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.

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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, February 13, 2018 at 10am CST.

- **Job Postings**
  - **Associate Director for the East Carolina Diabetes & Obesity Institute (ECDOI)**
  - **Chair, Department of Kinesiology, Temple University.** For more information see attachment or contact Emily Buehrens McCarthy, ebuehrens@IMSearch.com or (617) 262-6500

Upcoming Meetings and Conferences

- [Mayo Clinic Rehabilitation Medicine Update 2018](#) February 2-4, 2018, Scottsdale, AZ
- [ACSM’s International Health & Fitness Summit](#) April 5-8, 2018, Arlington, VA
- [Experimental Biology](#) April 21-25, 2018, San Diego, CA
- [Staying Power: Developing Lifestyle Interventions that Last](#) April 23-27, 2018, Warrenton, VA
- [ACSM’s 65th Annual Meeting](#) May 29-June 2, 2018, Minneapolis, MN

New Findings from NExTNet Investigators

**Aging**
- What's in a name: are menopausal "hot flashes" a symptom of menopause or a manifestation of neurovascular dysregulation?
- Physical Activity Patterns and Sedentary Behavior in Older Women With Urinary Incontinence: an Accelerometer-based Study.

Cancer
- Consumer credit as a novel marker for economic burden and health after cancer in a diverse population of breast cancer survivors in the USA.
- Perspective of older African-American and Non-Hispanic white breast cancer survivors from diverse socioeconomic backgrounds toward physical activity: A qualitative study.

Cardiovascular
- Long-term prognostic value of combined free triiodothyronine and late gadolinium enhancement in nonischemic dilated cardiomyopathy.
- Elevated Vasopressin in Pregnant Mice Induces T Helper Subset Alterations Consistent with Human Preeclampsia.
- Angiotensin AT_{1A} Receptors Expressed in Vasopressin-Producing Cells of the Supraoptic Nucleus Contribute to the Osmotic Control of Vasopressin.
- Influence of physical inactivity on arterial compliance during a glucose challenge.
- Effects of yoga interventions practiced in heated and thermoneutral conditions on endothelium-dependent vasodilation: The Bikram yoga heart study.
- Effects of High-Intensity Intermittent Training on Vascular Function in Obese Preadolescent Boys.

Cell and Molecular Biology
- Role of the carotid body chemoreceptors in glucose homeostasis and thermoregulation in humans.
- Inter- and intra-subject variability of nitric oxide levels in leukocyte subpopulations.
- Voluntary Wheel Running Does Not Alter Mortality to or Immunogenicity of Vaccinia Virus in Mice: A Pilot Study.

Exercise – Diet/Disease/Drug/Device/Environmental Interactions
- Last Word on Viewpoint: Principles, insights, and potential pitfalls of the noninvasive determination of muscle oxidative capacity by near-infrared spectroscopy.

Metabolic
- Type 2 diabetes impairs the ability of skeletal muscle pericytes to augment postischemic neovascularization in db/db mice.
- Physical activity mitigates adverse effect of metabolic syndrome on vessels and brain.

Neuroscience and Stroke
- Role of Physical Activity and Exercise in Alleviating Cognitive Impairment in People With Epilepsy.
- High-Intensity Exercise Acutely Increases Substantia Nigra and Prefrontal Brain Activity in Parkinson's Disease.
- Exercise as a Countermeasure to Declining Central Nervous System Function in Multiple Sclerosis.
- Patient- and Technician-Oriented Attitudes Toward Transcranial Magnetic Stimulation Devices.
- Increased myo-inositol in primary motor cortex of contact sport athletes without a history of concussion.
- Aerobic Exercise as an Adjuvant to Aphasia Therapy: Theory, Preliminary Findings, and Future Directions.
- Balance and fear of falling in subjects with Parkinson’s disease is improved after exercises with motor complexity.
- A history of sport-related concussion is associated with sustained deficits in conflict and error monitoring.
- Concussion Symptom Underreporting Among Incoming National Collegiate Athletic Association Division I College Athletes.
- Getting the Brain Into Shape: Exercise in Neurological Disorders.
Other

- Inter-individual variation in adaptations to endurance and resistance exercise training: genetic approaches towards understanding a complex phenotype.
- A mathematical model of the effects of resistance exercise-induced muscle hypertrophy on body composition.
- Reducing sedentary behaviour to decrease chronic low back pain: the stand back randomised trial.
- Non-Invasive Assessment of Internal and External Player Load: Implications for Optimizing Athletic Performance.

Pediatric

- Human development index, children's health-related quality of life and movement behaviors: a compositional data analysis.

Additional New Findings

- Effects of a 12-week cardiovascular rehabilitation programme on systemic inflammation and traditional coronary artery disease risk factors in patients with rheumatoid arthritis (CARDIA trial): a randomised controlled trial.
- Muscle damage protective effect by two maximal isometric contractions on maximal eccentric exercise of the elbow flexors of the contralateral arm.
- The role of physical exercise on Sestrin1 and 2 accumulations in the skeletal muscle of mice.
- A randomized controlled trial of exercise during pregnancy on maternal and neonatal outcomes: results from the PAMELA study.
- Running wheel exercise reduces a-synuclein aggregation and improves motor and cognitive function in a transgenic mouse model of Parkinson's disease.
- The effect of low-volume high-intensity interval training versus endurance training on glycemic control in individuals with type 2 diabetes.
- Building a Healthy Body After Cancer: Young Adult Lymphoma Survivors' Perspectives on Exercise After Cancer Treatment.
- Exercise Increases Glucose Transporter-4 Levels on Peripheral Blood Mononuclear Cells.
- Acute Effect of Aerobic and Strength Exercise on Heart Rate Variability and Baroreflex Sensitivity in Men with Autonomic Dysfunction.
- Investigation of the Effect of Exercise on Headache in Migraineurs Using a Smartphone Diary.
- Weight bearing exercise can elicit similar peak muscle activation as medium-high intensity resistance exercise in elderly women.
- Physical exercise improves strength, balance, mobility, and endurance in people with cognitive impairment and dementia: a systematic review.
- Regular Exercisers Have Stronger Pelvic Floor Muscles than Non-Regular Exercisers at Midpregnancy.
- Lactate Threshold as a Measure of Aerobic Metabolism in Resistance Exercise.
- Exercise Perception and Behaviors in Individuals Living with Primary Immunodeficiency Disease.
- The Effects of Acute Exercise on Cognitive Function: Solomon Experimental Design.
- Physical activity Implementation Study In Community-dwelling Adults (PHISICAL): study protocol.
- Personalized exercise dose prescription.
- Health Care Provider Counseling for Physical Activity or Exercise Among Adults with Arthritis - United States, 2002 and 2014.
- Effects of Low-Dose Dairy Protein Plus Micronutrient Supplementation during Resistance Exercise on Muscle Mass and Physical Performance in Older Adults: A Randomized, Controlled Trial.
- Diet and exercise changes following bone densitometry in the Patient Activation After DXA Result Notification (PAADRN) study.
- Exercise during and after neoadjuvant rectal cancer treatment (the EXERT trial): study protocol for a randomized
controlled trial.

- **Experimental effects of acute exercise duration and exercise recovery on mood state.**
- **Evaluation of supervised multimodal prehabilitation programme in cancer patients undergoing colorectal resection: a randomized control trial.**
- **Effect of vigorous physical activity on blood lipid and glucose.**
- **Acute acetaminophen ingestion improves performance and muscle activation during maximal intermittent knee extensor exercise.**
- **A physiotherapist-led exercise and education program for preventing recurrence of low back pain: a randomised controlled pilot trial.**
- **Measurement of postprandial glucose fluxes in response to acute and chronic endurance exercise in healthy humans.**
- **Resistance training during a 12-week protein supplemented VLCD treatment enhances weight-loss outcomes in obese patients.**
- **Sport-based physical activity recommendations and modifications in C-reactive protein and arterial thickness.**
- **The effect of targeted exercise on knee-muscle function in patients with persistent hamstring deficiency following ACL reconstruction - study protocol for a randomized controlled trial.**
- **Home exercise improves the quality of sleep and daytime sleepiness of elderlies: a randomized controlled trial.**
- **Attitudes and barriers to exercise in adults with a recent diagnosis of type 1 diabetes: a qualitative study of participants in the Exercise for Type 1 Diabetes (EXTOD) study.**

**RFAs / FOAs**

- Self-Management for Health in Chronic Conditions [PA-18-377 PA-18-384](#)
- Developing Interventions for Health-Enhancing Physical Activity [PAR-18-307](#)
- Testing Interventions for Health-Enhancing Physical Activity [PAR-18-324](#)
- Diet and Physical Activity Assessment Methodology [PAR-18-112 PAR-18-010](#)
- **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**

- **Exercise Alters Our Microbiome. Is That One Reason It’s So Good for Us?**
- **Extra Body Fat May Raise Breast Cancer Risk, No Matter Your Weight**
- **How much physical activity is appropriate for children with disabilities?**