

Orthopedic Specialties  
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# UAB MEDICINE

## Center for Exercise Medicine

### Mission

To promote the health and well-being of children and adults of all ages by:

- Fostering interdisciplinary research to optimize exercise treatment strategies for chronic conditions, disease prevention, and injury prevention and rehabilitation using a dose-response approach to exercise prescription
- Establishing prescription guidelines for health and fitness across the age span
- Training and educating the next wave of scientists and healthcare professionals on the physiology and clinical applicability of exercise treatments
- Recruiting established scientists and clinicians into exercise-based research programs
- Promoting community outreach and education based on findings through clinical exercise trials

2011  
Established

>200  
Members &  
Trainees

10  
UAB  
Schools

36  
UAB  
Departments

### Young Investigator Support

- Interdisciplinary Training in Pathobiology and Rehabilitation Medicine (T32)
  - Supporting pre- and postdoctoral trainees
- UCEM Research Roundtable
  - A resource for Center members to gain feedback on grant proposals, journal articles, etc. relating to exercise, rehabilitation, or muscle
- Student Internship Programs
- Pilot program

### Faculty Leadership



### Meet the Team



### Exercise Clinical Trials Facility (ECTF)

#### Exercise Intervention Facilities

- 6000 square feet
- 24 resistant exercise stations
- Olympic barbells, dumbbells, and 2000 pounds of free weight
- 10 stationary cycle ergometers
- 9 treadmills
- 4 rowers



#### Cardiorespiratory Function Lab

- 12-lead ECG graded exercise testing
- Aerobic power, ie VO2Max
- Anaerobic power
- Steady state cardiorespiratory and metabolic during submaximal exercise

#### Neuromuscular Function Lab

- Joint kinematics (electrogoniometry) and kinetics
- Maximum voluntary strength (isometric and dynamic) testing
- Electrically evoked maximum force measurement
- Neuromuscular power assessment Muscle fatigue testing
- Muscle activation via surface electromyography (EMG)
- Computerized balance assessment
- Computerized gait analysis



To request services: [go.uab.edu/ucem-request-for-services](http://go.uab.edu/ucem-request-for-services) or email **Chastity Bargerhuff** at [cbargerhuff@uabmc.edu](mailto:cbargerhuff@uabmc.edu) for more information.

Join our news list:  
[uab.edu/medicine/exercise/news-events](http://uab.edu/medicine/exercise/news-events)

### Recent Clinical Trials Supported

Principle Investigator	Department	Title	Funding Source
Thomas Buford, PhD	Gerontology, Geriatrics, and Palliative Care	Antihypertensives Combined with Exercise for Seniors with Hypertension (ACES)	NIA
		Molecular Transducers of Physical Activity Consortium (MoTrPAC)	NIH
James Hill, PhD	Nutrition	Nutrition for Precision Health (NPH)	NIH
Raymond Jones, PhD	Gerontology, Geriatrics, and Palliative Care	Vascular and Cognitive Dysfunction in Older Adults with HIV (VASCOG)	NIA
Thomas Buford, PhD Raymond Jones, PhD	Gerontology, Geriatrics, and Palliative Care	Feasibility of High-intensity Interval Training in Older Adults with HIV and Co-Occurring Hypertension (HARC)	National Institute on Aging-HIV & Aging Research Consortium
Pariya Fazeli Wheeler, PhD	Nursing Family, Community and Health Systems	The High-Intensity Exercise Study to Attenuate Limitations and Train Habits in Older Adults with HIV (HEALTH-COG)	NIA
Jane Allendorfer, PhD	Neurology	Effects of Exercise on Memory Deficits and Brain Network Connectivity in Epilepsy (MBI)	MBI Pilot, REACT, UAB Epilepsy Center
		Exercise for Memory Rehabilitation in Epilepsy (EMemRE)	NCMRR
Hsiao-Lan Wang, PhD	Nursing Family, Community and Health Systems	Reducing Health Disparity of Physical Functioning Among Young Adult Cancer Patients of Color (PAFitME-Strong)	Oncology Nursing Foundation
Merry-Lynn McDonald Donnelly, PhD	Pulmonary/ Allergy/ Critical Care	COPD Cachexia Etiology of Low-Lean Muscle (Ccell 2.0)	NHLBI
Taylor Taylor, PhD, MEd	Family and Community Medicine	Relationships of Affect and Neuroinflammation with Clinical Pain in Veterans with Fibromyalgia (RAN)	Veterans Administration CDA-1
Mckenna Tharpe, MS	Physical Therapy	Exercise, Vascular Health, and Environment in Older Women (EVE)	CCTS/UCEM
Pankaj Arora, MD	Cardiology	Genotype Guided-Natriuretic Peptides-Cardiometabolic Health Study (GENESIS)	NIH
		Effect of Natriuretic Peptide Augmentation on Cardiometabolic Health in Black Individuals (NAUTICAL)	
		Race, Natriuretic Peptides and Physiological Perturbations (EBS)	



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