

Take Control of Parkinson's Disease through Neurologic Physical Therapy & Exercise to Improve Mobility

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Outline

- PD Exercise Recommendations
- Comprehensive PD Care
- PT Approaches to Specific PD Impairments
- PT Referral & Plan of Care Recommendations

Brain Health: You Are In Charge



Physical
Exercise



Mental
Activities



Food and
Nutrition

Six Pillars of Brain Health



Social
Interaction

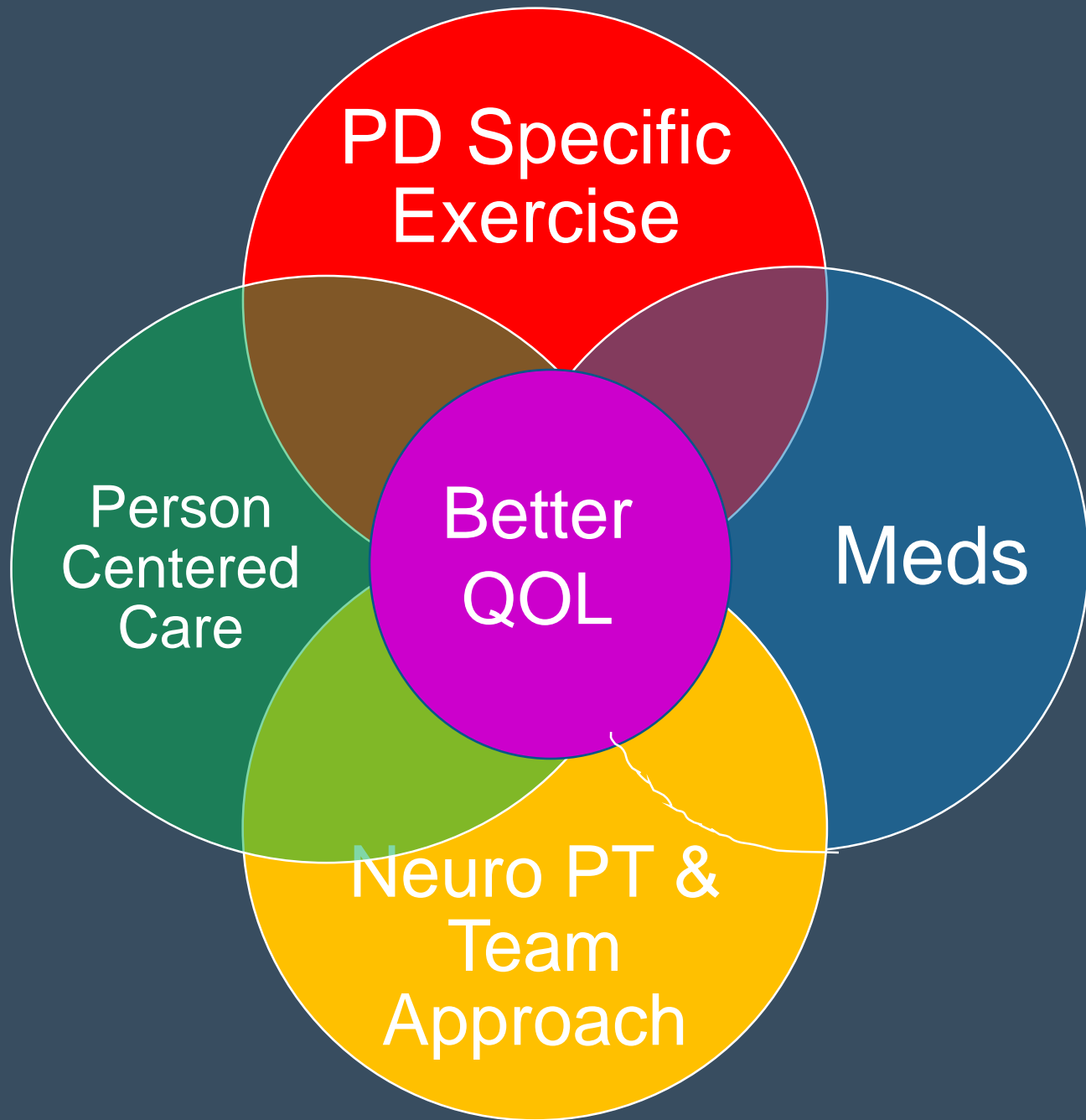


Health
Management



Sleep, Stress
Management





It's all about
comprehensive
care!

You **CAN** get
better!

You **CAN** stay
better!

PD Exercise Recommendations



-- HIIT/forced aerobic: 20-60min, 3-5x/wk, 80-85% intensity,
(Carvalho 2018, ACSM 2020, Miller Koop 2019, Salgado 2013, Schenkman 2018, Shulman 2013)



-- Large muscles: 2-3x/wk, 2-3 sets, 8-15 reps, 30-60% intensity

(Carvalho 2018, ACSM 2020, Salgado 2013)



-- Tai Chi / All aspects of balance: 10-15min, daily

(Carvalho 2018, Salgado 2013)



-- Spine & Trunk: 2-3x/wk, 10-30s

(Carvalho 2018)

Best Practices for PD Care



- Extensive education
- HEP development
- Work/Life Balance



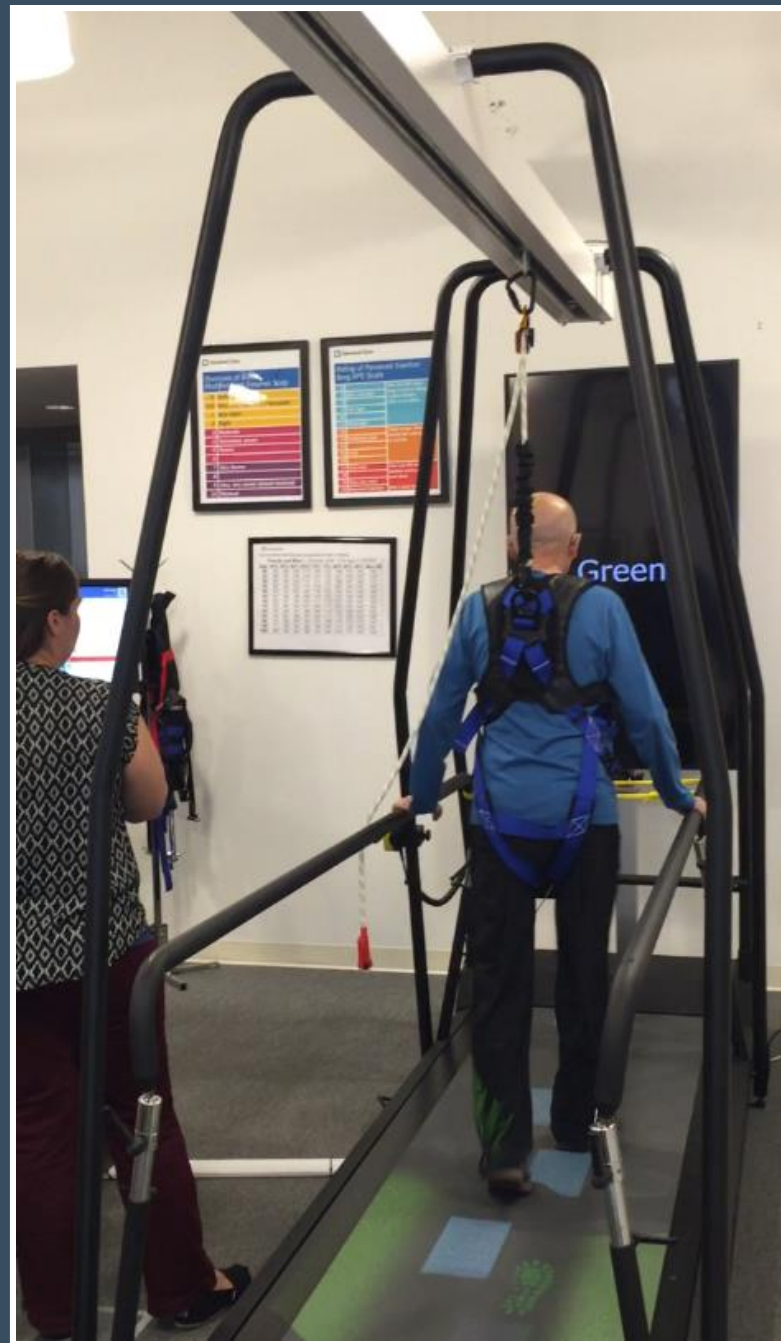
- HEP & Caregiver Education
- Fall Risk Mgmt
- AD/Orthosis Training
- Managing motor and non-motor sx



- Extensive Caregiver Training
- DME
- Cuing

Proactive Approaches in PD Care

- Efficacy, enjoyment, and adherence to a multi-modal exercise program is crucial
- Exercise at peak medication efficacy: 45-60 min post taking meds
- Intensity matters!
- Monitor non-motor sx and vitals effecting exercise performance
- 6 month follow up for fall risk PT re-eval (Duncan 2012, Rafferty 2019)



Multi-Modal Exercise & Cognitive DT Training





High Intensity Interval Training
& Dual Task Training

Dual Tasking Challenges:
Sequencing, Set-Shifting, Auditory
Attention, Processing Speed

Rigidity

- Trunk rotation
- Reciprocal mvt
- Rhythmic mvt
- HAMT
- Increase LOS
- Postural alignment



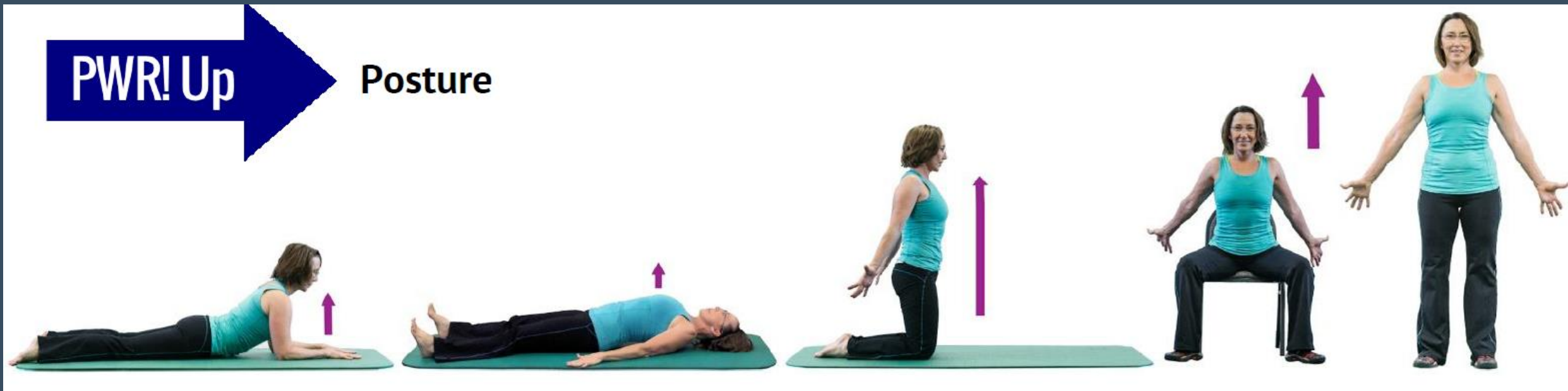
Bradykinesia

- Fast & HAMT
- HIIT
- Assisted cycling
- LOS Control

Dyskinesia

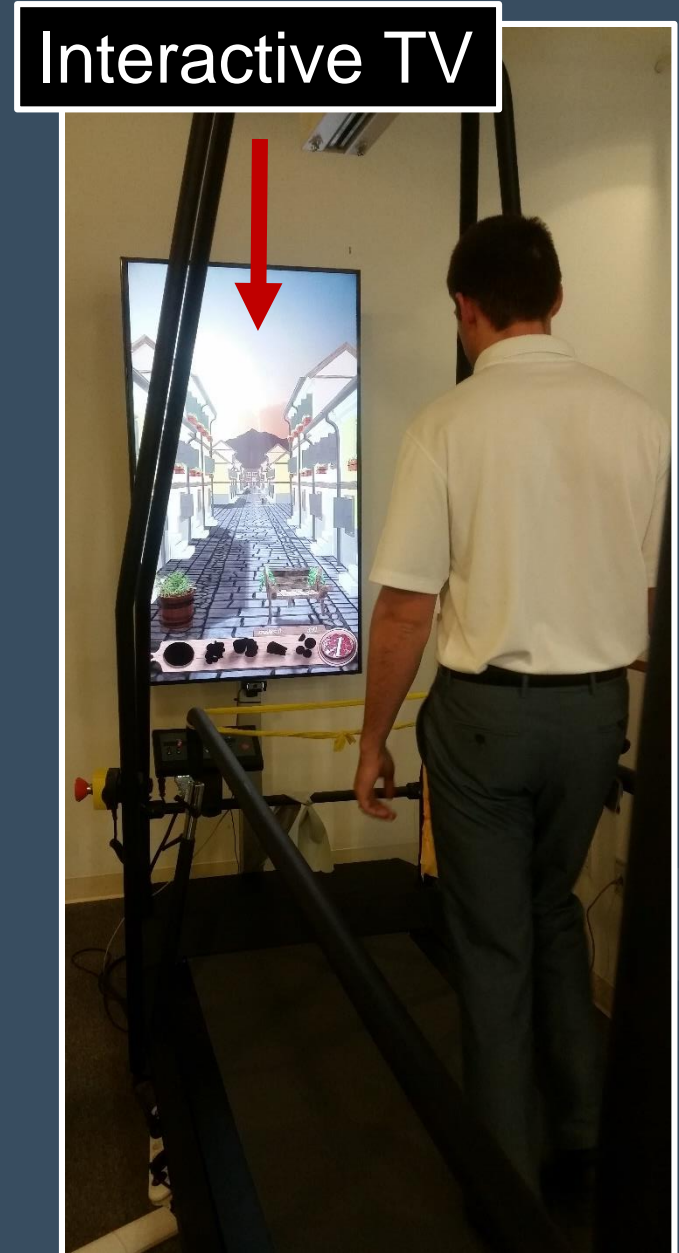
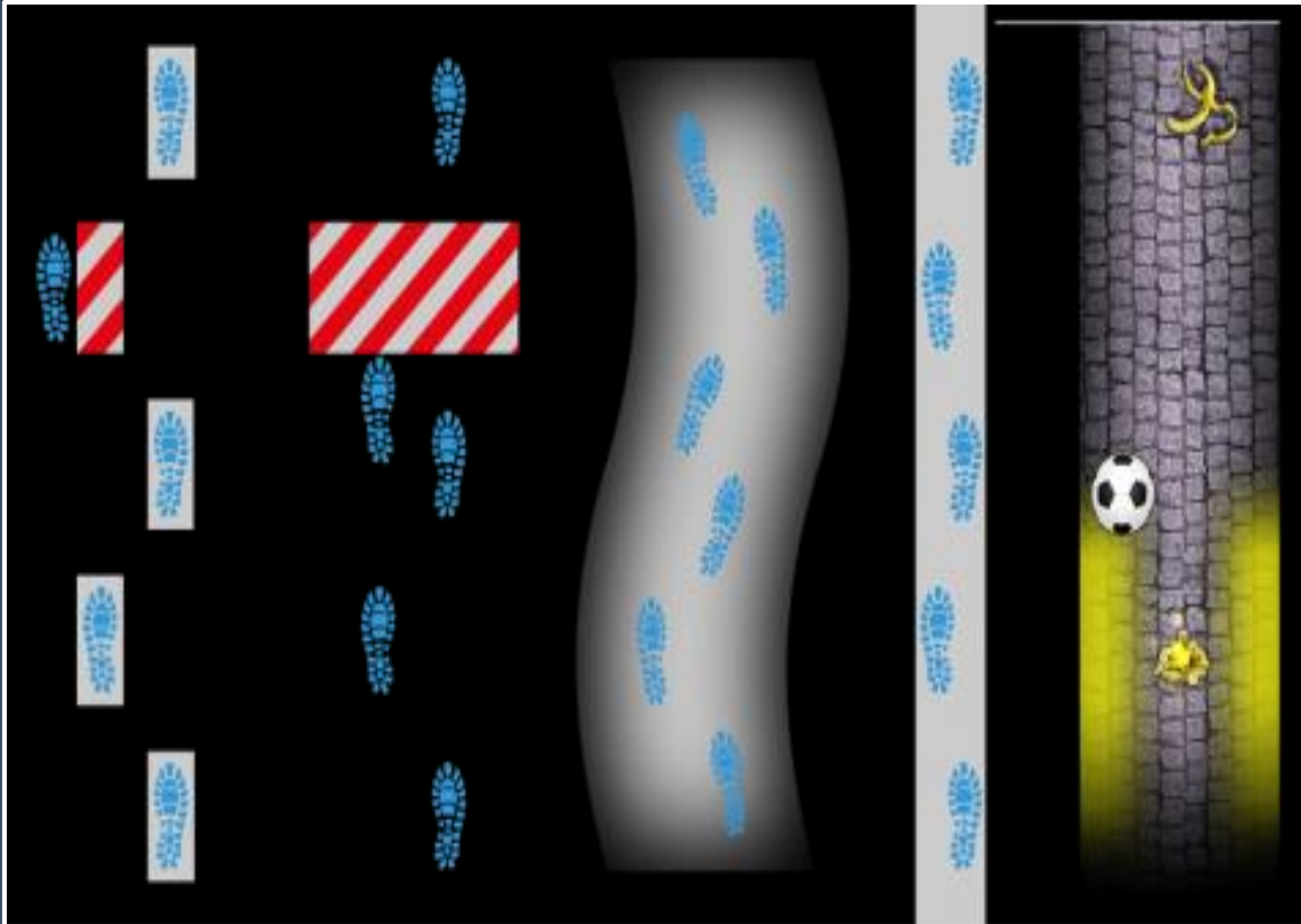
- Core strength
- Mvt Control: transfers & gait
- Relaxation techniques

Impaired Posture



- Stretching flexor muscles
- Strengthening extensor muscles
- Postural realignment

Gait Training & Utilization of Virtual Reality



Strategies to Manage Freezing

- What are your freezing triggers?
 - Narrowed spaces, distractions, turning, starting walking, stopping walking or reaching destination?



Visual Cues

- Visual Feedback to provide a location to place your foot when stepping
- Examples:
 - Laser lights
 - Tape / Lines on the floor
 - Use a contrasting color
- Visualization:
 - Think “BIG” and focus forward beyond your target

Tape: 15in – 22in length, 13 – 20in apart

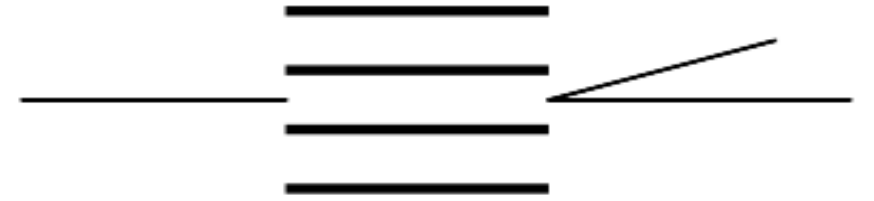


Fig.1 Strips placed through a doorway

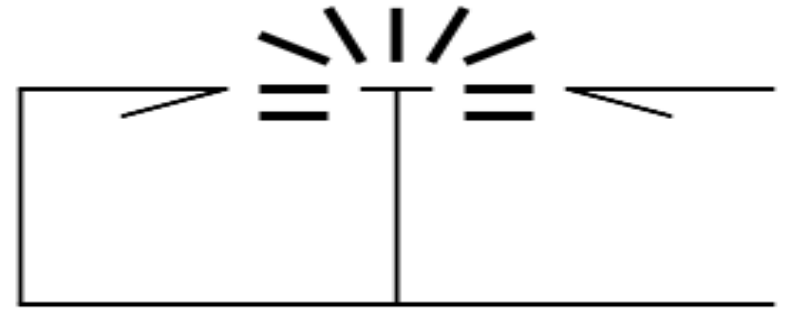


Fig. 2 Strips placed between two doorways

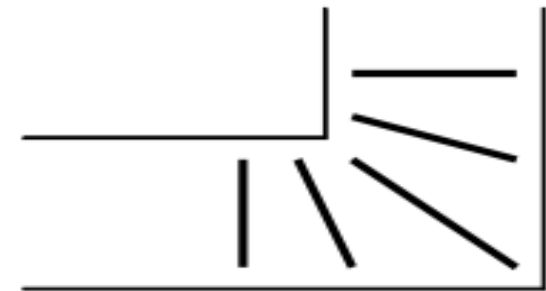


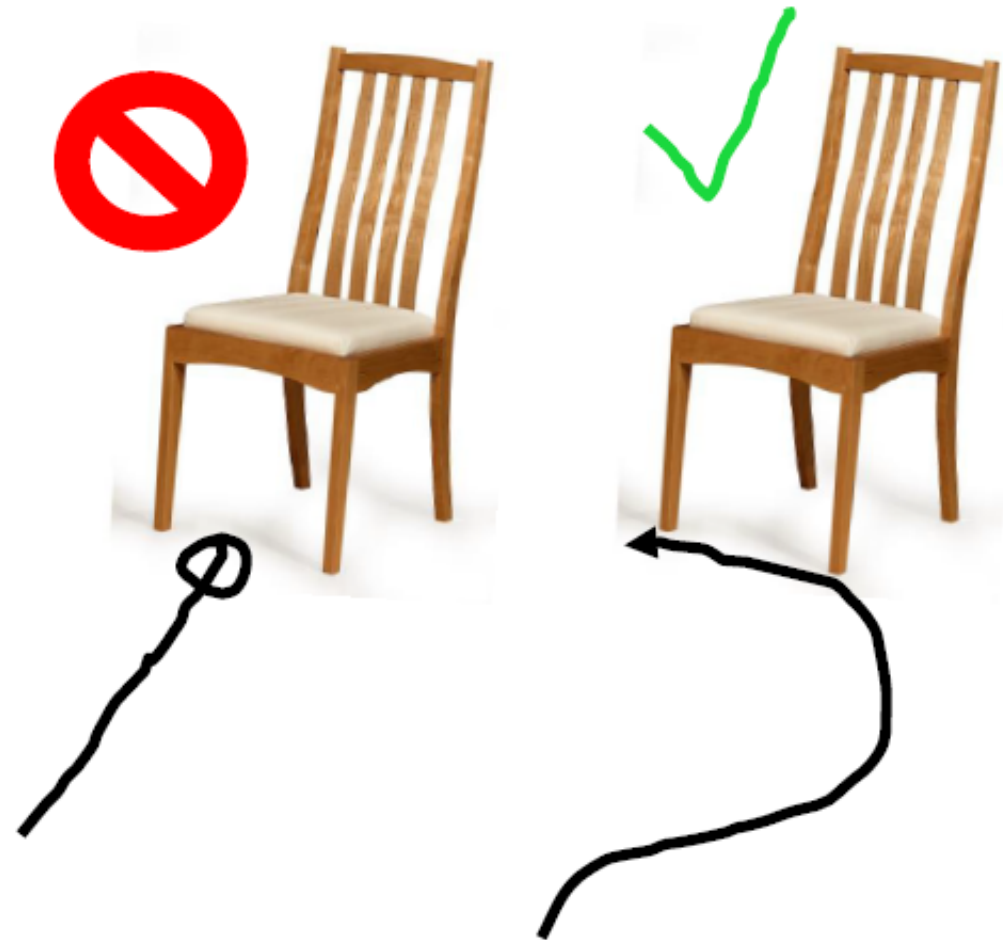
Fig. 3 Strips placed around a corner in the corridor

Auditory Cues

- Feedback to you through your ears and hearing to establish a rhythm to “step to the beat”
- Examples:
 - Music: Marching or Dancing Music
 - Counting/Singing out loud: “1, 2, 3, STEP!”
 - Using a metronome
 - Counting out loud may help as you approach the “trouble spot”
 - Partnering up with Dr. Becky Wellman, Music Therapist

Unfreezing Strategies When Turning to Chair

1. Turn by taking wide turns in a half circle, rather than a pivot turn

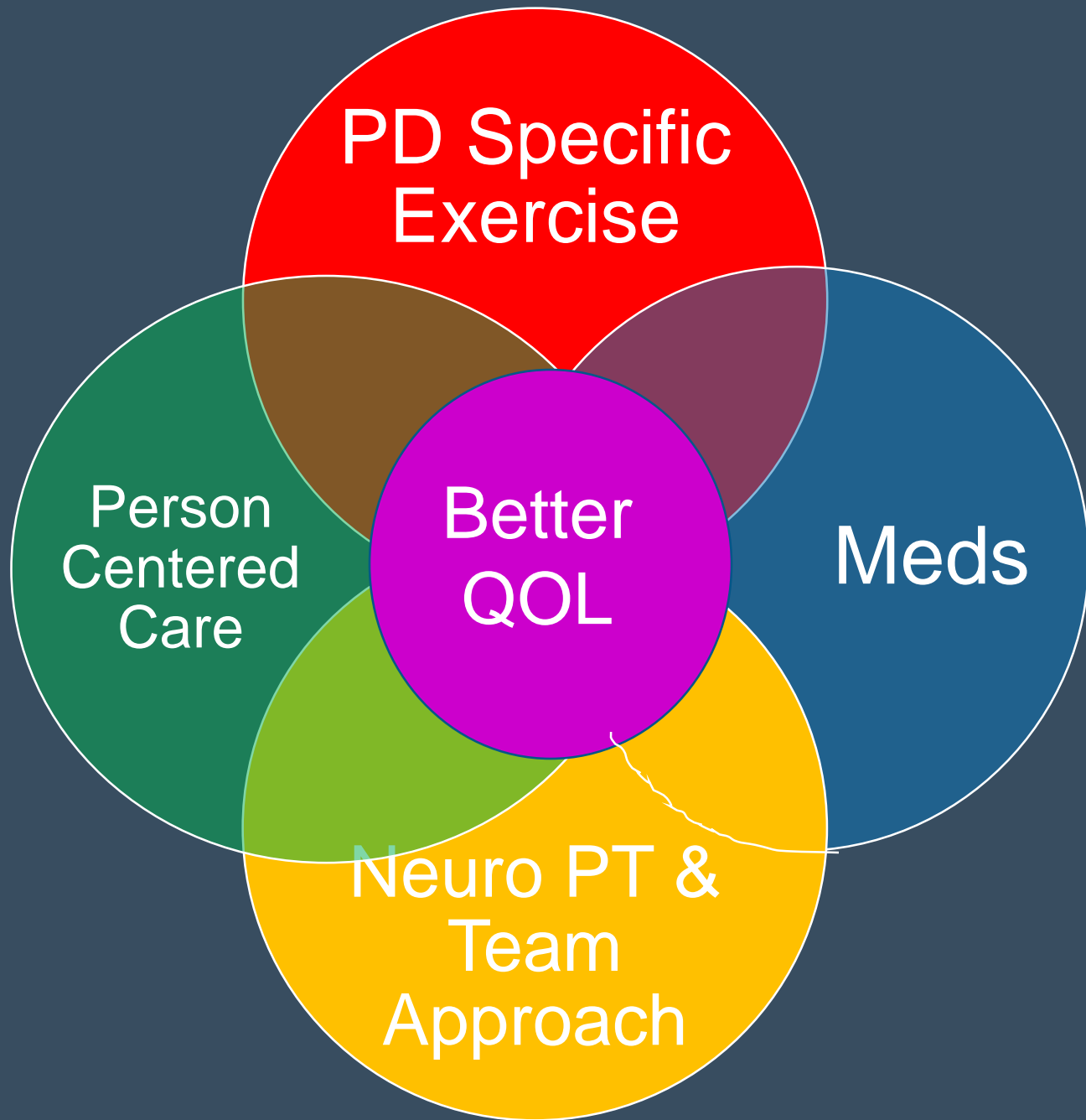


U-Step Walker



Key Takeaways

- Exercise is disease modifying for neuroprotection, helping people with PD get better & stay better longer!
- Person-centered, goal focused, PD specific individualized neurologic PT care
- Multidisciplinary approach
 - PTs make a great impact on PD and care-partners throughout continuum of care



Let's Get
MOVING!

You **CAN** get
better!

You **CAN** stay
better!



Every life deserves world class care.

*References for presentation are available upon request