

Karen Hutchinson, PT, DPT, PhD
Boston University

Education:

Transitional Doctor of Physical Therapy
Northeastern University, Boston, MA
Physical Therapy
(May/2008)

Doctor of Philosophy
The Ohio State University, Columbus, OH
Neuroscience, Exercise and Recovery from Experimental Spinal Cord Injury
(March/2000)

Post-professional Master of Science
The Ohio State University, Columbus, OH
Neurology, Stroke and Balance disorders
(March/1993)

Bachelor of Science
The University of Lowell, Lowell, MA
Physical Therapy
(June/1986)

Licensure Information:

MA Licensure: #6987 (from 1986 to present)

Certifications:

Academy of Geriatric Physical Therapy
Certified Exercise Expert for the Aging Adult (CEEAA Certification)
Completed September 2017

Employment and Positions Held:

Clinical Associate Professor
Boston University College of Health and Rehabilitation Sciences: Sargent College
Boston, MA
(from September 2008 to present)

Assistant Professor
Northeastern University, Department of Physical Therapy
Boston, MA
(from 2000 to 2008)

Research Assistant
The Ohio State University Department of Cell Biology, Neurobiology and Anatomy
Columbus, OH
(from 1996 to 2000)

Physical Therapist, part-time
Franklin Woods Health Care Center, Inpatient Neurorehabilitation
Columbus, OH
(from 1995 to 1997)

Teaching Assistant - Medical School Course in Neuroanatomy and Neurophysiology
The Ohio State University
Columbus, OH

(from 1996 to 1997)

Research Assistant
The Ohio State University, Department of Psychobiology, Neuroscience Program
Columbus, OH
(from 1994 to 1996)

Research Assistant
The Ohio State University, Department of Psychology, Neuroscience Program
Columbus, OH
(from 1993 to 1994)

Physical Therapist, part-time
Riverside Methodist Hospital, Outpatient Neuro Rehab
Columbus, OH
(from 1992 to 1995)

Research Assistant
The Ohio State University, School of Allied Medical Professions, Division of Physical Therapy
Columbus, OH
(from 1992 to 1993)

Teaching Assistant
The Ohio State University, School of Allied Medical Professions, Division of Physical Therapy
Columbus, OH
(from 1990 to 1992)

Staff Physical Therapist/Resource Clinician
Braintree Hospital, Inpatient and Outpatient Services
Braintree, MA
(from 1986 to 1990)

Peer Reviewed Publications:

Forrest, Gail F, Hutchinson, Karen; Lorenz, Douglas J; Buehner, Jeffery J; VanHiel, Leslie R; Sisto, SueAnn; Basso, D Michele. Are the 10 meter and 6 minute walk tests redundant in patients with spinal cord injury? PLoS one, 2014, Vol.9(5), pp.e94108.

Sue Ann Sisto, PT, PhD, Douglas Lorenz, Ph.D., Karen Hutchinson, DPT, PhD, Lisa Wenzel, MD, Jessica Hillyer, PhD, Susan Harkema, PhD, Andrei Krassioukov, MD, PhD Cardiovascular Status of Individuals with Incomplete Spinal Cord Injury From the 7 NeuroRecovery Network Rehabilitation Centers. Arch Phys Med Rehabil 2012; 93(9):1578-87.

Elizabeth Ardolino, K Hutchinson, Genvieve Pinto-Zipp, Mary Ann Clark, Susan Harkema, The Activity-Based Balance Level Evaluation (ABLE) Scale: The Development and Psychometric Properties of An Outcome Measure for the Spinal Cord Injury Population. Phys Ther August 2012; 92(8):1046-1054.

G. Forrest, D. Lorenz, K. Hutchinson, L. VanHiel, D.M. Basso, S. Datta, S. Sisto. Ambulation and balance outcomes measure different aspects of recovery in individuals with chronic incomplete spinal cord injury. Arch Phys Med Rehabil;2012; 93(9): 1553-64.

M. Detloff, L Clark, L. Fisher, K.Hutchinson, A. Kloos, LC Fisher, DM Basso. Validity of acute and chronic tactile sensory testing after spinal cord injury in rats. Experimental Neurology; Oct 2010; 225(2):366-376.

K. Hutchinson, Winnege T. Manual Therapy Applied to the Hemiparetic Upper Extremity of a Chronic Post-Stroke Individual: Case Report. J of Neurological Physical Therapy. 2004;28(3):129-137.

K. Hutchinson, Gomez-Pinilla F., Crowe MJ, Basso DM. Three Exercise Paradigms Differentially Improve Sensory Recovery after Spinal Cord Contusion in Rats. *Brain*. 2004;127:1403-1414.

K. Hutchinson, J. Linderman, D.M. Basso, Skeletal Muscle Adaptations following Experimental Spinal Cord Injury in Rat and the Relationship to Locomotor Function: A time course study. *J Neurotrauma*; 2001;18:1075-1090.

DS Nichols, T Glenn, KJ Hutchinson. Changes in the Mean Center of Pressure During Balance Testing in Young Adults. *Physical Therapy*. 1995;75(8):699-706.

Peer Reviewed Scientific and Professional Presentations:

Hutchinson, K.

Exercise Considerations for Individuals Post Spinal Cord Injury: A Clinical Perspective. Invited Speaker. Braintree Rehabilitation Hospital 37th Annual Neurorehabilitation conference. Cambridge, MA.

Nov 2016

Hutchinson, K.

Exercise Prescription for the Overweight and Obese Patient with Spinal Cord Injury. MA APTA Neurology Section Meeting, Boston, MA

June 2015

Hutchinson, K; Sisto, S.; Dale D, Prox K.

Assessment and Management of Overweight or Obese Patients with Spinal Cord Injury. APTA, Combined Sections Meeting, Indianapolis, IN

February 2015

Sisto, S; Hutchinson, K; Cowan, R; Rimmer, J; Maresh, T.

Health Promotion and Fitness Transition from Clinical Practice to the Community for People with Spinal Cord Injury

ACRM Annual meeting, Orlando, FLA

November 2013

K. Hutchinson.

"Functional Outcome Measures Following Spinal Cord Injury: Focus on Balance and Gait."

MA APTA Annual Meeting, Danvers, MA

November 2010

S. Sisto, A.Behrman, K.Hutchinson, L.VanHiel, E.Ardolino, D.Atkinson, D.Graves, M.Basso,

S.Harkema, H.Barbeau. "Locomotor Training: Moving Science into Evidence-Based Rehabilitation."

ACRM-ASNR Annual Meetings, Denver, Colorado

October 2009

D. Basso, KJ Hutchinson, E Ardolino, A Behrman, C Peschel, L Van Hiel, S Sisto.

"Selecting, using and interpreting outcome measures for recovery after spinal cord injury: Evidence from the Neurorecovery Network"

CSM, Las Vegas, Nevada

February 2009

KJ Hutchinson

"Hemodynamic Challenges Following Harness Application in Individuals with Spinal Cord Injury"

Platform Presentation, CSM, Cardiopulmonary Section of the APTA, Boston, MA

February 2007

KJ Hutchinson

“Heart Rate Variability as an Indicator of Fitness in Individuals with Spinal Cord Injury”
Platform Presentation, CSM, Cardiopulmonary Section of the APTA, San Diego, CA
February 2006

KJ Hutchinson, “Participation in Health-Related Activity in a Cohort of Subjects with Chronic Spinal Cord Injury”, Poster, National APTA Conference, Boston, MA
June 2005

KJ Hutchinson, P. Canavan and L. Deming
“Gait Analyses: Qualitative Assessment and Beyond”
APTA Annual Conference, Worcester, MA
October 2004

KJ Hutchinson, “Annotated Bibliography – SCI Research Year in Review”
CSM, Spinal Cord Injury Special Interest Group, Nashville, TN
February 2004

KJ Hutchinson
“Activity Level and Musculoskeletal Pain in Spinal Cord Injury”, Poster Teaser
CSM, Tampa, FL
February 2003

KJ Hutchinson
Discussion on skeletal muscle changes after SCI and clinical treatments, Roundtable
CSM, Tampa, FL
February 2003

KJ Hutchinson
“A Case Report on Joint Mobilization for a Hemiplegic Upper Extremity. An Adjunct for Constraint Induced Movement Therapy?”, Poster Teaser
CSM, Boston, MA
February 2002

KJ Hutchinson
“The Recovery of Function After Spinal Cord Contusion Injury in Rats: Skeletal Muscle, Neural and Behavioral Adaptations With and Without Exercise”, Dissertation Defense
The Ohio State University
February 2000

KJ Hutchinson
“Early Moderate Exercise Training After Spinal Cord Injury Does Not Exacerbate Lesion Size and Attenuates Changes in Hindlimb Sensation in the Rat.”, Poster
Society for Neuroscience Meeting, Los Angeles, CA
October 1999

KJ Hutchinson
“Moderate Exercise Training Improves Locomotor Recovery and Does Not Exacerbate Lesion Size When Implemented Early After Spinal Cord Injury in Rat.”, Platform Presentation
APTA CSM, Seattle, WA
February 1999

KJ Hutchinson
“Exercise Training Improves Recovery from Spinal Cord Contusion Injury in the Rat.”, Poster
Society for Neuroscience Meeting, New Orleans, LA
October 1998

Basso DM, KJ Hutchinson, et al.
"Neurotrophin and Insulin-like Growth Factor-1 mRNA expression in Rat. HL muscles after Spinal Cord Injury.", Poster
Neuroscience Meeting, New Orleans, LA
October 1998

Basso, DM, KJ Hutchinson
"The Severity of Hyperreflexia is Greater after Moderate vs. Mild Experimental Spinal Cord Injury in Rats." Poster
APTA CSM, Dallas, TX
February 1998

Invited Speaker Presentations:

KJ Hutchinson, "Update on locomotor training in neurologically impaired patient populations. Body weight support and treadmill walking." Invited Speaker, Grand Rounds, Boston Medical Center, Boston, MA
October 2005

Funded/In Review Grant Activity:

Consultant
\$400,000
"Neurorecovery Network Center", Boston Medical Center, Christopher Reeve Paralysis Foundation and The Centers for Disease Control
A multicenter trial assessing treadmill-based locomotor training, using body weight support, for patients with spinal cord injury
April 2006

Author/PI
\$12,000
"Assessment of Cardio-respiratory fitness in subjects with Chronic Spinal Cord Injury"
Internal: Provost Research and Scholarship Award, Northeastern University, July 2005

Author/PI
\$3,600
"Development of an Electrodiagnostic and Kinematic Motor Control Laboratory"
Internal: Faculty Development Award, Northeastern University, March 2001

Interdisciplinary Clinic Committee member
\$40,000
"Development of Interdisciplinary Clinical Services to Address Unmet Health Needs of Urban Families Living in the Northeastern University Community"
President's Excellence Fund, June 15, 2001

Current/Active Research Activity:

Lead/assist for studies
Stroke and Exercise Testing: I am currently working with Dr. Lou Awad to facilitate VO2 Max Exercise testing with patients post-stroke to be captured in his new lab during the next academic year. I completed CEEAA training to prepare myself to lead/assist these studies. It is likely that additional training to CEEAA will be required (e.g. ACLS training or EKG specific study).

Lead and first author
Single Case Study: Practicum Project with SP. Weighted Vest Training in a patient with Cerebellar Disease to decrease the incidence of Falls. This successful project ended in December of 2015.

Co-developer

The Health Fitness Plan (HFP): Is a tool we developed to improve communication between discharging physical therapists and fitness center staff (fitness trainer or exercise professional). The HFP is a new tool used between a physical therapist and patient, when discharging from PT, with a focus on goal development/exercise prescription for persons with physical disabilities. This tool has been rigorously tested at the Quincy YMCA with several Practicum Student projects working to improve the functionality. Erin Fabian, BSDPT '2009 initiated this project. This tool will be part of the National Health, Promotion and Wellness Initiative of the ANPT in 2019.

Membership in Scientific/Professional Organizations:

American Physical Therapy Association
(from 1982 to present)
Neurology Section, member

APTA, Spinal Cord Injury Special Interest Group
(from June 2011 to June 2017; 2002- 2005)
Chair; Nominating Committee

International Spinal Cord Society (ISCOS)
(from 2011 to present; 2011 to Jan 2017)
Member; Executive Board Member

Consultative and Advisory Positions Held:

Journal Article Reviewer
Journal of NeuroEngineering and Rehabilitation
(from 2017 to present)

Journal Article Reviewer
Journal of Neurologic Physical Therapy
(from 2016 to present)

Health Promotion and Wellness Task Force, Exercise Prescription Sub-Committee Member
Academy of Neurologic Physical Therapy
(from 2016 to 2019)

Reviewer
International Conference of Rehabilitation Robotics (ICORR) Conference
(2005)

Journal Article Reviewer
Journal of Spinal Cord Medicine
(from 2015 to present)

Reviewer
APTA Neuromuscular Practice Patterns
(from 2004 to 2006)

APTA: A Consensus Conference: Neurologic Entry Level Clinical Content Alexandria, VA
This was an expert consensus conference for the Neurology Section of the APTA (now called the Academy of Neurologic PT). The goal of this committee was to establish what constituted entry-level neurologic Physical Therapy practice, in contrast to the DSP or description of specialty practice.
(Oct 2008)

Advisory Board Member
New England Regional Spinal Cord Injury Center; Boston Medical Center Boston, MA
(from 6/2008 to 2016)

Advisory Board Member
Spaulding/NERSCIC Combined Advisory Board
(from 1/2017 to 2020)

Chair
APTA Spinal Cord Injury Special Interest Group
(from 2011 to 2014, 2014-2017)

US Rep and Board Member
International SCI Physiotherapy Network
(from 2011 to 2015)

Abstract Reviewer
IV Step
(2015)

Community Service:

Volunteer
Challenger Division of Little League Baseball in Dorchester, MA
(from Spring 2014 to 2018)

Volunteer in partnership program targeting exercise activities for individual with physical disabilities
Quincy YMCA
(from Summer 2010 to 2012)

Organizer, Wheelchair Basketball Clinic - 4 hour clinic for community members with physical disabilities
NEPVA and the "Joining Hands" organization
(from Feb 7, 2010 to Oct 2012)

Presenter, "Brains, Skulls, and Bicycle Safety" – neuroscience related outreach sessions to kindergarten class, and 4th Grade class
Edward Everett Elementary School, Dorchester, MA, and Murphy Elementary School
(May 2006, June 2010)

Presenter, "Mr Bones" – presented to preschool class
Russell J. Call Day Care Center at Northeastern University
(October 2005)

Services to the University/College/School on Committees/Councils/Commissions:

Sargent College
2017 – 2018
Member, Sargent Search Committee for Clinical Assistant position in Nutrition

Department of Physical Therapy & Athletic Training
2014 – present
Advisor, BSDPT program

Department of Physical Therapy & Athletic Training
2009 – present
Member, DPT Admissions Committee

Honors and Awards:

Academic Keys
Who's Who in Health Sciences Education

July 2003

Predoctoral Fellow, NIH Training Grant
The Ohio State University
1998-1999

Graduate Student Alumni Research Award, Sponsoring Dissertation Research at OSU (\$1500.00)
The Ohio State University
1998

Student Travel Award
Asilomar International Neural Regeneration Research Symposium
Dec 1997

1st Prize in Professional Biological Sciences Division
Council of Graduate Students, OSU Poster Presentation
April 1997

Fellow, Summer Institute in Cognitive Neuroscience
Univ. of California, Davis
July 1994

Member
Phi Kappa Phi Honor Society
1993

Dean's List
University of Lowell
from 1982 to 1986

Current Teaching Responsibilities in the Entry-Level for the Academic Year of Site Visit:

Summer 2018:

SAR PT515 Physical Therapy Examination (4 credits)
Lab Instructor

Fall 2018:

SAR PT652 Neurological Management I (6 credits)
Primary Instructor

Spring 2019:

SAR PT551 Neuroscience for Physical Therapy Students (4 credits)
Primary Instructor

SAR PT681 & PT781 Academic Practicum
Mentor to 3-6 students each year