

Functional Balance & Mobility

Can you do two things at once?

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Overview

- Why Exercise?
- How to Exercise
- Action Steps YOU Can Take
- Tracking Your Progress

Benefits of Exercise

- For every BODY
 - Strength
 - Balance
 - Agility
 - Flexibility
 - Endurance (Aerobic Capacity)
 - Mood
 - Sleep



Benefits of Exercise for Parkinson's

- Improve effectiveness of medication
- Stabilize brain cells
- Improve neural connections
- Increase function of dopamine system
- Combat motor deterioration
- Increase in dopamine receptors
- Improve motor output and automatic nature of movement

Benefits of Exercise for Parkinson's

- Resistance training results in improvements in **strength, balance, and Parkinson's related motor symptoms.**
(Chung et al. Clin Rehabil. 2016)
- Progressive resistance training results in improved Unified Parkinson's Disease Rating Scale **motor symptom scores** at 2 year follow up.
(Corcos et al. Mov Disord. 2013)
- Aerobic training results in improved **walking economy** at 16 month follow up. *(Schenkman et al. Phys Ther. 2012)*
- Various modes of exercise results in improved **cognitive function.**
(Shih et al. Parkinsonism Relat Disord. 2019; Stuckenschneider et al. J Parkinsons Dis. 2019)

How to Exercise

- High Intensity
- Challenging and Cognitively Engaging
- Repetitious
- Progressive
- Meaningful
- Specific
- **ENJOYABLE!**

Symptom Management Through Exercise

1. Imbalance → Balance
2. Weakness → Strength
3. Single Task → Dual Task Tolerant
4. Limited Aerobic Capacity → Endurance
5. Rigidity → Flexibility
6. Stooped Posture → Strong Posture
7. Tremor → Decreased Tremor



DAVIS PHINNEY
Foundation For Parkinson's

every victory counts.

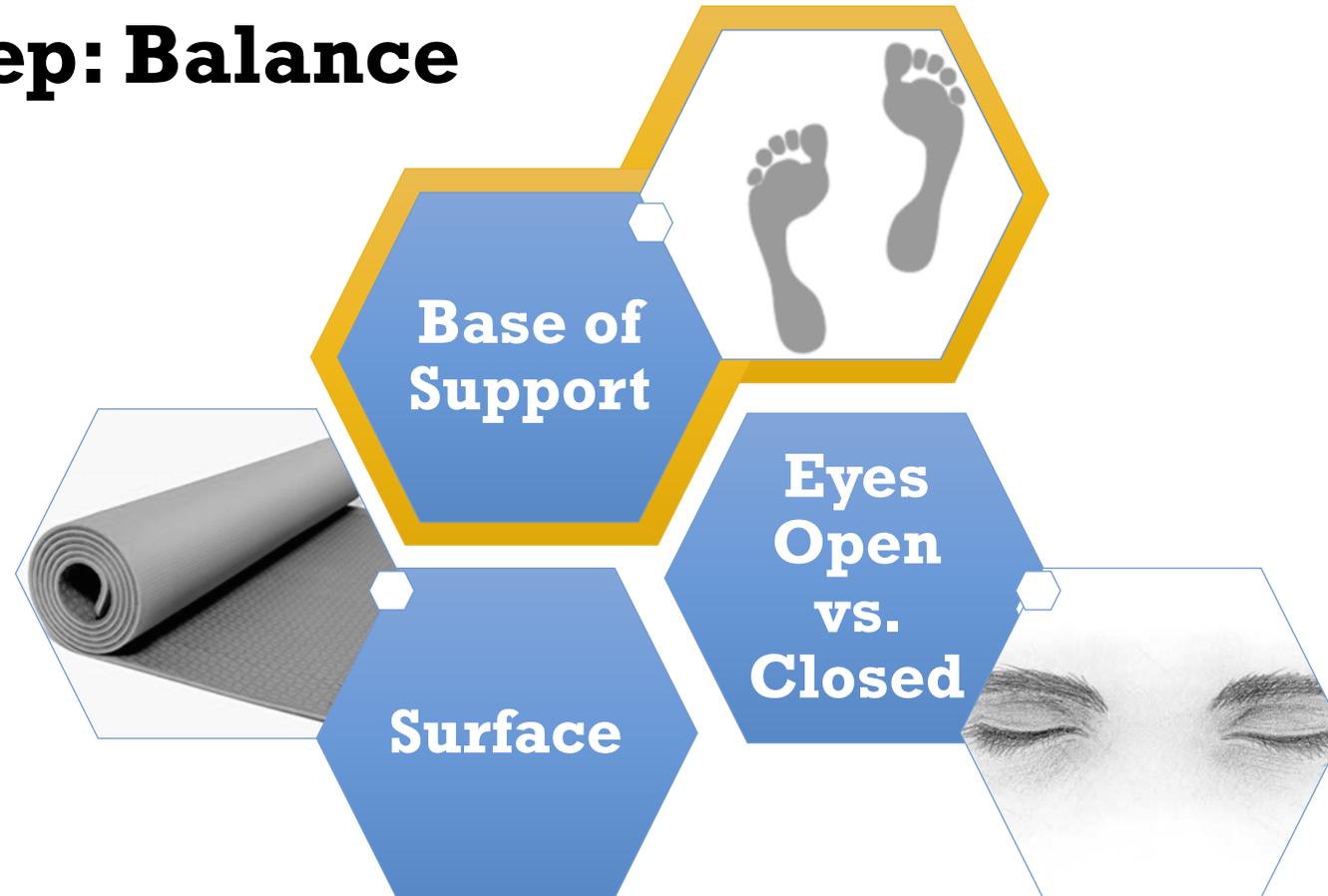
Balance

Balance

Goals: Improve sensory integration and decrease reliance on vision

1. Vision
2. Proprioception
3. Vestibular

Action Step: Balance



Balance

ACTION STEP!

Let's practice!



Let's practice!



Remember...

- High Intensity
- Challenging and Cognitively Engaging
- Repetitious
- Progressive
- Meaningful
- Specific

Remember...

- High Intensity - **is effortful and leaves you swaying or wobbling a bit.**
- Challenging and Cognitively Engaging
- Repetitious
- Progressive
- Meaningful
- Specific

Remember...

- High Intensity
- Challenging and Cognitively Engaging – requires you to focus your attention on the task.
- Repetitious
- Progressive
- Meaningful
- Specific

Remember...

- High Intensity
- Challenging and Cognitively Engaging
- Repetitious - **several times per set, daily or weekly**
- Progressive
- Meaningful
- Specific

Remember...

- High Intensity
- Challenging and Cognitively Engaging
- Repetitious
- Progressive – once you can consistently hold the position for 30 seconds, move on to the next stage.
- Meaningful
- Specific

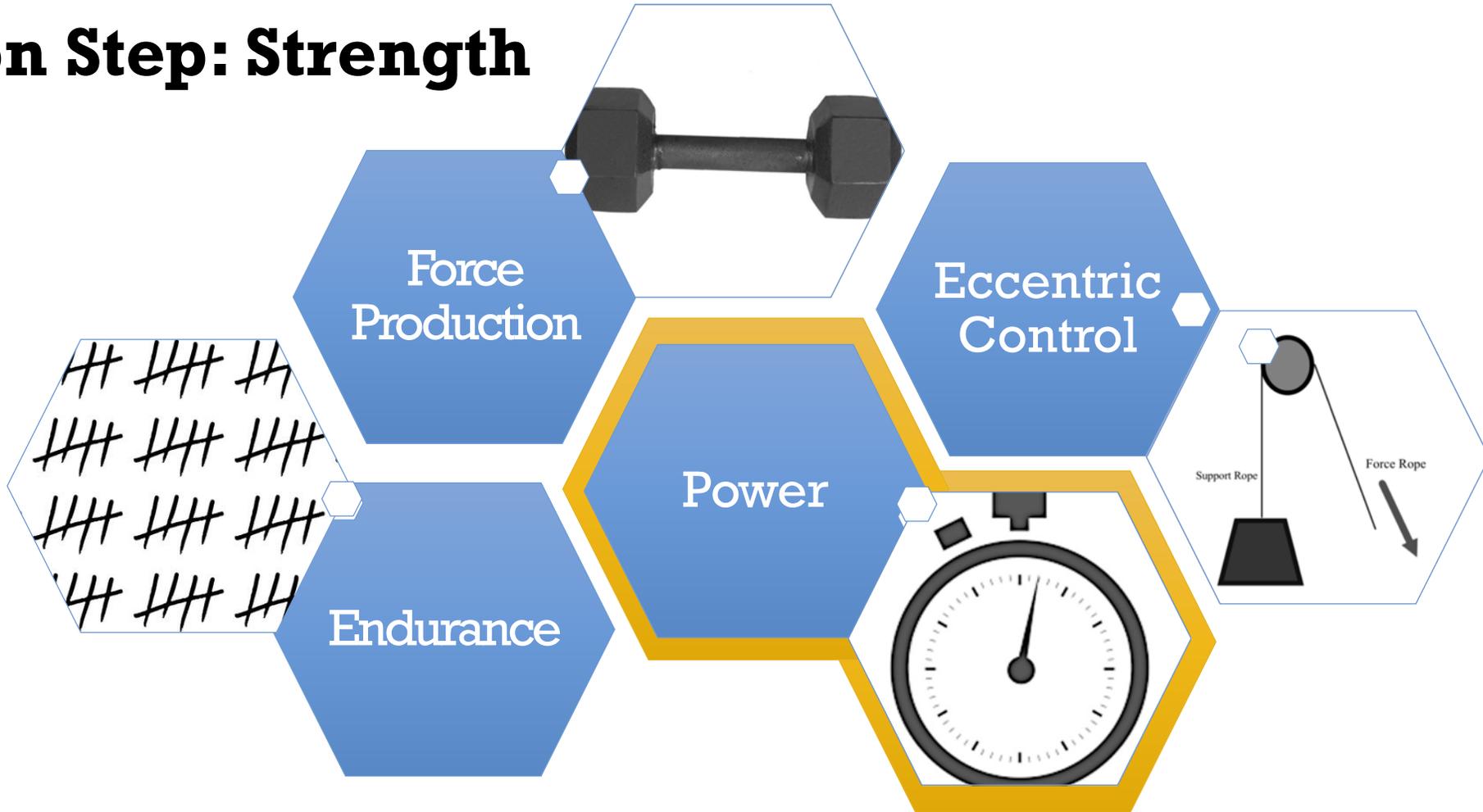
Strength

Strength

Goals: Improve muscle performance

1. Force production
2. Endurance
3. Power
4. Eccentric Control

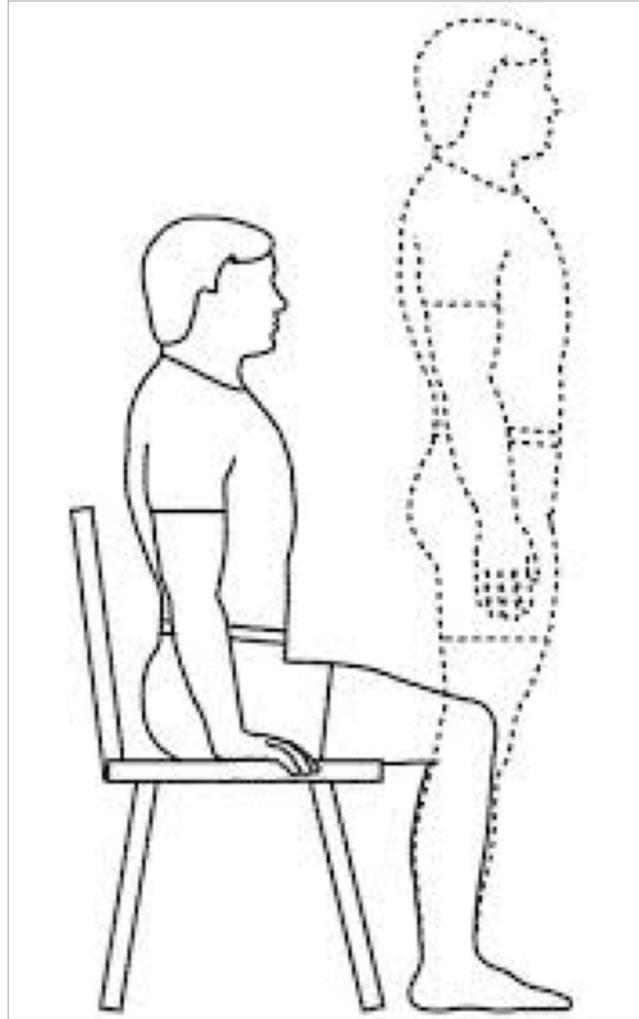
Action Step: Strength



Strength

ACTION STEP!

Let's practice!



Let's practice!



Dual Task

Dual Task

Goals: improve tolerance to complex environments that require you to split your attention between multiple tasks.

- 1. Cognitive**
- 2. Motor**

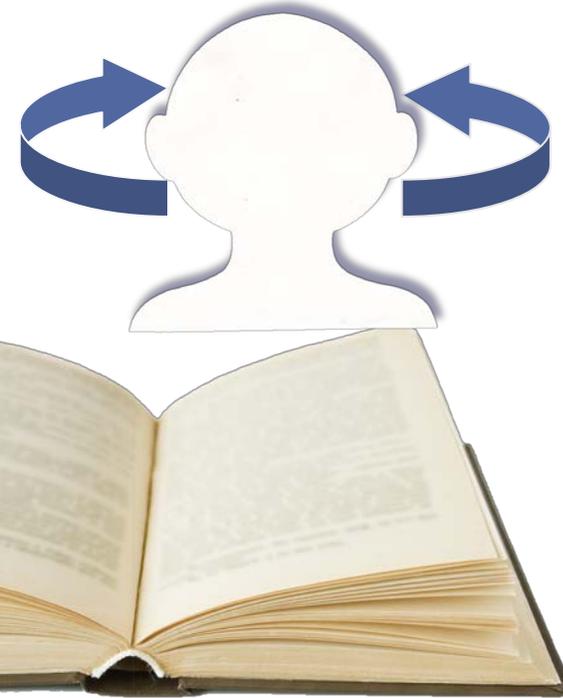
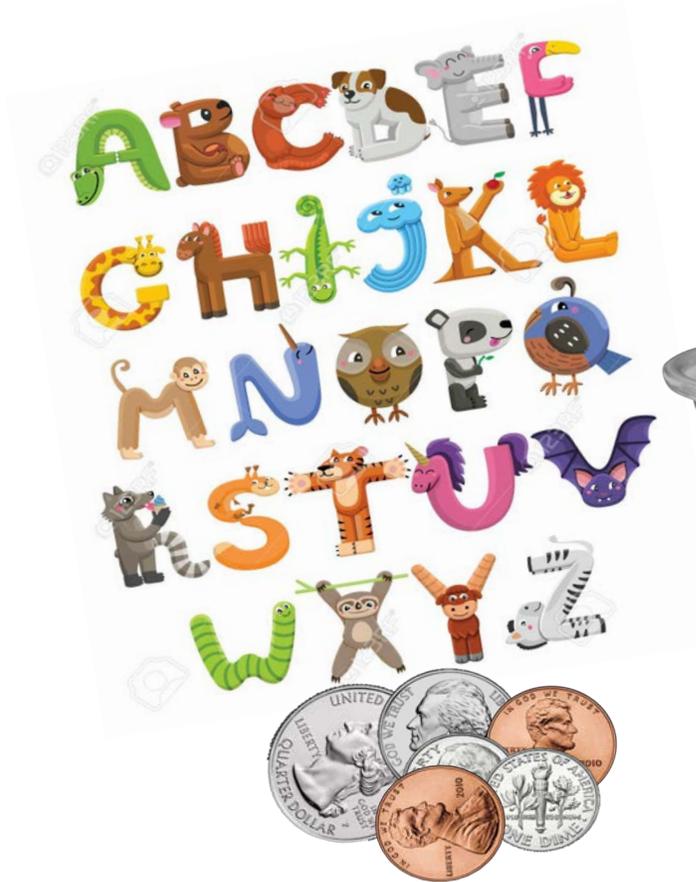
Fall Risk Predictor

Walking While Talking Test

- Do you have to stop walking to talk?
- Could you recite the alphabet or recite alternating letters of the alphabet aloud without slowing down?



Let's Practice!



Dual Task

ACTION STEP!

Let's Practice!



Let's practice!



Remember...

- High Intensity
- Challenging and Cognitively Engaging
- Repetitious
- Progressive
- Meaningful
- Specific

Remember...

- High Intensity
- Challenging and Cognitively Engaging
- Repetitious
- Progressive – when one motor or cognitive task with movement combo becomes easy, change it up!
- Meaningful
- Specific

Remember...

- High Intensity
- Challenging and Cognitively Engaging
- Repetitious
- Progressive
- Meaningful – before you start consider real world scenarios you have had difficulty in and replicate these environments.
- Specific

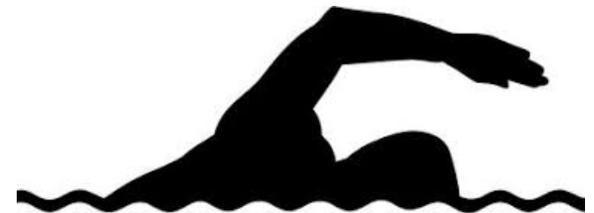
Remember...

- High Intensity
- Challenging and Cognitively Engaging
- Repetitious
- Progressive
- Meaningful
- **Specific** – use motor or cognitive task elements that are of particular challenge for YOU. Is it numbers? Word recall?

Tracking Progress & Sticking With It!

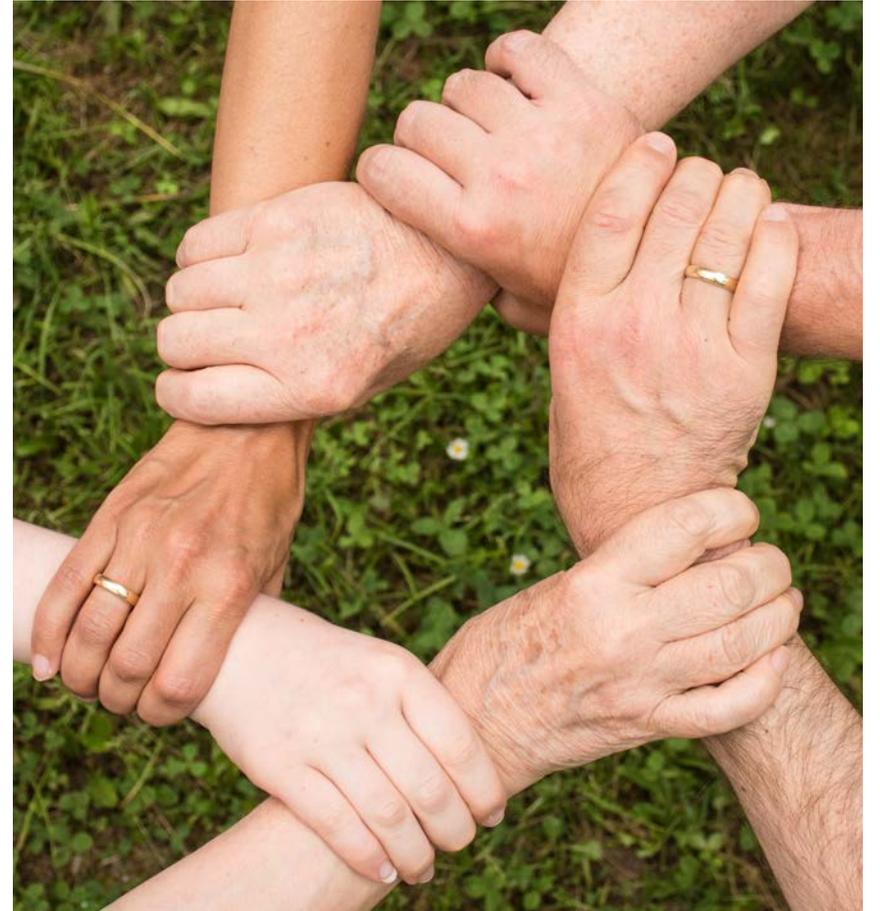
Most Importantly...

- Dancing
- Walking
- Tai Chi
- Cycling
- Yoga / Chair Yoga
- Aquatic
- Treadmill Intervals
- Group Classes



Find Your Support

- Family
- Friend
- Caregiver
- Neurologist
- Support Group
- Physical Therapist
- Movement Specialist



Tracking Performance

Within a Session

- Time
- Repetitions
- Task Intensity

Between Sessions

- Phone App
- Paper Chart
- Caregiver

Review

- **Exercise is beneficial for management of Parkinson's symptoms.**
- **Exercise improves the effectiveness of your medications.**
- **Exercise should be cognitively engaging, high intensity, repetitious, progressive, meaningful and specific.**
- **Set measurable goals and track your progress!**