



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.

May 2016

Announcements

- Monthly NExTNet Teleconference – June 14, 2016 10am CST – If you are interested in presenting on a future teleconference please email nextnet@uab.edu.
- Rehabilitation Research at NIH: Moving the Field Forward Conference, May 25-26: watch online <https://videocast.nih.gov/>. Agenda and speaker biographies are available on the meeting website: <https://palladianpartners.cvent.com/RehabilitationResearch>

Upcoming Meetings and Conferences

- [APS/TPS Joint Meeting: Physiology 2016](#), July 29-31, 2016, Dublin, Ireland
- [NSCA 2016 National Conference](#), July 6-9, 2016, New Orleans, LA
- [APS Conference: Inflammation, Immunity and Cardiovascular Disease](#) August 24-27, 2016, Westminster, Colorado
- [APS Intersociety Meeting: The Integrative Biology of Exercise VII](#) November 2-4, 2016, Phoenix, Arizona

New Findings from NExTNet Investigators

Aging

- [Identifying effective and feasible interventions to accelerate functional recovery from hospitalization in older adults: A randomized controlled pilot trial.](#)
- [Beyond Strength: Participant Perspectives on the Benefits of an Older Adult Exercise Program.](#)
- [Forward and inverse dynamic study during pedaling: Comparison between the young and the elderly.](#)

Arthritis

- [In hip osteoarthritis, Nordic Walking is superior to strength training and home-based exercise for improving function.](#)

Cancer

- [Prognostic Factors in an Exercised Model of Chemically-induced Mammary Cancer.](#)
- [Voluntary Physical Activity Abolishes the Proliferative Tumor Growth Microenvironment Created by Adipose Tissue in Animals Fed a High Fat Diet.](#)
- [A Pilot Study of Self-Management-based Nutrition and Physical Activity Intervention in Cancer Survivors.](#)
- [Energy Through Motion©: An Evidence-Based Exercise Program to Reduce Cancer-Related Fatigue and Improve Quality of Life.](#)
- [Home-Based Exercise Training Improves Left Ventricle Diastolic Function in Survivors of Childhood ALL: A Tissue Doppler and Velocity Vector Imaging Study.](#)

Cardiovascular

- [A workplace-based risk assessment improves predicted lifetime cardiovascular disease risk in male steelworkers.](#)
- [The Impact of Tai Chi Exercise on Self-Efficacy, Social Support, and Empowerment in Heart Failure: Insights from a Qualitative Sub-Study from a Randomized Controlled Trial.](#)
- [A Multimodal mHealth Intervention \(FeatForward\) to Improve Physical Activity Behavior in Patients with High Cardiometabolic Risk Factors: Rationale and Protocol for a Randomized Controlled Trial.](#)
- [Excessive exercise habits of runners as new signs of hypertension and arrhythmia.](#)
- [Longitudinal strain of systemic right ventricle correlates with exercise capacity in adult with transposition of the great arteries after atrial switch.](#)
- [Left and right ventricular longitudinal strain-volume/area relationships in elite athletes.](#)
- [Ischemic Preconditioning Enhances Muscle Endurance during Sustained Isometric Exercise.](#)

Cell and Molecular Biology

- [Comparison of Diet vs. Exercise on Metabolic Function & Gut Microbiota in Obese Rats.](#)
- [Physical Activity with Alanine Aminotransferase and Gamma-Glutamyltransferase: Implications of Liver Pathology on the Relationship Between Physical Activity and Mortality.](#)

Exercise – Drug/Diet/Device/Disease/Surgery/Cultural Interactions

- [Effect of Omega-3 PUFAs Supplementation with Lifestyle Modification on Anthropometric Indices and Vo2 max in Overweight Women.](#)
- [Loading rate increases during barefoot running in habitually shod runners: Individual responses to an unfamiliar condition.](#)
- [Enriching a protein drink with leucine augments muscle protein synthesis after resistance exercise in young and older men.](#)
- [Designing Culturally Relevant Physical Activity Programs for African-American Women: A Framework for Intervention Development.](#)

Exercise Genomics

- <http://physiolgenomics.physiology.org/content/48/3/175>
- <http://physiolgenomics.physiology.org/content/48/3/183>

Metabolic

- [Benefits for Type 2 Diabetes of Interrupting Prolonged Sitting With Brief Bouts of Light Walking or Simple Resistance Activities.](#)

Neuroscience and Stroke

- [Exercise and cerebrovascular plasticity.](#)
- [Antidepressant Efficacy of Adjunctive Aerobic Activity and Associated Biomarkers in Major Depression: A 4-Week, Randomized, Single-Blind, Controlled Clinical Trial.](#)
- [Lifetime occupational and leisure time physical activity and risk of Parkinson's disease.](#)
- [Do Differences in Levels, Types, and Duration of Muscle Contraction Have an Effect on the Degree of Post-exercise Depression?](#)

Pediatric

- [Associations of sedentary behavior, physical activity, cardiorespiratory fitness and body fat content with pain conditions in children: the PANIC study.](#)
- [Development and reliability of an audit tool to assess the school physical activity environment across 12 countries.](#)
- [Reliability of accelerometer-determined physical activity and sedentary behavior in school-aged children: a 12-country study.](#)
- [Active school transport and weekday physical activity in 9-11-year-old children from 12 countries.](#)
- [Using Mobile Apps to Promote a Healthy Lifestyle Among Adolescents and Students: A Review of the Theoretical Basis and Lessons Learned.](#)
- [Physical Activity and Cognitive Trajectories in Schoolchildren.](#)
- [Using self-determination theory to promote adolescent girls' physical activity: Exploring the theoretical fidelity of the Bristol Girls Dance Project.](#)
- [A multicomponent, school-initiated obesity intervention to promote healthy lifestyles in children.](#)
- [International normative 20 m shuttle run values from 1 142 026 children and youth representing 50 countries.](#)
- [Impact of a Community-Based Physical Activity Program on Fitness and Adiposity Among Overweight and Obese Children.](#)

Respiratory

- [Exercise pulmonary haemodynamics: a test in search of purpose.](#)
- [Restrictions in ATP diffusion within sarcomeres can provoke ATP-depleted zones impairing exercise capacity in chronic obstructive pulmonary disease.](#)
- [Physical activity and exercise capacity in patients with moderate COPD exacerbations.](#)
- [Regular and moderate aerobic training before allergic asthma induction reduces lung inflammation and remodeling.](#)
- [Aerobic exercise combined with noninvasive positive pressure ventilation increases serum brain-derived neurotrophic factor in healthy males.](#)

Additional New Findings

- [The SHIELD \(Safety & Health Improvement: Enhancing Law Enforcement Departments\) Study: Mixed Methods Longitudinal Findings.](#)
- [Metabolic Testing for Adults in a State Medicaid Program Receiving Antipsychotics: Remaining Barriers to Achieving Population Health Prevention Goals.](#)
- [Lower Odds of Post-Stroke Symptoms of Depression When Physical Activity Guidelines Met: NHANES 2011-2012.](#)
- [Metabolic Testing for Adults in a State Medicaid Program Receiving Antipsychotics: Remaining Barriers to Achieving Population Health Prevention Goals.](#)
- [Variant ASGR1 Associated with a Reduced Risk of Coronary Artery Disease.](#)
- [Case-Only Survival Analysis Reveals Unique Effects of Genotype, Sex, and Coronary Disease Severity on Survivorship.](#)
- [Exercise-Induced Systemic Venous Hypertension in the Fontan Circulation.](#)
- [Correlates of Moderate-to-Vigorous Physical Activity in Brazilian Children.](#)
- [Novel Links between Troubled Marriages and Appetite Regulation: Marital Distress, Ghrelin, and Diet Quality.](#)
- [Resting and exercise energy metabolism in weight-reduced adults with severe obesity.](#)
- [Heightened TWEAK-NF-κB signaling and inflammation-associated fibrosis in paralyzed muscles of men with chronic spinal cord injury.](#)
- [Bridging the Gaps: the Promise of Omics Studies in Pediatric Exercise Research.](#)
- [Clinical Significance of Symptoms in Smokers with Preserved Pulmonary Function.](#)
- [A controlled statistical study to assess measurement variability as a function of test object position and configuration for automated surveillance in a multicenter longitudinal COPD study \(SPIROMICS\).](#)
- [Effect of Exercise Training on Striatal Dopamine D2/D3 Receptors in Methamphetamine Users during Behavioral Treatment.](#)

- [Skeletal muscle cellular metabolism in older HIV-infected men.](#)
- [Aging, the Central Nervous System, and Mobility in Older Adults: Interventions.](#)
- [Estimating fat-free mass in elite-level male rowers: a four-compartment model validation of laboratory and field methods.](#)
- [Body Composition and Muscle Characteristics of Division I Track and Field Athletes.](#)
- [Exercise Induced Dose Response Alterations in Adiponectin and Leptin Levels are Dependent on Body Fat Changes in Women at Risk for Breast Cancer.](#)
- [Great Expectations: Racial Differences in Outcome Expectations for a Weight Lifting Intervention among Black and White Breast Cancer Survivors with or without Lymphedema.](#)
- [A Randomized Trial on the Effect of Exercise Mode on Breast Cancer-related Lymphedema.](#)
- [The Effect of Self-Efficacy on Behavior and Weight in a Behavioral Weight-Loss Intervention.](#)
- [Improving the quality of survivorship for older adults with cancer.](#)
- [Response to "Repeatability of Different Segmental Pulse Wave Velocity Measurements".](#)
- [Interrelationships Among Various Measures of Central Artery Stiffness.](#)
- [IMPROVEMENTS IN PSYCHOSOCIAL FUNCTIONING AND HEALTH-RELATED QUALITY OF LIFE FOLLOWING EXERCISE AUGMENTATION IN PATIENTS WITH TREATMENT RESPONSE BUT NONREMITTED MAJOR DEPRESSIVE DISORDER: RESULTS FROM THE TREAD STUDY.](#)
- [A 52-week pilot study of the effects of exenatide on body weight in patients with hypothalamic obesity.](#)

RFAs / FOAs

- Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects on Biomarkers of Prognosis and Survival <https://grants.nih.gov/grants/guide/pa-files/PA-16-122.html>
- Diet and Physical Activity Assessment Methodology <http://grants.nih.gov/grants/guide/pa-files/PA-15-171.html>
- Testing Interventions for Health-Enhancing Physical Activity (R01) <http://grants.nih.gov/grants/guide/pa-files/PA-14-315.html>
- Obesity Policy Evaluation Research (R01) <http://grants.nih.gov/grants/guide/pa-files/PA-16-165.html>

In the News

- [What's the Fittest City in the U.S.?](#)
- [Exercise Cuts Cancer Risk, Huge Study Finds](#)
- [Healthy Lifestyle May Prevent Up to Half of Deaths From Most Common Form of Cancer, Study Finds](#)
- [Study finds childhood fitness reduces long-term cardiovascular risks of childhood obesity](#)
- [Fitness Trackers Move to Earphones, Socks and Basketballs](#)
- [Tai Chi: Rx for Arthritic Knees](#)
- [UD's Knight, Shake It Off helping people with Parkinson's through exercise](#)