

**David J. Clark, ScD**  
***Curriculum Vitae***

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Mailing Address:  
Brain Rehabilitation Research Center (151A)  
Malcom Randall VA Medical Center  
1601 SW Archer Rd  
Gainesville, FL 32608

**Education**

**Doctor of Science (ScD)**

Boston University  
Sargent College of Health and Rehabilitation Sciences  
Department of Physical Therapy and Athletic Training  
Movement and Rehabilitation Sciences Program  
September 2002 – May 2007

**Bachelor of Science (BS), Summa Cum Laude**

University of Massachusetts – Lowell  
Exercise Physiology  
September 1997 – June 2001

**Professional Experience**

**Research Health Science Specialist**

*Adaptability of Walking in Persons with Neurologic Disorders*  
Brain Rehabilitation Research Center  
Malcom Randall VA Medical Center  
Gainesville, Florida  
September 2007 – present

**Courtesy Faculty**

Department of Physical Therapy  
University of Florida, Gainesville, FL  
September 2007 - present

**Graduate Research Assistant**

*Lower Extremity Muscle Power and Function in the Elderly*  
Jean Mayer Human Nutrition Research Center on Aging  
Nutrition, Exercise Physiology and Sarcopenia Laboratory  
Tufts University, Boston, MA  
June 2005 – August 2007

**Graduate Research Assistant**

*Physiological Correlates of Pathology, Impairment and Disability in Post-Stroke Hemiparesis*  
Neural Control of Movement Laboratory  
Sargent College of Health and Rehabilitation Sciences  
Boston University, Boston, MA  
September 2002 - June 2005

**Head Teaching Assistant**

*Neuroanatomy and Neurophysiology, 2007*

*Clinical Exercise Physiology, 2004-2006*

Health Sciences Department, Sargent College, Boston University

**Teaching Assistant**

*Neuroanatomy and Neurophysiology, 2006*

*Clinical Exercise Physiology, 2003*

Health Sciences Department, Sargent College, Boston University

**Physical Therapy Assistant**

Northeast Rehabilitation, Lowell, MA, 2000

**Intern**

Pulmonary Rehabilitation Department, Lahey Clinic, Burlington, MA, 2000

**Grants****Career Development Award – Level 1 (9/2007 – 8/2009)**

Department of Veterans Affairs, Rehabilitation Research and Development Service

*Adaptability of walking in persons with neurological disorders*

\$137,728

**Post-Doctoral Fellowship**

American Heart Association

*Adaptability of walking in persons with post-stroke hemiparesis*

\$81,000 (declined due to acceptance of Veterans Affairs Career Development Award)

**Dudley Allen Sargent Fund (1/2003 – 12/2003)**

Doctoral Student Research Grant, Sargent College, Boston University

*Assessing the Reliability of Lower Extremity Force Production in Persons with Post-Stroke Hemiparesis*

\$1,770

**Publications**

**Clark DJ**, Condliffe EG, Patten C. Activation impairment alters muscle-torque velocity in the knee extensors of persons with post-stroke hemiparesis. *Clin Neurophysiol*, 117(10): 2328-37, 2006.

**Clark DJ**, Condliffe EG, Patten C. Reliability of concentric and eccentric torque during isokinetic knee extension in post-stroke hemiparesis. *Clin Biomech*, 21: 395-404, 2006.

Condliffe EG, **Clark DJ**, Patten C. Reliability of elbow stretch reflex assessment in chronic post-stroke hemiparesis. *Clin Neurophysiol*, 116: 1870-8, 2005.

## **Manuscripts in Preparation**

**Clark DJ**, Neptune RR, Ting LH and Kautz SA. Modular control of muscle activity underlying locomotor control and recovery following stroke. (*in prep*)

Bowden MG, **Clark DJ**, Neptune RR and Kautz SA. Evaluation of abnormal synergy patterns post-stroke: relationship of clinical examination to hemiparetic locomotion. (*in prep*)

**Clark DJ**, Fielding RA and Patten C. Velocity-dependent modulation of agonist activation preserves dynamic torque. (*in prep*)

**Clark DJ**, Patten C and Fielding RA. Slow rate of neuromuscular activation contributes to impaired movement acceleration and peak power in mobility-limited older adults. (*in prep*)

## **Scientific Presentations**

**Clark DJ**, Subramanian N, Neptune RR, Ting LH and Kautz SA. Fewer basic activation patterns account for lower extremity EMG during walking in adults post-stroke compared to healthy controls. 18<sup>th</sup> Annual Meeting of the Society for the Neural Control of Movement, Naples FL, April 2008.

**Clark DJ**, Dairaghi CA, Patten C. Effects of concentric vs. eccentric resistance training on muscle strength and walking function in adults post-stroke. 18<sup>th</sup> Annual Meeting of the Society for the Neural Control of Movement, Naples FL, April 2008.

Kautz SA, **Clark DJ** and Neptune RR. Deficits in voluntary modulation of step length in hemiparetic walking. 18<sup>th</sup> Annual Meeting of the Society for the Neural Control of Movement, Naples FL, April 2008.

Bowden MG, **Clark DJ** and Kautz SA. Evaluation of abnormal synergy patterns post-stroke: relationship of clinical examination to hemiparetic locomotion. 18<sup>th</sup> Annual Meeting of the Society for the Neural Control of Movement, Naples FL, April 2008.

**Clark DJ**, Patten C, Reid KF, Carabello RJ, Phillips EM and Fielding RA. Slow rate of neuromuscular activation contributes to impaired movement acceleration and peak power in mobility-limited older adults. Experimental Biology, San Diego CA, April 2008.

Reid KF, Doros G, Cloutier GJ, **Clark DJ**, Carabello RJ, Phillips EM, Frontera WR and Fielding RA. Comparison of lower extremity strength, power and muscle area between healthy subjects and mobility-limited elders. Experimental Biology, San Diego CA, April 2008.

**Clark DJ**, Subramanian N, Neptune RR, Kautz SA. Fewer basic activation patterns account for lower extremity EMG during walking in adults post-stroke compared to healthy controls. Neuromuscular Plasticity Symposium, University of Florida, Gainesville FL, January 2008.

**Clark DJ**, Dairaghi CA, Patten C. Effects of concentric vs. eccentric resistance training on muscle strength and walking function in adults post-stroke. Neuromuscular Plasticity Symposium, University of Florida, Gainesville FL, January 2008.

**Clark DJ**, Patten C, Reid KF, Phillips EM, Fielding RA. Does force or velocity contribute more to maximal muscle power in older adults? *Med Sci Sports Exerc* 39(5 Suppl): S262. Annual Meeting of the American College of Sports Medicine, New Orleans LA, May 2007.

**Clark DJ**, Fielding RA, Patten C. Velocity-dependent modulation of agonist EMG distinguishes healthy adults from motor-compromised adults. Science and Engineering Research Symposium, Boston University, Boston MA, April 2007.

**Clark DJ**, Condliffe EG, Patten C. Activation impairment limits muscle power at slow movement velocity in post-stroke hemiparesis. Ontario Exercise Neuroscience Group, St. Catherines ON, June 2006.

Condliffe EG, **Clark DJ**, Patten C. Improved stretch reflex modulation following resistance training in post-stroke hemiparesis. Ontario Exercise Neuroscience Group, St. Catherines ON, June 2006.

**Clark DJ**, Condliffe EG, Patten C. Activation impairment alters muscle-torque velocity in post-stroke hemiparesis. Annual Meeting of the Society for Neuroscience, Washington DC, November 2005.

**Clark DJ**, Condliffe EG, Patten C. Reliability of lower extremity concentric and eccentric torque in persons with post-stroke hemiparesis. *Med Sci Sports Exerc* 37(5 Suppl): S292. Annual Meeting of the American College of Sports Medicine, Nashville TN, June 2005.

Condliffe EG, Kothari DH, **Clark DJ**, Lum PS, Patten C. Reflex Hypertonia in Post-Stroke Hemiparesis: Reliable Assessment & Adaptations Following High-Intensity Resistance Training. University of Toronto Medical Students Research Day, January 2005.

Condliffe E, **Clark DJ**, Patten C. Reliability of Quantitative Measures of Hypertonia in Post-Stroke Hemiparesis. Boston University Science and Engineering Research Symposium, March 2004.

### **Professional Affiliations**

Member, Society for the Neural Control of Movement

### **Additional Qualifications and Honors**

#### **Outstanding Post-doctoral Poster**

Effects of concentric vs. eccentric resistance training on muscle strength and walking function in adults post-stroke.

Neuromuscular Plasticity Symposium, University of Florida (2008)

#### **Sargent College Dean's Award: Outstanding Poster**

Velocity-dependent modulation of agonist EMG distinguishes healthy adults from motor-compromised adults.

Science and Engineering Research Symposium, Boston University (2007)

**Health/Fitness Instructor Certified**, American College of Sports Medicine (2001 – present)

**Class President**, Exercise Physiology, University of Massachusetts – Lowell (2000-2001)

**Member**, Honors Program, University of Massachusetts – Lowell (1997-2001)

**Member**, Alpha Lambda Delta National Honor Society (1998)