

Curriculum Vitae

DATE: November, 2025

NAME: **LINDA R. VAN DILLEN, Ph.D., P.T., F.A.P.T.A.**

CONTACT INFORMATION:

Office: Program in Physical Therapy
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Washington University School of Medicine
St. Louis, Missouri 63110
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PRESENT POSITION: 2013-Present, Professor, Physical Therapy and Orthopaedic Surgery
2018-Present, Director, Research Division
Program in Physical Therapy
Washington University School of Medicine
St. Louis, Missouri

EDUCATION: **University of Missouri/Columbia**
Columbia, Missouri
B.S. in Physical Therapy
Minor: Biology
1979

Washington University
St. Louis, Missouri
M.H.S. in Physical Therapy
Department: Program in Physical Therapy
1985

Washington University
St. Louis, Missouri
Ph.D. in Experimental Psychology
Department: Psychological and Brain Sciences
Laboratory: Attention, Perception and Motor Control
Thesis Title: Memory for Spatial Information Used for Aimed Limb Movements
Advisor: Richard A. Abrams, PhD
1994

ACADEMIC POSITIONS / EMPLOYMENT:

<u>Position</u>	<u>Institution</u>	<u>Dates</u>
Staff Physical Therapist	Irene Walter Johnson Institute of Rehabilitation Neurology Division, Physical Therapy Washington University School of Medicine St. Louis, Missouri	1980-1981
Staff Physical Therapist (part-time)	Home Rehabilitation Associates Home Health St. Louis, Missouri	1981-1982
Senior Physical Therapist	Irene Walter Johnson Institute of Rehabilitation Neurology Division, Physical Therapy Washington University School of Medicine St. Louis, Missouri	1981-1985
Lecturer (as needed)	Washington University School of Medicine Physical Therapy St. Louis, Missouri	1981-1994
Supervisor	Irene Walter Johnson Institute of Rehabilitation Neurology Division, Physical Therapy Washington University School of Medicine St. Louis, Missouri	1985-1988
Graduate Student Research Assistant	Washington University Perceptual, Attention and Motor Control Laboratory St. Louis, Missouri	1988-1994
Teaching Assistant	Washington University Department of Psychological and Brain Sciences Quantitative Methods I & II: Doctoral-Level St. Louis, Missouri	1989-1991
Instructor	Washington University School of Medicine Physical Therapy St. Louis, Missouri	1994-1998
Assistant Professor	Washington University School of Medicine Physical Therapy St. Louis, Missouri	1998-2007
Assistant Professor	Washington University School of Medicine Orthopaedic Surgery St. Louis, Missouri	2006

Associate Professor (with tenure)	Washington University School of Medicine Physical Therapy and Orthopaedic Surgery St. Louis, Missouri	2007-2013
Associate Director of Musculoskeletal Research, Research Division	Washington University School of Medicine Physical Therapy St. Louis, Missouri	2011-2016
Professor	Washington University School of Medicine Physical Therapy and Orthopaedic Surgery Faculty – Washington University Pain Center St. Louis, Missouri	2013-Present
Associate Director of Research, Research Division	Washington University School of Medicine Physical Therapy St. Louis, Missouri	2016-2018
Director of Research, Research Division	Washington University School of Medicine Physical Therapy St. Louis, Missouri	2018-Present

TEACHING TITLE AND RESPONSIBILITIES:

Summary of Current Teaching Responsibilities

Professional Doctorate in Physical Therapy Curriculum: Renewal Curriculum

- Evidence Thread Co-lead
- Lecture/discussion topics across Modules 1-8: Research methods; Musculoskeletal pain conditions – epidemiology, management and decision-making, evidence; Moderators of health; Journal Club
- Coach DPT Learners

Doctor of Philosophy in Movement Science Curriculum:

- Pre-doctoral advisor
- Readings in Movement Science: advisor
- Independent Study in Movement Science: advisor
- Lab Practicum in Movement Science: advisor
- Program Seminar in Movement Science: lecturer for different seminars; course coordinator and lecturer for biannual seminar “Funding Your Science”

Clinical Residency:

- Journal Club discussant

Summary of Previous Teaching Responsibilities

Professional Doctorate in Physical Therapy Curriculum: Legacy Curriculum

- Diagnosis, Evidence and Analysis I: lecturer and lab assistant

- Diagnosis, Evidence and Analysis II: course coordinator, lecturer
- Diagnosis, Evidence and Analysis III: lecturer
- Professional Issues and Skills Development I, III: lab assistant
- Diagnosis and Management of Musculoskeletal Conditions II: lecturer
- Diagnosis and Management of Musculoskeletal Conditions III: lecturer
- Case Integration Lab I: lecturer and lab assistant
- Case Integration Lab III: lecturer
- Moderators of Health: lecturer

Clinical Fellowship and Residency:

- Weekend in-house educational session: lecturer
- Journal club organizer and discussant
- 2020 Fellowship symposium: lecturer
- Project: consultant

Master's in Physical Therapy Curriculum:

- Clinical Tests and Procedures in Physical Therapy: lecturer
- Diagnosis and Management of Neurological Conditions: course coordinator; lecturer
- Diagnosis and Management of Musculoskeletal Conditions: lecturer
- Topics in Pathokinesiology: lecturer
- Selected Conditions in Physical Therapy: lecturer
- Clinical Research Methods in Physical Therapy: lecturer
- Clinical Research Methods I and II: lecturer
- Clinical Diagnosis and Management II: lecturer
- Kinesiology: lab assistant
- Anatomy: lecturer
- Senior Seminar: instructor

Post-Professional Doctorate in Physical Therapy Curriculum:

- Diagnosis of Musculoskeletal Dysfunction: Spine I: lecturer
- Treatment of Musculoskeletal Dysfunction: Spine I: lecturer
- Case Studies in Musculoskeletal Dysfunction: Spine I: lecturer
- Essentials of Evidence-Based Clinical Practice I: lecturer
- Evidence Analysis and Synthesis: lecturer
- Evidence, Analysis, and Synthesis II: lecturer
- Diagnosis and Management of Clinical Conditions Lower Quarter: lecturer

Doctor of Philosophy in Movement Science Curriculum:

- Program Seminar in Movement Science: Coordinator of Grant Writing seminar; lecturer in other seminars
- Post-doctoral sponsor/mentor

Workshops/Educational Courses Organized

Lecture/Demonstration Format:

“Diagnosis and Treatment of Muscle Imbalances Associated with Musculoskeletal Pain”

Level II or Level III Workshop

Co-presenter - 16 hours; Responsible for 8 hours of content

Program in Physical Therapy, Washington University School of Medicine, St. Louis, Missouri
January 1987/1989/1990/1991; July 1990; April 1991

"Diagnosis and Treatment of Muscle Imbalances Associated with Musculoskeletal Pain"

Level I and Level II Workshop and Level II

Co-presenter - 8 hours; Responsible for 4 hours of content

1988 Minnesota State Chapter Physical Therapy Meeting, Duluth, Minnesota
April 1988

"Diagnosis and Treatment of Muscle Imbalances Associated with Musculoskeletal Pain"

Level II Workshop

Co-presenter - 16 hours; Responsible for 8 hours of content

Bozeman Physical Therapy, Inc., Bozeman, MT
July 1988

"Identification of Movement System Impairment Syndromes of the Lumbar Spine: Examination and Classification"

Presenter - 3 hours of content

UAW-Ford Rehabilitation Team Annual Meeting, Detroit, MI

Physical Medicine and Rehabilitation Department, Johns Hopkins Medical School
November 2005

"Assessment and Treatment of People with Low Back Pain"

Presenter - 12 hours of content

Human Posture and Movement Laboratory Research Group

Program in Physical Therapy, University of Vermont Medical School, Burlington, Vermont
February 2010

"Update on Studies of the Kinesiopathologic Model for Low Back Pain"

Presenter – 1 hour of content

Lower Quarter Movement System Impairment Syndromes Course

Program in Physical Therapy, Washington University School of Medicine, St. Louis, Missouri
October 2013

"Evidence for the Use of Movement in the Assessment and Treatment of People with Low Back Pain"

Presenter – 1 hour of content

Lower Quarter Movement System Impairment Syndromes Course

Program in Physical Therapy, Washington University School of Medicine, St. Louis, Missouri
October 2017

UNIVERSITY, SCHOOL OF MEDICINE, AND HOSPITAL APPOINTMENTS AND COMMITTEES:

- Coordinator, Research Seminars, Program in Physical Therapy, Washington University School of Medicine, 1994-2016
- Member, Committee on Academic Evaluation of Students, Program in Physical Therapy, Washington University School of Medicine, 1994-2010

- Member, Outpatient Rehabilitation Clinical Outcomes Committee, Barnes-Jewish Hospital, 1995-1998
- Member, Program Innovation Council, Program in Physical Therapy, Washington University School of Medicine, 1996-1997
- Member, Admissions Committee, Entry-Level Master's Program, Program in Physical Therapy, Washington University School of Medicine, 1997-2002
- Member, Master's-Level Student Research Award Committee, Program in Physical Therapy, Washington University School of Medicine, 1997-2002
- Ad Hoc Member, Human Studies Committee, Washington University School of Medicine, 1997-2011
- Member, Steven J. Rose Research Award Committee, Program in Physical Therapy, Washington University School of Medicine, 1997-Present
- Member, Research Advisory Council, Program in Physical Therapy, Washington University School of Medicine, 2003-2018
- Member, Faculty Search Committee, Program in Physical Therapy, Washington University School of Medicine, 2004-2006
- Member, Data and Safety Monitoring Committee, "Botulinum toxin effects on plantar ulcer recurrence" (NICHD R21 HD048972), Program in Physical Therapy, Washington University School of Medicine, 2004-2006
- Member, Diagnosis Dialog Planning Committee, Program in Physical Therapy, Washington University School of Medicine, 2006-2008
- Member, Planning Committee for Steven J. Rose Symposium and Alumni Day, Program in Physical Therapy, Washington University School of Medicine, 2008, 2012
- Member, Institute for Clinical and Translational Sciences, Washington University School of Medicine, 2008-present
- Member, Data and Safety Monitoring Committee, "Effect of weight-bearing exercise on people with diabetes and neuropathic feet" (NICHD R21 HD058938), Program in Physical Therapy, Washington University School of Medicine, 2010-2011
- Member, Physical Therapy Committee on Academic and Professional Evaluation of Students, Program in Physical Therapy, Washington University School of Medicine, 2010-Present
- Member, Steering Committee, Doctorate in Movement Science, Program in Physical Therapy, Washington University School of Medicine, 2010-Present
- Member, Center for Musculoskeletal Research, Department of Orthopaedic Surgery, Washington University School of Medicine, 2010-Present
- Member, Data and Safety Monitoring Committee, "Dose response of movement practice during stroke rehabilitation" (NICHD R01 HD068290), Program in Physical Therapy, Washington University School of Medicine, 2010-2014
- Member, Research Affairs Committee, Washington University School of Medicine, 2011-2015
- Chair, Research Division Mission Statement Committee, Program in Physical Therapy, Washington University School of Medicine, 2013
- Member, Research Division Metrics Committee, Program in Physical Therapy, Washington University School of Medicine, 2013-2014
- Chair, Movement System Graphic Committee, Program in Physical Therapy, Washington University School of Medicine, 2013-2014
- Member, Faculty Search Committee, Program in Physical Therapy, Washington University School of Medicine, 2014-2015
- Member, Strategic Planning Action Planning Subcommittee: Culture, November 2014
- Member, Strategic Planning Action Planning Subcommittee: Clinical Operations, November 2014
- Member, Strategic Planning Action Planning Subcommittee: Marketing of Research Component,

January - February, 2015

- Member, Admissions Committee, Olin Fellowship for Women in Graduate Study, Washington University and the Monticello Foundation, 2015, 2016
- Chair, Research Assistantship Committee, Program in Physical Therapy, Washington University School of Medicine, 2016-Present
- Member, Strategic Planning Committee, Program in Physical Therapy, Washington University School of Medicine, 2017
- Liaison, Institute for Clinical and Translational Sciences, Washington University School of Medicine, 2017-2025
- Chair, Research Advisory Committee, Program in Physical Therapy, Washington University School of Medicine, 2018-Present
- Chair, Steven J. Rose Research Award Committee, 2018-Present
- Member, Curriculum Renewal-Leadership Coalition, Program in Physical Therapy, Washington University School of Medicine, 2018-2019
- Member, Doctoral Qualifying Examination Committee, Movement Science Program, Program in Physical Therapy, Washington University School of Medicine, June, 2019
- Chair, Faculty Search Committee (Research-Related Position), Program in Physical Therapy, Washington University School of Medicine, 2018-2019, 2020-2021, 2024
- Co-Lead, Evidence Thread, Education Division Competency-Based Curriculum, Program in Physical Therapy, Washington University School of Medicine, 2021-present
- Member, Research Profiles Steering Committee, Washington University School of Medicine, 2021-present
- Chair, Doctoral Qualifying Examination Committee, Movement Science Program, Program in Physical Therapy, Washington University School of Medicine, June-July, 2024

LICENSURE/REGISTRATION:

- Missouri #01032, 1985-Present

HONORS AND AWARDS:

- | | |
|---|------------|
| • Summa Cum Laude, BSPT, University of Missouri, Columbia | 1979 |
| • Magna Cum Laude, MHSPT, Washington University in St. Louis | 1985 |
| • Promotion of Doctoral Studies Award, Foundation for Physical Therapy | 1993 |
| • Early Career Women's Faculty Professional Development Seminar
Association of American Medical Colleges | 2000 |
| • Research Award, Section on Women's Health, American Physical Therapy Association | 2000 |
| • Outstanding Faculty Mentor Certificate of Special Recognition, Doctorate Level
Training, Washington University | 2005 |
| • Nominee, Marian Williams Award for Research in Physical Therapy, American Physical
Therapy Association | 2014, 2015 |
| • Catherine Worthingham Fellow, American Physical Therapy Association | 2016 |
| • Helen Hislop Award for Outstanding Contributions to the Professional Literature,
American Physical Therapy Association | 2019 |
| • John P. Maley Research Award, Academy of Physical Therapy Research, American
Physical Therapy Association | 2021 |

- Recognized Expert in Low Back Pain, Expertscape, <https://expertscape.com/ex/low+back+pain> 2021
- Rose Excellence in Research Award, Academy of Orthopaedic Physical Therapy, American Physical Therapy Association 2022
- 2022 Career Excellence in Biomechanics Research Award, Biomechanics Special Interest Group, Academy of Physical Therapy Research, American Physical Therapy Association 2022
- Dean's Impact Award, Washington University School of Medicine, Washington University in St. Louis 2024
- Top Scholar recognition (top 0.5% of all scholars), ScholarGPS <https://scholargps.com/scholars/73583202445879/linda-r-van-dillen> 2023, 2024

EDITORIAL RESPONSIBILITIES:

Manuscript Reviewer

- Physical Therapy 1996-Present
- Journal of Orthopaedic and Sports Physical Therapy 1998-Present
- Archives of Physical Medicine and Rehabilitation 2002-Present
- Spine 2003-Present
- Clinical Biomechanics 2005-Present
- Manual Therapy 2014-Present
- Muscle and Nerve 2014-Present
- BMC Musculoskeletal 2015-Present
- The Spine Journal 2022-Present
- Annals of Medicine 2023-Present

Editorial Review Board Member

- Journal of Orthopaedic and Sports Physical Therapy 2003-2012

NATIONAL AND INTERNATIONAL PANELS, COMMITTEES, AND BOARDS:

State (APTA)

- Co-Chairman, Research Committee, Missouri Physical Therapy Association, 1986-1988

National (APTA)

- Content Expert Reviewer, U.S. Labor Department Occupational Information Network (O'Net) Database of Occupational Titles, Representative for American Physical Therapy Assn, March 2001
- Member, Research Committee, Orthopaedic Section, American Physical Therapy Assn, 2005-2009
- Member, Subcommittee on Differential Diagnosis, American Physical Therapy Programming Subcommittee, 2005-2013
- Member, Taskforce on Evaluation Database to Guide Effectiveness, Section on Research, American Physical Therapy Association, 2005-2006
- Member, Panel for Development of Clinical Practice Guidelines for Physical Therapy Treatment of Low Back Pain, Orthopaedic Section, American Physical Therapy Association, 2006-2012
- Moderator, Research Platform Sessions, Orthopaedic Section, American Physical Therapy Association, 2005-2008, 2010

- External Reviewer for Promotions Committee, Drexel University, Department of Physical Therapy and Rehabilitation Sciences, 2008
- External Reviewer for Promotions, University of Vermont, Department of Physical Therapy and Movement Science, 2008
- Moderator, Marilyn Gossman Graduate Student Research Symposium, Section on Research, American Physical Therapy Association, 2008-2014
- External Reviewer for Promotions, University of California San Francisco, Division of Biokinesiology and Physical Therapy, 2012
- Chair, Abstract Review and Gossman Symposium Review Committee, Section on Research, American Physical Therapy Association, 2008-2014
- External Reviewer for Promotions, Regis University, Dept. of Physical Therapy, 2014
- Expert Reviewer, Agency for Health Care Research and Quality Key Questions for Noninvasive Treatments for Low Back Pain, Representative of American Physical Therapy Association, 2014
- Moderator, Symposium, Research Retreat, Section on Research, American Physical Therapy Association, Providence, RI, 2015
- Member, Orthopedic Section of American Physical Therapy Association Back Pain Working Group to Create Lumbar Module for Outcomes Registry, 2015-2017
- Member, Panel for Update of Clinical Practice Guidelines for Physical Therapy Treatment of Low Back Pain, Orthopaedic Section, American Physical Therapy Association, 2015-2020
- External Reviewer for Promotions, Michigan State University, Department of Orthopaedics, 2015
- External Reviewer for Promotions, University of Delaware, Department of Physical Therapy, 2016
- Content Expert, Planning Committee, 2018 Annual Orthopaedic Section Meeting, Orthopaedic Section of the APTA, 2017-2018
- Member, Board of Trustees for the Foundation for Physical Therapy Research, 2018-present
- Expert Reviewer, Pelvic Girdle Pain Postpartum Guideline Development Team Document, APTA Taskforce, 2019
- External Reviewer for Promotions, Ohio State University, Department of Physical Therapy, 2022

National (other)

- Committee Member, Burden of Musculoskeletal Disease in the United States: Prevalence, Societal and Economic Cost Report, Bone and Joint Initiative, USA, 2019-2021
- Committee Member, NINDS/NICHD Common Data Elements (CDEs) Working Group for the Rehabilitation CDE project, Emotion, Behavior, Neuropsychology Subgroup, 2020-2021
- SPINE-WORK: An inclusive research community to study and improve force-based manipulations for spine pain, University of Pennsylvania, PI: Winkelstein, NIH/NCCIH U24AT011978, 2022-2023
 - Committee Chair, External Advisory Committee
 - Committee Chair, Clinical Working Group
 - Committee Member, Scientific Review Committee

International

- Member, Spinal Control Research Group, Spine Center of Clinical Research Excellence, National Health Medical Research Council Center, University of Queensland, Queensland Australia, 2008-present
- Member, Expert Panel for Modified Delphi Survey Study of Definition of Recurrent Low Back Pain, University of Sydney, Australia, 2009
- Moderator, Poster Session, International Society for Electrophysiology and Kinesiology, Brisbane, Australia, 2012

- Expert Reviewer, North American Spine Society's Exercise-Based Management of Lumbar Spine Pain Decision-Making Narrative and Algorithm, 2012
- Member, External Advisory Committee for Development of Clinical Practice Guidelines for the Use of Pilates Exercise in Low Back Pain, University of Western Sydney, 2014
- Content Expert, Neuromotor Control Therapies for Low Back Pain, North American Spine Society Meeting, 2015
- Content Expert Member, Panel to Develop a Collaborative Consensus Model for Low Back Pain, North American Spine Society, 2017
- Scientific Steering Committee, World Congress in Low Back and Pelvic Girdle Pain, Melbourne, Australia, 2023

Scientific Review Committees

National (APTA):

- Scientific Reviewer, Orthopaedic Section, American Physical Therapy Association, 2005-2007
- Member, Scientific Review Committee, Foundation for Physical Therapy, 2008-2011
- Scientific Reviewer, Clinical Practice Guideline Proposals, American Physical Therapy Association, 2017-2024
- Ad Hoc Scientific Reviewer, Academy of Orthopaedic Physical Therapy, American Physical Therapy Association, 2022

National (Other):

- Ad Hoc Scientific Reviewer, Institute for Clinical and Translational Sciences, Washington University, 2007, 2009
- Ad Hoc Scientific Reviewer, Special Emphasis Panel, Musculoskeletal, Oral and Skin Sciences Internal Review Group, National Institutes of Health, 2011, 2012, 2016
- Ad Hoc Scientific Reviewer, Loan Repayment Program, National Institute for Child Health and Human Development, National Institutes of Health, 2014, 2016, 2020
- Ad Hoc Scientific Reviewer, Pilot and Feasibility Grants, P30 Core Center for Musculoskeletal Biology and Medicine, Washington University, 2015

International:

- Ad Hoc Scientific Reviewer, Research Foundation of Belgium, 2011
- Member, Expert Reviewers' Panel, Division of Biology and Medicine of the National Research Council, Swiss National Science Foundation, 2011-2014
- Ad Hoc Scientific Reviewer, Israel Science Foundation, 2013
- Ad Hoc Scientific Reviewer, German Research Foundation - Clinical Trials Programme, 2022

COMMUNITY SERVICE:

University

- Academic Women's Network 1995-Present

Scientific / Professional Societies and Organizations:

National

- Member, American Physical Therapy Association 1977-Present

- Section: Research, 1979-Present
- Section: Neurology, 1985-1987; 2004-2007
- Section: Orthopaedics, 1994-Present
- Member, American Congress of Rehabilitation Medicine 2001-2003
- Member, American Society for Biomechanics 2015-Present
- Member, Academic Orthopedic Consortium 2021-Present
- Member, NIH SPINE-WORK Network 2022-Present
- Member, NIH HEAL INITIATIVE/PURPOSE Network 2022-Present

State

- Member, Missouri Physical Therapy Association 1981-Present

International

- International Association for the Study of Pain 2005-Present
- International Society for Posture and Gait Research 2007-2011
- International Society for Electrophysiology and Kinesiology 2012-2023
- North American Spine Society 2012-2018

MAJOR INVITED PROFESSORSHIPS AND PRESENTATIONS:

University

Research Presentations:

- “Development and Testing of a Clinical Classification System for Low Back Pain”
Annual Alumnae and Clinical Instructor’s Meeting
Program in Physical Therapy, Washington University School of Medicine 1995
- “Progress in the Development and Testing of a Clinical Classification System for Low Back Pain”
Research Seminar
Program in Physical Therapy, Washington University Medical School 1995
- “Clinically-Based Impairment Measures for Low Back Pain”
Research Seminar
Program in Physical Therapy, Washington University Medical School 2000
- “Rotation-Related Impairments in Patients with Low Back Pain”
Research Seminar
Program in Physical Therapy, Washington University Medical School 2003
- “Current Status of Research in Classification of Low Back Pain”
Annual Movement System Research Retreat
Program in Physical Therapy, Washington University School of Medicine 2004
- “Update on Studies of the Movement System Impairment Model of Low Back Pain”
Annual Movement System Research Retreat

Program in Physical Therapy, Washington University School of Medicine	2006
“Low Back Pain: When and Where Does Motion Occur?”	
Alumnae Day	
Program in Physical Therapy, Washington University School of Medicine	2008
“Low Back Pain Studies: An Update”	
Annual Movement System Research Retreat	
Program in Physical Therapy, Washington University School of Medicine	2010
“Observations of People with Chronic, Recurrent Low Back Pain”	
Department of Anesthesiology	
Clinical Science Division, Washington University School of Medicine	2011
“Clinical Trials of Activity-Based Treatments for People with Chronic Low Back Pain”	
Annual Movement System Research Retreat	
Program in Physical Therapy, Washington University School of Medicine	2012
“Impact of Lumbar Spine Disorders on Outcome in Patients with Total Hip Arthroplasty”	
Annual Movement System Research Retreat	
Program in Physical Therapy, Washington University School of Medicine	2013
“Outcomes of Classification Directed Treatment and Adherence: A One Year, Prospective, Randomized Clinical Trial in People with Low Back Pain”	
Annual Movement System Research Retreat	
Program in Physical Therapy, Washington University School of Medicine	2014
“Prospective Examination of Hip Findings in People with Low Back Pain”	
“Update on Risk Factors for Initial Low Back Pain Development in Prolonged Standing”	
Annual Movement System Research Retreat	
Program in Physical Therapy, Washington University School of Medicine	2015
“Classification-Specific Treatment for Low Back Pain”	
Research Seminar	
Program in Physical Therapy, Washington University School of Medicine	2015
“Efficacy of Clinical Trials of Activity-Based Treatment of People with Low Back Pain”	
Department of Anesthesiology, Washington University School of Medicine	2016
“Adherence as a Moderator of Treatment Outcomes”	
Physical Medicine and Rehabilitation Resident Rounds	
Washington University School of Medicine	2016
“Skill Training in People with Low Back Pain”	
Annual Movement System Research Retreat	
Program in Physical Therapy, Washington University School of Medicine	2018

<p>“The Role of Movement in Low Back Pain Conditions” Physical Medicine and Rehabilitation Resident Rounds Washington University School of Medicine</p>	2018
<p>“The Use of Movement in the Treatment of Chronic Low Back Pain” Movement System Fellows Symposium Program in Physical Therapy</p>	2020
<p>“Motor Skill Training in Functional Activities in People with Chronic Low Back Pain” Program Research Seminar Program in Physical Therapy, Washington University School of Medicine</p>	2021
<p>“Motor Skill Training in Functional Activities vs. Strength and Flexibility Exercise: A Randomized Clinical Trial in People with Chronic Low Back Pain” Alumnae Weekend Seminar Program in Physical Therapy, Washington University School of Medicine</p>	2021
<p>“Changes in Pain and Function in People with Chronic Low Back Pain – Effects of Skill Training vs. Strength and Flexibility Exercise” Department of Anesthesiology Clinical Science Division, Washington University School of Medicine</p>	2022

Other Presentations:

<p>“Low Back Pain: An Overview of Laboratory Studies” Administrative Staff Educational Presentation Program in Physical Therapy, Washington University School of Medicine</p>	2004, 2015
<p>“Low Back Pain: Risk Factors, Treatment, Prognosis” Administrative Staff Educational Presentation Program in Physical Therapy, Washington University School of Medicine</p>	2014
<p>“Career Choices: A Career Path in Academic Medicine” Pre-Doctoral Seminar, Clinical Research and Training Center Washington University School of Medicine</p>	2014

Hospital

Research Presentations:

<p>“Development of a Clinical Classification System for Low Back Pain” Barnes-Jewish Rehabilitation and Fitness Center, Barnes-Jewish Hospital St. Louis, Missouri</p>	1999
<p>“Testing of a Clinical Classification System for Low Back Pain” Barnes-Jewish Rehabilitation and Fitness Center, Barnes-Jewish Hospital St. Louis, Missouri</p>	1999

"Effect of Limb Movements and Activity Type on Movement Impairments in People with LBP"

Barnes-Jewish Rehabilitation and Fitness Center, Barnes-Jewish Hospital
St. Louis, Missouri 1999

"Testing Systems for Classifying Clinical Conditions: An Example from Work in Progress"

Preceptor Group, Barnes-Jewish Hospital
St. Louis, Missouri 2007

"Research Methods Used to Test Scientific Properties of Clinically-Based Measures"

Physical Therapy Council, Barnes-Jewish Hospital
St. Louis, Missouri 2007

"Update of Conservative Management of Low Back Pain"

Dept. of Outpatient Physical Therapy, The Rehabilitation Institute of St. Louis
St. Louis, Missouri 2008

"Outcomes of Classification Directed Treatment and Adherence: A One Year, Prospective, Randomized Clinical Trial in People with Low Back Pain"

Barnes-Jewish Hospital 8th Multidisciplinary Research Conference
St. Louis, Missouri 2014

Other Presentations:

"Outcomes of a Randomized Clinical Trial in People with Chronic Low Back Pain"

Dept. of Outpatient Physical Therapy, The Rehabilitation Institute of St. Louis
St. Louis, Missouri 2011

National

Research Presentations:

"A Physical Therapist's Perspective on the Hemiplegic Shoulder"

Invited Speaker

First Annual Rusk Lectureship
University of Missouri/Columbia
Columbia, Missouri 1987

"Development and Testing of Diagnostic Categories"

Invited Speaker

Research Section
Combined Sections Meeting, American Physical Therapy Association
Dallas, Texas 1997

"Getting Your Research Started"

Invited Speaker

Performing Arts Special Interest Group, Orthopedic Section

Combined Sections Meeting, American Physical Therapy Association Seattle, Washington	1999
“Low Back Pain Movement System Impairments” Invited Speaker American Physical Therapy Association Annual Meeting, American Physical Therapy Association Washington, D.C.	1999
“Dialog in Performing Arts Research” Invited Speaker Performing Arts Special Interest Group, Orthopedic Section Combined Sections Meeting, American Physical Therapy Association New Orleans, Louisiana	2000
“Evidence-Based Practice: What is it? Where do we get it? How do we use it?” Invited Plenary Session Speaker Combined Sections Meeting, American Physical Therapy Association New Orleans, Louisiana	2000
“Dialog in Performing Arts Research” Invited Speaker Performing Arts Special Interest Group, Orthopedic Section Combined Sections Meeting, American Physical Therapy Association San Antonio, Texas	2001
“Meet the Authors” Invited Speaker Research Section Combined Sections Meeting, American Physical Therapy Association San Antonio, Texas	2001
“Writing Performing Artist Case Reports” Invited Speaker Performing Arts Special Interest Group, Orthopedic Section Combined Sections Meeting, American Physical Therapy Association Boston, Massachusetts	2002
“Evidence-Based Practice” Invited Speaker Performing Arts Special Interest Group, Orthopedic Section Combined Sections Meeting of the American Physical Therapy Association Tampa, Florida	2003
“Movement System Impairment Syndromes of the Lumbar Spine” Invited Symposium Speaker	

- Iowa Spine Symposium
Department of Orthopedics and Rehabilitation, University of Iowa
Iowa City, Iowa 2004
- “Research Experiences with the Movement System Impairment Syndromes”
Invited Symposium Speaker
Iowa Spine Symposium
Department of Orthopedics and Rehabilitation, University of Iowa
Iowa City, Iowa 2004
- “Clinically-Based Studies of Movement System Impairment Syndromes for
For Low Back Pain - Tests of Scientific Properties and Underlying Concepts”
Invited Speaker
Annual Meeting, American Congress of Rehabilitation Medicine
Ponte Vedra, Florida 2004
- “Movement System Impairments in People with Low Back Pain”
Invited Speaker
Department of Physical Medicine and Rehabilitation
Johns Hopkins University Medical School
Baltimore, Maryland 2004
- “Clinical and Laboratory Studies of Movement System Impairment Syndromes of the Lumbar Spine”
Invited Speaker
Pain Special Interest Group, Orthopedic Section
Combined Sections Meeting, American Physical Therapy Association
New Orleans, Louisiana 2005
- “Current Evidence in Movement-System Impairment Syndromes”
Invited Speaker
Annual Conference, American Physical Therapy Association
Boston, Massachusetts 2005
- “Movement System Impairment Syndromes of the Lumbar Spine: Description and Clinical Studies”
Invited Speaker
Human Posture and Movement Laboratory, Program in Physical Therapy
University of Vermont Medical School
Burlington, Vermont 2005
- “Movement System Impairment Syndromes of the Lumbar Region: Description and Evidence”
Invited Speaker
UAW-Ford On Site Rehabilitation Team Annual Meeting

UAW-Ford Meeting Center Detroit, Michigan	2005
“The Movement System Impairment Approach to Classification and Management of Low Back Pain” Invited Speaker Athleticare Conference, Athleticare Sports Medicine Program St. John’s Hospital Springfield, Illinois	2005
“Low Back Pain Classification: Are We All Seeing the Same Thing?” Invited Keynote Research Speaker American Association of Orthopedic and Manual Physical Therapists (AAOMPT) St. Louis, Missouri	2007
“Relative Flexibility of the Lumbar Region in People with and without Low Back Pain” Invited Speaker Program in Physical Therapy St. Louis University College of Health Sciences Research Seminar St. Louis, Missouri	2010
“Relative Stiffness: A Control Issue in Low Back Pain?” Invited Speaker Department of Physical Therapy, University of Kansas Medical Center Kansas City, Kansas	2010
“Spinal Control Symposium: Subgrouping Low Back Pain” Invited Keynote Speaker 7 th International World Congress on Low Back and Pelvic Pain Los Angeles, California	2010
“Observations of People with Non-Specific Low Back Pain: Clinically-Based Measures” Invited Speaker Center for Orthopedic Research College of Osteopathic Medicine, Michigan State University Lansing, Michigan	2012
“Hip and Spine Interactions in People with Low Back Pain” Invited Speaker Lumbar Spine Research Society 5 th Annual Meeting Chicago, Illinois	2013
“Assessment and Treatment of Movement System Impairment Syndromes in People with Low Back Pain” Invited Speaker 1 st Annual Meeting of the Orthopaedic Section, American Physical Therapy Assn.	

Orlando, Florida	2013
<p>“Relative Stiffness Impairments and Low Back Pain”</p> <p>Invited Clinical Research Rounds Speaker</p> <p>Program in Physical Therapy and Human Movement Science</p> <p>Feinberg School of Medicine, Northwestern University</p> <p>Chicago, Illinois</p>	2013
<p>“Adherence: An Important but Often Forgotten Determinant of Treatment Effectiveness”</p> <p>Invited Speaker</p> <p>Orthopaedic Section</p> <p>Combined Sections Meeting, American Physical Therapy Association</p> <p>Las Vegas, Nevada</p>	2014
<p>“Hip and Spine Interactions in People with Low Back Pain”</p> <p>Invited Symposium Speaker</p> <p>Women’s Health Symposium, Rehabilitation Institute of Chicago</p> <p>Chicago, Illinois</p>	2014
<p>“Adherence: Implications for Treatment Outcomes”</p> <p>Invited Speaker</p> <p>Eastern District Meeting, Missouri Physical Therapy Association</p> <p>St. Louis, Missouri</p>	2015
<p>“Relative Stiffness Impairments in Clinical Tests and Functional Activities”</p> <p>Invited Annual Panther Clinical Rounds Speaker</p> <p>Department of Physical Medicine and Rehabilitation, University of Pittsburgh</p> <p>Pittsburgh, Pennsylvania</p>	2015
<p>“Adherence and Outcomes of Care”</p> <p>Invited Resident Rounds Speaker</p> <p>Department of Physical Medicine and Rehabilitation, University of Pittsburgh</p> <p>Pittsburgh, Pennsylvania</p>	2015
<p>“The Value of Orthopaedic Manual Physical Therapy”</p> <p>Invited Panel Member</p> <p>2015 Annual Meeting of the American Association of Orthopaedic and Manual Physical Therapy (AAOMPT)</p> <p>Louisville, Kentucky</p>	2015
<p>“Clinical Research: New Directions to Explore”</p> <p>Invited Panel Member</p> <p>2015 Annual Meeting of the American Association of Orthopaedic and Manual Physical Therapy (AAOMPT)</p> <p>Louisville, Kentucky</p>	2015

- “Minimizing Pain, Normalizing Movement, and Maximizing Function: An Example in Low Back Pain”
Invited Keynote Speaker
 2015 Annual Meeting of the American Association of Orthopaedic and Manual Physical Therapy (AAOMPT)
 Louisville, Kentucky 2015
- “Assessing Relative Flexibility Impairments: Minimizing Pain”
Invited Keynote Speaker
 2015 Annual Meeting of the American Association of Orthopaedic and Manual Physical Therapy (AAOMPT)
 Louisville, Kentucky 2015
- “Assessing Relative Flexibility Impairments: Normalizing Movement”
Invited Keynote Speaker
 2015 Annual Meeting of the American Association of Orthopaedic and Manual Physical Therapy (AAOMPT)
 Louisville, Kentucky 2015
- “Effect of Treating Kinesiopathologic Impairments on Pain and Disability and the Potential Moderating Effect of Adherence on Outcomes”
Invited Symposium Speaker
 2nd International State of the Art in Spinal Control Symposium, Spine Center of Clinical Research Excellence, National Health Medical Research Council Center, University of Queensland and North American Spine Society
 Chicago, Illinois 2015
- “Adherence: An Important but Often Forgotten Determinant of Treatment Effectiveness”
Invited Speaker
 North American Spine Society 30th Annual Meeting
 Chicago, Illinois 2015
- “Motor Skill Training: An Alternative to Traditional Therapeutic Exercise”
Invited Speaker
 2016 Combined Sections Meeting of the American Physical Therapy Association
 Anaheim, California 2016
- “Update on the Hip-Spine Connection”
Invited Speaker
 Shirley Ryan Ability Lab
 Chicago, Illinois 2017
- “Gender Differences in Lumbopelvic Motion”
Invited Speaker
 Shirley Ryan Ability Lab

Chicago, Illinois 2017

“Relative Flexibility: A Movement Control Impairment in Low Back Pain”

Invited Lecturer, Annual Rehabilitation Science Lectureship

Rehabilitation Science Division, University of Minnesota

Minneapolis, Minnesota

2017

“The Role of Movement in Assessment and Management of People with Low Back Pain”

Invited Lecturer, Sahrmann Lectureship

Program in Physical Therapy

Washington University Medical School

St. Louis, Missouri

2017

“Movement Control Impairments in People with Low Back Pain”

Invited Biomechanics Symposium Speaker

Department of Biomedical Engineering

University of Kentucky

Lexington, Kentucky

2018

“Addressing Pain Problems Through the Use of Movement Science” -

“Changing Movement and Postural Strategies in People with Low Back Pain: The Potential Role of Skill Training to Improve Long-Term Outcomes”

Invited Speaker, General Session

Annual Meeting of the Orthopaedic Section, American Physical Therapy Association

Baltimore, Maryland

2018

“Implementing Skill Training in People with Low Back Pain: The Why and the How”

Invited Speaker, Breakout Sessions

Annual Meeting of the Orthopaedic Section, American Physical Therapy Association

Baltimore, Maryland

2018

“The Role of Movement in the Assessment and Treatment of Low Back Pain”

Invited Speaker

Department of Biokinesiology and Physical Therapy

University of Southern California

Los Angeles, California

2018

“Motor Skill Training in Musculoskeletal Conditions: Current Best Evidence”

Invited Speaker

2019 Combined Sections Meeting of the American Physical Therapy Association

Washington, DC

2019

"The Role of Movement in the Management of Chronic Low Back Pain: What Does it Take to Make a Change and Does it Work?"

Invited Speaker

Virtual presentation for Nexus Motion, Monthly Movement Seminar Series

2022

"Motor Skill Training vs. Strength and Flexibility Exercise in Chronic Low Back Pain: A Randomized Controlled Trial"

Invited Speaker, Rose Excellence in Research Award, AOPT

Virtual presentation as part of the 2022 Combined Sections Meeting of the American Physical Therapy Association

2022

"Examining the Role of Movement in Assessment and Management of Low Back Pain Conditions"

Invited Speaker, Career Excellence Award, Biomechanics SIG, APTR

Virtual presentation at Spring Special Interest Group Meeting

2022

"Low Back Pain Injury"

Invited Speaker

Advisory Board of National Center for Rehabilitation Research
NIH/NICHD/NCMRR

2023

"Movement as a Biomarker"

Invited Speaker

2025 Combined Sections Meeting of the American Physical Therapy Association

2025

Other Presentations:

"Effects of a Single Motor Skill Training Session in People With Low Back Pain: An Author Interview with Dr. Linda Van Dillen"

Podcast: PTJ Physical Therapy and Rehabilitation Journal

2018

"Moving Research Forward During the COVID-19 Pandemic: A Discussion"

Invited Panel Member (Virtual presentation)

2020

Webinar: CORRT NET Panel Discussion

"Trajectory of a Career in Physical Therapy"

Invited Speaker (Virtual presentation)

University of Arkansas

University of Arkansas Physical Therapy

2020

"Motor Skill Training Used in Treatment of Chronic Low Back Pain"
(Virtual presentation)

Invited Journal Club Speaker

University of South Florida, Jacksonville

Orthopaedic residents and faculty

2022

“Spotlight on Research: What to Measure and Treat in the Lumbar Spine”

Invited Session Moderator

2023 Combined Sections Meeting of the American Physical Therapy Association

2023

“Does Biomechanics have a Role in Management of People with Low Back Pain?” (Virtual presentation)

Invited Journal Club Speaker

Virtual presentation to University of Florida, Gainesville and Jacksonville Orthopaedic residents and faculty

2023

“Partnering for Excellence in Research”

Invited Speaker

2024 Combined Sections Meeting of the American Physical Therapy Association; Academy of Physical Therapy Research Business Meeting

2024

International

Visiting Professorship:

University of Waterloo, Department of Kinesiology

Spine Biomechanics Laboratory

Sponsor: Dr. Stuart McGill (funded by NIH Mentored Research Scientist Award K01 HD001226)

Chair of Kinesiology and Director of Spine Biomechanics Laboratory

Waterloo, Canada

2002

Research Presentations:

“Influence of Limb Movements on the Lumbar Spine”

Invited Speaker

Low Back Pain Research Group, Spine Center of Clinical Research

Excellence,

National Health Medical Research Council Center, University of

Queensland

Brisbane, Queensland, Australia

2009

“Relative Stiffness: A Motor Control Issue in Low Back Pain?”

Invited Symposium Speaker

1st International State of the Art in Spinal Control Symposium, Spine

Center of Clinical Research Excellence, National Health Medical Research

Council Center, University of Queensland

Brisbane, Queensland, Australia

2009

“Classification-Specific Treatment in Chronic Low Back Pain: A Prospective, Randomized, Controlled Clinical Trial”

Invited Symposium Speaker

8th International World Congress on Low Back and Pelvic Pain

Dubai, United Arab Emirates

2013

- “Crossing the Bridge from Basic Science to Clinical Science: Does Subgrouping Improve Outcomes?”
Invited Symposium Speaker
 North American Spine Society 30th Annual Meeting
 Chicago, Illinois 2015
- “Potential Role of Adherence for Improving Outcomes in People with Low Back Pain”
Invited Keynote Speaker
 9th World Congress on Low Back and Pelvic Pain
 Singapore, Singapore 2016
- “The Importance of Movement in Evaluation and Directing Treatment in People with Low Back Pain”
Invited Symposium Speaker
 North American Spine Society 32nd Annual Meeting
 Orlando, Florida 2017
- “Motor Skill Training in Functional Activities in People with Chronic Low Back Pain: Impact on Pain and Function”
Invited Symposium Speaker: Motor Control
 9th International World Congress on Low Back and Pelvic Pain
 Antwerp, Belgium 2019
- “Motor Skill Training in Functional Activities in People with Chronic Low Back Pain: Impact on Movement Characteristics”
Invited Symposium Speaker: Exercise
 9th International World Congress on Low Back and Pelvic Pain
 Antwerp, Belgium 2019
- “Skill Training in Functional Activities: Effects in Chronic Low Back Pain”
Invited Speaker: Digital physiotherapy: New strategies, new skills?
 International Scientific Congress A.I.F.I – Italian Association of Physiotherapy
 Virtual conference 2021
- “Person-Specific Motor Skill Training in Function for People with Chronic Low Back Pain”
Invited Keynote Speaker
 Annual Meeting of Japanese Society of Musculoskeletal Physical Therapy, Fukuoka, Japan
 Hybrid conference. Virtual presentation 2023
- “Spinal Movement Impairments in Non-Chronic Low Back Pain: A Potentially Important Clinical Biomarker”
Invited Keynote Speaker
 11th International World Congress on Low Back and Pelvic Pain
 Melbourne, Australia 2023

“Exercise in Low Back Pain”

Invited Session Moderator

11th International World Congress on Low Back and Pelvic Pain
Melbourne, Australia

2023

CONSULTING RELATIONSHIPS AND BOARD MEMBERSHIPS:

Consultant, Program for the Advancement of the UAW-Ford On-Site
Rehabilitation Centers, Department of Physical Medicine and
Rehabilitation

Johns Hopkins Medical School
Baltimore, Maryland

2005-2007

Chair, Data and Safety Monitoring Board, “Systems science center for
musculoskeletal CAM therapies” (NCCAM U19 AT006057)

Orthopedic Research Center

Michigan State University

East Lansing, Michigan

2011-2019

Member, Data and Safety Monitoring Board, “Management strategies
for patients with low back pain and sciatica” (AHRQ R18 HS022641)

Program in Physical Therapy

University of Utah

Salt Lake City, Utah

2014-2018

Member, Internal Advisory Board, P30 Core Center for Musculoskeletal
Biology and Medicine, Department of Orthopaedic Surgery

Washington University Medical School

St. Louis, Missouri

2014-
2022

Member, Board of Trustees

Foundation for Physical Therapy Research

Fairfax, Virginia

2019-
Present

RESEARCH SUPPORT (GOVERNMENTAL/NON-GOVERNMENTAL):

Previous

Role: Predoctoral Trainee

Title: “Aging and Development”

Source: NIA

Grant #: T32 AG000030

Principal Investigator: Storandt, M.

Dates: 1991-1992

Role: Predoctoral Trainee

Title: “Mechanisms of Spatial Localization for Aimed Movements”

Source: NIMH

Grant #: R29 MH04514
 Principal Investigator: Abrams, R.A.
 Dates: 1992-1993

Role: Scholar
 Title: "Memory for Spatial Information used for Aimed Limb Movements"
 Source: Foundation for Physical Therapy
 Grant#: NA; Doctoral Scholarship
 Dates: 1993-1994

Role: Co-Principal Investigator
 Title: "Reliability of a Classification Scheme for Patients with Low Back Pain and Analysis of Selected Quantitated Variables"
 Source: Foundation for Physical Therapy
 Grant#: 94R 03 NOR 02
 Co- Principal Investigator: Norton, B.J.
 Dates: July 1994-June 1996; NCE July 1996-June 1997

Role: Principal Investigator
 Title: "Mechanically-Based Impairment Measures of Low Back Pain"
 Source: NICHD, K01 Mentored Research Scientist Award
 Grant#: K01 HD001226
 Dates: March 2000-February 2005; NCE March 2005-February 2006

Role: Principal Investigator
 Title: "Classification-Directed Treatment of Low Back Pain"
 Source: NICHD
 Grant#: R01 HD047709
 Dates: June 2006-May 2010; NCE June 2010-April 2011

Role: Co-Investigator
 Title: "Measuring Outcomes in Young Hip Patients"
 Source: The Hip Society
 Grant#: NA
 Principal Investigator: Clohisy, J.C.
 Dates: June 2007-May 2008

Role: Co-Investigator
 Title: "Development of a Collaborative Research Team for Prevention of Hip Osteoarthritis"
 Source: NCRR - Washington University Institute of Clinical and Translational Sciences
 Grant#: UL1 RR024992
 Principal Investigator: Clohisy, J.C.
 Dates: January 2008-December 2009

Role: Principal Investigator
 Title: "The Role of Daily Activities to Low Back Pain: A Feasibility Study"

Source: Pilot Fund, Research Division, Program in Physical Therapy, Washington University School of Medicine
 Grant#: NA
 Dates: July 2008-June 2010

Role: Co-Investigator
 Title: "Effect of Unloading Techniques as a Component of Treatment for People with Long Standing Neck Pain"
 Source: Pilot Fund, Research Division, Program in Physical Therapy, Washington University School of Medicine
 Grant#: NA
 Principal Investigator: McDonnell, M.K.
 Dates: September 2008-June 2010

Role: Secondary Mentor
 Title: "Rehabilitation Factors in Pre-Arthritic Hip Disease"
 Source: NICHD, NINDS
 Grant#: K12 HD055931
 Principal Investigator: Harris-Hayes, M.
 Dates: September 2008-March 2011

Role: Primary Mentor
 Title: "Prediction of Ambulation and Disability in Adults with Multiple Sclerosis Using Instrumented Measures of Lower Extremity Impairment"
 Source: NICHD, NINDS
 Grant#: K12 HD055931
 Principal Investigator: Wagner, J.
 Dates: September 2008-August 2013

Role: Principal Investigator
 Title: "Trunk and Pelvic Region Characteristics in Subgroups of People with Low Back Pain"
 Source: NCRR - Washington University Institute for Clinical and Translational Sciences and Mallinckrodt Institute of Radiology
 Grant#: UL1 RR024992
 Dates: May 2009-July 2010

Role: Principal Investigator
 Title: "Anterior Shear Findings in People with Flexion-Related Low Back Pain"
 Source: Missouri Physical Therapy Association
 Grant#: NA
 Dates: July 2009-June 2011

Role: Co-Investigator
 Title: "Musculoskeletal Pain Problems in Professional Musicians"
 Source: Pilot Fund, Research Division, Program in Physical Therapy, Washington University School of Medicine
 Grant#: NA

Principal Investigator: Khoo-Summers, L.

Dates: October 2009-September 2011; NCE June 2012

Role: Co-Investigator

Title: "The Hip Spine Syndrome: A Prospective Descriptive Study of Clinical Presentation and Diagnostic Tests for Patients with Coexisting Hip and Lumbar Spine Disorders"

Source: NCRR - Washington University Institute of Clinical and Translational Sciences; JIT Core Usage Funding

Grant#: JIT137, UL1 RR024992

Principal Investigator: Prather, H.

Dates: July 2010-July 2011

Role: Co-Investigator

Title: "Mechanisms of Specific Trunk Exercises in Low Back Pain"

Source: NICHD

Grant#: R01 HD040909

Principal Investigator: Henry, S.M.

Dates: September 2010-March 2012

Role: Co-Investigator

Title: "The Hip-Spine Syndrome: A Prospective Descriptive Study of Clinical Presentation and Physical Examination"

Source: Scott F. Nadler PASSOR Musculoskeletal Education and Research Grant

Grant#: NA

Principal Investigator: Prather, H.

Dates: August 2010-August 2011

Role: Secondary Mentor

Title: "Rehabilitation Factors in Pre-Arthritic Hip Disease"

Source: NICHD

Grant#: K23 HD067343

Principal Investigator: Harris-Hayes, M.

Dates: April 2011-March 2015

Role: Co-Investigator

Title: "Physical Therapy in the Emergency Department: Intervention Effects for Patients with Acute Back Pain"

Source: Pilot Fund, Research Division, Program in Physical Therapy, Washington University School of Medicine

Grant#: NA

Principal Investigator: McDonnell, D.F.

Dates: May 2011-April 2012; NCE April 2013

Role: Co-Investigator

Title: "Back Pain in the Emergency Department: A New Service Delivery Model"

Source: Missouri Physical Therapy Association

Grant#: NA

Principal Investigators: McDonnell, D.F., Deusinger S.

Dates: July 2011-June 2013

Role: Secondary Mentor

Title: "Brain Spectroscopy Following Exercise Training in Chronic Low Back Pain"

Source: NCRR, Kansas University Hartland Institute for Clinical & Translational Research

Grant#: KL2 RR033177 & UL1 RR033179

Principal Investigator: Sharma, NK.

Dates: July 2011-February 2014

Role: Secondary Mentor

Title: "Development of an Optimal Data Acquisition Protocol for Spine Kinematics and Trunk Muscle Activation in Patients with Non-Specific Low Back Pain"

Source: Canadian Institutes for Health Research, REPAR Program

Grant#: 2012-2013-#2

Principal Investigator: Preuss, R.

Dates: May 2012-April 2013

Role: Principal Investigator

Title: "Relationship of Movement and Alignment Patterns During Clinical Tests and Functional Activities in People with Low Back Pain"

Source: Missouri Physical Therapy Association

Grant#: NA

Dates: May 2012-April 2014; NCE April 2014-March 2015

Role: Consultant

Title: "Task-Specific Movement Pattern Training for Treatment of Patellofemoral Pain"

Source: NCRR - Washington University Institute of Clinical and Translational Sciences

Grant#: UL1 TR000448; CTSA#705

Principal Investigator: Salsich, G

Dates: June 2014-May 2015; NCE June 2015-May 2016

Role: Principal Investigator

Title: "Kinematic and Intervertebral Disc Changes in People with Non-specific Low Back Pain and People at Risk for Low Back Pain"

Source: Multi-Institutional Pilot Grant, Research Division, Program in Physical Therapy, Washington University School of Medicine

Grant#: NA

Dates: July 2014- June 2015; NCE July 2015-June 2016

Role: Consultant

Title: "Supplement to Task-Specific Movement Pattern Training for Treatment of Patellofemoral Pain"

Source: Orthopaedic Section, American Physical Therapy Association

Grant#: Supplement to UL1 RR024992; CTSA#705

Principal Investigator: Salsich, G

Dates: June 2014-May 2016; NCE June 2016-May 2017

Role: Primary Mentor

Title: "Lumbar Alignment and Development of Low Back Pain in Prolonged Standing"

Source: American Society for Biomechanics, Grant in Aid Award

Grant#: NA

Principal Investigator: Hwang, CT

Dates: May 2016-April 2017

Role: Consultant

Title: "Spinal Loads during Activities of Daily Living: Influences of Unilateral Lower-Limb Amputation"

Source: NICHD, NINDS

Grant#: R03 HD086512

Principal Investigator: Bazrgari, B

Dates: September 2016-August 2018

Role: Principal Investigator

Title: "Spinal Control During Functional Activities to Improve Low Back Pain Outcomes"

Source: NICHD, NCMRR

Grant#: R01 HD047709

Dates: April 2013-March 2020

Role: Co-Mentor

Title: "Physical Therapy and Deep Brain Stimulation in Parkinson's Disease"

Source: NICHD, NINDS

Grant#: K12 HD055931

Principal Investigator: Duncan, R

Dates: September 2016-April 2020

Role: Primary Mentor

Title: "Tissue Level Deformations of the Loaded Spine In Humans with Low Back Pain"

Source: NIAMS

Grant#: K01 AR069116

Principal Investigator: Tang, S.

Dates: August 2016- July 2021

Role: Primary Mentor

Title: "Muscle Geometry and its Influence on Function in Patients with Developmental Dysplasia of the Hip"

Source: NIAMS

Grant#: K01 AR072072

Principal Investigator: Harris, M

Dates: April 2018-March 2023

Role: Secondary Mentor
 Title: "The Influence of Postural Behavior and Brain Organization on Progression of Back Pain Symptoms in Young Adults"
 Source: NICHD
 Grant#: K01 HD092613
 Principal Investigator: Armour-Smith, J
 Dates: July 2018-June 2024

Role: Significant Contributor
 Title: "SPINE-WORK: An Inclusive Research Community to Study and Improve Force-Based Manipulations for Spine Pain"
 Source: NIH/NCCIH
 Grant#: U24AT011978
 Co-Principal Investigators: Winkelstein, B; Barocas, V
 Dates: June 2022-December 2023

Role: Co-Mentor
 Title: Low back pain in Parkinson Disease
 Source: NICHD, NCMRR
 Grant #: K23 HD100569
 Principal Investigator: Duncan, R
 Dates: March 2021-February 2024

Role: Principal Investigator
 Title: "Impact of Hip Structure and Function on the Clinical Presentation of Low Back Pain"
 Source: Academy of Orthopaedic Physical Therapy, APTA
 Grant#: P19-03313
 Dates: June 2019-April 2024

Current:

Role: Principal Investigator
 Title: "Significance of Spinal Movement Impairments in Acute Low Back Pain"
 Source: NIH/NICHD
 Grant#: R01 HD108240
 Dates: March 2023-February 2028

Role: Secondary Mentor
 Title: "Using Mobile Health Technology and Real-Time Assessments to Address Multilevel Influences on Lumbar Spine Surgery Outcomes"
 Source: NIH/NIAMS
 Grant#: K23AR082986
 Principal Investigator: Jacob Greenberg, MD
 Dates: June 2024-May-2029

Role: Mentor
 Title: Promoting Excellence through Pain and Addiction Research Enhancement (PREPARE) T90 R90

Source: NIH/NINR
 Grant #: R90NR021799
 Principal Investigator: Goodin, Burel
 Dates: August 2024-July 2029

TRAINEE, MENTEE, SPONSORSHIP RECORD:

Current:

Faculty Career Development Trainees:

Washington University School of Medicine

Jacob Greenberg, MD

Assistant Professor, Department of Neurosurgery

December 2023-Present

K23 Mentored Patient-Oriented Research Career Development Award, NIAMS

Secondary Mentor, Project Title: "Using mobile health technology and real-time assessments to address multilevel influences on lumbar spine surgery outcomes"

Currently: Assistant Professor, Department of Neurosurgery, Washington University, St. Louis, Missouri

Ph.D. in Movement Science:

Washington University School of Medicine

Kayla Krueger, DPT

Program in Physical Therapy

August 2020-Present

NICHD T32 HD007434

Primary Mentor, Project Title: Spinal movement impairments in people with low back pain

WUPT Faculty:

Washington University School of Medicine

Vanessa Lanier, DPT, OCS

Associate Professor

Program in Physical Therapy

Alyssa Skala, DPT, OCS

Assistant Professor

Program in Physical Therapy

Previous:

Faculty Career Development Trainees:

Washington University School of Medicine

Marcie Harris-Hayes

Program in Physical Therapy, Washington University School of Medicine

Scholar, K12 Comprehensive Opportunities in Rehabilitation Research Training, NICHD/NINDS

K12 HD055931

2008-2011

Member, Mentoring Committee, Project Title: Intra-articular hip disease

Fellow, K23 Mentored Clinical Scientist Trainee, NICHD K23 HD067343

September 2011-April 2015

Member, Mentoring Committee, Project Title: Rehabilitation factors in pre-arthritic hip disease

Currently: Professor, Program in Physical Therapy, Washington University, St. Louis, Missouri

Simon Tang, PhD

Assistant Professor, Orthopaedic Surgery, Biomedical Engineering

May 2016-April 2021

NIAMS K01 AR069116-01A1/UL1 RR024992 (MTPCI)

Member, Career Advisory Committee

Primary Mentor, Project Title: Deformations of the loaded spine in people with low back pain

Currently: Associate Professor, Department of Orthopaedic Surgery and Department of Biomedical Engineering, Washington University, St. Louis, Missouri

Mike Harris, PhD

Assistant Professor, Program in Physical Therapy, Orthopaedic Surgery, Mechanical Engineering

June 2016-March 2023

K01 Mentored Research Scientist Award, NIAMS

Primary Mentor, Project Title: Muscle geometry and its influence on function in patients with developmental dysplasia of the hip

Currently: Associate Professor, Program in Physical Therapy and Department of Orthopaedic Surgery, Washington University, St. Louis, Missouri

Ryan Duncan, PT, DPT

Associate Professor, Program in Physical Therapy, Neurology

March 2020-February 2024

K23 mentored Patient-Oriented Research Career Development Award, NICHD/NCMRR NICHD

Secondary Mentor, Project Title: Low Back Pain in Parkinson Disease

Currently: Associate Professor, Program in Physical Therapy and Department of Neurology, Washington University, St. Louis, Missouri

Outside University

Joanne Wagner

Program in Physical Therapy, Saint Louis University

Scholar, K12 Comprehensive Opportunities in Rehabilitation Research Training Trainee, NICHD

K12 HD055931

September 2008-August 2013

Primary Mentor, Project Title: Prediction of ambulation and disability in adults with multiple sclerosis using instrumented measures of lower extremity impairment

Grant: National Multiple Sclerosis Society Pilot Research Grant, 2013-2014

Project Title: Neuropathogenesis of impairments in bilateral coordination of gait in persons with Multiple Sclerosis

Currently: Senior Director, Scientific Communications, Xenon Pharmaceuticals Inc.

Neena Sharma

Program in Physical Therapy, Kansas University

Scholar, KL2 NCRR Kansas University Hartland Institute for Clinical & Translational Research Therapy, Kansas University

KL2 RR033177 & UL1 RR033179

July 2011-February 2014

Secondary Mentor, Project Title: Brain spectroscopy following exercise training in chronic low back pain

Currently: Associate Professor, Program in Physical Therapy, Kansas University, Kansas, Missouri

Joanne Armour-Smith, PT, PhD

Assistant Professor, Physical Therapy

June 2017-May 2023

K01 Mentored Research Scientist Award, NICHD/NCMRR

Secondary Mentor, Project Title: The influence of postural behavior and brain organization on progression of back pain symptoms in young adults

Currently: Associate Professor, Program in Physical Therapy, Chapman University, Orange, California

Post-Doctoral Fellow:

Washington University School of Medicine

Molly Johnson, PhD, MAmSAT

Movement Science, Program in Physical Therapy

NICHD T32 HD007434

January 2010-July 2011

Primary Mentor, Project Title: Relationships among movement patterns during functional activities and clinical tests in people with and without low back pain

Currently: Instructor, Integrated Motion Studio, Austin, Texas; Research Scientist at Dell Children's Medical Center, Austin, Texas; Adjunct Kinesiology Professor, University of the Incarnate Word, San Antonio, Texas

Adam Abraham, PhD

Department of Orthopaedic Surgery, Musculoskeletal Research Center

NIH T32AR060719

April 2014-January 2016

Member, Post-Doctoral Advisory Committee

Currently: Research Investigator, Department of Orthopedic Surgery, University of Michigan, Ann Arbor, Michigan

Bethany Taylor Gardner, OTD, OTR/L

Department of Internal Medicine, Division of General Medical Sciences

May 2014-June 2015

Member, Mentoring Committee, Project Title: Assessment of work productivity and functional impairment due to musculoskeletal disorders

Currently: Occupational Therapist, Vice President - Service Development at Fit-For-Work, Lexington, Kentucky

Brecca Gaffney, PhD

Postdoctoral Fellow, Movement Science

October 2017-April 2021

Postdoctoral Fellowship Award, NIH/NIAMS F32AR075349

Co-Sponsor, Project Title: Effects of simulated interventions on hip articular cartilage loading in patients with femoroacetabular impingement and developmental dysplasia of the hip
Currently: Assistant Professor, Department of Mechanical Engineering, University of Colorado Denver, Denver, Colorado

Outside University

Valentina Graci, PhD

Program in Physical Therapy, St. Louis University
 September 2010-March 2012

Member, Mentoring Committee, Project Title: Gender differences in trunk, pelvis and lower limb kinematics during a single leg squat

Currently: Research Scientist, Children's Hospital of Philadelphia, Research Institute, Philadelphia, Pennsylvania

Ph.D. in Physical Therapy:

Outside University

Daniel Azevedo, PT, MSc.

Universidade Cidade de São Paulo, São Paulo, Brazil

CNPQ grant number 470273/2013-5

April 2014-March 2018

Primary Dissertation Committee Member, Project Title: Movement system impairment based classification vs. general exercise for chronic non-specific low back pain: A randomized, clinical trial

Currently: Assistant Professor, Pontificia Universidade Catolica de Minas Gerais, Minas Gerais, Brazil

Ph.D. in Kinesiology:

Outside University

Janice Moreside, PT, PhD

Department of Kinesiology, University of Waterloo, Waterloo, Canada

July 2010

External Examiner Ph.D. Thesis, Dissertation Title: Hip mobility and lumbar spine function

Currently: Assistant Professor, Health and Human Sciences, Dalhousie University, Halifax, Nova Scotia

Ph.D. in Psychology:

Washington University

Emily Bloesch, BS, PhD

Department of Psychological and Brain Sciences

May 2013

External Examiner Ph.D. Thesis, Dissertation Title: An investigation into peripersonal space representations in older adults

Currently: Associate Professor, Psychology Department, Central Michigan University, Mount Pleasant, Michigan

Ph.D. in Movement Science:

Washington University School of Medicine

Katrina Maluf, MSPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

August 1998-May 1999

Primary Mentor, August 1998-May 1999; Project Titles: Modifying lumbar spinal alignment or movement during symptom testing in patients with low back pain: A follow-up study; The use of a classification system to guide nonsurgical management of a patient with LBP

June 2001-December 2002

Primary Dissertation Committee Member, June 2002-December 2002; Dissertation Title: Effect of physical activity on plantar tissue stress: Experimental application of a theoretical model for tissue adaptation & injury

Currently: Professor, San Diego State University, San Diego, California

John Hollman, MSPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

August 1998-December 2000

Primary Dissertation Committee Member, Dissertation Title: Analysis of intrinsic knee joint surface kinematics: The path of instant centers of rotation

Currently: Professor, Physical Therapy, Mayo Clinic, College of Medicine and Science, Rochester, Minnesota

Sara Gombatto, MSPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

August 2002-August 2007

Primary Mentor, Dissertation Title: Mechanisms contributing to chronic, recurrent low back pain

Scholarships:

- Foundation for Physical Therapy Doctoral Scholarships 2003-2007

Currently: Professor, San Diego State University, San Diego, California

Sara Scholtes, DPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

August 2004-July 2009

Primary Mentor, Dissertation Title: The role of limb movements in chronic, recurrent low back pain

Scholarships:

- Foundation for Physical Therapy McMillan Scholarship 2004-2005
- Foundation for Physical Therapy Doctoral Scholarships 2006-2009

Currently: Professor and Chair, Department of Physical Therapy, North Central College, Naperville, Illinois

Cara Lewis, MSPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

June 2004-December 2005

Primary Dissertation Committee Member, Dissertation Title: Effect of movement and muscle activation patterns on anterior hip joint forces and hip pain

Currently: Professor, Program in Physical Therapy, Boston University, Boston, Massachusetts

Joanne Wagner, MSPT, ATC, PhD

Program in Physical Therapy

NICHD T32 HD007434

October 2005-April 2006

Dissertation Committee Member, Dissertation Title: Upper extremity movement control in people with acute hemiparesis

Currently: Sr. Director, Scientific Communications at Xenon Pharmaceuticals

Donovan Lott, MSPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

February 2006-May 2007

Dissertation Committee Member, Dissertation Title: Mechanisms and contributing factors to skin trauma and breakdown in the neuropathic foot

Currently: Research Associate Professor, Department of Physical Therapy, College of Public Health and Health Professions, University of Florida, Gainesville, Florida

Justin Beebe, MSPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

April 2007-December 2008

Dissertation Committee Member, Dissertation Title: Mechanisms underlying hand function after stroke

Currently: Associate Professor, Physical Therapy, Simmons School of Nursing and Health Sciences, Simmons College, Boston, Massachusetts

Minna Hong, DPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

August 2007-December 2007

Dissertation Committee Member, Dissertation Title: Locomotor deficits in patients with Parkinson's Disease

Currently: SCI Peer Support Supervisor at Shepherd Center Spinal Cord Injury Group, Atlanta, Georgia

Madeleine Hackney, BS, PhD

Program in Physical Therapy

NICHD T32 HD007434

April 2008-April 2009

Dissertation Committee Member, Dissertation Title: Alternative movement therapies for Parkinson's Disease

Currently: Assistant Professor of Medicine, Division of General and Geriatric Medicine, Emory University School of Medicine, Atlanta, Georgia

Dustin Hardwick, DPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

July 2008-March 2010

Primary Dissertation Committee Member, Dissertation Title: Hemiparetic shoulder pain

Currently: Associate Professor, Physical Therapy and Rehabilitation Sciences, University of Southern Florida, Tampa, Florida

Ericka Merriweather, DPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

August 2009-May 2014

Primary Dissertation Committee Member, Dissertation Title: Foot progression angle in people with diabetes and peripheral neuropathy

Currently: Associate Professor, Department of Physical Therapy, New York University, New York, New York

Christopher Sorensen, MS, PhD

Program in Physical Therapy

NCRR TL1 RR024995 & UL1 RR024992

August 2010-May 2015

Primary Mentor, Project Title: Symptom behavior and risk factors for low back pain in prolonged standing

Awards and Scholarships:

- TL1 Pre-Doctoral Scholarship (Standard Program) 2011-2015
- 2nd place award, Poster presentation, 17th Annual Washington University Graduate Student Research Symposium

Currently: Medical Informaticist and REDCap Administrator, Division of Data and Research Computing, Washington University School of Medicine

Andrej Marich, PT, DPT, PhD

Program in Physical Therapy

NICHD T32 HD007434

August 2012-April 2017

Primary Mentor, Project Title: Relationship between movement and alignment patterns during standardized clinical tests and functional activities

Awards and Scholarships:

- Florence P. Kendall Doctoral Scholarship 2012-2013
- PODS I Scholarship 2014-2015
- 3rd place award, Poster presentation, 19th Annual Washington University Graduate Student Research Symposium
- Dr. Hans and Clara Davis Zimmerman Foundation Health Scholarship 2015-2017

Currently: Medical Science Liaison, Scholar Rock Biotechnology

Kshamata Shah, BS, PT, PhD

Program in Physical Therapy

December 2013-May 2014

Dissertation Committee Member, Dissertation Title: Diabetes mellitus and impairments of the UE

Currently: Associate Professor of Physical Therapy, Arcadia University, Glenside, Pennsylvania

Victor Cheuy, BS, PhD

Program in Physical Therapy

September 2013-2015

Primary Dissertation Committee Member, Project Title: Contributing factors to forefoot deformity in the diabetic, neuropathic foot

Currently: Assistant Professor, University of California San Francisco, San Francisco, California

Ching Ting Hwang, BS, PhD

Program in Physical Therapy

August 2013-February 2018

Primary Mentor, Project Title: Biomechanical, psychological and sensory processing findings in back-healthy people susceptible to low back pain

Awards:

- Olin Fellowship for Women in Graduate Study co-sponsored by Washington University and the Monticello Foundation 2013-2017
- American Society for Biomechanics, Grant in Aid Award, 2016-2017

Currently: Senior Project Manager, Scale Management, Clario

Kimberly Waddell, MS, OTR/L, PhD

Program in Physical Therapy

November 2016-April 2019

NICHD T32 HD007434

NCRR TL1 TR000449

Member, Mentoring Committee, Project Title: Evaluating self-reported change and actual change in upper limb use after stroke

Primary Dissertation Committee Member, Project Title: Exploring the complexities of real world upper limb performance after stroke

Currently: Assistant Professor of Physical Medicine and Rehabilitation in the Perelman School of Medicine, University of Pennsylvania, Research Health Scientist, VA Center for Health Equity Research and Promotion

Quenten Hooker, MS, PhD

Program in Physical Therapy

August 2017-August 2021

NICHD T32 HD007434

NCRR TL1 TR000449

Primary Mentor, Project Title: Movement patterns during functional activities in people with chronic low back pain

Currently: Manager, R&D-Biomechanics at Callaway Golf

Jessica Barth, OTD, PhD

Program in Physical Therapy

February 2021-May 2022

NICHD T32 HD007434

Dissertation Committee Member, Project Title: "Prediction of upper limb outcomes after stroke"

Currently: Advanced Health Services Research Fellow, U.S. Department of Veteran's Affairs

David May, DPT

Program in Physical Therapy

February 2021-Present

NICHD T32 HD007434

Dissertation Committee Member, Project Title: "Advancing the assessment and treatment of signs and symptoms of Parkinson Disease"

Currently: Clinical Scientist III in Neuromodulation, Boston Scientific

Molly Shepherd, BS

Program in Physical Therapy

August 2022-June 2024

NICHD T32 HD007434

Primary Dissertation Committee Member, Project Title: Femoral Geometry and Activity Type: Factors that Influence Loading in the Dysplastic Hip

Currently: Staff Scientist, Clinical Biomechanics Laboratory, Program in Physical Therapy, Washington University

Allison Haussler, BA

Program in Physical Therapy

January 2024-October 2025

MSCI Scholar, Clinical Research and Training Center, Washington University Institute for Clinical and Translational Sciences

NCRR TL1 TR002344

Primary Dissertation Committee Member, Project Title: Advancing interventions to improve symptoms of Parkinson Disease

Ph.D. in Biokinesiology and Physical Therapy:

Outside University

Hai-Jung (Steffi) Shih, PT, PhD

Biokinesiology and Physical Therapy, University of Southern California

February 2017-2020

Primary Dissertation Committee Member, Project Title: Effects of cognitive loading on gait characteristics in people with and people without LBP

Currently: Engineering Program Manager - Human Factors, Apple, Inc.

Master's in Clinical Investigation Trainees:

Washington University School of Medicine

Michelle Kinney, MSPT

Clinical Research and Training Center, Washington University Institute for Clinical and Translational Sciences

NCRR TL1 RR024995

July 2006-September 2006

Primary Mentor, Project Title: Effect of modifications of hip lateral rotation on symptoms, movement patterns and muscle activity in people with low back pain

Scholarships:

- * TL1 Pre-Doctoral Scholarship (Summer Program) 2006

Currently: Director, Physical Therapy, Saline Physical Therapy, Saline, Michigan

Marcie Harris-Hayes, PT, DPT, MSCI, OCS

MSCI student, Clinical Research and Training Center, Washington University Institute for Clinical and Translational Sciences

August 2006-September 2008

Primary Mentor, Project Titles: Reliability of examiners to classify patients with LBP based on the MSI classification system; Development and preliminary testing of examiners to assess adherence to a physical therapy treatment program

Currently: Professor, Program in Physical Therapy, Washington University School of Medicine, St. Louis, Missouri

Ruth Porter-Chimenti, DPT, PhD

Clinical Research and Training Center, Washington University Institute for Clinical and Translational Sciences

NCRR TL1 RR024995

June 2007-August 2007

Primary Mentor, June 2007-August 2007; Project Title: Movement patterns and activity levels in people with and without low back pain who participated in rotation-related sport

Scholarships:

- TL1 Pre-Doctoral Scholarship (Summer Program) 2007

June 2009-August 2009

Primary Research Advisor, June 2009-August 2009, Research Intensive Clinical Rotation, Project Title: Musculoskeletal conditions in professional musicians

Currently: Associate Professor, Department of Physical Therapy, University of Iowa, Iowa City, Iowa

Margaret Ravenna, DPT

MSCI Scholar, Clinical Research and Training Center, Washington University Institute for Clinical and Translational Sciences

NCRR TL1 RR024995

June 2009-May 2010

Primary Mentor, Project Title: Anterior shear findings in people with flexion-related low back pain

Scholarships:

- TL1 Pre-Doctoral Scholarship (Intensive Program) 2009-2010

Currently: Manager Physical Therapist, Fusion Rehabilitation, Phoenix, Arizona

Stephanie Sandvick, DPT

MSCI Scholar, Clinical Research and Training Center, Washington University Institute for Clinical and Translational Sciences

NCRR TL1 RR024995

June 2012-May 2013

Primary Mentor, Project Title: Mechanical impairments and outcomes in people with LBP

Awards and Scholarships:

TL1 Pre-Doctoral Scholarship (Intensive Program), 2012-2013

Missouri Physical Therapy Association Noteworthy Poster Award, 2015

Currently: Physical Therapist, Physical Therapy & Sports Medicine Centers, Orange, Connecticut

Stacey Chen, BS, ATC

MSCI Scholar, Clinical Research and Training Center, Washington University Institute for Clinical and Translational Sciences

NCRR TL1 TR002344

June 2020-May 2021

Primary Mentor, Project Title: Spinal movement impairments in people with chronic, recurrent LBP vs. people with chronic LBP

Awards and Scholarships:

TL1 Pre-Doctoral Scholarship (Intensive Program), 2020-2021

Currently: PhD student, Movement Science Program, Program in Physical Therapy, Washington University

MS in Biomedical Engineering

Washington University

Donald Aboytes, BS

Department of Biomedical Engineering

January 2021-August 2021

Master's Thesis Committee Member, Project Title: "Intervertebral disc strains induced during prolonged standing"

Currently: Research and Development Engineer at BioSense Weber (Johnson and Johnson)

Research Scholars:

International

Roberto Meroni, PT, MSc, PhD

Visiting Researcher, Motion Analysis Laboratory, Department of Clinical Medicine and Prevention, University of Milan Bicocca, Milan, Italy

March 2008-May 2008

Primary Mentor, Project Title: Lumbopelvic movements and symptom behavior with a test performed in quadruped: People with and without LBP

Currently: Associate Professor, Chair, Physical Therapy, Lunex University, Luxembourg

Marco Boschi, BSPT, OMPT

Visiting Researcher, Physical Therapist, Department of Physical Therapy, University of Bologna, Bologna, Italy

January 2009-May 2009

Primary Mentor, Project Title: Pattern of movement with hip medial rotation in 2 LBP subgroups

Currently: Physical Therapist, IGEA S.P.A., Bologna, Italy

Hiroshige Tateuchi, MSPT, PhD

Visiting Researcher, Physical Therapist

February 2009-April 2009

Primary Mentor, Project Title: Pattern of movement with return from forward bend in 2 LBP subgroups

Currently: Professor, Department of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kyoto University, Kyoto, Japan

Post-Professional Clinical Doctorate in Physical Therapy:

Washington University School of Medicine

Cheryl Caldwell, PT, DPT, CHT

Capstone Project, Program in Physical Therapy

September 2002-December 2002

Primary Mentor, Project Title: Medical and physical therapy diagnosis of shoulder impingement syndrome

Currently: Retired 2021 as Associate Professor of Physical Therapy and Orthopaedic Surgery, Washington University School of Medicine, St. Louis, Missouri

Marcie Harris-Hayes, PT, DPT, MSCI

Independent Study, Program in Physical Therapy

September 2002-May 2003

Primary Mentor, Project Title: Classification, treatment and outcomes of a patient with lumbar extension syndrome

Currently: Professor of Physical Therapy and Orthopaedic Surgery, Washington University School of Medicine, St. Louis, Missouri

Mary Kate McDonnell, PT, DPT, OCS

Capstone Project, Program in Physical Therapy

September 2002-May 2003

Primary Mentor, Project Title: Use of a specific exercise program and modification of postural alignment in the treatment of a patient with cervicogenic headache

Currently: Retired 2022 as Associate Professor of Physical Therapy and Orthopaedic Surgery, Washington University School of Medicine, St. Louis, Missouri

Teresa Spitznagle, PT, DPT, WCS

Independent Study, Program in Physical Therapy

January 2004-August 2004; January 2006-May 2006

Primary Mentor, Project Title: Diastasis recti abdominis in a urogynecological patient population

Currently: Professor of Physical Therapy and Obstetrics and Gynecology, Washington University School of Medicine, St. Louis, Missouri

Tom Susco, DPT

Independent Study, Program in Physical Therapy

July 2004-December 2004

Primary Mentor, Project Titles: Passive hip rotation measures in people with and without low back pain who participate in rotation-related sports activities

Currently: Lawyer, United States Court of Appeals for Veterans Claims, Washington, D.C.

Renee Ivens, PT, DPT

Independent Study, Program in Physical Therapy

January 2005-December 2005

Primary Mentor, Project Title: Characteristics of people with low back pain who do not fully respond to modifications of alignment and movement during a clinical examination

Currently: Associate Professor of Physical Therapy and Orthopaedic Surgery, Washington University School of Medicine, St. Louis, Missouri

Bethany Taylor Gardner, OTD, OTR/L

Capstone Project, Program in Occupational Therapy

November 2005-May 2007

Capstone Project Committee Member, Project Title: The relationship between job satisfaction, control, social support at work and hand symptoms in carpal tunnel syndrome

Currently: Occupational Therapist, Toyota Family Health Center, San Antonio, Texas

Pamela Wendl, PT, DPT

Independent Study, Program in Physical Therapy

June 2006-August 2006

Primary Mentor, Project Title: Outcomes Used in LBP

Currently: Assistant Professor of Emergency Medicine and Physical Therapy, Washington University School of Medicine, St. Louis, Missouri

Brigitte Cutler

Capstone Project, Program in Physical Therapy

January 2007-December 2007

Primary Mentor, Project Title: The use of unweighting techniques in a patient with lumbar rotation with extension syndrome

Currently: Owner and Physical Therapist at PhysioTherapy Professionals, Springfield, Illinois

Lynnette Khoo-Summers, PT, DPT

Independent Study, Program in Physical Therapy

January 2008-December 2008

Primary Mentor, Project Title: Musculoskeletal contributions to turn out in first position in college-level ballet dancers

Currently: Associate Professor of Physical Therapy and Orthopaedic Surgery, Washington University School of Medicine, St. Louis, Missouri

Doctorate in Physical Therapy:

Washington University School of Medicine

Yi Kang, BS, DPT

Research Assistant

January 2021-May 2024

Currently: Pre-doctoral trainee, Movement Science Doctoral Program, Washington University School of Medicine, St. Louis, Missouri

Master's in Science:

Washington University School of Medicine

Sanford Olevitch

Program in Occupational Therapy, Washington University School of Medicine
July 1998-December 1998

Primary Master's Thesis Committee Member, Thesis Title: Effects of the perceived work environment on return to work outcomes of LBP patients

Currently: Physical therapist, Luna Physical Therapy, Robbinsdale, Minnesota

Professional Master's in Physical Therapy:

Washington University School of Medicine

Stephanie Griffith

January 1998-May 1998

Katherine Ballmann

January 1999-May 1999; September 1999-December 1999

Matt Luzinski

August 1999-December 1999

Jill Taylor

January 2000-May 2000

Elena Zerkowitz

January 2000-May 2000; August 2000-December 2000

Rani Linarelli

February 2001-May 2001

Marc Haro

February 2002-December 2002

Undergraduate:

Washington University

Elizabeth Jokerst, Psychology

August 1994-May 1995

Laura Jones, Psychology

January 1995-May 1995

Alissa Hartmann, Biology

August 1995-May 1996

Ayala Weiner, Psychology and Biology

August 1995-December 1995

Anna Bales, Biomedical Engineering

August 2014-May 2015, August 2016- May 2017

Patrick Wong, Biomedical Engineering

January 2016-May 2016

Kearsten Miller, Biomedical Engineering

March 2023-April 2024

Sophie Ma, Mechanical Engineering and Biomedical Engineering

August 2023-December 2023

BIBLIOGRAPHY:

Peer Reviewed Manuscripts - Published/In Press/Accepted **Pre/Postdoctoral Trainees *Faculty
Mentees

1. **Van Dillen LR**, Roach KE. Reliability and validity of the Acute Care Index of Function for patients with neurologic impairment. *Physical Therapy*. 1988; 68(7):1098-101. PubMed PMID: 3387465.
2. Roach KE, **Van Dillen LR**. Development of an Acute Care Index of Functional status for patients with neurologic impairment. *Physical Therapy*. 1988; 68(7):1102-8. PubMed PMID: 3387466.
3. **Van Dillen LR**, Roach KE. Interrater reliability of a clinical scale of rigidity. *Physical Therapy*. 1988; 68(11):1679-81. PubMed PMID: 3186794.
4. **Van Dillen LR**, Sahrman SA, Norton BJ, Caldwell CA, Fleming DA, McDonnell MK, Woolsey NB. Reliability of physical examination items used for classification of patients with low back pain. *Physical Therapy*. 1998; 78(9):979-88. PubMed PMID: 9736895.
5. **Van Dillen LR**, McDonnell MK, Fleming DA, Sahrman SA. Effect of knee and hip position on hip extension range of motion in individuals with and without low back pain. *Journal of Orthopaedic and Sports Physical Therapy*. 2000; 30(6):307-16. PubMed PMID: 10871142.
6. **Maluf KS, Sahrman SA, **Van Dillen LR**. Use of a classification system to guide nonsurgical management of a patient with chronic low back pain. *Physical Therapy*. 2000; 80(11):1097-111. PubMed PMID: 11046197.
7. **Van Dillen LR**, Sahrman SA, Norton BJ, Caldwell CA, Fleming D, McDonnell MK, Bloom NJ. Effect of active limb movements on symptoms in patients with low back pain. *Journal of Orthopaedic and Sports Physical Therapy*. 2001; 31(8):402-13; discussion 414-8. PubMed PMID: 11508611.
8. **Hollman JH, Deusinger RH, **Van Dillen LR**, Matava MJ. Knee joint movements in subjects without knee pathology and subjects with injured anterior cruciate ligaments. *Physical Therapy*. 2002; 82(10):960-72. PubMed PMID: 12350211.
9. **Van Dillen LR**, Sahrman SA, Norton BJ, Caldwell CA, McDonnell MK, Bloom NJ. Movement system impairment-based categories for low back pain: stage 1 validation. *Journal of Orthopaedic and Sports Physical Therapy*. 2003; 33(3):126-42. PubMed PMID: 12683688.
10. **Van Dillen LR**, Sahrman SA, Norton BJ, Caldwell CA, McDonnell MK, Bloom N. The effect of modifying patient-preferred spinal movement and alignment during symptom testing in patients with low back pain: a preliminary report. *Archives of Physical Medicine and Rehabilitation*. 2003; 84(3):313-22. PubMed PMID: 12638097.
11. **Hollman JH, Deusinger RH, **Van Dillen LR**, Zou D, Minor SD, Matava MJ, Engsberg JR. Tibiofemoral joint-surface motions in weight-bearing and non-weight-bearing movement. *Journal of Sport Rehabilitation*. 2003; 12(2):143-161.
12. **Hollman JH, Deusinger RH, **Van Dillen LR**, Matava MJ. Gender differences in surface rolling and gliding kinematics of the knee. *Clinical Orthopedics & Related Research*. 2003; (413):208-21. PubMed PMID: 12897612.
13. Norton BJ, Sahrman SA, **Van Dillen LR**. Differences in measurements of lumbar curvature related to gender and low back pain. *Journal of Orthopaedic and Sports Physical Therapy*. 2004; 34(9):524-34. PubMed PMID: 15493520.
14. *McDonnell MK, Sahrman SA, **Van Dillen LR**. A specific exercise program and modification of postural alignment for treatment of cervicogenic headache: a case report. *Journal of Orthopaedic and Sports Physical Therapy*. 2005; 35(1):3-15. PubMed PMID: 15754599.
15. **Van Dillen LR**, Sahrman SA, **Wagner JM. Classification, intervention, and outcomes for a person with lumbar rotation with flexion syndrome. *Physical Therapy*. 2005; 85(4):336-51. PubMed PMID: 15794704.
16. *Harris-Hayes M, **Van Dillen LR**, Sahrman SA. Classification, treatment and outcomes of a patient with lumbar extension syndrome. *Physiotherapy Theory and Practice*. 2005; 21(3):181-96. PubMed PMID: 16389699.
17. **Van Dillen LR**, Sahrman SA, Caldwell CA, McDonnell MK, Bloom N, Norton BJ. Trunk rotation-related impairments in people with low back pain who participated in 2 different types of leisure

- activities: a secondary analysis. *Journal of Orthopaedic and Sports Physical Therapy*. 2006; 36(2):58-71. PubMed PMID: 16494073.
18. Prather H, **Van Dillen LR**, Metzler JP, Riew KD, Gilula LA. Prospective measurement of function and pain in patients with non-neoplastic compression fractures treated with vertebroplasty. *Journal of Bone and Joint Surgery*. 2006; 88(2):334-41. PubMed PMID: 16452745.
 19. ****Gombatto SP**, Collins DR, Sahrman SA, Engsborg JR, **Van Dillen LR**. Gender differences in pattern of hip and lumbopelvic rotation in people with low back pain. *Clinical Biomechanics*. (Bristol, Avon). 2006; 21(3):263-71. PubMed PMID: 16376467.
 20. **Van Dillen LR**, ****Gombatto SP**, Collins DR, Engsborg JR, Sahrman SA. Symmetry of timing of hip and lumbopelvic rotation motion in 2 different subgroups of people with low back pain. *Archives of Physical Medicine and Rehabilitation*. 2007; 88(3):351-60. PubMed PMID: 17321829.
 21. ***Spitznagle TM**, Leong FC, **Van Dillen LR**. Prevalence of diastasis recti abdominis in a urogynecological patient population. *International Urogynecology Journal and Pelvic Floor Dysfunction*. 2007; 18(3):321-8. PubMed PMID: 16868659.
 22. ****Gombatto SP**, Collins DR, Sahrman SA, Engsborg JR, **Van Dillen LR**. Patterns of lumbar region movement during trunk lateral bending in 2 subgroups of people with low back pain. *Physical Therapy*. 2007; 87(4):441-54. PubMed PMID: 17374634.
 23. ***Caldwell C**, Sahrman S, **Van Dillen L**. Use of a movement system impairment diagnosis for physical therapy in the management of a patient with shoulder pain. *Journal of Orthopaedic and Sports Physical Therapy*. 2007; 37(9):551-63. PubMed PMID: 17939614.
 24. **Van Dillen LR**, ***McDonnell MK**, ****Susco TM**, Sahrman SA. The immediate effect of passive scapular elevation on symptoms with active neck rotation in patients with neck pain. *Clinical Journal of Pain*. 2007; 23(8):641-7. PubMed PMID: 17885341.
 25. ***Harris-Hayes M**, Wendl PM, Sahrman SA, **Van Dillen LR**. Does stabilization of the tibiofemoral joint affect passive prone hip rotation range of motion measures in unimpaired individuals? A preliminary report. *Physiotherapy Theory and Practice*. 2007; 23(6):315-23. PubMed PMID: 18075905.
 26. ****Scholtes SA**, **Van Dillen LR**. Gender-related differences in prevalence of lumbopelvic region movement impairments in people with low back pain. *Journal of Orthopaedic and Sports Physical Therapy*. 2007; 37(12):744-53. PubMed PMID: 18560183.
 27. ****Gombatto SP**, Klaesner JW, Norton BJ, Minor SD, **Van Dillen LR**. Validity and reliability of a system to measure passive tissue characteristics of the lumbar region during trunk lateral bending in people with and people without low back pain. *Journal of Rehabilitation Research & Development*. 2008; 45(9):1415-29. PubMed PMID: 19319764.
 28. **Van Dillen LR**, Bloom NJ, ****Gombatto SP**, ****Susco TM**. Hip rotation range of motion in people with and without low back pain who participate in rotation-related sports. *Physical Therapy in Sport*. 2008; 9(2):72-81. PubMed Central PMCID: PMC2597839.
 29. ****Gombatto SP**, Norton BJ, ****Scholtes SA**, **Van Dillen LR**. Differences in symmetry of lumbar region passive tissue characteristics between people with and people without low back pain. *Clinical Biomechanics*. (Bristol, Avon). 2008; 23(8):986-95. PubMed Central PMCID: PMC2577573.
 30. Andrade GT, ****Azevedo DC**, De Assis Lorentz I, Galo Neto RS, Sadala Do Pinho V, Ferraz Goncalves RT, McDonnell MK, **Van Dillen LR**. Influence of scapular position on cervical rotation range of motion. *Journal of Orthopaedic and Sports Physical Therapy*. 2008; 38(11):668-73. PubMed PMID: 19024884.
 31. ****Gardner BT**, Dale AM, **Van Dillen LR**, Franzblau A, Evanoff BA. Predictors of upper extremity symptoms and functional impairment among workers employed for 6 months in a new job. *American Journal of Industrial Medicine*. 2008; 51(12):932-40. PubMed PMID: 18651568.

32. **Scholtes SA, **Gombatto SP, **Van Dillen LR**. Differences in lumbopelvic motion between people with and people without low back pain during two lower limb movement tests. *Clinical Biomechanics*. (Bristol, Avon). 2009; 24(1):7-12. PubMed Central PMCID: PMC2643272.
33. **Van Dillen LR**, **Maluf KS, Sahrman SA. Further examination of modifying patient-preferred movement and alignment strategies in patients with low back pain during symptomatic tests. *Manual Therapy*. 2009; 14(1):52-60. PubMed Central PMCID: PMC2659590.
34. *Harris-Hayes M, Sahrman SA, **Van Dillen LR**. Relationship between the hip and low back pain in athletes who participate in rotation-related sports. *Journal of Sport Rehabilitation*. 2009; 18(1):60-75. PubMed Central PMCID: PMC2699456.
35. *Harris-Hayes M, **Van Dillen LR**. The inter-tester reliability of physical therapists classifying low back pain problems based on the movement system impairment classification system. *Physical Medicine and Rehabilitation*. 2009; 1(2):117-26. PubMed Central PMCID: PMC2752279.
36. *Harris-Hayes M, Holtzman GW, Earley JA, **Van Dillen LR**. Development and preliminary reliability testing of an assessment of patient independence in performing a treatment program: standardized scenarios. *Journal of Rehabilitation Medicine*. 2010; 42(3):221-7. PubMed Central PMCID: PMC3574865.
37. **Scholtes SA, Norton BJ, Lang CE, **Van Dillen LR**. The effect of within-session instruction on lumbopelvic motion during a lower limb movement in people with and people without low back pain. *Manual Therapy*. 2010; 15(5):496-501. PubMed Central PMCID: PMC2922485.
38. Hoffman SL, *Harris-Hayes M, **Van Dillen LR**. Differences in activity limitation between 2 low back pain subgroups based on the movement system impairment model. *Physical Medicine and Rehabilitation*. 2010; 2(12):1113-8. PubMed Central PMCID: PMC3628674.
39. *Sharma NK, McCarson K, **Van Dillen L**, Lentz A, Khan T, Cirstea CM. Primary somatosensory cortex in chronic low back pain - a H-MRS study. *Journal of Pain Research*. 2011; 4:143-50. PubMed Central PMCID: PMC3100229.
40. **Ravenna MM, Hoffman SL, **Van Dillen LR**. Low interrater reliability of examiners performing the prone instability test: a clinical test for lumbar shear instability. *Archives of Physical Medicine and Rehabilitation*. 2011; 92(6):913-9. PubMed Central PMCID: PMC3104326.
41. Hoffman SL, **Johnson MB, Zou D, **Van Dillen LR**. Sex differences in lumbopelvic movement patterns during hip medial rotation in people with chronic low back pain. *Archives of Physical Medicine and Rehabilitation*. 2011; 92(7):1053-9. PubMed Central PMCID: PMC3124680.
42. Hoffman SL, **Johnson MB, Zou D, Harris-Hayes M, **Van Dillen LR**. Effect of classification-specific treatment on lumbopelvic motion during hip rotation in people with low back pain. *Manual Therapy*. 2011; 16(4):344-50. PubMed Central PMCID: PMC3095730.
43. Hoffman SL, **Johnson MB, Zou D, **Van Dillen LR**. Gender differences in modifying lumbopelvic motion during hip medial rotation in people with low back pain. *Rehabilitation Research and Practice*. 2012; 2012:635312. PubMed Central PMCID: PMC3270471.
44. Holtzman G, *Harris-Hayes M, Hoffman SL, Zou D, **Edgeworth RA, **Van Dillen LR**. Clinical examination procedures to determine the effect of axial decompression on low back pain symptoms in people with chronic low back pain. *Journal of Orthopaedic and Sports Physical Therapy* 2012; 42(2):105-13. PubMed Central PMCID: PMC3628684.
45. Hoffman SL, **Johnson MB, Zou D, **Van Dillen LR**. Differences in end-range lumbar flexion during slumped sitting and forward bending between low back pain subgroups and genders. *Manual Therapy*. 2012; 17(2):157-63. PubMed Central PMCID: PMC3288514.
46. Delitto A, George SZ, **Van Dillen LR**, Whitman JM, Sowa G, Shekelle P, Denninger TR, Godges JJ. Low back pain: clinical practice guidelines linked to the international classification of functioning, disability, and health from the orthopaedic section of the American Physical Therapy Association.

- Journal of Orthopaedic and Sports Physical Therapy*. 2012; 42(4):A1-57. PubMed Central PMCID: PMC4893951.
47. Prather H, **Van Dillen LR**, Kymes SM, Armbrrecht MA, Stwalley D, Clohisy JC. Impact of coexistent lumbar spine disorders on clinical outcomes and physician charges associated with total hip arthroplasty. *Spine Journal*. 2012; 12(5):363-9. PubMed Central PMCID: PMC3340523.
 48. **Graci V, **Van Dillen LR**, Salsich GB. Gender differences in trunk, pelvis and lower limb kinematics during a single leg squat. *Gait Posture*. 2012; 36(3):461-6. PubMed Central PMCID: PMC3407338.
 49. *Sharma NK, Brooks WM, Popescu AE, **Van Dillen LR**, George SZ, McCarson KE, Gajewski BJ, Gorman P, Cirstea CM. Neurochemical analysis of primary motor cortex in chronic low back pain. *Brain Sciences*. 2012; 2(3):319-31. PubMed Central PMCID: PMC3678773.
 50. **Scholtes SA, Norton BJ, **Gombatto SP, **Van Dillen LR**. Variables associated with performance of an active limb movement following within-session instruction in people with and people without low back pain. *BioMed Research International*. 2013; 2013:867983. PubMed Central PMCID: PMC3747432.
 51. **Azevedo DC, Lauria AC, Pereira AR, Andrade GT, Ferreira ML, Ferreira PH, **Van Dillen LR**. Intraexaminer and interexaminer reliability of pressure biofeedback unit for assessing lumbopelvic stability during 6 lower limb movement tests. *Journal of Manipulative and Physiological Therapeutics*. 2013; 36(1):33-43. PubMed PMID: 23380212.
 52. Henry SM, **Van Dillen LR**, Trombley AR, Dee JM, Bunn JY. Reliability of novice raters in using the movement system impairment approach to classify people with low back pain. *Manual Therapy*. 2013; 18(1):35-40. PubMed Central PMCID: PMC3618854.
 53. *Khoo-Summers LC, Prather H, Hunt DM, **Van Dillen LR**. Predictors of first position turnout in collegiate dancers: the role of tibiofemoral external rotation and hip external rotation. *American Journal of Physical Medicine & Rehabilitation*. 2013; 92(2):136-42. PubMed PMID: 22286892.
 54. **Gombatto SP, Norton BJ, Sahrmann SA, Strube MJ, **Van Dillen LR**. Factors contributing to lumbar region passive tissue characteristics in people with and people without low back pain. *Clinical Biomechanics* (Bristol, Avon). 2013; 28(3):255-61. PubMed Central PMCID: PMC3677531.
 55. **Chimenti RL, **Van Dillen LR**, Prather H, Hunt D, Chimenti PC, Khoo-Summers L. Underutilization of worker's compensation insurance among professional orchestral musicians. *Medical Problems of Performing Artists*. 2013; 28(1):54-60. PubMed PMID: 23462905.
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45. Lanier VM, **Hooker QL, **van Dillen LR**. Person-specific characteristics moderate the effect of motor skill training in adults with low back pain. In *Proceedings of 11th Interdisciplinary World Congress for Low Back and Pelvic Pain*, November 1-5, Melbourne, Australia 2023, p. 149, ISBN/EAN 978-90-816016-8-9.
46. **van Dillen LR**, Lanier V, McDonnell DF. Within-session effects of treating spinal movement impairments in people with acute low back pain presenting to the Emergency Department. In *Proceedings of 11th Interdisciplinary World Congress for Low Back and Pelvic Pain*, November 1-5, Melbourne, Australia 2023, p. 264, ISBN/EAN 978-90-816016-8-9.

Poster Presentations (Peer Reviewed; No associated published abstract)

1. Spitznagle TM, Leong FC, **Van Dillen LR**. Diastasis recti abdominis in a urogynecological patient population. *American Physical Therapy Association Combined Sections Meeting* 1999, February 3-7, Seattle, WA.
2. **Porter R, Scholtes SA, **Van Dillen LR**. Differences between people with low back pain and people without low back pain who participate in rotation-related sports. *Second Annual Research Training Symposium and Poster Session* 2007, September, Washington University School of Medicine, St. Louis, MO.
3. **Ravenna MM, Hoffman SL, **Van Dillen LR**. Low inter-rater reliability of examiners performing the Prone Instability Test, a clinical identification of lumbar anterior shear. *Missouri Physical Therapy Association*

Spring Meeting 2010, April 2-3, St. Louis, MO.

4. Bowers S, Spitznagle TM, **Van Dillen LR**. The combined use of a musculoskeletal and a neuromuscular physical therapy diagnosis in the treatment of a patient with knee pain: A case report. *American Physical Therapy Association Combined Sections Meeting* 2011, February 10-13, New Orleans, LA.
5. Norton BJ, Sahrman SA, Baldwin SJ, Kotyk JJ, **Van Dillen LR**. Effect of opposing rotation conditions on transverse rotation of lumbar vertebra and sacrum. *American Physical Therapy Association Combined Sections Meeting* 2011, February 10-13, New Orleans, LA.
6. **Gombatto SP, Norton BJ, **Scholtes SA, **Van Dillen LR**. Differences in symmetry of lumbar region passive tissue characteristics between people with and people without low back pain. *Washington University Musculoskeletal Research Symposium* 2011, February, St. Louis, MO.
7. Norton BJ, Baldwin SJ, Sahrman SA, Kotyk JJ, **Van Dillen LR**. Effect of in vivo twisting on lumbar region intersegmental angles in frontal and transverse planes. *American Physical Therapy Association Combined Sections Meeting* 2012, February 8-12, Chicago, IL.
8. **Sorensen CJ, **Johnson MB, Callaghan JP, George SZ, **Van Dillen LR**. The relationship between psychological measures and low back pain symptom intensity during prolonged standing in back healthy people: A preliminary study. *National Clinical and Translational Sciences Predoctoral Programs Meeting, Mayo Clinic* 2012, May 6-8, Rochester, MN.
9. **Sandvick SA, Bohall S, **Van Dillen LR**. Association between rotation-related impairments and asymmetric activity in people with and without low back pain. *National Clinical and Translational Sciences Predoctoral Programs Meeting* 2013, May 5-7, Rochester, MN.
10. **Sorensen CJ, Callaghan JP, George SZ, **Van Dillen LR**. Differences in movement patterns during the active hip abduction test in low back pain developers and non-pain developers. *National Clinical and Translational Sciences Predoctoral Programs Meeting Mayo Clinic* 2013, May 5-7, Rochester, MN.
11. Fleming-McDonnell D, Wendl P, Deusinger S, **Van Dillen LR**, Bohall S, Poirer R. Physical therapy in the emergency department: A new delivery option. *4th Annual Great Plains Regional Society for Academic Emergency Medicine Research Meeting*, 2013, September 28th, Springfield, IL.
12. **Hwang CT, Tang S, Liu J, **Van Dillen LR**. Intervertebral disc deformation in people with and people without low back pain: A preliminary report. *Washington University Musculoskeletal Research Winter Symposium*, 2015, February 16th, St. Louis, MO.
13. **Hwang CT, Tang S, Liu J, **Van Dillen LR**. Intervertebral disc deformation in people with and people without low back pain: A preliminary report. *Washington University Graduate Student Association Symposium*, 2015, February 21st, St. Louis, MO.
14. **Marich AV, Bohall SC, **Van Dillen LR**. Assessing patient preferences towards two physical therapy treatments in people with low back pain. *5th Annual Comparative Effectiveness Research Symposium*, 2015, April 14, St. Louis, MO.
15. **Weyrauch S, Bohall S, **Sorensen CJ, **Van Dillen LR**. Association between rotation-related impairments and activity type in people with and without low back pain. *Missouri Physical Therapy Association Spring Conference, MPTA Noteworthy Poster Award*, 2015, April 16-18, St. Louis, MO.
16. Salsich GB, Yemm B, Reitenbach A, DiStaulo A, Lang CE, **Van Dillen LR**. Task specific movement pattern training for treatment of patellofemoral pain. *Section on Research Retreat*, 2015, July 26-30, Providence, RI.
17. Francois SJ, **Marich AV, Putnam SC, **Van Dillen LR**. Attributes contributing to treatment preference in people with chronic low back pain. *Missouri Physical Therapy Association Spring Conference*, 2017, April 8, St. Louis, MO.
18. Salsich GB, Yemm B, Steger-May K, Lang CE, **Van Dillen LR**. Preliminary effects of task-specific movement training on lower extremity kinematics, pain, and activity limitations in women with patellofemoral pain. *Midwest Musculoskeletal Workshop*, Washington University School of

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19. Lanier VM, Lang CE, **Van Dillen LR**. Application of a motor skill training program in an individual with chronic low back pain. *Missouri Physical Therapy Association Spring Meeting*, 2018, April 14, Kansas City, MO.
20. Salsich GB, Yemm B, Steger-May K, Lang CE, **Van Dillen LR**. Preliminary effects of task-specific movement training on lower extremity kinematics, pain, and activity limitations in women with patellofemoral pain. *6th International Patellofemoral Research Network Retreat*, 2019, October 1-3, Milwaukee, WI.
21. **Krueger KO, *Duncan RP, **Van Dillen LR**. Prevalence of spinal movement impairments in people with acute low back pain. *16th Annual Neuromuscular Plasticity Symposium*, 2021, March 13, Gainesville, FL.
22. **Hooker QL, **Van Dillen LR**. Person-specific characteristics of people with LBP moderate the baseline and change over time in the altered movement pattern. *16th Annual Neuromuscular Plasticity Symposium*, 2021, March 13, Gainesville, FL.
23. *Harris MD, **Wu T, **Van Dillen LR**, Clohisey JC. Associations between abnormal muscle-induced biomechanics and patient-reported outcomes among patients with developmental dysplasia of the hip. *North American Congress on Biomechanics*, 2022, August 21-22, Ottawa, Ontario, CA.
24. **Chen S, **Van Dillen LR**, **Krueger KO. Relationship between hip range of motion to pain and function in people with low back pain. *28th Annual Graduate Research Symposium*, 2023, April 4, Olin Business School, St. Louis, MO.
25. **Krueger KO, **Chen S, **Kang Y, Miller K, Lohse K, **van Dillen LR**. Hip passive range of motion partially explains spinal movement impairment: A cross sectional cohort study. *American Physical Therapy Association Combined Sections Meeting 2025*, February 12-15, Houston, TX.

Platform Presentations (Peer Reviewed; No associated published abstract)

1. **Gombatto SP, Collins DR, Sahrman SA, Engsberg JR, Lenke LG, **Van Dillen LR**. Lumbar spine contribution to trunk side bending in people with different low back pain classifications. Presented *Gossman Research Symposium for Graduate Students, American Physical Therapy Association Combined Sections Meeting 2005*, February 23 -27, New Orleans, LA.
2. **Scholtes SA, **Gombatto SP, **Van Dillen LR**. Differences in lumbopelvic movement during hip lateral rotation between people with and people without low back pain. Presented *Gossman Research Symposium for Graduate Students, American Physical Therapy Association Combined Sections Meeting 2008*, February 6-9, Nashville, TN.
3. **Ravenna MM, Hoffman SL, **Van Dillen LR**. Low inter-rater reliability of examiners performing the Prone Instability Test, a clinical identification of lumbar anterior shear. Presented *2010 Fifth Annual Pre-Doctoral Research Training Symposium and Poster Session 2010*, October 27, Washington University School of Medicine, St. Louis, MO.
4. **Van Dillen, LR**, Norton BJ, Sahrman SA, Evanoff BE, Harris-Hayes, M, Holtzman GE, Earley J, Chou I, Strube M. Effects of classification-specific treatments and adherence on function in people with chronic low back pain: A one-year prospective, randomized, controlled clinical trial. Presented *8th Annual Multidisciplinary Research Symposium*, 2014, October 23, Barnes-Jewish Hospital, St. Louis, MO.
5. McDonnell DF, Wendl PA, Deusinger SS, **Van Dillen LR**, Bohall S, Poirer RF. Partnership with physical therapy in inter-disciplinary emergency care: An innovative delivery paradigm. Presented *8th Annual Multidisciplinary Research Symposium*, 2014, October 23, Barnes-Jewish Hospital, St. Louis, MO.
6. *Harris-Hayes M, Czuppon S, **Van Dillen LR**, Steger-May K, Sahrman SA, Schootman M, Salsich GB, Clohisey JC, Mueller MJ. Movement pattern training improves function in people with pre-arthritis hip disease: a preliminary study. Presented *American Association of Hip and Knee Surgeons 25th Annual Meeting*, 2014, November 7, Dallas, TX.

7. **Weber C, Hwang CT, **Van Dillen LR**, *Tang S. Load-sharing of the intervertebral discs during standing determined by open-upright magnetic resonance imaging. Presented *Philadelphia Spine Research Symposium*. 2016, November, Philadelphia, PA.
9. **Marich AV, **Hwang CT, **Van Dillen LR**. Consistency of a lumbar movement pattern in back-healthy people and people with low back pain when demands of a functional activity are varied. Presented *Gossman Graduate Symposium at Combined Sections Meeting of the APTA*, 2017, February 15-18, 2017, San Antonio, TX.
10. **Hooker QL, Roles K, Lanier VM, **Van Dillen LR**. Motor skill training vs. strength and flexibility exercise: Effects on functional limitations, pain, and movement. *10th Musculoskeletal Research Center: Musculoskeletal Symposium*, 2019, February 20, St. Louis, MO.
11. **Hooker QL, Roles K, Lanier VM, **Van Dillen LR**. Effects of motor skill training vs. strength and flexibility exercise on functional limitations, pain, and movement characteristics in people with chronic low back pain. *Association for Clinical and Translational Sciences Meeting*, 2019, March 5-8, Washington, DC.
12. **Hooker QL, Roles K, Lanier VM, **Van Dillen LR**. Person-specific characteristics of people with LBP moderate the baseline and change over time in an altered movement pattern. *2019 Fifth Annual Pre-Doctoral Research Training Symposium and Poster Session*, 2019, October 8, Washington University School of Medicine, St. Louis, MO.