



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.

February 2016

Announcements

- Monthly NExTNet Teleconference – No teleconference for March 2016. If you are interested in presenting on a future teleconference please email nextnet@uab.edu.
- Internship Opportunities
 - Duke University Integrated Health Sciences Internship Program <http://dmpi.duke.edu/center-living-internship>
 - UAB Center for Exercise Medicine <http://www.uab.edu/medicine/exercise/training-ed/125-training-ed/81-undergradinternship>

Upcoming Meetings and Conferences

- [ACSM Health & Fitness Summit & Expo](#) March 29 - April 1, 2016, Orlando, FL
- [ACSM Annual Meeting, World Congress on Exercise is Medicine and World Congress on The Basic Science of Energy Balance](#) May 31 - June 4, 2016, Boston, MA
- [Rehabilitation Research at NIH: Moving the Field Forward](#) May 25-26, 2016, Bethesda, MD
- Save the Date: Symposium on Regenerative Rehabilitation October 14-16, 2016, Atlanta GA

New Findings from NExTNet Investigators

Aging

- [Sarcopenia Is Associated With Lower Skeletal Muscle Capillarization and Exercise Capacity in Older Adults.](#)
- [COX Inhibitor Influence on Skeletal Muscle Fiber Size and Metabolic Adaptations to Resistance Exercise in Older Adults.](#)
- [Effects of vitamin D supplementation during weight loss on sex hormones in postmenopausal women.](#)
- [Antihypertensive Use and the Effect of a Physical Activity Intervention in the Prevention of Major Mobility Disability Among Older Adults: The LIFE Study.](#)
- [Effect of structured physical activity on prevention of serious fall injuries in adults aged 70-89: randomized clinical trial \(LIFE Study\).](#)

- Hypertension and aging.
- [Effects of exercise and dietary epigallocatechin gallate and \$\beta\$ -alanine on skeletal muscle in aged mice.](#)

Cancer

- [Associations of sex steroid hormones with mortality in women with breast cancer.](#)
- [Effect of low or high glycemic load diets on experimentally induced mammary carcinogenesis in rats.](#)

Cardiovascular

- [Higher augmentation index is associated with tension-type headache and migraine in middle-aged/older humans with obesity.](#)
- [Low literacy self-care management patient education for a multi-lingual heart failure population: Results of a pilot study.](#)

Cell and Molecular Biology

- [Ribosome biogenesis may augment resistance training-induced myofiber hypertrophy and is required for myotube growth in vitro.](#)
- [Glucose and acute exercise influence factors secreted by circulating angiogenic cells in vitro.](#)
- [Guidelines for the use and interpretation of assays for monitoring autophagy \(3rd edition\).](#)

Exercise – Drug/Diet/Device/Surgery Interactions

- [Validity of SenseWear[®] Armband v5.2 and v2.2 for estimating energy expenditure.](#)
- [Walkable distances are bioenergetically scaled.](#)
- [Smart Multi-Frequency Bioelectrical Impedance Spectrometer for BIA and BIVA Applications.](#)

Metabolic

- [Comparing Simple Insulin Sensitivity Indices to the Oral Minimal Model Postexercise.](#)
- [Ovariectomized High Fit Rats Are Protected against Diet-Induced Insulin Resistance.](#)

Pediatric

- [N100 Repetition Suppression Indexes Neuroplastic Defects in Clinical High Risk and Psychotic Youth.](#)
- [Effects of 6-month soccer and traditional physical activity programmes on body composition, cardiometabolic risk factors, inflammatory, oxidative stress markers and cardiorespiratory fitness in obese boys.](#)
- [Developmental and physical-fitness associations with gross motor coordination problems in Peruvian children.](#)
- [Macrophage Activation in HIV-infected Adolescent Males Contributes to Differential Bone Loss by Sex: Adolescent Trials Network Study 021.](#)

Additional New Findings

- [Site-specific, adult bone benefits attributed to loading during youth: A preliminary longitudinal analysis.](#)
- [Environmental Resources in Maintenance of Physical Activity 6 Months Following Cardiac Rehabilitation.](#)
- [Interplay between exercise and dietary fat modulates myelinogenesis in the central nervous system.](#)
- [Exercise Training Improves Vascular Mitochondrial Function.](#)
- [Exercise Modulates Oxidative Stress and Inflammation in Aging and Cardiovascular Diseases.](#)
- [Musculoskeletal overuse injuries and heart rate variability: Is there a link?](#)
- [Poststroke Physical Activity Levels No Higher in Rehabilitation than in the Acute Hospital.](#)
- [Relationships of physical activity and sedentary time in obese parent-child dyads: a cross-sectional study.](#)
- [Active workstation allows office workers to work efficiently while sitting and exercising moderately.](#)
- [Concurrent Validity of a Self-Reported Physical Activity "Vital Sign" Questionnaire With Adult Primary Care Patients.](#)
- [Investigating the effects of a multidimensional exercise program on symptoms and antiinflammatory status in female patients with ankylosing spondylitis.](#)
- [Benefits of aerobic or resistance training during pregnancy on maternal health and perinatal outcomes: A systematic review.](#)

- [Concurrent validity of the international physical activity questionnaire in outpatients with bipolar disorder: Comparison with the Sensewear Armband.](#)
- [Effect of a randomized controlled exercise trial on bone outcomes: influence of adjuvant endocrine therapy.](#)
- [Fall prevention in postmenopausal women: the role of Pilates exercise training.](#)
- [Analysis Of Agreement Between Four Lactate Threshold Measurements Methods In Professional Soccer Players.](#)
- [The Impact of Physical Activity and Dietary Measures on the Biochemical and Anthropometric Parameters in Obese Children. Is There Any Genetic Predisposition?](#)
- [Aerobic exercise for cognitive deficits in schizophrenia - The impact of frequency, duration, and fidelity with target training intensity.](#)
- [Upper cervical and upper thoracic manipulation versus mobilization and exercise in patients with cervicogenic headache: a multi-center randomized clinical trial.](#)
- [Randomized trial of a physical activity intervention in women with metastatic breast cancer.](#)
- [Predictors of adherence to a 12-week exercise program among men treated for prostate cancer: ENGAGE study.](#)
- [Examining Dark Triad traits in relation to mental toughness and physical activity in young adults.](#)
- [Short-term Improvement in Physical Activity and Body Composition Following Supervised Exercise Training Program in Idiopathic Pulmonary Fibrosis.](#)
- [Superficial and Deep Scapulothoracic Muscle EMG Activity During Different Types of Elevation Exercises in the Scapular Plane.](#)
- [Risks and Benefits of Exercise Training in Adults With Congenital Heart Disease.](#)
- [Endurance Exercise Improves Molecular Pathways of Aerobic Metabolism in Patients with Myositis.](#)
- [rs6295 \[C\]-Allele Protects Against Depressive Mood in Elderly Endurance Athletes.](#)
- [Do Male And Female Cyclists' Cortical Activity Differ Before and During Cycling Exercise?](#)
- [Time-dependent Effects of Cardiovascular Exercise on Memory.](#)
- [The Level of Anxiety and Depression in Dialysis Patients Undertaking Regular Physical Exercise Training - a Preliminary Study.](#)
- [Effect of High-Intensity Interval Versus Continuous Exercise Training on Functional Capacity and Quality of Life in Patients With Coronary Artery Disease: A RANDOMIZED CLINICAL TRIAL.](#)
- [Relationship Between Exercise Workload During Cardiac Rehabilitation and Outcomes in Patients With Coronary Heart Disease.](#)
- [Newer QT Correction Formulae to Correct QT for Heart Rate Changes During Exercise.](#)
- [Practical Approaches to Prescribing Physical Activity and Monitoring Exercise Intensity.](#)
- [Quadrupedal movement training improves markers of cognition and joint repositioning.](#)
- [Motivation for Different Types and Doses of Exercise During Breast Cancer Chemotherapy: a Randomized Controlled Trial.](#)
- [Voluntary Running Suppresses Tumor Growth through Epinephrine- and IL-6-Dependent NK Cell Mobilization and Redistribution.](#)
- [Psychological distress leads to reduced physical activity and fitness in children: the Australian longitudinal LOOK study.](#)
- [Endurance training in early life results in long-term programming of heart mass in rats.](#)
- [The effect of 6 h of running on brain activity, mood, and cognitive performance.](#)

RFAs

- Rehabilitation Research Resources to Enhance Clinical Trials RFA for Pilot Studies <https://react.center/funding/pilot-studies/>
- MoTrPAC Genomics, Epigenomics, and Transcriptomics Chemical Analysis Sites and Metabolomics and Proteomics Chemical Analysis Sites <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-15-010.html> and <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-15-011.html>
- MoTrPAC Bioinformatics Center <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-15-012.html>
- MoTrPAC Preclinical Animal Study Sites <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-15-013.html>
- MoTrPAC Consortium Coordination Center <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-15-014.html>
- MoTrPAC Clinical Centers <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-15-015.html>

- Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects on Biomarkers of Prognosis and Survival (R01) <http://grants.nih.gov/grants/guide/pa-files/PA-15-311.html>
- Diet and Physical Activity Assessment Methodology (R01) <http://grants.nih.gov/grants/guide/pa-files/PAR-15-170.html>
- Diet and Physical Activity Assessment Methodology <http://grants.nih.gov/grants/guide/pa-files/PAR-15-171.html>
- Testing Interventions for Health-Enhancing Physical Activity (R01) <http://grants.nih.gov/grants/guide/pa-files/PAR-14-315.html>
- School Nutrition and Physical Activity Policies, Obesogenic Behaviors, and Weight Outcomes (R21) <http://grants.nih.gov/grants/guide/pa-files/PA-13-098.html>
- School Nutrition and Physical Activity Policies, Obesogenic Behaviors and Weight Outcomes (R03) <http://grants.nih.gov/grants/guide/pa-files/PA-13-099.html>
- School Nutrition and Physical Activity Policies, Obesogenic Behaviors and Weight Outcomes (R01) <http://grants.nih.gov/grants/guide/pa-files/PA-13-100.html>
- [NIH Blueprint Training in Computational Neuroscience: From Biology to Model and Back Again \(T90/R90\)](#)
- [Neuroimaging Informatics Tools and Resources Clearinghouse \(U24\)](#)

In the News

- [We all know exercise makes you live longer. But this will actually get you off the couch.](#)
- [Sufficient Sleep, Exercise May Help Keep Stroke at Bay](#)
- [Where Wearable Technology Ends Up \(Hint: Not Your Wrist\)](#)
- [Concussion Protocol: Is Football Worth the Risk?](#)
- [Lessons From Exercising Until Hitting the Wall: A Reflection](#)
- [People Who Exercise May Have Bigger Brains](#)
- [Which Type of Exercise Is Best for the Brain?](#)