



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.

October 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 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, December 12, 2017 at 10am CST.

Upcoming Meetings and Conferences

- [6th Annual International Symposium on Regenerative Rehabilitation](#) November 1-3, 2017, Pittsburgh, PA
- [Clinical Research for Regenerative Rehabilitation and Rehabilitation Strategies in Preclinical Models: An Overview of the Fundamentals](#) November 3, 2017, Pittsburgh, PA
- [Physiology and Pathophysiology Consequences of Sickle Cell Disease](#) November 6-8, 2017, Washington, DC
- [American Society for NeuroRehabilitation](#) November 9-10, 2017 Baltimore, MD
- [4th Federal Interagency Conference on TBI](#) June 11-15, 2018

New Findings from NExTNet Investigators

Aging

- [Overview: the modulation of ageing through altered proteostasis.](#)
- [Long-term supplementation with EGCG and beta-alanine decreases mortality but does not affect cognitive or muscle function in aged mice.](#)
- [Strategies to Reduce Injuries and Develop Confidence in Elders \(STRIDE\): A Cluster-Randomized Pragmatic Trial](#)

of a Multifactorial Fall Injury Prevention Strategy: Design and Methods.

- [The Strategies to Reduce Injuries and Develop Confidence in Elders Intervention: Falls Risk Factor Assessment and Management, Patient Engagement, and Nurse Co-management.](#)
- [The effect of moderate-intensity exercise on nightly variability in objectively measured sleep parameters among older women.](#)

Cancer

- [Dose-response effects of exercise on insulin among colon cancer survivors.](#)
- [Difficulties in Defining and Measuring Cancer-Related Fatigue-Reply.](#)

Cardiovascular

- [Phosphodiesterase-5 inhibition preserves exercise onset vasodilator kinetics when NOS activity is reduced.](#)
- [Effects of Exercise Training on Calf Muscle Oxygen Extraction and Blood Flow in Patients with Peripheral Artery Disease.](#)
- [Combined Dietary Nitrate and Exercise Intervention in Peripheral Artery Disease: Protocol Rationale and Design.](#)
- [Utility of Growth Differentiation Factor-15, A Marker of Oxidative Stress and Inflammation, in Chronic Heart Failure: Insights From the HF-ACTION Study.](#)
- [Right Ventricular Dysfunction in Acute Myocardial Infarction Complicated by Cardiogenic Shock: a Hemodynamic Analysis of the SHould We Emergently Revascularize Occluded Coronaries for Cardiogenic shock \(SHOCK\) Trial and Registry.](#)
- [Aortic Stiffness in Aging and Hypertension: Prevention and Treatment with Habitual Aerobic Exercise.](#)
- [FES-Assisted Cycling Improves Aerobic Capacity and Locomotor Function Post-CVA.](#)
- [Steady State vs. Pulsatile Blood Pressure Component and Regional Cerebral Perfusion.](#)

Cell and Molecular Biology

- [Targeting mitochondrial function and proteostasis to mitigate dynapenia.](#)
- [Triheptanoin versus trioctanoin for long-chain fatty acid oxidation disorders: a double blinded, randomized controlled trial.](#)
- [MyoVision: Software for Automated High-Content Analysis of Skeletal Muscle Immunohistochemistry.](#)
- [Depletion of Pax7+ satellite cells does not affect diaphragm adaptations to running in young or aged mice.](#)

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

- [Effects of Two Years of Calorie Restriction on Aerobic Capacity and Muscle Strength.](#)
- [Long-term Effects of Weight Loss & Exercise on Biomarkers Associated with Angiogenesis.](#)
- [Bariatric Surgery Resistance: Using Preoperative Lifestyle Medicine and/or Pharmacology for Metabolic Responsiveness.](#)

Metabolic

- [Physical Function Following a Long-Term Lifestyle Intervention among Middle Aged and Older Adults with Type 2 Diabetes: the Look AHEAD Study.](#)
- [Markers of maternal and infant metabolism are associated with ventricular dysfunction in infants of obese women with type 2 diabetes.](#)

Neuroscience and Stroke

- [Transcranial Magnetic Stimulation in basic and clinical neuroscience: a comprehensive review of fundamental principles and novel insights.](#)
- [Combining therapeutic approaches: rTMS and aerobic exercise in post-stroke depression: a case series.](#)
- [Do sport-related concussions result in long-term cognitive impairment? A review of event-related potential research.](#)

Other

- [Validation of the doubly labeled water method using off-axis integrated cavity output spectroscopy and isotope ratio mass spectrometry.](#)

- [Exercise and physical activity for patients with ESLD: Improving functional status and sarcopenia while on the transplant waitlist.](#)

Additional New Findings

- [How the built environment affects change in older people's physical activity: A mixed- methods approach using longitudinal health survey data in urban China.](#)
- [Contraction intensity and sex differences in knee-extensor fatigability.](#)
- [Acute physical exercise in humans enhances reconsolidation of emotional memories.](#)
- [Effects of a Pre-surgery Supervised Exercise Training 1 Year After Bariatric Surgery: a Randomized Controlled Study.](#)
- [Eight-week, multimodal exercise counteracts a progress of chemotherapy-induced peripheral neuropathy and improves balance and strength in metastasized colorectal cancer patients: a randomized controlled trial.](#)
- [Physical activity for pregnant women: an infographic for healthcare professionals.](#)
- [Treadmill exercise alleviated prenatal buprenorphine exposure-induced depression in rats.](#)
- [Higher levels of objectively measured sedentary behavior is associated with worse cognitive ability: Two-year follow-up study in community-dwelling older adults.](#)
- [Benefits of home-based multidisciplinary exercise and supportive care in inoperable non-small cell lung cancer - protocol for a phase II randomised controlled trial.](#)
- [Meaningful components of a community-based exercise program for individuals with disabilities: A qualitative study.](#)
- [Pearls of optimizing nutrition and physical performance of older adults undergoing cancer therapy.](#)
- [Exercise for Coronary Heart Disease Patients: Little Is Good, More Is Better, Vigorous Is Best.](#)
- [Physical Activity and Mortality in Patients With Stable Coronary Heart Disease.](#)
- [Effectiveness of furosemide in attenuating Exercise Induced Pulmonary Haemorrhage in horses when administered at 4- and 24-hours prior to high speed training.](#)
- [Modulation of mitochondrial dynamics by treadmill training to improve gait and mitochondrial deficiency in a rat model of Parkinson's disease.](#)
- [Characterization of Prepractice Injury Prevention Exercises of High School Athletic Teams.](#)
- [Home-based telerehabilitation in older patients with chronic obstructive pulmonary disease and heart failure: a randomised controlled trial.](#)
- [The role of land and aquatic exercise in ankylosing spondylitis: a systematic review.](#)
- [Rowers' Self-Reported Behaviors, Attitudes, and Safety Concerns Related to Exercise, Training, and Competition During Pregnancy.](#)
- [Cortical Substrate of Supraspinal Fatigue following Exhaustive Aerobic Exercise Localizes to a Large Cluster in the Anterior Premotor Cortex.](#)
- [Exercise training improves blood flow to contracting skeletal muscle of older men via enhanced cGMP signaling.](#)
- [Cerebral Blood Flow in Normal Aging Adults: Cardiovascular Determinants, Clinical Implications, and Aerobic Fitness.](#)
- [The Effect of Physical Activity and Cardiorespiratory Fitness on All-cause Mortality in Hong Kong Chinese Older People.](#)
- [An innovative educational clinical experience promoting geriatric exercise.](#)
- [Long-term effects of exercise and physical therapy in people with Parkinson disease.](#)
- [Aerobic exercise training lowers platelet reactivity and improves platelet sensitivity to prostacyclin in pre- and postmenopausal women.](#)
- [Obesity and Atrial Fibrillation Prevalence, Pathogenesis, and Prognosis: Effects of Weight Loss and Exercise.](#)
- [Maintenance of Lifestyle Changes at 12-month Follow-up in a Nutrition and Physical Activity Trial for Cancer Survivors.](#)
- [Effects of long-term exposures to low iron and branched-chain amino acid containing diets on aging skeletal muscle of Fisher 344 Brown Norway rats.](#)
- [Wrist Acceleration Cut-points for Moderate-to-Vigorous Physical Activity in Youth.](#)
- [Flexible Work: The Impact of a New Policy on Employees' Sedentary Behaviour and Physical Activity.](#)
- [Initial validation of the exercise chronic pain acceptance questionnaire.](#)

- [Effects of physical activity on executive functions, attention and academic performance in preadolescent children: a meta-analysis.](#)
- [Exercise attenuates dexamethasone-induced hypertension through an improvement of baroreflex activity independently of the renin-angiotensin system.](#)
- [Dietary resveratrol confers apoptotic resistance to oxidative stress in myoblasts.](#)
- [Different times of day do not change heart rate variability recovery after light exercise in sedentary subjects: 24 hours Holter monitoring.](#)
- [Exercise and bone health across the lifespan.](#)
- [Effect of morphine on breathlessness and exercise endurance in advanced COPD: a randomised crossover trial.](#)
- [A Telerehabilitation Approach to Enhance Quality of Life Through Exercise Among Adults With Paraplegia: Study Protocol.](#)
- [Parameters influencing the physical activity of patients with a history of coronary revascularization.](#)
- [How Is Pulmonary Function and Exercise Tolerance Affected in Patients With AIS Who Have Undergone Spinal Fusion?](#)
- [TRPM8 activation improves energy expenditure in skeletal muscle and exercise endurance in mice.](#)

RFA / FOAs

- Tailoring Cardiac Rehabilitation to Enhance Participation of Older Adults (R01) [RFA-AG-18-016](#)
- NIMH Biobehavioral Research Awards for Innovative New Scientists (NIMH BRAINS) (R01) [RFA-MH-18-200](#)
- Symptom Cluster Characterization in Chronic Conditions (R01) [PA-17-462](#)
- Symptom Cluster Characterization in Chronic Conditions (R21) [PA-17-461](#)
- BRAIN Initiative: Research on the Ethical Implications of Advancements in Neurotechnology and Brain Science (R01) [RFA-MH-18-500](#)
- Science of Behavior Change: Revision Applications for Use-inspired Research to Optimize Adherence, Behavior Change Interventions, and Outcomes (R01) [RFA-RM-17-022](#); (U01) [RFA-RM-17-023](#); (R34) [RFA-RM-17-024](#); (R21) [RFA-RM-17-028](#)
- [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

- [Exercising With Asthma or Allergies](#)
- [For Your Brain's Sake, Keep Moving](#)
- [Even a Little Walking Can Lengthen Your Life](#)
- [Fitness in a Flash: the Case for Interval Workouts](#)