Pathological Gait Analysis and Orthotic Intervention For Adults with Neurologic Dysfunction

Memorial Hermann Rehabilitation Network Speakers:
Lauren Szot, PT, DPT, NCS
Lauren Norris, PT, DPT, NCS
Todd Klekar PT, DPT, NCS

Guest Speaker:
Tom DiBello, CO, FAAOP

General Info

Open to: Physical Therapist (PT), Physical Therapy Assistant (PTA)
Course date: Saturday and Sunday, July 27 – 28, 2019
Time: Registration at 7:30 a.m., course 8 a.m. – 5 p.m. (Saturday), 8 a.m. – 12 p.m. (Sunday)
Location: Memorial Hermann Greater Heights Hospital - TIRR Memorial Hermann
South Tower Conference Center
Conference Rooms BE
1635 North Loop West
Houston, Texas 77008
(I-610 and Ella Blvd., The Heights)
Parking: Parking available in Garage 2; http://tirr.memorialhermann.org/locations/inpatient-rehabilitation-greater-heights/

Class size: Limited to 40 attendees

Recommended pre-course activity
Prior to attendance of this course, the participant should be able to:
1. Identify the parameters of normal gait, including necessary range of motion, muscle activity and functional implications.
2. Be familiar with basic knowledge of types of orthotics.
3. Be familiar with NORMAL gait. Participants are expected to use the Normal Gait handout shared with the course handouts as a guide for normal gait knowledge.

Handouts
Electronic handouts will be shared with all attendees prior to the course via email as they are made available by the presenters. Please print or download the materials prior to the course for your use. Wi-Fi is available to all; however, we cannot ensure connectivity at all times.

Overview

Description
This intermediate-level course will apply the participants' knowledge of normal gait to the analysis of pathological gait in persons with neurological injuries. Also included will be practical information in regards to biomechanics, component selection, prescription rationale, orthotic design, and problem solving. Interventions targeting pathological gait will be reviewed, including orthotic intervention. This information will be conveyed through lecture, video case presentations, clinical observation and resident case presentations.

Learning objectives: Upon completion of this course, participants will be able to:
1. Identify common gait deviations in adults with neurologic conditions and hypothesize potential causes of gait deviations.
2. Select appropriate outcome measures for measuring gait outcomes.
3. Appraise available literature on evidence-based interventions to address gait dysfunction.

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4. Discuss biomechanical principles related to orthotic design, fit and componentry.
5. Demonstrate understanding of biomechanics, design and componentry by formulating an appropriate orthotic prescription and justification for orthotic device.
6. Develop evidence-guided interventions and gait-training strategies designed to target specific gait deviations, underlying impairments and functional limitations through a series of case studies.

**Assessment of learning objectives:** Course evaluation

**Required for course completion:** Attendance, participation, completed feedback form

**Speakers**

**Lauren Szot, PT, DPT, NCS**

Lauren graduated with a Master of Physical Therapy (MPT) in 2007 and transitional Doctorate of Physical Therapy (DPT) in 2009 from Louisiana State University Health Sciences Center in Shreveport, Louisiana. She is a graduate of the TIRR Memorial Hermann Neurologic Physical Therapy Residency Program in 2011 and received her board certification in neurologic physical therapy in 2011. Lauren has worked in a variety of clinical settings, with focus on neurologic rehabilitation. She is currently a clinical assistant professor and assistant director of clinical education (DCE) at Texas Woman’s University (TWU) in Houston. She also participates in clinical practice in neurologic inpatient rehabilitation at TIRR Memorial Hermann, where she has served as residency mentor and faculty for the TIRR Memorial Hermann Residency Program. Lauren also enjoys professional service through her involvement in the Texas Physical Therapy Association (TPTA) as a member of the nominating committee.

**Speaker disclosures and conflicts of interest**

Financial: TIRR Memorial Hermann employee, TWU faculty.

Non-financial: Assistant DCE and assistant clinical professor for TWU.
Todd Klekar, PT, DPT, NCS

Todd is a physical therapist who currently works at Memorial Hermann Rehabilitation Hospital Katy in the outpatient therapy department, where he primarily works with patients post-stroke. His professional interests include orthotic interventions and the impact of high intensity in treatment sessions on patients’ functional outcomes. Todd is a board-certified clinical specialist in neurology and completed the TIRR Memorial Hermann Neurologic Residency Program in 2013. He obtained his Doctorate in Physical Therapy from Texas Women’s University in 2011 and his Bachelor of Science in kinesiology/exercise science from the University of Houston in 2006. He has been an active member of the American Physical Therapy Association since 2008 and a member of the neurologic section since 2012.

Speaker disclosures and conflicts of interest

Financial: Memorial Hermann Rehabilitation Hospital Katy employee
Non-financial: None reported

Lauren Norris, PT, DPT, NCS

Lauren is a board-certified clinical specialist in neurologic physical therapy and active American Physical Therapy Association (APTA) member who has been working as a physical therapist within the TIRR Memorial Hermann system since 2016. Lauren graduated from the University of Nebraska-Lincoln in 2013 with a Bachelor’s of Science in speech-language pathology (SLP) and from Texas Woman’s University (TWU) in 2016 with her Doctorate in Physical Therapy (DPT). She also graduated from the TIRR Memorial Hermann Neurologic Physical Therapy Residency Program, treating patients throughout the neurologic continuum of care. Currently, Lauren is a member of the spinal cord injury team at the TIRR Memorial Hermann Outpatient Rehabilitation at the Kirby Glen Center. Outside of work, she enjoys traveling and volunteering in the community at The Forge for Families in urban ministry.

Speaker disclosures and conflicts of interest

Financial: TIRR Memorial Hermann employee
Non-financial: None reported
Guest Speaker

Tom DiBello, CO, FAAOP

Tom is the Director of Clinical and Scientific Affairs, Hanger Clinic. He holds a Bachelor’s of Pharmacy degree from Duquesne University and certificates in orthotics and prosthetics from Northwestern University. He has lectured extensively on lower-extremity orthotics throughout the United States and Mexico as well as Italy, Australia, Southeast Asia and Africa. He has authored chapters in two textbooks and two chapters for the new Atlas of Orthotics. He has served the American Academy of Orthotists and Prosthetists as a past president and board member. Tom is a fellow of the Academy and received the American Academy of Orthotists and Prosthetists distinguished practitioner award in 2007 and was awarded the American Orthotic and Prosthetic Associations Lifetime Achievement Award in 2015.

Speaker disclosures and conflicts of interest

Financial: Director, Clinical and Scientific Affairs, Hanger Clinic
Non-financial: Clinical assistant professor at the Baylor College of Medicine, honorary adjunct faculty at Texas Women’s University and chairman of the advisory committee of the Baylor College of Medicine master’s program on orthotics and prosthetics.

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Program Schedule

Day 1
7:30 – 8 a.m.   Registration and refreshments
8 – 10 a.m.   Intro to gait analysis and pathological gait
10 – 10:15 a.m.   Break
10:15 – 11:30 a.m.   Pathological gait
11:30 a.m. – 12:30 p.m.   Examination and evaluation
12:30 – 1:30 p.m.   Lunch provided
1:30 – 3 p.m.   Evidence based interventions
3 – 3:15 p.m.   Break
3:15 – 5 p.m.   Orthotics and prescription writing

Day 2
7:30 – 8 a.m.   Registration and refreshments
8:00 – 8:30 a.m.   Pathological gait and orthotics review
8:30 – 10 a.m.   Clinical decision making
10 – 10:15 a.m.   Break
10:15 – 11:30 a.m.   Clinical application and case studies
11:30 a.m. – 12 p.m.   Course summary and Q&A, feedback forms

Instructional level: Intermediate

Target audience: PT and PTA clinicians looking to advance their clinical expertise in pathological gait and orthotics when working with those with a neurologic injury or illness

Instructional methods used: PowerPoint, lecture, video, labs

Education

Participants must attend the entire course in order to receive Continuing Education Units / Continuing Competency Units (CEUs/CCUs) and course certificate.

No partial credits will be given.
PT: Memorial Hermann Health System is a Texas Physical Therapy Association (TPTA) approved provider of continuing education. This course meets continuing competence requirements for PT and PTA licensure renewal in Texas for 11.25 CCUs.

**Instructional level:** Intermediate

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**Registration**

**Class size:** Registration is open to 40 participants.

**Cost/registration:** Non-employee: $325; MHHS Rehab Service Line Employee: $150. MHHS employees must register with their MHHS email addresses to receive the employee benefit.

**Cancellation fee:** Refunds will be granted if cancellation notice is received in writing according to the stated cancellation policy below.

**Cancellation policy:** If you register and do not attend or do not fulfill the requirements of the class, your course and all other associated fees will not be refunded. All cancellations must be in writing 14 days prior to the course start date to ContinuingEducationRegistration@memorialhermann.org. Refunds will not be granted past this date.

TIRR Memorial Hermann reserves the right to cancel or change any programs for due cause. Cancellation of the event by TIRR Memorial Hermann will result in a full registration refund of monies received. TIRR Memorial Hermann is not responsible for the refund of other expense, such as travel or hotel expenses, under any circumstances. In the event of a course cancellation, participants will be notified via email and contact phone number on the registration form below. Please fill out all information in the registration form. (continued)
Cancellation by the sponsor/instructor will result in a full refund of the tuition. Sponsor/instructor is not responsible for additional expenses incurred by registrants.

**Complaints:** Complaints of faculty and participants are handled with dignity and respect by the course coordinator and/or director of rehabilitation, with resolution of the complaint communicated to all involved parties.

**Assistance:** All participants in Memorial Hermann continuing-education courses are entitled to an accessible, accommodating and supportive teaching and learning environment. Please email and note on the registration form any specific needs we can work to assist you with.

**Questions:** Contact TIRR Education Academy via ContinuingEducationRegistration@memorialhermann.org or 713.797.7432.