



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.

November 2015

Announcements

- Molecular Transducers of Physical Activity webinar slides and FAQs available online: <https://commonfund.nih.gov/MolecularTransducers/meetings>
- Monthly NExTNet Teleconference December 8, 2015 10am CST

Upcoming Meetings and Conferences

- [Advances in Skeletal Muscle Biology in Health and Disease](#) January 20-22, 2016, University of Florida
- [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

New Findings from NExTNet Investigators

Cardiovascular Disease

- [Psychosocial Factors, Exercise Adherence, and Outcomes in Heart Failure Patients: Insights From Heart Failure: A Controlled Trial Investigating Outcomes of Exercise Training \(HF-ACTION\).](#)
- [Arterial stiffness is associated with age-related differences in cerebrovascular conductance.](#)

Cancer

- [Maintaining physical activity during head and neck cancer treatment: Results of a pilot controlled trial.](#)
- [Dose-response effects of aerobic exercise on estrogen among women at high risk for breast cancer: a randomized controlled trial.](#)

Metabolic Disease

-

[Impact of combined resistance and aerobic exercise training on branched-chain amino acid turnover, glycine metabolism and insulin sensitivity in overweight humans.](#)

- [The influence of reduced insulin sensitivity via short-term reductions in physical activity on cardiac baroreflex sensitivity during acute hyperglycemia.](#)
- [Short-term weight loss with diet and physical activity in young adults: The IDEA study.](#)
- [Low levels of physical activity are associated with dysregulation of energy intake and fat mass gain over 1 year.](#)
- [The intervention composed of aerobic training and Non-exercise physical activity \(I-CAN\) study: Rationale, design and methods.](#)

Aging

- [Processing of visual information compromises the ability of older adults to control novel fine motor tasks.](#)
- [The effects of water-based exercise in combination with blood flow restriction on strength and functional capacity in post-menopausal women.](#)
- [Dual-tasking gait variability and cognition in late-life depression.](#)

Cell and Molecular Biology

- [Reduced voluntary running performance is associated with impaired coordination as a result of muscle satellite cell depletion in adult mice.](#)
- [Intrinsic muscle clock is necessary for musculoskeletal health.](#)
- [Histone Methylation Dynamics and Gene Regulation Occur through the Sensing of One-Carbon Metabolism.](#)
- [The effects of age and resistance loading on skeletal muscle ribosome biogenesis.](#)

Neuroscience and Stroke

- [Higher Treadmill Training Intensity to Address Functional Aerobic Impairment after Stroke.](#)

Arthritis

- [Effects of Swimming and Cycling Exercise Intervention on Vascular Function in Patients With Osteoarthritis.](#)

Exercise – Drug/Diet/Device/Surgery Interactions

- [Dose response of exercise training following roux-en-Y gastric bypass surgery: A randomized trial.](#)
- [AMPK-agonist AICAR delays the initial decline in lifetime-apex VO₂peak while voluntary wheel running fails to delay its initial decline in female rats.](#)
- [Addition of Exercise Increases Plasma Adiponectin and Release from Adipose Tissue.](#)

Patient-Centered Outcomes

- [Evaluation of pedometry as a patient-centered outcome in patients undergoing hematopoietic cell transplant \(HCT\): a comparison of pedometry and patient reports of symptoms, health, and quality of life.](#)

Additional New Findings

- [Cardiorespiratory Fitness and Light-Intensity Physical Activity Are Independently Associated with Reduced Cardiovascular Disease Risk in Urban Black South African Women: A Cross-Sectional Study.](#)
- [Misperception: No Evidence to Dismiss RPE as Regulator of Moderate-Intensity Exercise.](#)
- [Effects of a physical activity program on the urinary collagen crosslinks in pre and postmenopausal women.](#)
- [A spectrum of exercise training reduces soluble A \$\beta\$ in a dose-dependent manner in a mouse model of Alzheimer's disease.](#)
- [Dutch Young Adults Ratings of Behavior Change Techniques Applied in Mobile Phone Apps to Promote Physical Activity: A Cross-Sectional Survey.](#)
- [Core muscle characteristics during walking of patients with multiple sclerosis.](#)
- [Lifestyle Changes: Effect of Diet, Exercise, Functional Food, and Obesity Treatment, on Lipids and Lipoproteins.](#)

- [Changing physical activity and sedentary behaviour in people with COPD.](#)
- [Exercise and rehabilitation delivered through exergames in older adults: An integrative review of technologies, safety and efficacy.](#)
- [Cost effectiveness of a mail-delivered individually tailored physical activity intervention for Latinas vs. a mailed contact control.](#)
- [Electromyographic comparison of elastic resistance versus machine exercise for high-intensity strength training in chronic stroke patients.](#)
- [Impaired Circulating Angiogenic Cells Mobilization and Metalloproteinase-9 Activity after Dynamic Exercise in Early Metabolic Syndrome.](#)
- [Effects of Physical \(In\)activity on Platelet Function.](#)
- [Core Muscle Activity, Exercise Preference, and Perceived Exertion during Core Exercise with Elastic Resistance versus Machine.](#)
- [The Intricacies of Children's Physical Activity.](#)
- [The Preventive Effects of 8 Weeks of Resistance Training on Glucose Tolerance and Muscle Fiber Type Composition in Zucker Rats.](#)
- [Engaging South Asian women with type 2 diabetes in a culturally relevant exercise intervention: a randomized controlled trial.](#)
- [Effects of Chronic Endurance Exercise on Doxorubicin-Induced Thymic Damage.](#)
- [Reconsidering Physical Activity Restrictions for Mononephric Survivors of Childhood Cancer: A Report From the Children's Oncology Group.](#)
- [Ibuprofen intake increases exercise time to exhaustion: A possible role for preventing exercise-induced fatigue.](#)
- [Reflex control of the circulation during exercise.](#)
- [Vascular function in health, hypertension, and diabetes: effect of physical activity on skeletal muscle microcirculation.](#)
- [Cardiorespiratory Fitness, Sedentary Time, and Cardiovascular Risk Factor Clustering.](#)
- [Effects of light-intensity physical activity on red blood cell distribution width: Implications for a novel mechanism through which light-intensity physical activity may influence cardiovascular disease.](#)
- [Structured exercise program prior to major cancer surgery improves cardiopulmonary fitness: a retrospective cohort study.](#)
- [Treadmill exercise tests in persons with Parkinson's disease: responses and disease severity.](#)

RFA's

- 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>

In the News

- [Tai chi can help build strength, relieve pain](#)
- [58% of Americans have downloaded a health app, but almost half don't use ...](#)
- [Older adults with diabetes may get exercise from video games](#)
- [Widow of firefighter who died on 9/11 completes marathon for husband](#)
- [App helps employees do yoga at their desks](#)
- [Fitness vs. fatness: What's more important?](#)
- [8 Secrets to Staying Fit During the Holidays](#)
- [Yoga May Boost Quality of Life for Prostate Cancer Patients](#)