Active warming of patients during general anesthesia (co-investigator), Co-PI's: D Grahn and J Brock-Utne, Stanford University, 1994-1997.
- Intervertebral disc and back pain studies using spinal traction and compression during magnetic resonance imaging (co-investigator), PI: AR Hargens, NASA Ames Research Center, \$50,000/yr, 1993-1996.
- Cranial mechano-acoustical method for measurement of intracranial pressure (co-investigator), National Aeronautics and Space Administration, PI: AR Hargens, NASA Ames Research Center, \$50,000, 1994.
- Cardiovascular adaptation to zero gravity (Experiment 294, Spacelab Life Sciences Shuttle flights 1 and 2) (co-investigator), National Aeronautics and Space Administration, PI: CG Blomqvist, UT Southwestern, 1989-1994.

### CONSULTING

- Sleep Center, Cook Children's Medical Center, Fort Worth, Texas, Directors, W Schmidt-Nowara, 2008-2010, H Pearson, 2011-present.
- Multiple confidential biomedical and clinical projects, Gerson Lehrman Group Healthcare Council, 2009-present.
- Healthcare Training Program Advisory Committee, Concorde Career Colleges, Grand Prairie, Texas campus, 2015.
- A non-invasive acoustic diagnostic device to measure intracranial pressure, R Koch, Scientific-Atlanta, Inc., 1994-1995.
- STELLAR Program for public school teacher research training and curriculum development (consultant/mentor), NASA Ames Research Center, 1994-1995.
- Biology & Space Exploration Video Series: The Cardiovascular System in Space, NASA Ames Research Center, producers: S Rapa and AR Hargens, 1994-1995.
- Inelastic legging for venous insufficiency, F Shaw, Shaw Therapeutics, 1993-1994.
- Comprehensive (whole-body) compact resistance exercise device for Earth and space use, D Keiser, Keiser Sports Health Equipment, 1992-1994.

### AWARDS

- Pickwick Postdoctoral Fellow, National Sleep Foundation, 1997-1999.
- NASA Tech Brief Award, National Aeronautics and Space Administration, 1996.
- Patent Award, National Aeronautics and Space Administration, Ames Commercial Technology Office, 1995.
- Women's Mentor Award, NASA Ames Research Center Advisory Committee for Women, and Federally Employed Women, 1995.

First Place, Student Awards, Animal Physiology, American Society for Gravitational and Space Biology Annual Meeting, 1994.

Procter and Gamble Graduate Student Award, Experimental Biology meeting, 1994.

Group Achievement Award, Spacelab Life Sciences-2 Payload Team, National Aeronautics and Space Administration, 1994.

Phi Sigma National Biological Honor Society, University of California, Davis, 1993.

Graduate Student Researchers Program Grant, National Aeronautics and Space Administration, 1987-1988.

Murray Savings Corporation Scholar, Physiology Graduate Program, University of Texas Southwestern Medical Center at Dallas, 1984.

U.S. Environmental Protection Agency Traineeship, Department of Biological Sciences, North Texas State University, 1982-1984.

Tri-Beta National Biological Honor Society, North Texas State University Chapter, 1981.

### REVIEW SERVICE

*Acta Physiologica Scandinavica*

*American Journal of Physiology*

*Annals of Biomedical Engineering*

*Autonomic Neuroscience: Basic and Clinical*

*Aviation, Space and Environmental Medicine*

*European Journal of Applied Physiology*

*Journal of Applied Physiology*

*Journal of Investigative Medicine*

*Kidney International*

*LUNG*

*Medicine and Science in Sports and Exercise*

National Aeronautics and Space Administration

*SLEEP*

*Wilderness and Environmental Medicine*

### STUDENTS FORMALLY SUPERVISED (GRADUATE ADVISORY COMMITTEE SERVICE)

Erin Westerholm, D.O., M.S.

Raichel Alex, M.S., Ph.D.

Swathi Iyer, M.S.

Priya Xavier, M.S.

Wendy Eubank-Holden, Ph.D.

Nazaneen Mousavi, M.S.

Vikram Rao, M.S.

Mohammad Al-Abed, Ph.D.

Varun Kanal, M.S.

Feraydune (Fred) Kashefi, Ph.D

### SLEEP / CIRCADIAN MEDICAL TRAINEES

Kathryn Judd, M.D.

Barbara Wu, M.D.

John Saito, M.D.

OTHER STUDENTS / TRAINEES DIRECTLY SUPERVISED

Rick Ballard, Esq., M.S.	Gita Murthy, Ph.D.
Karen Hutchinson, R.N.	Baokanh Nguyen
Shannon Stout Kava, M.S.	Jeffrey Gross
Elizabeth Sanchez, Ph.D.	Mark Wilson, M.D.
Tonia Hsieh, Ph.D.	Mei Hsieh
Jackie William, M.D., Ph.D.	Kana Kuriyama
Carly Rogers	Col. Robert Carter, III, Ph.D.
Adriana Cothron, D.O.	Terell Bellard
Nicolette Muentner, Ph.D.	Patrick Guinet, M.D.
Borjana Mikic, Ph.D.	Gauri Bhave, M.S.
Timiera Clark	Aditya Bashaboyina, M.S.
Taylor Kittleman, B.S.	Noah Jouett, D.O.

COURSES TAUGHT OR ASSISTED

Sleep disorders in Nervous System 1 and Cardiopulmonary System 1, Texas College of Osteopathic Medicine, University of North Texas Health Science Center, 2007-2014.

Foundations of Health, Department of Kinesiology, University of Texas at Arlington, 2009.

Human physiology, Physician Assistant Studies, University of North Texas Health Science Center, 1999-2001.

Cellular and systems physiology, NASA Ames Research Center, Life Sciences Division, 1993.

Human physiology, Allied Health Sciences Program, University of Texas Southwestern Medical Center, 1987.

Mammalian physiology laboratory, Medical School, University of Texas Southwestern Medical Center, 1985-1986.

Undergraduate zoology and human biology laboratories, Department of Biological Sciences, North Texas State University (now University of North Texas), 1982-1984.

INVITED PRESENTATIONS AND CONFERENCES

(\* accredited continuing medical education)

“Successful treatment of sleep apnea involves much more than treating sleep apnea.” SLEEP 2016, Denver, CO (In preparation), 2016.\*

“Doctoring the philosophy of sleep medicine.” Society of Behavioral Sleep Medicine satellite session to SLEEP 2016, Denver, CO (In preparation), 2016.

“Honor and protect your sleep, and it will pay you back ... Literally!”, Fort Worth Country Day School, 2015.

“A lot of hot air: Stories told by PAP air leakage data, from sleep lab to bedroom.” 8<sup>th</sup> Annual meeting of the Texas Society of Sleep Professionals, Fort Worth, Texas, 2014.\*

- “Pain – sleep interactions: Implications for pain management.” 27<sup>th</sup> Annual International Clinical Symposium, American Academy of Craniofacial Pain, Fort Worth, Texas, 2012.\*
- “Sleep apnea and stroke”, co-presented with J Burk, Texas Health Fort Worth Education Center, Fort Worth, Texas, 2012.\*
- “Is sleep more important than diet and exercise?”, 4<sup>th</sup> Annual meeting of the Texas Society of Sleep Professionals, Austin, Texas, 2011.\*
- “Sleep and sleep disorders: everything you wanted to ask but were afraid to know”, Pulmonary Patient Support Group, Harris Hospital, Fort Worth, Texas, 2011.
- “The ups and downs of PAP titration: from CPAP to ASV ... and beyond!”, Northeast regional meeting of the Texas Society of Sleep Professionals, Irving, Texas, 2011.\*
- “Sleep apnea, cerebrovascular disease, and stroke”, 27<sup>th</sup> Annual Frontiers of Cardiology Conference, Winter Park, Colorado, 2011\*; and Stroke Happens: Managing a Brain Attack, Texas Health Resources Neuroscience Conference, Arlington, Texas, 2010.\*
- “Pathophysiology of obstructive sleep apnea: a disease of vicious cycles”, 3<sup>rd</sup> Annual meeting of the Texas Society of Sleep Professionals, Houston, Texas, 2010.\*
- “Development and validation of lower body negative pressure as a form of artificial gravity”, 31<sup>st</sup> Annual Meeting of the International Society for Gravitational Physiology, Trieste, Italy, 2010.
- “Obstructive sleep apnea, congestive heart failure, and atrial fibrillation”, 26<sup>th</sup> Annual Frontiers of Cardiology Conference, Winter Park, Colorado, 2010.\*
- “Sleep: as important as diet and exercise (only easier!)”, Department of Kinesiology, University of Texas, Arlington, Texas, and Broadway Plaza Medical Group, Fort Worth, Texas, 2009.\*
- “The unrecognized role of obstructive sleep apnea in physical inactivity and depression in minority populations”, Tutorial Symposium, American College of Sports Medicine, 55<sup>th</sup> Annual Meeting, Indianapolis, IN, 2008.\*
- “Psychiatric and sleep disorders: interactions and opportunities”, Society of Psychiatric Physicians, North Texas Chapter, Fort Worth, Texas, 2006.\*
- “Environmental physiology and biomedical engineering: expanding human capability undersea and in space”, Department of Biomedical Engineering, University of Texas, Arlington, Texas, 2006.
- “Obstructive sleep apnea: causes, consequences, and treatment”, Arlington Memorial Hospital CME Program, Arlington, Texas, 2006\*; and Respiratory Therapy Continuing Education and Patient Education Programs, Baylor All Saints Hospital, Fort Worth, Texas, 2005\*.
- “Causes and consequences of sympathoexcitation from sleep apnea”, Pickwick Datablitz, National Sleep Foundation, Washington, DC, 2005.
- “Artificial gravity: centrifugation vs. LBNP”, Symposium honoring C. Gunnar Blomqvist, MD, PhD, Southwestern Medical Center, Dallas, Texas, 2004.
- “Restless legs syndrome and periodic limb movement disorder”, Patient Education Program, Harris Hospital, Fort Worth, Texas, 2004.
- “Environmental challenges to breathing easy in the Navy’s many workplaces”, National Respiratory Care Week seminar, Baylor All Saints Medical Center, Fort Worth, Texas, 2004.\*

- “Brief daily post-exercise orthostatic stress protects orthostatic tolerance during bed rest”, Japanese Physiological Society Meeting, Sapporo, Japan, 2004; and Center for Circadian and Sleep Disorders Medicine, Harvard Medical School, 2001.
- “Degassed liquids to prevent/treat decompression sickness”, Perfluorocarbons in Decompression Sickness Workshop, Naval Medical Research Center, Bethesda, MD, 2003; and Flying After Diving Workshop, Divers Alert Network, and Duke University Medical Center, Raleigh-Durham, NC, 2002.
- “Naval Submarine Medical Research Laboratory: Capabilities and interests relevant to staying awake and sustaining performance”, Defense Advanced Research Projects Agency (DARPA) Continuous Assisted Performance Teaming Workshop, Las Vegas, Nevada, 2001.
- “Fluid volume control during space flight”, *Journal of Experimental Biology* Conference: Physiological Limits to Human Performance, Flagstaff, AZ, 2000.
- “Sleep disordered breathing and blood pressure control”, John B. Pierce Laboratory, Yale University, 2002; and Naval Submarine Medical Research Laboratory, Groton, CT, 2000.
- “Effects of microgravity on the cardiovascular system in humans: recent results and interpretations”, 19<sup>th</sup> Annual International Gravitational Physiology Meeting, Rome, Italy, 1998.
- “Lower body negative pressure exercise to simulate gravity”, University of North Texas Health Science Center, Fort Worth, Texas; Danish Aerospace Medical Centre of Research A/S, Copenhagen, Denmark; and German Institute for Air- and Space Flight, Cologne, Germany, 1996.
- “The cardiovascular system in microgravity”, University of North Texas Health Science Center, Fort Worth, Texas, 1998; and Danish Aerospace Medical Centre of Research A/S, Copenhagen, Denmark, 1996.
- “LBDP exercise for space flight and rehabilitation”, Department of Orthopaedics, University of California, San Diego, CA, 1994.
- “Novel methods to maintain human fitness during long space flights”, Jupiter Horizon Mission Methodology Conference, National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, CA, 1994.
- “Body segment circumference measurements for monitoring fluid shifts with simulated microgravity”, Annual Meeting of the Biomedical Engineering Society, Charlottesville, Virginia, 1991.
- “Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion”, National Aeronautics and Space Administration, Johnson Space Center, Houston, Texas; and Ames Research Center, Moffett Field, CA 1989.

### MISCELLANEOUS

- Guest on Saturday morning health and medical information radio talk show “A Bridge to Care and Comfort”, hosted by Pete Persaud on KVCE 1160 AM, Dallas, Texas, 2014 - 2015.
- Managed reaccreditation of Sleep Consultants, Inc. by the American Academy of Sleep Medicine, 2007 and 2012.
- Interview of Dr. John Greenleaf, Living History Project, American Physiological Society, (see the-aps.org, Living History of Physiology), 2007.



### PROFESSIONAL INTERESTS

Integrative physiology; all facets of environmental physiology, including and especially gravitational physiology; physical activity and exercise; sleep and circadian physiology and medicine; occupational physiology; biomedical engineering, particularly of medical devices and exercise equipment; comparative physiology; sub-lethal effects of environmental contaminants; systems-level ecology.

### PERSONAL INTERESTS / HOBBIES

Art in all forms, aviation, basketball, boating, bolo ties, chess, climbing trees, coin and stamp collecting, football (American), motorcycles, mountain biking, music (e. g. trumpet, Dallas Cowboy Band, 1977-1978), orienteering, photography, rock skipping, scuba diving, sports in general, water and snow skiing, white-water canoeing.

**Donald E. Watenpaugh, Ph.D.**

## PUBLICATIONS

**Research Articles**

1. Watenpaugh DE and TL Beitinger. Absence of selenate avoidance by fathead minnows (*Pimephales promelas*). *Water Research* 19: 923-926, 1985.
2. Watenpaugh DE and TL Beitinger. Nitrite exposure and respiration rates in fathead minnows. *Bulletin of Environmental Contamination and Toxicology* 35: 106-111, 1985.
3. Watenpaugh DE and TL Beitinger. Swimming performance of channel catfish (*Ictalurus punctatus*) after nitrite exposure. *Bulletin of Environmental Contamination and Toxicology* 34: 754-760, 1985.
4. Watenpaugh DE and TL Beitinger. Oxygen consumption in fathead minnows (*Pimephales promelas*) following acute exposure to water-borne selenium. *Comparative Biochemistry and Physiology* 80C: 253-256, 1985.
5. Watenpaugh DE, TL Beitinger, and DW Huey. Temperature tolerance of nitrite-exposed channel catfish. *Transactions of American Fisheries Society* 114: 274-278, 1985.
6. Watenpaugh DE and TL Beitinger. Selenium exposure and temperature tolerance of fathead minnows (*Pimephales promelas*). *Journal of Thermal Biology* 10: 83-86, 1985.
7. Watenpaugh DE and TL Beitinger. Resistance of nitrite-exposed channel catfish (*Ictalurus punctatus*) to hypoxia. *Bulletin of Environmental Contamination and Toxicology* 37: 802-807, 1986.
8. Levine BD, JC Buckey, JM Fritsch, CW Yancy, DE Watenpaugh, PG Snell, LD Lane, DL Eckberg, and CG Blomqvist. Physical fitness and cardiovascular regulation: mechanisms of orthostatic intolerance. *Journal of Applied Physiology* 70: 112-122, 1991.
9. Hargens AR, RT Whalen, DE Watenpaugh, DF Schwandt, and LP Krock. Lower body negative pressure to provide load bearing in space. *Aviation, Space and Environmental Medicine* 62: 934-937, 1991.
10. Schwandt DF, RT Whalen, DE Watenpaugh, SE Parazynski, and AR Hargens. Development of exercise devices to minimize musculoskeletal and cardiovascular deconditioning in microgravity. *The Physiologist* 34: S189-S190, 1991.
11. Hargens AR, DE Watenpaugh, and GA Breit. Control of circulatory function in altered gravitational fields. *The Physiologist* 35: S80-S83, 1992.
12. Ballard RE, M Aratow, A Crenshaw, J Styf, N Kahan, DE Watenpaugh, and AR Hargens. Intramuscular pressure measurement as an index of torque during dynamic exercise. *The Physiologist* 35: S115-S126, 1992.

13. Murthy G, RJ Marchbanks, DE Watenpaugh, J-U Meyer, N Eliashberg, and AR Hargens. Increased intracranial pressure in humans during simulated microgravity. *The Physiologist* 35: S184-S185, 1992.
14. Kawai Y, G Murthy, DE Watenpaugh, and AR Hargens. Cerebral blood flow velocity increases with acute head-down tilt of humans. *The Physiologist* 35: S186-S187, 1992.
15. Watenpaugh DE, CW Yancy, JC Buckey, LD Lane, and CG Blomqvist. Role of atrial natriuretic peptide in systemic responses to acute intravascular volume expansion. *Journal of Applied Physiology* 73: 1218-1226, 1992.
16. Breit GA, DE Watenpaugh, RE Ballard, G Murthy, and AR Hargens. Regional cutaneous microvascular flow responses during gravitational and LBNP stresses. *The Physiologist* 36(1): S110-S111, 1993.
17. Aratow M, RE Ballard, AG Crenshaw, J Styf, DE Watenpaugh, NJ Kahan, and AR Hargens. Intramuscular pressure and electromyography as indices of force during isokinetic exercise. *Journal of Applied Physiology* 74: 2634-2640, 1993.
18. Kawai Y, G Murthy, DE Watenpaugh, GA Breit, CW DeRoshia, and AR Hargens. Cerebral blood flow velocity in humans exposed to 24 h head-down tilt. *Journal of Applied Physiology* 74: 3046-3051, 1993.
19. Aratow M, S Fortney, DE Watenpaugh, AG Crenshaw, and AR Hargens. Transcapillary fluid responses to lower body negative pressure and saline ingestion. *Journal of Applied Physiology* 74: 2763-2770, 1993.
20. Buckey, JC, FA Gaffney, LD Lane, BD Levine, DE Watenpaugh, and CG Blomqvist. Central venous pressure in space. *New England Journal of Medicine* 328: 1853-1854, 1993.
21. Breit GA, DE Watenpaugh, RE Ballard, and AR Hargens. Acute cutaneous microvascular flow responses to whole-body tilting in humans. *Microvascular Research* 46: 351-358, 1993.
22. Watenpaugh DE, RE Ballard, MS Stout, G Murthy, RT Whalen, and AR Hargens. Dynamic leg exercise improves tolerance to lower body negative pressure. *Aviation, Space, and Environmental Medicine* 65: 412-418 1994.
23. Murthy G, DE Watenpaugh, RE Ballard, and AR Hargens. Supine exercise during lower body negative pressure effectively simulates upright exercise in normal gravity. *Journal of Applied Physiology* 76: 2742-2748, 1994.
24. Murthy G, DE Watenpaugh, RE Ballard, and AR Hargens. Exercise against lower body negative pressure as a countermeasure for cardiovascular and musculoskeletal deconditioning. *Acta Astronautica* 33: 89-96, 1994.
25. Murthy G, RE Ballard, GA Breit, DE Watenpaugh, and AR Hargens. Intramuscular pressures beneath elastic and inelastic leggings. *Annals of Vascular Surgery* 8: 543-548, 1994.

26. Blomqvist CG, JC Buckey, FA Gaffney, LD Lane, BD Levine, and DE Watenpaugh. Mechanisms of post-flight orthostatic intolerance. *Journal of Gravitational Physiology* 1: P122-P124, 1994.
27. Hutchinson KJ, DE Watenpaugh, G Murthy, VA Convertino, and AR Hargens. Back pain during 6° head-down tilt approximates that during actual microgravity. *Aviation, Space, and Environmental Medicine* 66: 256-259, 1995.
28. Stout MS, DE Watenpaugh, GA Breit, and AR Hargens. Simulated microgravity increases cutaneous microcirculatory blood flow in the head and leg of humans. *Aviation, Space, and Environmental Medicine* 66: 872-875, 1995.
29. Watenpaugh DE, SF Vissing, LD Lane, JC Buckey, BG Firth, W Erdman, AR Hargens, and CG Blomqvist. Atrial natriuretic peptide reduces leg capillary filtration rate. *Journal of Cardiovascular Pharmacology* 26: 414-419, 1995.
30. Styf J, R Ballard, M Aratow, A Crenshaw, D Watenpaugh, and AR Hargens. Intramuscular pressure and torque during isometric, concentric, and eccentric muscular activity. *Scandinavian Journal of Medicine and Science in Sports* 5: 291-296, 1995.
31. Watenpaugh DE, RE Ballard, GA Breit, EM Bernauer, CG Blomqvist, and AR Hargens. Calf venous compliance measured with head-up tilt equals supine calf compliance. *Journal of Gravitational Physiology* 2: 21-22, 1995.
32. Torikoshi S, MH Wilson, RE Ballard, DE Watenpaugh, G Murthy, WT Yost, and AR Hargens. Ultrasound measurement of transcranial distance during head-down tilt. *Journal of Gravitational Physiology* 2: 145-146, 1995.
33. Buckey JC, FA Gaffney, LD Lane, BD Levine, DE Watenpaugh, SJ Wright, CW Yancy, D Meyer, and CG Blomqvist. Central venous pressure in space. *Journal of Applied Physiology* 81: 19-25, 1996.
34. Buckey JC, LD Lane, BD Levine, DE Watenpaugh, SJ Wright, WE Moore, FA Gaffney, and CG Blomqvist. Orthostatic intolerance after spaceflight. *Journal of Applied Physiology* 81: 7-18, 1996.
35. Hargens AR and DE Watenpaugh. Cardiovascular adaptation to long-duration space flight. *Medicine and Science in Sports and Exercise* 28: 977-982, 1996.
36. Greenleaf JE, DP Gundo, DE Watenpaugh, GM Mullenburg, N Marchman, R Looft-Wilson, and AR Hargens. Cycle-powered short radius (1.9M) centrifuge: exercise vs. passive acceleration. *Journal of Gravitational Physiology* 3:61-62, 1996.
37. Levine BD, LD Lane, DE Watenpaugh, FA Gaffney, JC Buckey, and CG Blomqvist. Peak exercise performance after adaptation to microgravity. *Journal of Applied Physiology* 81: 686-694, 1996.
38. Watenpaugh DE, GA Breit, RE Ballard, and AR Hargens. Monitoring acute whole-body fluid redistribution by changes in leg and neck volumes. *Aviation, Space, and Environmental Medicine* 68: 858-862, 1997.

39. Styf JR, RE Ballard, K Fechner, DE Watenpaugh, NJ Kahan, and AR Hargens. Height increase, neuromuscular function, and back pain during 6° head-down tilt with traction. *Aviation, Space, and Environmental Medicine* 68: 24-29, 1997.
40. Breit GA, JH Gross, DE Watenpaugh, B Chance, and AR Hargens. Near-infrared spectroscopy for monitoring of tissue oxygenation of exercising skeletal muscle in a chronic compartment syndrome model. *Journal of Bone and Joint Surgery* 79A: 838-843, 1997.
41. Lee SMC, BS Bennett, AR Hargens, DE Watenpaugh, RE Ballard, G Murthy, SR Ford, and SM Fortney. Upright exercise or supine lower body negative pressure exercise maintains exercise responses after bed rest. *Medicine and Science in Sports and Exercise* 29: 892-900, 1997.
42. Watenpaugh DE and FA Gaffney. Measurement of net whole body transcapillary fluid transport and effective vascular compliance in humans. *Journal of Trauma* 45: 1062-1068, 1998.
43. Ballard RE, DE Watenpaugh, GA Breit, G Murthy, DC Holley, and AR Hargens. Leg intramuscular pressures during locomotion in humans. *Journal of Applied Physiology* 84: 1976-1981, 1998.
44. Grahn D, JG Brock-Utne, DE Watenpaugh, and HC Heller. Recovery from mild hypothermia can be accelerated by mechanically distending blood vessels in the hand. *Journal of Applied Physiology* 85: 1643-1648, 1998.
45. Watenpaugh DE and ML Smith. Human cardiovascular acclimation to microgravity. *Journal of Gravitational Physiology* 5: P15-P18, 1998.
46. Carter R, III, DE Watenpaugh, WL Wasmund, SL Wasmund, and ML Smith. Muscle pump and central command during recovery from exercise in humans. *Journal of Applied Physiology* 87: 1463-1469, 1999.
47. Watenpaugh DE, NK Muentner, WL Wasmund, SL Wasmund, and ML Smith. Post-apneic inhalation reverses apnea-induced sympathoexcitation before restoration of blood oxygen levels. *SLEEP* 22: 435-440, 1999.
48. Muentner NK, DE Watenpaugh, WL Wasmund, SL Wasmund, SA Maxwell, and ML Smith. Effect of sleep restriction on orthostatic cardiovascular control in humans. *Journal of Applied Physiology* 88: 966-972, 2000.
49. Watenpaugh DE, RE Ballard, SM Schneider, SMC Lee, AC Ertl, JM William, WL Boda, KJ Hutchinson, and AR Hargens. Supine lower body negative pressure exercise during bed rest maintains upright exercise capacity. *Journal of Applied Physiology* 89: 218-227, 2000.
50. Boda WL, DE Watenpaugh, RE Ballard, and AR Hargens. Lower body negative pressure exercise simulates metabolic and kinetic features of upright exercise. *Journal of Applied Physiology* 89: 649-654, 2000.

51. Watenpaugh DE, B Pump, P Bie, and P Norsk. Does gender influence human cardiovascular and renal responses to water immersion? *Journal of Applied Physiology* 89: 621-628, 2000.
52. Kuriyama K, T Ueno, RE Ballard, PS Cowings, WB Toscano, DE Watenpaugh, and AR Hargens. Cerebrovascular responses during lower body negative pressure-induced presyncope. *Aviation, Space, and Environmental Medicine* 71: 1033-1038, 2000.
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