

Therapist Recertification Workshop: Designing Personalized Freezing of Gait (FOG) Interventions to Benefit Both FOG and Functional Mobility

Date

January 20, 2024

Location

Delivered via Zoom | Arizona Time Zone

Workshop Fee

\$350 per person

Discounts available for groups of 4 or more



What will you learn?

- How to use the PWR!Moves® “Retrain Functional Mobility” framework for people with Freezing of Gait (FOG) to improve FOG and Functional Mobility goals.
- Mechanisms that underlie FOG.
- Research updates on interventions that are proactive or rescue-focused.
- Group class considerations for Persons with Parkinson’s disease (PwP) with FOG
- How to use training tools related to cueing, feedback, priming, and simple equipment to optimize quality of movement and success.

Who is eligible?

- Physical Therapists, Physical Therapy Assistants
- Occupational Therapists, Occupational Therapy Assistants
- PT, PTA, DPT, OT, OTA students

For additional information see the
PWR! Workshop registration page



501(C)3 Non-Profit Organization

Are continuing education hours offered?

For details see the continuing education
information page at pwr4life.org/ceu

Earn 5-6 contact hours

My Time	AZ Time	Topic
	8:00 am	Introduction Welcome, review of workshop, and housekeeping
	8:10 am	Freezing of Gait (FOG) Introduction <ul style="list-style-type: none"> • Mechanisms • Assessment Considerations
	8:45 am	Overview of Key Research <ul style="list-style-type: none"> • Implications for translation • Training tools for implementation • Implementation Goals
	9:45 am	Video Case Study #1
	11:00 am	Break
	11:15 am	Video Case Study #1
	12:30 pm	Break
	12:45 pm	Emerging Technology for Assessment and Intervention
	1:15 pm	Q&A Additional PWR!Moves® Resources
	1:30 pm	End of Workshop

The PWR!Moves® Therapist Recertification Workshop: Freezing of Gait will summarize Freezing of Gait (FOG) interventions that can provide clinical insight into how physical and occupational therapists can design personalized interventions within the plan of care to benefit both FOG and functional mobility in persons with Parkinson's disease (PwP). Video case studies (n=2) will illustrate how FOG-specific interventions can be integrated within the PWR!Moves® Retrain Functional Mobility framework. Assessments, role of instruction, sensory feedback, use of simple multipurpose equipment, and group class challenges will be highlighted in the literature review and as part of case study discussion. Emerging therapies on feedback/assessment devices will be summarized at the end.

The severity of functional mobility impairment in PwP is affected by dopamine-dependent disturbances that alter cortico-striatal networks and interfere with the ability to express habitual-automatic actions in complex real-world scenarios. In PwP with FOG specific executive functions – response inhibition, attention, set switching, visual-spatial impairments decline disproportionately. These same executive functions are also required for functional mobility in everyday environments. Freezing impairments such as arrhythmicity with brief episodes of absent or reduced movement can occur in other non-gait functions that require repetition and/or coordination across limbs or multiple structures like speech, repetitive finger or hand movements, bilateral reach and grasp movements, and during upper or lower limb floor crawling movements.

A recent meta-analysis suggests that rehabilitation that targets multiple behavioral training modes related to 1) reducing the frequency or emergence of FOG episodes (prevention) and 2) circumventing and alleviating imminent FOG episodes (rescue) are efficacious. These studies support the importance of starting early, challenging the intensity and complexity of training, targeting aerobic exercise to enhance neuroplasticity, ongoing practice for sustained gains, and recognizing the unique benefits and challenges of group classes for PwP with FOG.

Upon successful completion of this workshop, participants will be recertified as PWR!Moves® Certified Therapists for three years.

Methods of Instruction

- Brief lectures with time for Q&A and response to chat.
- Faculty debriefs with chat and time to answer questions and discuss highlights.
- Pre-recorded video cases (n=2) showing therapists implementing the curriculum with PwP of varying disease severity with freezing of gait.

Course Objectives and Goals

Upon successful completion of this workshop, participants will be able to:

1. Define FOG - mechanisms, assessments, early identification.
2. Translate new research on FOG that informs our clinical reasoning, decision making and intervention goals.
3. Discuss the clinical implications of FOG-specific cognitive and emotional impairments affecting functional mobility.
4. Define behavioral interventions included in the categories of:
 - a. Prevention - increase resilience against FOG occurrence.
 - b. Rescue - circumvent or alleviate imminent episodes to induce compensatory gait control (i.e., strategies/cueing) and reduce the impact of triggers.
5. Identify factors that influence the severity of FOG and functional mobility impairments including motor symptoms, non-motor symptoms, co-morbidities, and other personal and environmental factors.
6. Describe how functional skills like anti-gravity extension, weight shifting, axial rotation, and transitions can be progressed physically and cognitively to retrain functional mobility and specifically address FOG.
7. Develop personalized functional mobility interventions for clients with FOG that include FOG-specific cognitive challenges.
8. Discuss the role emerging technologies may play in assessment and intervention for FOG in the future.
9. Describe group class considerations related to personal factors and FOG-specific cognitive impairment that can be integrated into group exercise classes to address lifetime adherence, quality practice, and safety.



Becky G. Farley, PT, MSPT, PhD

Dr. Becky Farley is a physical therapist, neuroscientist, Parkinson exercise specialist, Chief Scientific Officer and Founder of Parkinson Wellness Recovery | PWR!. She received a PhD in Neuroscience from the University of Arizona, a Master of Science in Physical Therapy from the University of North Carolina, and a Bachelor of Physical Therapy from the University of Oklahoma. She is a published author on exercise for people with Parkinson disease and gives public and medical seminars worldwide. Her postdoctoral research investigated the muscle activation deficits underlying bradykinesia in people with PD. She was awarded, and completed, an R21 NIH-funded randomized clinical trial to establish the benefits of LSVT BIG®, the first

whole-body, amplitude- focused, physical and occupational therapy exercise approach for individuals with PD. Dr. Farley also created PWR! Moves, a more flexible Parkinson-specific exercise approach that directly targets the training of amplitude into building blocks of function. Each building block counteracts a primary motor control deficit shown by research to interfere with everyday mobility. Dr. Farley has been training therapists and fitness professionals for the last 14 years and is now focusing on publishing data from the Tucson-based PWR!Gym and integrating new research into PWR!Moves workshops and PWR!Gym programs. She believes lifelong access to integrated rehabilitation and community exercise and wellness programming is necessary to optimize and perpetuate functional mobility benefits and to slow disease progression.



Jennifer Bazan-Wigle, PT, DPT, CEEAA®

Jennifer Bazan-Wigle has worked in neurological rehabilitation for the entirety of her physical therapy career. She is currently a physical therapist at Parkinson Wellness Recovery's PWR!Gym in Tucson, AZ, where she specializes in one-on-one rehabilitation and group exercise instruction with people with Parkinson disease. Since 2013, she has focused on honing her expertise in treating the movement disorder and Parkinson's population, emphasizing freezing of gait and advanced PD. Jennifer is a PWR! Moves Certified Therapist, PWR!Moves Certified Instructor, and a Certified Exercise Expert for the Aging Adult (CEEAA). Jennifer has delivered community, academic, and peer-reviewed presentations on Parkinson disease in the

US and internationally. As an integral part of the NeuroFit faculty, Jennifer has worked closely with Dr. Becky Farley to develop course content for PWR!Moves Therapist and Instructor Training and Certification Workshops, and has delivered over 70 continuing education workshops, across the US and world. In doing so, Jennifer has helped thousands of physical therapists, occupational therapists, and fitness professionals implement evidence-based rehabilitation and group exercise for people with Parkinson disease.



Shelley Hockensmith, PT, MPT

Shelley Hockensmith is a physical therapist with nearly 20 years of experience in outpatient neurological rehab settings. She graduated from the University of Evansville with her MPT in 2003 and in 2008 became a Board Certified Neurologic Clinical Specialist re-certifying in 2018. She has experience in private practice and hospital-based multi-disciplinary neurologic teams working with people with neurological disorders such as stroke, multiple sclerosis, brain injuries, spinal cord injuries, and movement disorders. She also was fortunate to work in a specialized vestibular and balance disorder clinic as both clinician and coordinator with a team of

audiologists and physical therapists. As an avid believer in the power of exercise for people with Parkinson Disease, she became certified in LSVT BIG in 2007, attended one of the first PWR!Moves workshops, and eventually began working at the PWR!Gym in 2019 as a PWR! Moves Certified Therapist. She joined the PWR!Moves faculty in 2022.



Maria Allen, PT

Certificate of Advanced Competency in Home Health

Maria has over 35 years of experience as a physical therapist treating people with neurological disorders, primarily severe brain injury, stroke, and vestibular dysfunction. She began to focus on working with the Parkinson's population in 2011. After earning her LSVT BIG certification, she became a PWR!Moves Certified Therapist in 2013 and PWR!Moves Certified Instructor in 2014. She began attending Parkinson disease related conferences, including Allied Team Training for Parkinson's (ATTP) in 2014, the 19th International Congress of Parkinson's Disease and Movement Disorders in 2015, and the World Parkinson Congress in 2016. She had the privilege of volunteering at the PWR! Retreat in both 2015 and 2016. She developed and currently serves as Coordinator of a multidisciplinary Parkinson Wellness Program for a home health company serving the Central Coast area of California, which now serves over 260 PWP each year. She recently earned her Certificate of Advanced Competency in Home Health. She has been assisting with PWR!Moves Therapist and Instructor Training and Certification Workshops since 2016. As a Home Health Consultant for PWR!, she has been instrumental in the development and teaching of our home health focused PWR!Moves Therapist Training and Certification Workshops across the country. In March 2019, she joined the NeuroFit faculty to teach PWR!Moves Therapist Workshops with more regularity. While not traveling the US teaching, Maria works closely with her local Parkinson Disease community and serves as the Board Advisor and Education Chair for the Central Coast Parkinson Association and as an Advisor for a group of Cal Poly, San Luis Obispo students-turned-entrepreneurs who are developing a new device for freezing of gait.



Kristina Dorkoski, PT, DPT, CEEAA®

Board Certified Neurologic Clinical Specialist

Dr. Kristina Dorkoski is a physical therapist, Board-Certified Neurologic Clinical Specialist, Certified Exercise Expert for Aging Adults, Professional Yoga Therapist, and certified Pilates instructor. Dorkoski specializes in the rehabilitation of adults with Parkinson's disease and vestibular dysfunction. With over 20 years of clinical experience, she serves as lead therapist and mentor on the neurologic team at Allied Services Heinz Rehab outpatient center in Wilkes-Barre, PA. Dorkoski's treatment philosophy is to provide evidence-based, "whole person" care. She enjoys coupling this approach with the advanced technologies available at her facility. Dorkoski earned her BS in health science and MS in physical therapy from Misericordia University, doctorate in physical therapy from Temple University, and Certificate in Vestibular Rehabilitation from the American Physical Therapy Association. She is an LSVT BIG® and PWR! Moves® Certified Therapist and past PWR! Retreat volunteer. Dorkoski is a long-term adjunct faculty member at Misericordia University, where she instructs neuromuscular labs and a special practices course on the use of Pilates and Medical Therapeutic Yoga® in rehabilitation. Dorkoski has taught continuing education courses for the Pennsylvania Physical Therapy Association and appeared as an expert panelist on public television programs. Additionally, Dorkoski is a 2022 Parkinson's Foundation Community Grant awardee and facilitates her local Parkinson's support group.

1. Chen YA, Wu RM, Sheu CH, Lin CH, Huang CY. Attentional focus effect on dual-task walking in Parkinson's disease with and without freezing of gait. *Geroscience*. 2023;45(1):177-195. doi:10.1007/s11357-022-00606-3
2. Cosentino C, Putzolu M, Mezzarobba S, et al. One cue does not fit all: A systematic review with meta-analysis of the effectiveness of cueing on freezing of gait in Parkinson's disease. *Neurosci Biobehav Rev*. 2023;150:105189. doi:10.1016/j.neubiorev.2023.105189
3. Gilat M, Ginis P, Zoetewei D, et al. A systematic review on exercise and training-based interventions for freezing of gait in Parkinson's disease. *npj Park Dis*. 2021;7(1):81. doi:10.1038/s41531-021-00224-4
4. Ginis P, Nackaerts E, Nieuwboer A, Heremans E. Cueing for people with Parkinson's disease with freezing of gait: A narrative review of the state-of-the-art and novel perspectives. *Annals of Physical and Rehabilitation Medicine*. 2018;61(6):407-413. doi:10.1016/j.rehab.2017.08.002
5. Goh L, Canning CG, Song J, Clemson L, Allen NE. The effect of rehabilitation interventions on freezing of gait in people with Parkinson's disease is unclear: a systematic review and meta-analyses [published online ahead of print, 2022 Sep 15]. *Disabil Rehabil*. 2022;1-20. doi:10.1080/09638288.2022.2120099
6. Klaver EC, van Vugt JPP, Bloem BR, van Wezel RJA, Nonnekens J, Tjepkema-Cloostermans MC. Good vibrations: tactile cueing for freezing of gait in Parkinson's disease. *J Neurol*. 2023;270(7):3424-3432. doi:10.1007/s00415-023-11663-9
7. King LA, Mancini M, Smulders K, et al. Cognitively Challenging Agility Boot Camp Program for Freezing of Gait in Parkinson Disease. *Neurorehabilitation and Neural Repair*. 2020;34(5):417-427. doi:10.1177/1545968320909331
8. Li KP, Zhang ZQ, Zhou ZL, et al. Effect of music-based movement therapy on the freezing of gait in patients with Parkinson's disease: A randomized controlled trial. *Front Aging Neurosci*. 2022;14:924784. Published 2022 Oct 19. doi:10.3389/fnagi.2022.924784
9. Monaghan AS, Gordon E, Graham L, Hughes E, Peterson DS, Morris R. Cognition and freezing of gait in Parkinson's disease: A systematic review and meta-analysis. *Neurosci Biobehav Rev*. 2023;147:105068. doi:10.1016/j.neubiorev.2023.105068
10. Ribeiro de Souza C, Ávila de Oliveira J, Takazono PS, et al. Perturbation-based balance training leads to improved reactive postural responses in individuals with Parkinson's disease and freezing of gait. *Eur J Neurosci*. 2023;57(12):2174-2186. doi:10.1111/ejn.16039
11. Scully AE, Tan D, Oliveira BIR, Hill KD, Clark R, Pua YH. Scoring festination and gait freezing in people with Parkinson's: The freezing of gait severity tool-revised [published online ahead of print, 2023 May 18]. *Physiother Res Int*. 2023;e2016. doi:10.1002/pri.2016
12. Silva-Batista C, Lima-Pardini AC, Nucci MP, et al. A Randomized, Controlled Trial of Exercise for Parkinsonian Individuals With Freezing of Gait. *Mov Disord*. 2020;35(9):1607-1617. doi:10.1002/mds.28128
13. Silva-Batista C, Miranda-Domínguez Ó, Ragothaman A, et al. Does Cueing Need Attention? A Pilot Study in People with Parkinson's Disease. *Neuroscience*. 2022;507:36-51. doi:10.1016/j.neuroscience.2022.10.023
14. Witt I, Ganjavi H, MacDonald P. Relationship between Freezing of Gait and Anxiety in Parkinson's Disease Patients: A Systemic Literature Review. *Parkinsons Dis*. 2019;2019:6836082. Published 2019 Jul 24. doi:10.1155/2019/6836082

PWR! uses the latest research to inform our programs, workshops, and resources. The full body of research referenced during the workshop is updated regularly and can be viewed at:

pwr4life.org/research