

CURRICULUM VITAE

Karen Hutchinson, PT, DPT, PhD
238 Savin Hill Ave
Dorchester, MA 02125
Phone: (617) 288-4440
Boston University
College of Health and Rehabilitation Sciences: Sargent College
Department of Physical Therapy and Athletic Training
Physical Therapy Program

Education:

Northeastern University
Boston, MA
2008
Physical Therapy, tDPT, May 2008

The Ohio State University
Columbus, OH
1993 - 2000
Neuroscience, Exercise and Recovery from Experimental Spinal Cord Injury, Ph.D., March
2000

The Ohio State University
Columbus, OH
1990 - 1993
Neurology, Stroke and Balance disorders, Post-professional M.S. Degree, 1993

The University of Lowell
Lowell, MA
1982 - 1986
Physical Therapy, B.S., 1986

Licensure Information/Registration Number:

MA Licensure: #6987

Employment and Positions Held :

Clinical Associate Professor
Boston University
College of Health and Rehabilitation Sciences: Sargent College
Department of Physical Therapy and Athletic Training
Boston, MA
September 2008 - present

Assistant Professor
Northeastern University
Department of Physical Therapy
Boston, MA
2000 - 2008

Research Assistant
The Ohio State University
Department of Cell Biology, Neurobiology and Anatomy
Columbus, OH
1996 - 2000

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

Teaching Assistant
Medical School Course in Neuroanatomy and Neurophysiology
1996 - 1997

Research Assistant
The Ohio State University
Department of Psychobiology, Neuroscience Program
Columbus, OH
1994 - 1996

Research Assistant
The Ohio State University
Department of Psychology, Neuroscience Program
Columbus, OH
1993 - 1994

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

Research Assistant
The Ohio State University
School of Allied Medical Professions
Division of Physical Therapy
Columbus, OH
1992 - 1993

Teaching Assistant
The Ohio State University
School of Allied Medical Professions
Division of Physical Therapy
Columbus, OH
1990 - 1992

Staff Physical Therapist/Resource Clinician
Braintree Hospital
Inpatient and Outpatient Services
Braintree, MA
1986 - 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 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, "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.

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.

Abstracts:

Forrest GF, Lorenz DJ, Hutchinson KJ, VanHeil DM, Harkema SJ. Variability Conundrum for walking measures after Spinal Cord Injury. Accepted Soc. Neurosci. Abstracts. Nov 2012.

Harkema SJ, Hutchinson KJ, Krassiokov A, Lorenz D, Wenzel LR, Sisto AS. Impact of Locomotor Training on Cardiovascular Parameters in Patients with Incomplete Spinal Cord Injury. Accepted ACRM October 2012

Sisto, Lorenz, Hutchinson, Wenzel, Krassiokov, Harkema et al. Cardiovascular Parameters in

Incomplete Spinal Cord Injury. Academy of Spinal Cord Injury Professionals. Las Vegas, NV, Sept 2012.

Forrest G, Basso M, *Hutchinson K*, Buehner J, Sisto S, VanHiel L, Lorenz D. Variability of Walking Measures after Spinal Cord injury. Submitted to ASCIP (Academy of SCI Professionals) Feb 2012 for Las Vegas, September 2012

S.A. Sisto, D. Lorenz, *K. Hutchinson*, L.Wenzel, J. Hillyer, S.J. Harkema, A. Krassiokov. Orthostatic Hypotension in Incomplete Spinal Cord Injury. Proceedings for the Society for Neurosciences. Washington, DC., Nov 2011.

Forrest GF, Lorenz DJ, *Hutchinson K*, Van Heil L, Basso M, Sisto S, Harkema SJ (2011). Measures of balance and walking in SCI. Proceedings from Society for Neurosciences, Washington, DC.

G. Forrest, D. Lorenz, *K. Hutchinson*, L. VanHiel, D.M.Basso, S. Datta, S. Sisto. Relationships between Balance and Walking Measures at Baseline and after Locomotor Training in Incomplete SCI: Impact of Functional Recovery. Reeve Foundation Spinal Cord Symposium, Dec 2010, Phoenix, AZ.

E. Ardolino, G. Pinto-Zipp, DMBasso, M Schmidt, KHutchinson, Susie Harkema. The Interrater Reliability of the Berg Balance Scale and the Tinetti Performance-Oriented Mobility Assessment in the Spinal Cord Injury Population. CSM Las Vegas 2009, J of Neurologic Physical Therapy.

K.Hutchinson, T. Andrews, A. Hylwa, J. Stecker, D. Ferreira, L.Cahalin. Hemodynamic Challenges Following Harness Application and Upright Tilt in a Subject with Chronic Paraplegia. J Neurologic PT, Jan 2007.

K. Hutchinson, K. Benson, H. Fullerton. Heart Rate Variability as an Indicator of Fitness in Individuals with Spinal Cord Injury. Cardiopulmonary Physical Therapy Journal. 2005;16(4):51.

K. Hutchinson, J. Bannon. Participation in Health-Related Physical Activity in a Cohort of Subjects with Chronic Spinal Cord Injury. Physical Therapy. June 2005; www.ptjournal.org/abstracts/pt2005/AbsAuthIndex.cfm

K. Hutchinson, J. Bannon. Pain Follows Function in a Cohort of Subjects with Chronic Spinal Cord Injury. J of Neurologic Physical Therapy: Dec 2004;28(4):177-178.

A. Blain, J. McKnight, K. Hutchinson, D. Fitzpatrick, S. Lowe. Modest Exercise Program Improves Function in Elderly Subjects in an Assisted Living Facility. J Geriatric Phys Ther. 2004; 27(3):113.
*Student submission

K. Hutchinson, Bannon J., Fournier L., Guarniere S., Yonych E. Activity Level and Musculoskeletal Pain in Subjects Greater than Five Years Post Spinal Cord Injury. Neurology Report :Dec 2002; 26(4):211-212.

Choi H., Tammaro E., Hutchinson K., Hyunh C., Guilbault M. Foo D. Wheelchair Satisfaction and Perception of Accessibility Among SCI Veterans in New England". American Association of Physical Medicine and Rehabilitation (AAPMR abstracts), Oct. 2002.

T. Winnege, K.Hutchinson. A Case Report on Joint Mobilization for a Hemiplegic Upper Extremity: An Adjunct for Constraint Induced Movement Therapy? Neurology Report. 2001; Dec. 25 (4):141-142.

F. Gomez-Pinilla, Z.Ying, K.Hutchinson, D.M. Basso. Differential Expression of Neurotrophins and Functional Recovery Associated with Specific Types of Exercise in Spinal Cord Injured Rats; Soc. Neuroscience Abstracts; November 2001.

Hutchinson, K., Vensel, J., Obermiller, S., LeDuff, L., Fisher, L., Basso, D.M.. Early Moderate Exercise Training After Spinal Cord Injury Does Not Exacerbate Lesion Size and Attenuates Changes in Hindlimb Sensation in the Rat. 1999; Soc. Neurosci. Abstr., 25;110.

KJ Hutchinson, LC Fisher, MB Johnson, J Linderman, DM Basso. Moderate Exercise Training Improves Locomotor Recovery and Does Not Exacerbate Lesion Size When Implemented Early After Spinal Cord Injury in Rat. Neurology Report; 1998; 22(5):181-182.

Voll, Jr CA, Fisher LC, Hutchinson KJ, Basso DM. The Severity of Hyperreflexia is Greater after Moderate vs. Mild Experimental Spinal Cord Injury in Rats. 1998; Neurology Report; 22(5);174.

MJ Crowe, K Hutchinson, DM Basso. Neurotrophin and Insulin-like Growth Factor-1 mRNA Expression in Rat HL Muscles after Spinal Cord Injury. 1998; Soc. Neurosci. Abstr.; 24(1);1149.

K. Hutchinson, L Fisher, J Linderman, DM Basso. Exercise Training Improves Recovery from Spinal Cord Contusion Injury in the Rat. 1998; Soc. Neurosci. Abstr.; 24(2):1415.

K. Hutchinson, J. Linderman, D.M. Basso. Relationship Between Behavioral Recovery, Muscle Structure and Muscle Function After Spinal Cord Injury in Rat. 1997. Neurology Report; 21:175.

K. Hutchinson, J. Linderman, D.M. Basso. Effects of Experimental Spinal Cord Injury on Behavior and Hindlimb Muscle Function in Rat. 1997. J Neurotrauma; 14: 782.

K. Hutchinson, J. Linderman, D.M. Basso. Effects of Experimental Spinal Cord Injury on Hindlimb Skeletal Muscle in Rat. 1997. Soc. Neurosci. Abstr.; 23:2190.

K. Hutchinson, J. Linderman, D.M. Basso. A Comparison of Fischer 344 and F1 Hybrid Rats for Appropriate Animal Models for Neuromotor Control and Aging. 1996; Neurology Report; 20(4);15-16.

K.Hutchinson, M. Sarter, B. Givens. Single Unit Activity in Medial Prefrontal Cortex of Rats Performing in a Behavioral Vigilance Task. Soc. Neurosci. Abstr., 1996; 22:1388.

DS Nichols, KJ Hutchinson, LA Colby. Reliability and Validity of the CTSIB and Chattecx Balance

System in the Evaluation of Individuals with Hemiparesis. Soc. Neurosci. Abstr., 1995;21 (2);1203.

B. Givens, K. Hutchinson, K. McMahon. The Behavioral and Neurophysiological Effects of Ethanol on Sustained Attention in Rats. Soc. Neurosci. Abstr.,1995;21 (2):1240.

D. Nichols, T. Glenn, K. Hutchinson. The Effects of Balance Training on Gait Components Following Stroke. Society for Neurosci.; 1994;20(1):795.

D. Nichols, T. Glenn, K. Hutchinson. Changes in the Mean Center of Pressure Related to Testing Conditions During Balance Testing. Physical Therapy. 1994;74(5):S115.

D. Nichols, K. Hutchinson, L. Colby, A Correlational Analysis of Stroke Patients' Performance on the CTSIB and Chattecx dynamic balance unit. Physical Therapy. 1994;74(5):S114.

K. Hutchinson. Abstract of: The Effectiveness of Computer Managed Instruction Versus Traditional Classroom Lecture on Achievement Outcomes. Schmidt SM, Arndt JH, Gaston S, Miller BJ. Computers in Nursing. 1991;9 (4):159-163. Printed in Journal of Allied Health. 1992;21 (2):144-145.

Non-Peer Reviewed Presentations:

KJ Hutchinson, Molly Sebo, Kevin Vaz. "Activity-Based Locomotor Training following Spinal Cord Injury". This was a presentation at Braintree Rehabilitation Hospital, to the Physical Therapy Department, June 2010.

KJ Hutchinson, Molly Sebo, Sancho Malloun. "Body Weight Supported Locomotion Training: Lessons from the NeuroRecovery Network." , A lecture to the Spaulding Rehabilitation Hospital Physical Therapy Department, May 2010.

KJ Hutchinson. Invited Speaker. BMC: Stepping Forward- Staying Informed Lecture Series. "Activity-Based Locomotor Training Following Spinal Cord Injury". A lecture for Individuals with disabilities, family members and health care professionals. Simulcast to Northeast Rehabilitation in Salem, NH. And 3-5 Model Systems Centers for Spinal Cord Injury Care. January 14, 2009.

KJ Hutchinson. Invited Speaker. "Activity-Based Therapy in Spinal Cord Injury: An Update from the NRN." Grand Rounds (MDs, OTs,PTs, Residents), Boston Medical Center, Boston, MA., Dec. 2008

KJ Hutchinson, NeuroRecovery Network (NRN) Research Update. Invited Speaker, PM & R Residents, Boston Medical Center, Boston, MA, November 2008.

Funded/In Review Grant Activity:

Consultant

\$400,000

"Neurorecovery Network Center", Boston Medical Center

Christopher Reeve Paralysis Foundation and The Centers for Disease Control
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

Research Activity:

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. Journal Article Submission in preparation stage.

I am also currently working to develop a new tool to improve communication between discharging physical therapists and fitness center staff (fitness trainer or exercise professional). It is called the ‘Health Fitness Plan’. The goal is to improve communication when discharging from PT with a focus on goal development/exercise prescription for persons with physical disabilities. I have practicum students testing out the form at the Quincy YMCA.

Membership in Scientific/Professional Organizations:

American Physical Therapy Association, Neurology Section, member since 1982
APTA, Spinal Cord Injury Special Interest Group, (Chair Nominating Committee, 2005)
International Spinal Cord Society (ISCOS) Member Since 2011;

Leadership, Consultative and Advisory Positions Held:

Reviewer, International Conference of Rehabilitation Robotics (ICORR) Conference, 2005
Reviewer, APTA Neuromuscular Practice Patterns, 2004-2006
APTA: A Consensus Conference: Neurologic Entry Level Clinical Content Alexandria, VA, Oct 2008
New England Regional Spinal Cord Injury Center; Boston Medical Center Boston, MA, Advisory Board Member since 6/2008. Started Second 5 year term Spring 2012.
APTA Spinal Cord Injury Special Interest Group Chair (2011-2014) (2014-2017)

International SCI Physiotherapy Network- US Rep and Board Member (2011-2015)
Abstract Reviewer: IV Step, Summer 2015

Community Service:

Challenger Division of Little League Baseball in Dorchester, MA. Spring 2014, 2015

Summer 2010/2011/2012 volunteering at the Quincy YMCA in their partnership program
Which specifically targets exercise activities for individual with physical disabilities.

Wheelchair Basketball Clinic. In conjunction with the NEPVA and the "Joining Hands"
organization, we have organized a 4 hour clinic for community members with physical
disabilities, which was held at Boston University on Feb 7, 2010 for the first time. And once
or twice every Academic year since. The last Clinic was in Oct. 2012. Approximately 20-30
participants take part in the clinics. Goal is to achieve bimonthly offerings.

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

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

Honors and Awards:

Academic Keys, Who's Who in Health Sciences Education, July 2003

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

Graduate Student Alumni Research Award, Sponsoring Dissertation Research at OSU -
\$1500.00, 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, 1982 - 1986

Current Teaching Responsibilities in the Entry-Level Program:

Spring, Year 1

Primary Instructor, PT 551 Neuroscience for Physical Therapy Students

Fall, Year 2

Primary Instructor, PT 652, Neurological Management I

Spring, Year 2
Lecturer for Spinal Cord Injury Module