



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.

March 2017

Announcements

- Teleconference
 - The next teleconference will take place on Tuesday, April 11, 2017 at 10am CST. If you are interested in presenting on this or a future teleconference please email nextnet@uab.edu.

Upcoming Meetings and Conferences

- [Translational Science 2017](#) April 19-21, 2017, Washington, D.C.
- [Experimental Biology 2017](#) April 22-26, 2017, Chicago, Illinois
- [ACSM Annual Meeting](#) May 30-June 3, 2017, Denver, Colorado
- [International Conference on Ambulatory Monitoring of Physical Activity and Movement](#) June 21-23, 2017, Bethesda, Maryland
- [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

New Findings from NExTNet Investigators

Aging

- [Influence of Nrf2 activators on subcellular skeletal muscle protein and DNA synthesis rates after 6 weeks of milk protein feeding in older adults.](#)
- [Effect of Physical Activity versus Health Education on Physical Function, Grip Strength and Mobility.](#)
- [Protein intake distribution pattern does not affect anabolic response, lean body mass, muscle strength or function over 8 weeks in older adults: A randomized-controlled trial.](#)
- [Changing Sex Hormones Represent a Cardiovascular Disadvantage for Aging Women.](#)
- [Time-course of muscle growth, and its relationship with muscle strength in both young and older women.](#)

Cancer

- [Comparison of Pharmaceutical, Psychological, and Exercise Treatments for Cancer-Related Fatigue: A Meta-analysis.](#)

Cardiovascular

- [An age- and sex-specific gene expression score is associated with revascularization and coronary artery disease: Insights from the Prospective Multicenter Imaging Study for Evaluation of Chest Pain \(PROMISE\) trial.](#)
- [Exploring Patient, Caregiver, and Healthcare Provider Perceptions of Caring for Patients With Heart Failure: What Are the Implications?](#)
- [Adherence to Exercise Prescription and Improvements in the Clinical and Vascular Health of African Americans.](#)
- [Erratum to: Walking performance is positively correlated to calf muscle fiber size in peripheral artery disease subjects, but fibers show aberrant mitophagy: an observational study.](#)
- [The Carotid Intima-Media Thickness and Arterial Stiffness of Pediatric Mucopolysaccharidosis Patients Are Increased Compared to Both Pediatric and Adult Controls.](#)
- [Low-load resistance training with low relative pressure produces muscular changes similar to high-load resistance training.](#)
- [Associations of resting heart rate with endothelium-dependent vasodilation and shear rate.](#)

Cell and Molecular Biology

- [Genetic characterization of physical activity behaviours in university students enrolled in kinesiology degree programs.](#)

Exercise – Diet/Disease/Device/Cultural Interactions

- [An intervention to reduce sitting and increase light-intensity physical activity at work: Design and rationale of the 'Stand & Move at Work' group randomized trial.](#)
- [Body-composition changes in the Comprehensive Assessment of Long-term Effects of Reducing Intake of Energy \(CALERIE\)-2 study: a 2-y randomized controlled trial of calorie restriction in nonobese humans.](#)
- [Electrical impedance myography \(EIM\) in individuals with COL6 and LAMA2 congenital muscular dystrophy: a cross-sectional and two-year analysis.](#)
- [Content validity and clinical meaningfulness of the HFMSSE in spinal muscular atrophy.](#)
- [Resilience Resources Moderate the Association of Adverse Childhood Experiences with Adulthood Inflammation.](#)
- [Dual energy X-ray absorptiometry body composition reference values of limbs and trunk from NHANES 1999-2004 with additional visualization methods.](#)
- [Calcium Supplementation Attenuates Disruptions in Calcium Homeostasis during Exercise.](#)
- [Accuracy and Reliability of Assessing Lateral Compartmental Leg Composition Using Dual-Energy X-ray Absorptiometry.](#)
- [Body Composition and Bone Mineral Density of Division 1 Collegiate Football Players, a Consortium of College Athlete Research \(C-CAR\) Study.](#)
- [Yoga for Health: Considerations beyond Energy Cost and Isolated Asanas \(Poses\).](#)
- [Comparing Performance during Morning vs. Afternoon Training Sessions in Intercollegiate Basketball Players.](#)

Metabolic

- [Post-absorptive muscle protein turnover affects resistance training hypertrophy.](#)
- [Human, Tissue-Engineered, Skeletal Muscle Myobundles to Measure Oxygen Uptake and Assess Mitochondrial Toxicity.](#)
- [Estrogens regulate glycosylation of IgG in women and men.](#)
- [HIV infection does not prevent the metabolic benefits of diet-induced weight loss in women with obesity.](#)

Neuroscience and Stroke

- [Moral Enhancement Using Non-invasive Brain Stimulation.](#)
- [Skeletal muscle changes following stroke: a systematic review and comparison to healthy individuals.](#)
- [Factors Associated With Ambulatory Activity in De Novo Parkinson Disease.](#)
- [Shortened sleep fuels inflammatory responses to marital conflict: Emotion regulation matters.](#)

- [Common data elements for clinical research in mitochondrial disease: a National Institute for Neurological Disorders and Stroke project.](#)
- [Physical Activity: A Viable Way to Reduce the Risks of Mild Cognitive Impairment, Alzheimer's Disease, and Vascular Dementia in Older Adults.](#)

Orthopedic

- [Asymmetries Identified in Sit-to-Stand Task Explain Physical Function After Hip Fracture.](#)
- [Weight-loss and exercise for communities with arthritis in North Carolina \(we-can\): design and rationale of a pragmatic, assessor-blinded, randomized controlled trial.](#)
- [Impact of Diet and/or Exercise Intervention on Infrapatellar Fat Pad Morphology: Secondary Analysis from the Intensive Diet and Exercise for Arthritis \(IDEA\) Trial.](#)

Pediatric

- [Tracking of gross motor coordination in Portuguese children.](#)
- [Immune Response to Exercise During Growth.](#)

Additional New Findings

- [Physical activity and osteoarthritis: a consensus study to harmonise self-reporting methods of physical activity across international cohorts.](#)
- [The differential effects of prolonged exercise upon executive function and cerebral oxygenation.](#)
- [Neurovascular control during exercise in acute coronary syndrome patients with Gln27Glu polymorphism of \$\beta\$ 2-adrenergic receptor.](#)
- [Physical performance analysis: A new approach to assessing free-living physical activity in musculoskeletal pain and mobility-limited populations.](#)
- [Assessment of laboratory and daily energy expenditure estimates from consumer multi-sensor physical activity monitors.](#)
- [Impact of Mild Hypohydration on Muscle Endurance, Power and Strength in Healthy, Active Older Men.](#)
- [A Hydrothermally Processed Maize Starch and its Effects on Blood Glucose Levels During High Intensity Interval Exercise.](#)
- [Vitamin D supplementation improves simvastatin-mediated decline in exercise performance : A randomized, double-blind, placebo-controlled study.](#)
- [Effectiveness of a multicomponent exercise program in the attenuation of frailty in long-term nursing home residents: study protocol for a randomized clinical controlled trial.](#)
- [Dynamics of the RR-interval versus blood pressure relationship at exercise onset in humans.](#)
- [Biochemical responses and physical performance during high-intensity resistance circuit training in hypoxia and normoxia.](#)
- [Sedentary patterns, physical activity and health-related physical fitness in youth: a cross-sectional study.](#)
- [Move it or Lose it. Is it Reasonable for Older Adults with Osteoarthritis to Continue to Use Paracetamol in Order to Maintain Physical Activity?](#)
- [Oncology care provider perspectives on exercise promotion in people with cancer: an examination of knowledge, practices, barriers, and facilitators.](#)
- [Effectiveness of a 16-Week Multimodal Exercise Program on Individuals With Dementia: Study Protocol for a Multicenter Randomized Controlled Trial.](#)
- [Enhancing Support for Physical Activity in Older Adults: A Public Health Call to Action.](#)
- [Sudden Arrhythmic Death During Exercise: A Post-Mortem Genetic Analysis.](#)
- [Prospective associations of exercise and depressive symptoms in older adults: the role of apolipoprotein E4.](#)
- [Acute effects of post-absorptive and postprandial moderate exercise on markers of inflammation in hyperglycemic individuals.](#)
- [Development and Validity of the Rating-of-Fatigue Scale.](#)
- [Physical Activity Guided by Pulse Pressure in Patients with Continuous Flow Left Ventricular Assist Devices: A Pilot Study.](#)
- [A single bout of high-intensity interval exercise and work-matched moderate-intensity exercise has minimal](#)

- [effect on glucose tolerance and insulin sensitivity in 7- to 10-year-old boys.](#)
- [Wrist-based cut-points for moderate- and vigorous-intensity physical activity for the Actical accelerometer in adults.](#)
- [Exercise: A vitally important prescription.](#)
- [Cardiovascular risk reduction in sedentary postmenopausal women during organized physical activity.](#)
- [Moderate and intense muscular exercises induce marked intramyocellular metabolic acidosis in sickle cell disease mice.](#)
- [High physical fitness is associated with reduction in basal and exercise induced inflammation.](#)
- [Effect of Moderate-Intensity Exercise Training on Peak Oxygen Consumption in Patients With Hypertrophic Cardiomyopathy: A Randomized Clinical Trial.](#)
- [The Relationships Among Pain, Depression, and Physical Activity in Patients With Heart Failure.](#)
- [Effects of a 6-Week Aquatic Treadmill Exercise Program on Cardiorespiratory Fitness and Walking Endurance in Subacute Stroke Patients: A PILOT TRIAL.](#)
- [Exercise Training and Functional Connectivity Changes in Mild Cognitive Impairment and Healthy Elders.](#)
- [Estimating Accuracy at Exercise Intensities: A Comparative Study of Self-Monitoring Heart Rate and Physical Activity Wearable Devices.](#)
- [Stair negotiation as a rehabilitation intervention for enhancing recovery following total hip and knee replacement surgery.](#)
- [Improving physical activity program adoption using integrated research-practice partnerships: an effectiveness-implementation trial.](#)
- [Changes in Pain and Muscle Architecture in Colon Cancer Survivors After a Lumbopelvic Exercise Program: A Secondary Analysis of a Randomized Controlled Trial.](#)
- [A systematic review of the relationship of physical activity and health status in adolescents.](#)
- [Telephone-Delivered Exercise Advice and Behavior Change Support by Physical Therapists for People With Knee Osteoarthritis: Protocol for the Telecare Randomized Controlled Trial.](#)
- [Exploring the Facilitators and Barriers to Physical Activity in Older People With Sight Loss.](#)
- [Inter- and Intra-Subject Similarity of Muscle Synergies During Bench Press With Slow and Fast Velocity.](#)
- [The six-minute walk test in patients with AL amyloidosis: a single centre case series.](#)

RFAs / FOAs

- BRAIN Initiative: Research Career Enhancement Award for Investigators to Build Skills in a Cross-Disciplinary Area (K18; [RFA-DA-17-022](#))
- 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

- [Exercising 2.5 Hours a Week May Slow Parkinson's Progression](#)
- [Exercise is the Best Cure for Fatigue Caused by Cancer](#)
- [The Best Exercise for Aging Muscles](#)
- [What Can You Do to Prevent Colon Cancer?](#)
- [Walk, Stretch or Dance? Dancing May Be Best for the Brain](#)