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Primary Research Interest:	Rehabilitative Medicine
Description of Research:	<p>To address our research question 60 older adults (age 65-89) will be randomized to one of two 12 week intervention groups: 1) Cognitive Training alone (CT) or 2) Aerobic Exercise + Cognitive Training (AE+CT). The aerobic exercise arm of the study will follow the same format shown to improve a broad range of cognitive functions in older adults in previous research. The cognitive training arm will consists of a popular commercially-available brain fitness program that has demonstrated specific cognitive improvements and high adherence. Baseline testing will consist of a battery of cognitive function that target verbal fluency, response inhibition, and working memory. Additionally, participant will undergo a structural and functional MRI. Participants will also be evaluated on their physical function as assessed by a 400 meter walk, balance tests, and questionnaires about their daily functioning. And lastly, all participants will be assessed on their aerobic capacity. Following the 12-week intervention all participants will be post tested in the same manner as the baseline testing.</p>
Relevance to VA:	<p>Currently the United States has over 23 million Veterans. Of this number, 39.1 percent are over the age of 65- a number that will greatly increase as a large percent of the US population ages. Unfortunately, many of these individuals will suffer from some form of age-related cognitive decline and/or mobility disability. Despite the fact that the United States federal government spends \$100 billion dollars annually to cure and/or treat cognitive impairments, successful strategies to mitigate these impairments remain elusive. Interestingly, the current initiative of the RR&D seeks to improve the quality of life of Veterans through a full spectrum of research, from rehabilitation research projects, through evaluation and transfer to final clinical application that ultimately results in improved daily lives of Veterans. My research aims to substantially advance the development of treatments for cognitive and mobility impairment because the goals explore an intervention that may potentially have pervasive effects on US Veterans quality of life and well-being from a physical as well as a cognitive standpoint.</p>