BIOGRAPHICAL SKETCH

Margo N. Orlin PT, PhD
Co-investigator
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EDUCATION

INSTITUTION AND LOCATION	DEGREE	YEARS	FIELD OF STUDY
Temple University	B.S.	1970-1974	Physical Therapy
Hahnemann University	M.S.	1983-1989	Pediatric Physical Therapy
Drexel University	Ph.D.	1996-2003	Rehabilitation Sciences

A. Personal Statement

My overarching research goal is to study activity and participation for children with cerebral palsy with a concentration on the biomechanics of physical activities such as walking and running. My background and dissertation research have been on gait analysis and foot biomechanics in children with and without cerebral palsy. More recently, I was an investigator on a large multicenter study of the determinants of activity and participation in children and youth with cerebral palsy. I merged that experience and my previous work in movement biomechanics resulting in a 3-year funded study on the biomechanics of running in children with cerebral palsy, which recently ended. The biomechanical data generated by this study will help us to begin to answer questions as to how children with cerebral palsy run and what characteristics may be present that could potential cause stress and/or injury to the musculoskeletal system over time.
To date, his work has generated 2 doctoral dissertations, 2 DPT final projects and several national peer reviewed presentations. Preparation of manuscripts is in process.
Work in this area is projected to continue.

B. Positions and Honors

Professional and Research Positions:

1991-Present	Faculty member, currently Associate Professor, Department of Physical Therapy and Rehabilitation Sciences, Drexel University, Philadelphia, PA
2011-2013	Interim Chair, Department of Physical Therapy and Rehabilitation Sciences, Drexel University, Philadelphia, PA
2003-2006	Director, Doctor of Physical Therapy Program, Drexel University
2003-Present	Scientific Staff Member, Shriners Hospitals for Children, Philadelphia.
2005-2013	Member, Board of Directors, United Cerebral Palsy Association of Philadelphia & Vicinity
2013-present	President, Board of Directors, United Cerebral Palsy Association of Philadelphia & Vicinity
2010-2013	Co Chair Special Needs Committee, Jewish Family & Children's Service of Southern New Jersey

Selected Professional Activities:

Associate Editor: PTNow, American Physical Therapy Association
Editorial Board Member: Physical & Occupational Therapy in Pediatrics
Manuscript reviewer: Pediatric Physical Therapy, Developmental Medicine and Child Neurology, Archives of Physical Medicine and Rehabilitation, Pediatrics, Clinical Biomechanics
Associate Editor: Campbell, SK (Ed.), Palisano, RJ & Orlin MN (Assoc. Eds.) (2006). Physical Therapy for Children, Edition 3. Philadelphia: WB Saunders (4th edition).

Honors:

2012	Research Award, Section on Pediatrics, American Physical Therapy Association
2010	Anniversary Award, Section on Pediatrics, American Physical Therapy Association

1996 Awarded membership in the Alpha Eta Society, Hahnemann University Chapter
1990 Finalist in the American Physical Therapy Association Section on Pediatrics Thesis Award

C. Selected Peer-Reviewed Publications

1. **Orlin, MN**, Effgen, SK, Handler, SD. (1997). Effect of otitis media with effusion on gross motor skill ability in preschool-aged children: Preliminary findings. *Pediatrics, 99(3),* 399-409.
2. **Orlin, MN** & McPoil, TC (2000). Update: plantar pressure assessment. *Physical Therapy, 80, (4),* 399-409.
3. Lowes, LP, Westcott, SL, Palisano, RJ, Effgen, SK & **Orlin, MN.** (2004). Muscle force and range of motion as predictors of standing balance in children with cerebral palsy. *Physical & Occupational Therapy in Pediatrics, 24.* Nos 1/2.
4. Pierce, S, Laughton, CA, Smith, BT, **Orlin, MN**, Johnston, TE. & McCarthy, JJ. (2004). Direct effect of percutaneous electrical stimulation during gait in two children with hemiplegic cerebral palsy. A Report of 2 cases. *Archives in Physical Medicine and Rehabilitation, 85,* 339-343.
5. Pierce, SR, **Orlin, MN**, Lauer, RT, Johnston, TE, Smith, BT, McCarthy JJ. (2004). Comparison of percutaneous and surface functional electrical stimulation during gait in a child with hemiplegic cerebral palsy. *American Journal of Physical Medicine and Rehabilitation, 83(10),* 798-805.
6. Lauer RT, Stackhouse C, Shewokis PA, Smith BT, **Orlin** M, McCarthy JJ. (2005). Assessment of wavelet analysis of gait in children with typical development and cerebral palsy. *Journal of Biomechanics. 38(6),* 1351-1357.
7. Chiarello, LA., O'Neil, M, Dichter, C, Westcott, S, **Orlin, M**, Marchese, V, Tieman, B, Rose, U. (2005), Exploring Physical Therapy Clinical Decision Making for Children with Spastic Diplegia. *Pediatric Physical Therapy. 17(1),* 46-54.
8. Dayanidhi S, **Orlin M**. Kozin S. Duff S, Karduna A. (2005). Scapular kinematics during humeral elevation in adults and children. *Clinical Biomechanics. 20(6):*600-606.
9. **Orlin MN**, Pierce SR, Laughton Stackhouse C, Smith BT, Johnston TE, Shewokis PA, McCarthy JJ. (2005). The immediate effect of percutaneous intramuscular stimulation during gait in children with cerebral palsy: a feasibility study. *Developmental Medicine and Child Neurology, 47,* 684-690.
10. Pierce SR, Lauer RT, Shewokis PA, Rubertone JA, **Orlin MN**. (2006). Test retest reliability of isokinetic dynamometry for the assessment of spasticity of the knee flexors and knee extensors in children with cerebral palsy. *Archives of Physical Medicine and Rehabilitation, 87,* 697-702.
11. Oladeji, OB. Stackhouse, C, Gracely E.J. **Orlin MN**. (2008). Comparison of two-step and midgait methods of plantar pressure measurement in children. *Journal of the American Podiatric Medical Association, 98 (4),* 268-277. (senior author).
12. Palisano RJ, Kang LJ, Chiarello LA, **Orlin M**, Oeffinger D, Maggs J. (2009). Social and Community Participation of Children and Youth with Cerebral Palsy is Associated with Age and Gross Motor Classification. *Physical Therapy, 89(12),* 1-11.
13. **Orlin M**, Palisano RJ, Chiarello L, Kang LJ, Polanky M, Almasri N, Maggs J. (2010). Participation in Home, Extracurricular, and Community Activities among Children and Youth with Cerebral Palsy. *Developmental Medicine and Child Neurology*, 52: 160-166.
14. Palisano RJ, Almasri N, Chiarello L, **Orlin M**, Bagley A, Maggs J. (2010). Family Needs of Parents of Children and Youth with Cerebral Palsy. *Child: Care, Health & Development, 36 (1),* 85–92.
15. Palisano RJ, Chiarello LA, **Orlin M**, Oeffinger D, Polansky M, Maggs J, Bagley A, Gorton G, Activity and Participation Research Group. Determinants of Intensity of Participation in Leisure and Recreational Activities by Children with Cerebral Palsy. *Developmental Medicine and Child Neurology. Oct 21, 2010 (epub ahead of print)*
16. Chiarello LA, Palisano RJ, Maggs J, **Orlin M**, Almasri N, Kang L, Chang H. (2010). Family Priorities for Activity and Participation of Children with Cerebral Palsy. *Physical Therapy, 90 (9),* 1-10.
17. Kang L, Palisano R, **Orlin M**, Chiarello L, King G, Polanky M. (2010). Determinants of Social Participation with Friends and Other Non-Family Members for Youth with Cerebral Palsy. *Physical Therapy, 89 (12),* 1304-1314.
18. Laibsirinon S. **Orlin MN**. Leg stiffness in children with cerebral palsy. *Pediatric Physical Therapy*, 22(1): 123, 2010. (abstract)
19. **Orlin MN**, Laibsirinon S., Davis IS. Ground reaction forces and kinetics of running in children with cerebral palsy compared to children with typical development. *Pediatric Physical Therapy*, 22(1): 100, 2010. (abstract)

20. Palisano RJ, Chiarello LA, **Orlin M**, Polansky M, Oeffinger D, Gorton G, Bagley A. (2011). Determinants of Participation in Leisure and Recreational Activities by Children with Cerebral Palsy. *Developmental Medicine and Child Neurology*, 53(2):142-149.
21. Kang LJ, Palisano RJ, King G, Chiarello LA, **Orlin MN**, Polansky M. Social Participation of Youths with Cerebral Palsy Differed Based on Their Self-Perceived Competence as a Friend. *Child: Care, Health & Development*, 38(1): 117–127, 2012.
22. Chiarello LA, Palisano RJ, **Orlin M**, Chang HJ, Begnoche D, An M. (2012). Understanding Participation of Preschool Age Children with Cerebral Palsy. *Journal of Early Intervention*, 34, 3-19.
23. King G, Imms C, Palisano R, Majnemer A, Chiarello L, **Orlin M**, Law M, Avery L. (2013). Geographical Patterns in the Recreational and Leisure Participation of Children and Youth with Cerebral Palsy: A CAPE International Collaborative Network Study. Developmental Neurorehabilitation, 16(3), 196-206.
24. Chang H, Chiarello L, Palisano R, **Orlin M**, Bundy A, Gracely E. (2014). The Determinants of Self-Determined Behaviors of Young Children with Cerebral Palsy. *Research in Developmental Disabilities*, 35(1), 99-109.
25. **Orlin MN**, Cicirello N, O'Donnell AE, Doty A. (2014). The Continuum of Care for Individuals with Lifelong Disabilities: Role of the Physical Therapist. *Physical Therapy Journal*. Accepted

C. Research Support

Completed Research Support

Orlin, MN (PI) 1/1/10 – 12/31/11
Agency: Pediatric Section of the American Physical Therapy Association
Running Initiation in Children with Cerebral Palsy
Goal: To fund student dissertation that will describe and validate a model of running initiation in children with and without cerebral palsy.
Role: Primary investigator, doctoral research

Orlin, MN (PI) 7/1/07 – 12/31/10
Agency: Cerebral Palsy International Research Foundation.
Biomechanics of Running in Cerebral Palsy
Goal: Examine biomechanics of running children with cerebral palsy compared to children without cerebral palsy and compared to running. To describe the running activities participated in by children with cerebral palsy.
Role: Primary Investigator

Palisano, R (PI)
Agency: Shriners Hospitals Research Foundation 2003-2006
Children's Activity and Participation Study
Goal: Identify the determinants of intensity of activity and participation for children and youth with cerebral palsy
Role: Co-investigator