

Starting a Exercise program in your Community

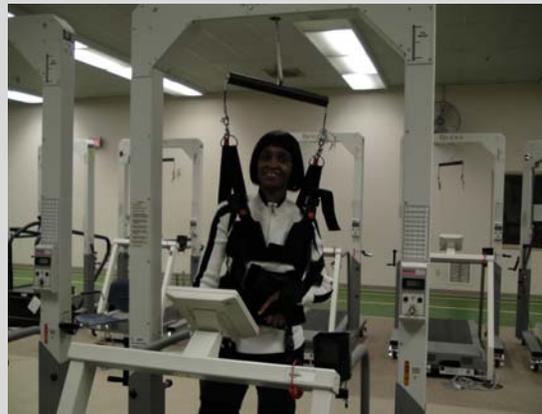
We currently have a detailed manual available if you are interested in starting this free exercise rehabilitation program in your community. We provide information on how to apply for grants and where to find stroke survivors. We have a variety of group programs for all stroke survivors. Please contact us if you are interested in all of our programs.



Howard County Exercise Rehabilitation Program.
Howard County, MD

Stroke Survivors

If you or someone you know has had a stroke and you are interested in one of our free research rehabilitation programs please contact us at the number be-



Treadmill Aerobics Exercise



BALTIMORE/VAMHCS & University of Maryland - School of Medicine

Latosha Collins

10N Greene St

Baltimore, MD 21201

Phone: 410-960-5562

E-mail: latosha.collins@va.com



BALTIMORE/VAMHCS & University of Maryland - School of Medicine

Maryland Exercise and Robotics Center of Excellence (MERCE)



Telephone: 410-960-5562

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About MERCE

The mission of Maryland Exercise and Robotics center of Excellence, (MERCE) is to develop and test new rehabilitation therapies to improve physical function, fitness and cardiovascular health.



MERCE Rehabilitation goals:



Group Exercise Study

1. Create a test new therapies to improve upper and lower extremity function for stroke survivors and other neurological disease. This includes Parkensins, Multiple Sclerosis, (MS) and Myostenia Gravis. The overall goal is to help improve motor function, cardio fitness and the overall quality of life.

2. Our physical goals include learning more about how the brain learns (brain plasticity); understanding more about how neurological disabilities affect muscle biology, gaining a deeper knowledge of cardiovascular issues and lastly studying and understanding the role of mental health within neurological disorders.

3. Community Outreach: Once we have an understanding of an issue we realize the importance of taking this knowledge and sharing with the community. We distribute educational materials within Baltimore and Washington, DC. The content of our information focuses on overall health specifically for stroke survivors and other neurological disabilities. We also provide information on our robotic and exercise programs that attempt to improve extremity function, overall health and quality of life for everyone.

Stroke Survivors

Nine out of every 10 strokes are silent. Approximately 780,000 strokes occur each year. By 2040 this number is expected to double. About 75% of all stroke survivors will have continued deficits following their stroke. Continued mobility issues occur in 1/2 to 2/3 of all stroke survivors. In many cases after physical therapy ends mobility problems still continues. Paralysis and disuse combined with aging has been linked to overall worsening health and increased disability.



Stroke Survivor lifting weights with a trainer (SMART)

teaching the brain how to walk

3. Increase cognitive function and motor learning abilities. Type 2 Diabetes was apparent in 81% of stroke survivors and have been shown to double or triple a stroke survivors chance at a secondary stroke. Exercise following stroke can improve cardiovascular fitness, glucose control to reverse diabetes, and walking function through re-teaching the brain how to walk, Our studies have also shown that by increasing the intensity of a walk there are overall higher fitness gains. Following 6 months of aerobic activity we were able to reverse diabetes in 58% of cases, possibly reducing the chances of a second stroke. To date our rehabilitation research studies have been able to improve cardiovascular fitness and walking; improve insulin and glucose metabolism and overall improve walking years after a stroke.

MERCE and Exercise for Stroke

Our free research exercise rehabilitation programs seek to:

1. Increase fitness
2. Improve gait by re

MERCE and Robotics for Stroke Survivors

Our research robotics rehabilitation programs use robotic devices to aid in rehabilitation after stroke. MERCE's research has shown that patients with



Stroke survivor with the EEG Cap for Ankle Bot study

moderate to severe weakness in their ankle of arm can benefit from robotic rehabilitation. Currently we are providing free research programs for upper and lower extremity robotic programs. This novel research attempts to identify possible mechanisms for recovery. Using fMRI TMS; or EEG we are using these devices to measure areas of brain activity to investigate how the brain is learning while using a robotic device.



Stroke Survivor using the Anklebot

For more information
please call 410-960-5562