



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.

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Announcements

- **Request for clinical trials info and teleconference presenters**
 - As part of NExTNet's effort to facilitate multi-site clinical trials we provide opportunities for member institutions to present their research, interests, and capabilities to help identify collaborative possibilities. The bi-monthly teleconference is one such opportunity. If you would be interested in having your institution highlighted during one of these calls please email nextnet@uab.edu for more information.
 - Investigators with current multi-site clinical trials are also invited to submit their trials for listing on the NExTNet website (<http://www.uab.edu/medicine/nextnet/clinical-trials>)
- **Teleconference Schedule**
 - The next teleconference is scheduled to take place on Tuesday, February 13, 2018 at 10am CST.
- **Job Postings**
 - [Scientific Program Manager - Chronic Medical Conditions and/or the Consequences of Aging, VA Central Office \(VACO\), Washington, DC.](#)
 - [Scientific Program Manager - Behavioral Health & Social Reintegration, VA Central Office \(VACO\), Washington, DC.](#)

Upcoming Meetings and Conferences

- [Mayo Clinic Rehabilitation Medicine Update 2018](#) February 2-4, 2018, Scottsdale, AZ
- [ACSM's International Health & Fitness Summit](#) April 5-8, 2018, Arlington, VA
- [Experimental Biology](#) April 21-25, 2018, San Diego, CA
- [ACSM's 65th Annual Meeting](#) May 29-June 2, 2018, Minneapolis, MN
- [4th Federal Interagency Conference on TBI](#) June 11-15, 2018, Washington, DC

New Findings from NExTNet Investigators

Aging

- [Randomized, four-arm, dose-response clinical trial to optimize resistance exercise training for older adults with age-related muscle atrophy.](#)
- [PRIME: A Novel Low-Mass, High-Repetition Approach to Improve Function in Older Adults.](#)
- [Aortic hemodynamics in postmenopausal women following cessation of hormone therapy.](#)
- [Cerebrovascular Reactivity and Vascular Activation in Postmenopausal Women With Histories of Preeclampsia.](#)
- [Association of Accelerometry-Measured Physical Activity and Cardiovascular Events in Mobility-Limited Older Adults: The LIFE \(Lifestyle Interventions and Independence for Elders\) Study.](#)

Cancer

- [Genetic variation in TNFa, PPARy, and IRS-1 genes, and their association with breast-cancer survival in the HEAL cohort.](#)
- [Applying pre-participation exercise screening to breast cancer survivors: a cross-sectional study.](#)
- [Effects of exercise during chemotherapy on chemotherapy-induced peripheral neuropathy: a multicenter, randomized controlled trial.](#)

Cardiovascular

- [Back to the Future in Cardiogenic Shock - Initial PCI of the Culprit Lesion Only.](#)

Cell and Molecular Biology

- [Starring or Supporting Role? Satellite Cells and Skeletal Muscle Fiber Size Regulation.](#)
- [Effects of resistance exercise on endothelial progenitor cell mobilization in women.](#)

Exercise – Diet/Disease/Drug/Device/Environmental Interactions

- [Long-Term Effects of Weight Loss and Exercise on Biomarkers Associated with Angiogenesis.](#)
- [Comparison of machine learning techniques to predict all-cause mortality using fitness data: the Henry ford exercise testing \(FIT\) project.](#)
- [Using Machine Learning to Define the Association between Cardiorespiratory Fitness and All-Cause Mortality \(from the Henry Ford Exercise Testing Project\).](#)
- [Effect of mindfulness meditation on short-term weight loss and eating behaviors in overweight and obese adults: A randomized controlled trial.](#)
- [Physical Function and Physical Activity in Peritoneal Dialysis Patients.](#)

Metabolic

- [Fibroblast growth factor 21 increases hepatic oxidative capacity but not physical activity or energy expenditure in hepatic PGC-1a deficient mice.](#)
- [Voluntary wheel running improves adipose tissue immunometabolism in ovariectomized low-fit rats.](#)

Neuroscience and Stroke

- [Comparative of transcranial magnetic stimulation and other treatments in experimental autoimmune encephalomyelitis.](#)
- [Varied Antidepressant Response and Subjective Experience Across 3 Different Repetitive Transcranial Magnetic Stimulation Devices: A Case Report.](#)
- [Simultaneous aerobic exercise and rTMS: Feasibility of combining therapeutic modalities to treat depression.](#)
- [Effect of High-Intensity Treadmill Exercise on Motor Symptoms in Patients With De Novo Parkinson Disease: A Phase 2 Randomized Clinical Trial.](#)
- [Prediction of treatment outcomes to exercise in patients with nonremitted major depressive disorder.](#)

Other

- [Comparison of Resistance-Based Walking Cardiorespiratory Test to The Bruce Protocol.](#)
- [Erratum: Diet Quality Predicts Visceral Adiposity and Liver Fatness: The Multiethnic Cohort Study.](#)
- [The Importance of the Circadian System & Sleep for Bone Health.](#)
- [A mathematical model of the effects of resistance exercise-induced muscle hypertrophy on body composition.](#)

Pediatric

- [Physical Education Classes, Physical Activity, and Sedentary Behavior in Children.](#)
- [Temporal and bi-directional associations between sleep duration and physical activity/sedentary time in children: An international comparison.](#)
- [Multi-dimensional bone density phenotyping reveals new insights in to genetic regulation of the pediatric skeleton.](#)
- [Faster ticking rate of the epigenetic clock is associated with faster pubertal development in girls.](#)

Pulmonary

- [The effects of slow-paced versus mechanically assisted breathing on autonomic function in fibromyalgia patients.](#)

Additional New Findings

- [A comparative study found that a seven-year school-based exercise programme increased physical activity levels in both sexes.](#)
- [Endothelial Piezo1 channels as sensors of exercise.](#)
- [A cross-sectional and prospective analyse of reallocating sedentary time to physical activity on children's cardiorespiratory fitness.](#)
- [Executive-Related Oculomotor Control is Improved Following a 10-Minute Single-Bout of Aerobic Exercise: Evidence from the Antisaccade Task.](#)
- [Self-reported physical activity correlates in Swedish adults with multiple sclerosis: a cross-sectional study.](#)
- [Comparison of outpatient and home-based exercise training programmes for COPD: A systematic review and meta-analysis.](#)
- [Cholinesterase levels predict exercise capacity in cardiac recipients early after transplantation.](#)
- [Physical activity and family-based obesity treatment: a review of expert recommendations on physical activity in youth.](#)
- [Physical Activity and Weight Loss Reduce the Risk of Breast Cancer: A Meta-analysis of 139 Prospective and Retrospective Studies.](#)
- [Exercise induced dehydration status and skinfold compressibility in athletes: an intervention study.](#)
- [Effects of two aerobic exercise training protocols on parameters of oxidative stress in the blood and liver of obese rats.](#)
- [Self-regulated use of a wearable activity sensor is not associated with improvements in physical activity, cardiometabolic risk or subjective health status.](#)
- [Physical activity, sedentary time, TV viewing, physical fitness and cardiovascular disease risk in adolescents: The HELENA study.](#)
- [Quantifying the effects of acute hypoxic exposure on exercise performance and capacity: A systematic review and meta-regression.](#)
- [Exercise increases Rho-kinase activity and insulin signaling in skeletal muscle.](#)
- [Effects of cardiac rehabilitation on heart rate recovery of patients undergoing a cardiac rehabilitation programme after acute coronary syndrome.](#)
- [Scapular-focused exercise treatment protocol for shoulder impingement symptoms: Three-dimensional scapular kinematics analysis.](#)
- [Reliability of the parameters of the power-duration relationship using maximal effort time-trials under laboratory conditions.](#)
- [Individual preferences for physical exercise as secondary prevention for non-specific low back pain: A discrete choice experiment.](#)
- [Energy compensation after sprint- and high-intensity interval training.](#)
- [Effects of Beetroot Juice Supplementation on a 30-s High-Intensity Inertial Cycle Ergometer Test.](#)
- [The effect of descriptive age norms on the motivation to exercise among older adults.](#)
- [A hospital and home-based exercise program to address functional decline in people following allogeneic stem cell transplantation.](#)
- [Acute Impact of Different Exercise Modalities on Arterial and Platelet Function.](#)

RFAs / FOAs

- Developing Interventions for Health-Enhancing Physical Activity [PAR-18-307](#)
- Testing Interventions for Health-Enhancing Physical Activity [PAR-18-324](#)
- Diet and Physical Activity Assessment Methodology [PAR-18-112](#) [PAR-18-010](#)
- [Center for Translation of Rehabilitation Engineering Advances and Technology \(TREAT\) Pilot Project Grants](#)
- [REACT Center Scholar Awards Program](#)
- [AR3T Regenerative Rehabilitation Pilot Grants](#)

In the News

- [Prepare for Aging: Focus on Fitness](#)
- [Get Active, Beat Lymphoma?](#)
- [Vigorous Exercise May Help Slow Parkinson's Disease](#)
- [How Exercise Can Make for Healthier Fat](#)
- [Sleep vs. Exercise?](#)