

PWR!Moves® Instructor Training and Certification Workshop

Date

November 16-17, 2019



Location

YMCA of Western North Carolina
Ferguson Family YMCA
31 Westridge Market Place
Candler, NC 28715



Eligible Participants

Certified Personal Trainers, Group Fitness Instructors, PTs, PTAs, OTs, COTAs, and individuals holding a 2- or 4-year degree in health, exercise science, recreation, or physical activity-related field with at least 2 years of experience

Approved for 1.5 CECs

American Council on Exercise (ACE, CEP39449)
American Academy of Sports Medicine (ACSM, 746775)
Aerobics and Fitness Association of America (AFAA, 12095)
National Academy of Sports Medicine (NASM, 2007)

Registration Fees

\$550 per person
\$525 per person for groups of 2 or more

For more information, email us at workshops@pwr4life.org, and to register online, visit www.pwr4life.org.

Implement PD-specific research-based exercise programs now!

Help people with Parkinson disease get better and stay better with exercise!

PWR!Moves® Instructor Workshop Training and Certification Course Description

Recent advances in basic and clinical science research suggest that exercise and learning approaches that promote aerobics and skill acquisition may protect vulnerable neurons, repair damaged circuits, and optimize function in people with Parkinson disease (PD). Participants will learn a PD-specific approach to skill acquisition called **PWR!Moves**. **PWR!Moves** is a standalone exercise program that can also be integrated into other exercise approaches. The Basic 4 | **PWR!Moves** (**PWR!** Up, **PWR!** Rock, **PWR!** Twist, **PWR!** Step) are building blocks for everyday movement and are always performed with large amplitude, high effort, and attention to action in multiple positions (prone, supine, all 4's, sitting, standing). Participants will learn how to use these foundational **PWR!Moves** exercises to target symptoms that interfere with everyday movement.

- Rigidity-- **PWR!Moves** are performed slowly, rhythmically, and with sustained effort.
- Bradykinesia—**PWR!Moves** are performed as fast as possible with repetitive effort.
- Incoordination—**PWR!Moves** are linked together into longer and longer sequences that mimic everyday movement.
- Automaticity—**PWR!Moves** are performed in conjunction with everyday motor and cognitive tasks.

This course will provide participants with the background and skills to apply an evidence-based PD-specific approach to teaching group fitness classes or personal training. Participants will learn two group exercise class formats (**PWR!Moves** Group or **PWR!Moves** Circuit). Both of these class formats can be adapted for individuals with minimal to moderate levels of disease severity. Participants will have the opportunity to participate in **PWR!Moves** classes, develop class activities, and teach **PWR!Moves** while interacting with **PWR!** faculty and people with Parkinson disease during the workshop.

Participants will also be introduced to how to implement essential principles of learning and neuroplasticity rooted in exercise science, motor control, and motor learning research. When applied, these principles combine to help people with PD achieve optimal improvement to quality of life, function, and symptoms, and slow the progression of PD. Instructors will learn to use the group class structure, feedback, and a variety of instructional methods to empower and educate class participants. The course will emphasize promoting an environment well-suited to learning that embraces an atmosphere of empowerment, motivation, social enrichment, and fun! The goal for individuals with PD is that they not only improve their performance in the class, but that they learn to recognize when they need to self-correct their slow/small movements for better movement, posture, and balance in everyday life.

Objectives and Goals

Upon completion of the course, participants will be able to:

1. Implement general knowledge of PD including who gets it, what causes it, its major symptoms, and how it impacts function (e.g., mobility, balance, flexibility, coordination) in individuals with PD.
2. Describe how medications, deep brain stimulation, and symptoms (motor and non-motor) may affect an individual's ability to participate in and benefit from exercise.
3. Outline ways to design an aerobics program that is PD-specific.
4. Explain the significance of targeting the training of amplitude into function (**PWR!Moves**[®]) as the foundation for a PD-specific program.
5. Teach the Basic 4 | **PWR!Moves** in different positions (prone, supine all 4's, sitting, standing) in a group format.
6. Explain how the goals of PREPARE, ACTIVATE, and FLOW target the primary symptoms of PD and incorporate examples of each concept.
7. Identify how each of the Basic 4 | **PWR!Moves**, in combination with different positions, can be used to target common PD-specific problems related to flexibility, strength, coordination, balance, and posture.
8. Demonstrate how each of the **PWR!** Boosts can be integrated into **PWR!Moves** exercises and be prepared to discuss their purpose and their importance.
9. Use modeling, mental imagery, voice, cues, instruction, and reward-based feedback to achieve optimal alignment, motor output (effort), and engagement.
10. Discuss how **PWR!Moves** can be integrated into function/ADL/lifestyle during a class activity.
11. Explain how **PWR!Moves** may be implemented across settings (therapy or community), and reinforced in other community research-based exercise programming (e.g., treadmill, cycling, pole walking, yoga, boxing, dance, Tai Chi).
12. Demonstrate how **PWR!Moves** in different positions may be adapted for individuals with different disease severity levels or comorbidities.
13. Integrate the **PWR!Moves** into a circuit format using more typical fitness equipment or other approaches that require individuals to work more independently, and demonstrate how its difficulty or complexity may be increased for different individuals.
14. Describe high-risk fall activities and scenarios, as well as means of reducing fall risk during a class (e.g., using attentional strategies, cues, equipment, class organization, feedback, and modeling/mental imagery).

PWR!Moves® INSTRUCTOR WORKSHOP SCHEDULE - DAY 1

YELLOW = Practicum sessions with PwP

7:30 am	Registration
8:00 am	Introduction / PWR! vision for healthcare for PwP (people with Parkinson disease)
8:30 am	Overview of PD / symptoms
9:30 am	BREAK
9:45 am	Exercise as medicine in Parkinson disease – The why, what, and how
11:00 am	Basic 4 PWR!Moves® - GROUP PRACTICUM <ul style="list-style-type: none"> • Basic 4 PWR!Moves® Prone / Supine / All 4's / Sitting / Standing • Prepare / Activate • Connect to symptoms (rigidity, bradykinesia, incoordination) • Boosts integrated
12:30 pm	LUNCH (on your own)
1:30 pm	Basic 4 PWR!Moves® Master Demo Class – observe / participate PWR!Moves checklist / Template #1 Intro class
2:30 pm	Highlights / discussion of Basic 4 PWR!Moves® group demo class Common problems / goals / symptoms / safety
2:45 pm	Continue with Intro to Basic 4 PWR!Moves® - group practice PWR!Moves goals: FLOWS / BOOSTS
3:30 pm	BREAK
3:45 pm	Basic 4 PWR!Moves – cognitive / motor challenges GROUP PRACTICUM <ul style="list-style-type: none"> • Basic 4 PWR!Moves walking (plus variations) / cardio progressions • Basic 4 PWR!Moves transitional flows (evolutions) • Basic 4 PWR!Moves functional flows (introduction to functional chart)
4:30 pm	Teach us one of the PWR!Moves - group class activity <ul style="list-style-type: none"> • Use Section 2 to practice a PREPARE, ACTIVATE, and focus on a BOOST
4:45 pm	Basic 4 PWR!Moves – PRACTICUM <ul style="list-style-type: none"> • Teach your PWR!Moves to the group Review manual: checklist / teaching tips / PWR!Moves® class variations
5:30 pm	End of Day 1

PWR!Moves® INSTRUCTOR WORKSHOP SCHEDULE - DAY 2

YELLOW = Practicum sessions with PwP

8:00 am	Introduction to learning principles – Exercise4BrainChange® techniques
8:45 am	Overview typical PWR!Moves circuit format <ul style="list-style-type: none"> • Introduce equipment and demo a circuit station progression
9:15 am	Develop a PWR!Moves circuit station (~10 stations) with 3-4 variations (Assign equipment / PWR!Moves participation – partners)
9:50 am	BREAK
10:00 am	PWR!Moves circuit – participation with PwP With a partner, take turns instructing your station with each volunteer Additional progressions - complexity, evolutions, partner format, pole walking
11:30 am	Equipment practicum
12:00 pm	LUNCH (on your own)
1:00 pm	Highlights of PWR!Moves circuit demo class – class description / templates Review E4BC chart and implementation Discuss adaptations / modifications
1:30 pm	Getting Started <ul style="list-style-type: none"> • Screening / class criteria / equipment / technology / volunteers
2:15 pm	Exercise4BrainChange® essentials review / barriers <ul style="list-style-type: none"> • Empowerment / reducing stress - importance of social support (breathing, mediation, education, etc.), counseling, and education
2:45 pm	Becoming part of a PWR!Moves exercise expert network – therapy / community <ul style="list-style-type: none"> • Class descriptions / credentials
3:00 pm	End of Day 2 – THE END! Feedback forms / certificates

WELCOME TO THE PARKINSON EXERCISE REVOLUTION!

Faculty

Becky G. Farley, PhD, MS, PT

Dr. Farley 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 has over 30 years of experience in neurological rehabilitation, and is currently the CEO/Founder of the nonprofit Parkinson Wellness Recovery | **PWR!**[®] and a Physiology Associate at the University of Arizona. During her post-doc, Dr. Farley studied bradykinesia, developed the LSVT BIG[®] exercise program, and completed an NIH funded randomized clinical trial documenting its' short-term efficacy (3-months).

Dr. Farley is now training clinicians and fitness professionals to be PD-exercise experts to ensure the foundations of large amplitude functional training and other essential research-components are implemented into a comprehensive PD-specific exercise and integrated throughout the Parkinson's community. She is advocating that local PD-exercise experts join forces to allow people with PD to have access to comprehensive neuroplasticity-principled exercise programming for life, beginning at diagnosis. This is the type of paradigm shift that is necessary to truly slow disease progression. On February 2012, the doors to the first **PWR!Gym**[®], a Model Community Neuro Fitness Center for people with Parkinson disease, were opened in Tucson, AZ to truly implement **Exercise AS Medicine**.

Jennifer Bazan-Wigle, PT/DPT

Dr. Jennifer Bazan-Wigle began her first career with a Bachelor's of Science in Education from Northern Arizona University teaching science for the Department of Defense Schools in the Netherlands, South Korea, Japan, and Germany and for the Miami-Dade School District in Miami, FL. In 2010, Jennifer graduated with a Doctor of Physical Therapy from Nova Southeastern University in Ft. Lauderdale, FL. Her primary area of physical therapy practice has focused on neurological rehabilitation. She is currently the Lead **PWR!Gym**[®] Physical Therapist and participates in research, community presentations and continuing education courses as part of the **PWR!Moves**[®] Faculty.

Claire McLean, DPT, NCS

Dr. Claire McLean is a Board Certified Neurologic Clinical Specialist. She graduated with a doctorate in physical therapy from the University of Southern California and has specialty training through the University of Southern California/Rancho Los Amigos Neurologic Physical Therapy Residency program.

At Hoag Hospital, an NPF Care Center, Dr. McLean works in the outpatient rehabilitation clinic primarily with clients with neurologic dysfunction with an emphasis on Parkinson's disease and other movement disorders. She is on an interdisciplinary assessment and intervention team for patients prior to, and after receiving DBS surgery. Dr. McLean also coordinates and instructs multiple community exercise classes for individuals with PD following physical therapy.

Dr. McLean also is an Adjunct Faculty member instructing in USC's entry-level doctorate program. She has instructed in continuing education courses on the topics of self-efficacy and executive function training for patients with neurologic dysfunction as well as for the LSVT[®]BIG program. Dr. McLean has research experience working as an intervention therapist on the LEAPS (Locomotor Experience Applied Post-Stroke) trial, and on multiple studies investigating the effect of exercise in people with Parkinson disease. She was the primary blinded evaluator for the California sites of the ICARE (Interdisciplinary Comprehensive Arm Rehabilitation Evaluation) trial.

References

1. Ahlskog JE. Does vigorous exercise have a neuroprotective effect in Parkinson disease? *Neurology* 2011;77:288-294.
2. Bouca-Machado R, Maetzler W, Ferreira JJ. What is functional mobility applied to Parkinson's disease. *J Parkinson Disease* 2018;8:121-130.
3. Cascaes da Silva F, Iop Rda R, Domingos dos Santos P, Aguiar Bezerra de Melo LM, Barbosa Gutierrez Filho PJ, da Silva R. Effects of Physical-exercise-based rehabilitation programs on the quality of life of patients with Parkinson's disease: A systematic review of randomized controlled trials. *J Aging Physical Activity* 2016;24(3):484-496.
4. Duchesne C, Gheysen F, Bore A, Albouy G, Nadeau A, et al. Influence of aerobic exercise training on the neural correlates of motor learning in Parkinson's disease individuals. *NeuroImage Clin* 2016;12:559-569.
5. Duchesne C, Lungu O, Nadeau A, Robillard ME, Bore A, et al. Enhancing both motor and cognitive functioning in Parkinson's disease: Aerobic exercise as a rehabilitative intervention. *Brain Cognition* 2015;99:68-77.
6. Farley BG, Koshland GF. Training BIG to move faster: The application of the speed-amplitude relation as a rehabilitation strategy for people with Parkinson's disease. *Exp Brain Res* 2005;167(3):462-467.
7. Farley BG, Fox CM, Ramig LO, McFarland, D. Intensive amplitude-specific therapeutic approaches for Parkinson disease: Toward a neuroplasticity-principled rehabilitation model. *Top Geriatr Rehabil* 2008;24(2):99-114.
8. Frazzitta G, Bertotti G, Riboldazzi G, Turla M, Uccellini D, Boveri N, et al. Effectiveness of intensive inpatient rehabilitation treatment on disease progression in parkinsonian patients: A randomized controlled trial with 1-year follow-up. *Neurorehab Neural Repair* 2012;26:144-150.
9. Frazzitta G, Maestri R, Bertotti G, Riboldazzi G, Boveri N, Perini M, Uccellini D, Turla M, Comi C, Pezzoli G, Ghilardi MF. Intensive rehabilitation treatment in early Parkinson's disease: A randomized pilot study with a 2-year follow-up. *Neurorehab Neural Repair* 2015;29(2):123-131.
10. Hirsch MA, Farley BG. Exercise and Neuroplasticity in Persons Living with Parkinson's Disease. *Eur J Phys Rehabil Med* 2009;45:215-229.
11. Abbruzzese G, Marchese R, Avanzino L, Pelosin E. Rehabilitation for Parkinson's disease: Current outlook and future challenges. *Parkinsonism Related Disord* 2016;22:S60-S64.
12. Gretchen O, Reynolds MA, Otto MW, Ellis TD, Cronin-Golomb A. The therapeutic potential of exercise to improve mood, cognition, and sleep in Parkinson's disease. *Mov Disord* 2016;31(1):23-38.
13. Lauze M, Daneault JF, Duval C. The effects of physical activity in Parkinson's disease: A review. *J Parkinson's Disease* 2016;6:685-698.
14. Marinelli L, Quartarone A, Hallett M, Frazzitta G, Ghilardi MF. The many facets of motor learning and their relevance for Parkinson's disease. *Clin Neurophysiol* 2017;128:1127-1141.
15. Petzinger GM, Fisher BE, McEwen S, Beeler JA, Walsh JP, Jakowec M. Exercise-enhanced neuroplasticity targeting motor and cognitive circuitry in Parkinson's disease. *Lancet* 2013;12:716-726.
16. Schenkman M, Moor CG, Kohrt WM, Hall DA, Delitto A, Comella CL, et al. Effect of high-intensity treadmill exercise on motor symptoms in patients with De Novo Parkinson disease. A phase 2 randomized clinical trial. *JAMA Neurology* 2018 Feb 1;75(2):219-226.
17. Lee YY, Fisher BE. Use of low-frequency repetitive transcranial magnetic stimulation to reduce context-dependent learning in people with Parkinson's disease. *Eur J Phys Rehabil Med* 2018 Aug;54(4):560-567.