



Welcome to this month's edition of NExTNet News. In addition to pertinent announcements, RFAs, and news stories, follow the exciting research advances of NExTNet members and their investigative teams with links to recent findings.

NExTNet News is prepared monthly by Jenny Martz, NExTNet Coordinator. For future editions, please send relevant stories, articles, scientific publications, or announcements to [nextnet@uab.edu](mailto:nextnet@uab.edu).

## September 2016

### Announcements

- Monthly NExTNet Teleconference – October 11, 2016 10am CST – Benjamin Miller and Karyn Hamilton (Colorado State) presenting. If you are interested in presenting on a future teleconference please email [nextnet@uab.edu](mailto:nextnet@uab.edu).
- The National Institutes of Health (NIH) Research Plan on Rehabilitation: Moving the Field Forward has been posted. For more details on the plan, visit: [https://www.nichd.nih.gov/publications/pubs/Documents/NIH\\_ResearchPlan\\_Rehabilitation.pdf](https://www.nichd.nih.gov/publications/pubs/Documents/NIH_ResearchPlan_Rehabilitation.pdf)

### Upcoming Meetings and Conferences

- [Lifestyle Medicine Education Summit](#) October 7-9, 2016, University of South Carolina School of Medicine Greenville
- [AR<sup>3</sup>T 5th Annual Symposium on Regenerative Rehabilitation](#), October 14-16, 2016, Emory University, Atlanta, Georgia
- [APS Intersociety Meeting: The Integrative Biology of Exercise VII](#) November 2-4, 2016, Phoenix, Arizona

### New Findings from NExTNet Investigators

#### Aging

- [Preoperative Cognitive Performance Dominates Risk for Delirium Among Older Adults.](#)
- [Physical activity and skeletal muscle aging.](#)
- [An Ecosystem to Support Traditional Clinical Investigation: Lessons From Aging, Exercise, Blood Pressure, and Women.](#)

#### Cancer

- [Longitudinal fluctuation in mammographic percent density differentiates between interval and screen-detected breast cancer.](#)
- [Scan-associated distress in lung cancer: Quantifying the impact of "scanxiety".](#)

- [Exercise Promotion in Geriatric Oncology.](#)

### **Cardiovascular**

- [Medical Training to Achieve Competency in Lifestyle Counseling: An Essential Foundation for Prevention and Treatment of Cardiovascular Diseases and Other Chronic Medical Conditions: A Scientific Statement From the American Heart Association.](#)
- [Effects of pomegranate extract on blood flow and vessel diameter after high-intensity exercise in young, healthy adults.](#)

### **Cell and Molecular Biology**

- [Cycle training modulates satellite cell and transcriptional responses to a bout of resistance exercise.](#)
- [Aerobic capacity and hepatic mitochondrial lipid oxidation alters susceptibility for chronic high fat diet induced hepatic steatosis.](#)

### **Exercise – Drug/Diet/Device/Disease/Surgery/Cultural Interactions**

- [Impact of Self-Preference Community Fitness Interventions in High-Risk African Americans.](#)
- [Empiric validation of a process for behavior change.](#)
- [DOES PREOPERATIVE VITAMIN D DEFICIENCY PREDICT POSTOPERATIVE HYPOCALCEMIA AFTER THYROIDECTOMY?](#)
- [Effect of Wearable Technology Combined With a Lifestyle Intervention on Long-term Weight Loss: The IDEA Randomized Clinical Trial.](#)
- [The impact of post exercise essential amino acid ingestion on the ubiquitin proteasome and autophagosomal-lysosomal systems in skeletal muscle of older men.](#)

### **Metabolic**

- [Humans with Type-2 Diabetes Show Abnormal Long-Term Potentiation-Like Cortical Plasticity Associated with Verbal Learning Deficits.](#)
- [Voluntary Running Attenuates Metabolic Dysfunction in Ovariectomized Low-Fit Rats.](#)
- [The Role of a Coronary Artery Calcium Scan in Type 1 Diabetes.](#)
- [Effects of Longitudinal Glucose Exposure on Cognitive and Physical Function: Results from the Action for Health in Diabetes Movement and Memory Study.](#)

### **Neuroscience and Stroke**

- [Progressive resistance exercise restores some properties of the triphasic EMG pattern and improves bradykinesia: The PRET-PD randomized clinical trial.](#)
- [Commentary on "A Tandem Cycling Program: Feasibility and Physical Performance Outcomes in People With Parkinson Disease".](#)
- [Resistance Training with Instability for Patients with Parkinson's Disease.](#)

### **Pediatric**

- [Gender differences in V'O<sub>2</sub> and HR kinetics at the onset of moderate and heavy exercise intensity in adolescents.](#)
- [Household-level correlates of children's physical activity levels in and across 12 countries.](#)
- [Abnormal Central Pulsatile Hemodynamics in Adolescents With Obesity: Higher Aortic Forward Pressure Wave Amplitude Is Independently Associated With Greater Left Ventricular Mass.](#)

### **Respiratory**

- [Skeletal muscle power and fatigue at the tolerable limit of ramp-incremental exercise in COPD.](#)
- [REPRODUCIBILITY OF NIRS ASSESSMENT OF MUSCLE OXIDATIVE CAPACITY IN SMOKERS WITH AND WITHOUT COPD.](#)

## **Additional New Findings**

- [Leisure time physical activity among pregnant women and its associations with maternal characteristics and pregnancy outcomes.](#)
- [Within-day time-varying associations between behavioral cognitions and physical activity in adults.](#)
- [Early goal-directed mobilisation in the intensive care unit is feasible and safe, and increases both the level and duration of activity \[synopsis\].](#)
- [The effect of climatic conditions on exercise-induced bronchoconstriction in 10-12 year old students.](#)
- [A time for exercise: the exercise window.](#)
- [Differences in the Association of Physical Activity and Children's Overweight and Obesity Status Among the Major Racial and Ethnic Groups of U.S. Children.](#)
- [Physical activity, bone mass and muscle strength in children.](#)
- [\[Physical training in chronic heart failure: pathophysiology and clinical evolution\].](#)
- [How Does Exercise Reduce the Rate of Age-Associated Cognitive Decline? A Review of Potential Mechanisms.](#)
- [Health-related quality of life, physical activity, and sedentary behavior of adults with visual impairments.](#)
- [The Effects of Wearable Resistance Training on Metabolic, Kinematic and Kinetic Variables During Walking, Running, Sprint Running and Jumping: A Systematic Review.](#)
- [Aerobic versus Resistance Exercise in Non-alcoholic Fatty Liver Disease: A Systematic Review.](#)
- [Role Of Counseling To Promote Adherence In Healthy Lifestyle Medicine: Strategies to Improve Exercise Adherence and Enhance Physical Activity.](#)
- [Sagittal plane kinematics predict kinetics during walking gait in individuals with anterior cruciate ligament reconstruction.](#)
- [Markers of biological stress in response to a single session of high-intensity interval training and high-volume training in young athletes.](#)
- [Applying Proteomics to Study Crosstalk at the Cartilage-Subchondral Bone Interface in Osteoarthritis: Current Status and Future Directions.](#)
- [Exercise Training Improves Neurovascular Control and Calcium Cycling Gene Expression in Heart Failure Patients with Cardiac Resynchronization Therapy.](#)
- [Relative efficacy of different types of exercise for treatment of knee and hip osteoarthritis: protocol for network meta-analysis of randomised controlled trials.](#)
- [Effects of a 1-year randomised controlled trial of resistance training on blood lipid profile and chylomicron concentration in older men.](#)
- [Exercise Preconditioning Regulates the Toll-Like Receptor 4/Nuclear Factor-κB Signaling Pathway and Reduces Cerebral Ischemia/Reperfusion Inflammatory Injury: A Study in Rats.](#)
- [Effectiveness of a smartphone app in increasing physical activity amongst male adults: a randomised controlled trial.](#)
- [Midlife Physical Activity and Cognition Later in Life: A Prospective Twin Study.](#)
- [Efficacy of an mHealth intervention to stimulate physical activity in COPD patients after pulmonary rehabilitation.](#)
- [Sport, exercise, and daily activity: a double-edged sword revisited.](#)
- [Long-term maintenance and effects of exercise in early psychosis.](#)
- [Regular exercise behaviour and intention and symptoms of anxiety and depression in coronary heart disease patients across Europe: Results from the EUROASPIRE III survey.](#)
- [Physical activity participation in community dwelling stroke survivors: synergy and dissonance between motivation and capability. A qualitative study.](#)
- [Physical activity and quality of life in older women with a history of depressive symptoms.](#)
- [Neighbourhood walkability and home neighbourhood-based physical activity: an observational study of adults with type 2 diabetes.](#)
- [The biomechanical and physiological response to repeated soccer-specific simulations interspersed by 48 or 72 hours recovery.](#)
- [Effects of short-term step aerobics exercise on bone metabolism and functional fitness in postmenopausal women with low bone mass.](#)
- [Replacing sedentary time with sleep, light, or moderate-to-vigorous physical activity: effects on self-regulation and executive functioning.](#)

- [Factors associated with regular physical exercise and consumption of fruits and vegetables among Mexican older adults.](#)
- [Fatty Acid Blood Levels, Vitamin D Status, Physical Performance, Activity, and Resiliency: A Novel Potential Screening Tool for Depressed Mood in Active Duty Soldiers.](#)
- [Physical Activity and Health Perception in Aging: Do Body Mass and Satisfaction Matter? A Three-Path Mediated Link.](#)
- [Does the Company of a Dog Influence Affective Response to Exercise? Using Ecological Momentary Assessment to Study Dog-Accompanied Physical Activity.](#)

### RFAs / FOAs

- Research Innovations for Scientific Knowledge (RISK) for Musculoskeletal Diseases: R61/R33 <http://grants.nih.gov/grants/guide/rfa-files/RFA-AR-17-009.html>
- Pre-Application: Research Innovation for Scientific Knowledge (RISK) for Musculoskeletal Diseases: X02 <http://grants.nih.gov/grants/guide/pa-files/PA-16-382.html>
- NINDS Morris K. Udall Centers of Excellence for Parkinson’s Disease Research: P50 <http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-17-001.html>
- Predictors and Determinants of Age-Related Changes in Resiliencies to Physical Stressors in Humans: (UH2/UH3) <http://grants.nih.gov/grants/guide/rfa-files/RFA-AG-17-014.html>
- Mechanisms Mediating Osteoarthritis in Aging: R01 <https://grants.nih.gov/grants/guide/pa-files/PA-16-239.html>; R21 <http://grants.nih.gov/grants/guide/pa-files/PA-16-240.html>
- Dissemination and Implementation Research in Health: R01 <http://grants.nih.gov/grants/guide/pa-files/PA-16-238.html>; R21 <http://grants.nih.gov/grants/guide/pa-files/PA-16-236.html>; R03 <https://grants.nih.gov/grants/guide/pa-files/PA-16-237.html>
- Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects on Biomarkers of Prognosis and Survival <https://grants.nih.gov/grants/guide/pa-files/PA-16-122.html>
- Testing Interventions for Health-Enhancing Physical Activity: R01 <http://grants.nih.gov/grants/guide/pa-files/PA-14-315.html>

### In the News

- [Here’s Exactly How Exercise – Or Lack Of It – Affects Aging Muscles.](#)
- [The Exercise Cure](#) (TIME magazine digital subscription required)
- [Sitting Really Can Kill You, Heart Experts Say](#)
- [Walking Is Medicine? It Helped High-Risk Seniors Stay Mobile](#)
- [9 of 10 U.S. Teens Don’t Get Enough Exercise](#)

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