



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).

## June 2017

### 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](mailto: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 will take place on Tuesday, August 8, 2017 at 10am CST.

### Upcoming Meetings and Conferences

- [IUPS 38<sup>th</sup> World Congress: Rhythms of Life](#) August 1-5, 2017, Rio de Janeiro, Brazil
- [APS Conference: Cardiovascular Aging, New Frontiers and Old Friends](#) August 11-14, 2017, Westminster, Colorado
- [APS Conference: Physiological Bioenergetics: Mitochondria from Bench to Bedside](#) August 27-30, 2017, San Diego, California
- [UAB Center for Exercise Medicine Annual Symposium](#) September 22, 2017, Birmingham, Alabama
- [Physiology and Pathophysiology Consequences of Sickle Cell Disease](#) November 6-8, 2017, Washington, DC

### New Findings from NExTNet Investigators

#### Aging

- [Understanding Age-Related Changes in Skeletal Muscle Metabolism: Differences Between Females and Males.](#)
- [Quantification and characterization of grouped type I myofibers in human aging.](#)
- [Metabolic costs of daily activity in older adults \(Chores XL\) study: design and methods.](#)
- [Individualized Estimation of Physical Activity in Older Adults with Type 2 Diabetes.](#)

- [Aging of Competitive Athletes.](#)
- [Postexercise essential amino acid supplementation amplifies skeletal muscle satellite cell proliferation in older men 24 hours postexercise.](#)
- [Neuromuscular Electrical Stimulation Combined with Protein Ingestion Preserves Thigh Muscle Mass But Not Muscle Function in Healthy Older Adults During 5 Days of Bed Rest.](#)

#### **Cancer**

- [Interaction of mammographic breast density with menopausal status and postmenopausal hormone use in relation to the risk of aggressive breast cancer subtypes.](#)

#### **Cardiovascular**

- [2016 AHA/ACC Guideline on the Management of Patients with Lower Extremity Peripheral Artery Disease: Executive Summary.](#)
- [Comparison of the Vasodilatory Effects of Sodium Nitroprusside versus Nitroglycerin.](#)
- [Small Sample Sizes Confound Understanding of Cardiometabolic Responses to Exercise.](#)
- [Intra- and inter-day reproducibility of low-flow mediated constriction response in young adults.](#)

#### **Cell and Molecular Biology**

- [Association of the Composite Inflammatory Biomarker GlycA, with Exercise-Induced Changes in Body Habitus in Men and Women with Prediabetes.](#)
- [Sympatholytic effect of intravascular ATP is independent of Nitric Oxide, prostaglandins, Na<sup>+</sup>/K<sup>+</sup>-ATPase, and K<sub>IR</sub> channels in humans.](#)
- [Leucine Differentially Regulates Gene-Specific Translation in Mouse Skeletal Muscle.](#)

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

- [Body-mass index and all-cause mortality.](#)
- [Dietary Methionine Restriction Regulates Liver Protein Synthesis and Gene Expression Independently of Eukaryotic Initiation Factor 2 Phosphorylation in Mice.](#)
- [Randomized trial reveals that physical activity and energy expenditure are associated with weight and body composition after RYGB.](#)
- [International Society of Sports Nutrition Position Stand: protein and exercise.](#)
- [Immediate Initiation of Antiretroviral Therapy for HIV Infection Accelerates Bone Loss Relative to Deferring Therapy: Findings from the START Bone Mineral Density Substudy, a Randomized Trial.](#)
- [The effects of high intensity interval training on muscle size and quality in overweight and obese adults.](#)
- [International society of sports nutrition position stand: diets and body composition.](#)
- [Comparing Performance During Morning vs. Afternoon Training Sessions in Intercollegiate Basketball Players.](#)

#### **Metabolic**

- [The metabolic fate of isotopically labeled trimethylamine-N-oxide \(TMAO\) in humans.](#)
- [Cardiopulmonary Exercise Testing and Metabolic Myopathies.](#)
- [Automated Insulin Delivery-The Light at the End of the Tunnel.](#)
- [Markers of maternal and infant metabolism are associated with ventricular dysfunction in infants of obese Women with type 2 diabetes.](#)

#### **Neuroscience and Stroke**

- [A randomized trial of aerobic exercise on cognitive control in major depression.](#)

#### **Pediatric**

- [Assessing the impact of adjusting for maturity in weight status classification in a cross-sectional sample of UK children.](#)

#### **Respiratory**

- [Pulmonary Endpoints in Duchenne Muscular Dystrophy: a Workshop Summary.](#)

#### Other

- [Developing a Curriculum for Information and Communications Technology Use in Global Health Research and Training: A Qualitative Study Among Chinese Health Sciences Graduate Students.](#)
- [Assessing and Communicating the Value of Biomedical Research: Results From a Pilot Study.](#)
- [Facilitating orphan drug development: Proceedings of the TREAT-NMD International Conference, December 2015, Washington, DC, USA.](#)
- [Body composition by DXA.](#)
- [The Steps Model: A Practical Tool for Engaging Communities to Improve Health Outcomes.](#)

#### Additional New Findings

- [Exercise interventions for cerebral palsy.](#)
- [Increase in carbon dioxide accelerates the performance of endurance exercise in rats.](#)
- [Effect of physical activity and dietary restriction interventions on weight loss and the musculoskeletal function of overweight and obese older adults with knee osteoarthritis: a systematic review and mixed method data synthesis.](#)
- [Exercise intervention on cardiovascular disease risk factors in a university population in the United Arab Emirates.](#)
- [Effects of Exercise on Type 2 Diabetes Mellitus-Related Cognitive Impairment and Dementia.](#)
- [Physical fitness and obesity levels during an academic year followed by summer holidays: an issue of insufficient time for physical activity.](#)
- [The feasibility of a pragmatic distance-based intervention to increase physical activity in lung cancer survivors.](#)
- [Hemodynamic adaptation to training in visually impaired professional tandem cyclists.](#)
- [Aerobic physical exercise and negative compensation of non-exercise physical activity in post-menopause: a pilot study.](#)
- [The use of steroids by gym athletes: an attempt to diagnose the problem scale and possible causes.](#)
- [Pre-operative predictors of post-operative falls in people undergoing total hip and knee replacement surgery: a prospective study.](#)
- [Effects of progressive resistance training and weight loss versus weight loss alone on inflammatory and endothelial biomarkers in older adults with type 2 diabetes.](#)
- [Skeletal muscle water T<sub>2</sub> as a biomarker of disease status and exercise effects in patients with Duchenne muscular dystrophy.](#)
- [Finding the Optimal volume and intensity of Resistance Training Exercise for Type 2 Diabetes: The FORTE Study, a Randomized Trial.](#)
- [Effects of resistance exercise in prostate cancer patients: a meta-analysis.](#)
- [Towards ageing well: Use it or lose it: Exercise, epigenetics and cognition.](#)
- [Vasoconstrictor responsiveness in contracting human muscle: influence of contraction frequency, contractile work, and metabolic rate.](#)
- [Impact of physical activity in group versus individual physical activity on fatigue in patients with breast cancer: A pilot study.](#)
- [Cardiorespiratory benefits of group exercise among adults with serious mental illness.](#)
- [Effects of home-based exercise on pre-dialysis chronic kidney disease patients: a randomized pilot and feasibility trial.](#)
- [Indirect sinusoidal vibrations induces an acute increase in explosive strength.](#)
- [Assessment of Active Video Gaming Using Adapted Controllers by Individuals With Physical Disabilities: A Protocol.](#)
- [Association of Resistance Exercise, Independent of and Combined With Aerobic Exercise, With the Incidence of Metabolic Syndrome.](#)
- [General Exercise Does Not Improve Long-Term Pain and Disability in Individuals With Whiplash-Associated Disorders: A Systematic Review.](#)
- [Per-protocol investigation of a best practice exercise referral scheme.](#)

- Young athletes with ventricular premature beats: Continuing or not intense training and competition?
- [Epidemiology and biology of physical activity and cancer recurrence.](#)
- [Gender-varying associations between physical activity intensity and mental quality of life in older cancer survivors.](#)
- [Overweight dogs exercise less frequently and for shorter periods: results of a large online survey of dog owners from the UK.](#)
- [Heart Rate Recovery After 6-min Walking Test Predicts Acute Exacerbation in COPD.](#)
- [Factors predicting falls and mobility outcomes in patients with stroke returning home after rehabilitation who are at risk of falling.](#)
- [Effect of exercising at minimum recommendations of the multiple sclerosis exercise guideline combined with structured education or attention control education - secondary results of the step it up randomised controlled trial.](#)
- [The Role of Physical Activity and Sedentary Behavior in Predicting Daily Pain and Fatigue in Older Adults: a Diary Study.](#)
- [Regular exercise participation improves genomic stability in diabetic patients: an exploratory study to analyse telomere length and DNA damage.](#)
- [Protocol for the residents in action pilot cluster randomised controlled trial \(RiAT\): evaluating a behaviour change intervention to promote walking, reduce sitting and improve mental health in physically inactive older adults in retirement villages.](#)
- [Neuromuscular function during knee extension exercise after cold water immersion.](#)
- [Adapted yoga to improve physical function and health-related quality of life in physically-inactive older adults: a randomised controlled pilot trial.](#)
- [Implementation in action: how Australian Exercise Physiologists approach exercise prescription for people with mental illness.](#)
- [Effects of Exercise on the Immune Function of Pediatric Patients With Solid Tumors: Insights From the PAPEC Randomized Trial.](#)
- [Exercise-Induced Bronchospasm and Allergy.](#)
- [Benefits of Substituting Sitting with Standing and Walking in Free-Living Conditions for Cardiometabolic Risk Markers, Cognition and Mood in Overweight Adults.](#)
- [INTENSITY, DURATION AND TYPE OF PHYSICAL ACTIVITY REQUIRED TO IMPROVE FUNCTION IN KNEE OSTEOARTHRITIS.](#)
- [Left ventricles of aging athletes: better untwisters but not more relaxed during exercise.](#)
- [Reliability and measurement error of the Osteoarthritis Research Society International recommended performance-based tests of physical function in people with hip and knee osteoarthritis.](#)
- [Prediction of 6-minute walk performance in patients with peripheral artery disease.](#)
- [A Contrast-Enhanced Ultrasonographic Study About the Impact of Long-term Exercise Training on Mammary Tumor Vascularization.](#)

#### **RFAs / FOAs**

- Technologies To Promote Exercise & Health Among Persons with Disabilities: NIDILRR Funding Opportunity May 31 National Institute on Disability, Independent Living, and Rehabilitation Research funding RFP; submission deadline is July 31  
Learn more here (<https://www.grants.gov/web/grants/view-opportunity.html?oppld=291418>)
- NIH Director's Transformative Research Awards (R01) [RFA-RM-17-007](#)
- Coordinating Center for Claude D. Pepper Older Americans Independence Centers (U24) [RFA-AG-18-008](#)
- Paul B Beeson Emerging Leaders Career Development Award in Aging (K76) [RFA-AG-18-006](#)
- Translational Outcomes Project in Neurotrauma (TOP-NT) (UG3/UH3) [RFA-NS-17-023](#)
- Research Innovations for Scientific Knowledge (RISK) for Musculoskeletal Diseases (R61/R33) [RFA-AR-17-009](#)
- NIMH Biobehavioral Research Awards for Innovative New Scientists (NIMH BRAINS) (R01) [RFA-MH-18-200](#)

#### **In the News**

- [National Senior Games Competitors Prove That Running Keeps Us Young](#)
- [Lifestyle changes may slow, prevent dementia](#)

- [Why Running May Be Good for Your Back](#)
- [Exercise: The secret to aging slowly](#)
- [Guided Approach to Exercise May Help Chronic Fatigue Patients](#)