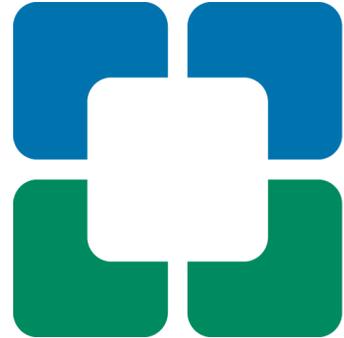


Physical Therapy for Improving Strength and Balance in PD

July 17, 2021

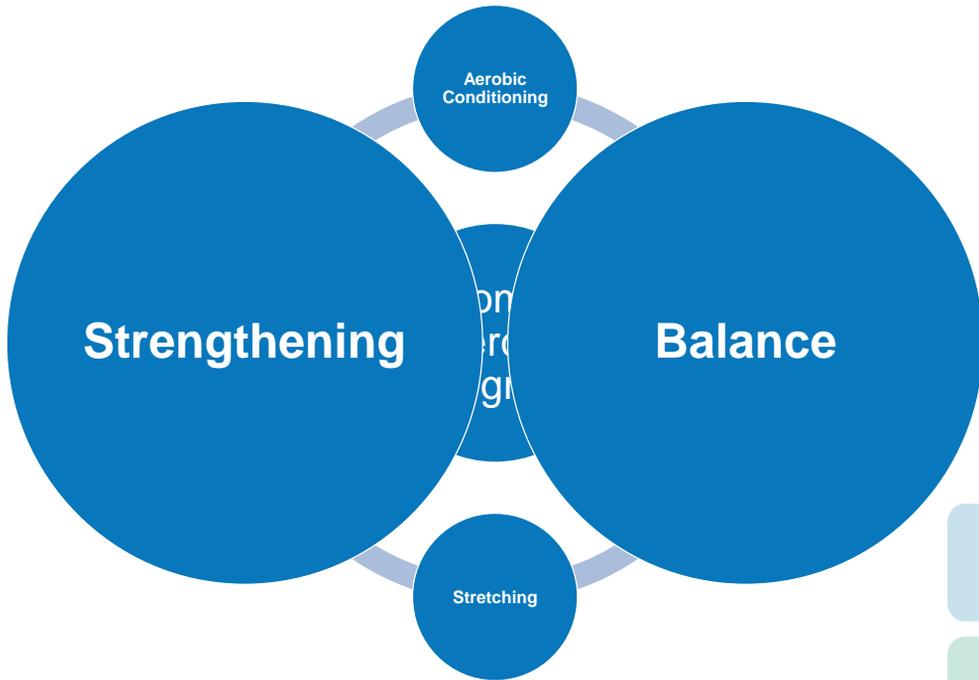
Trevor Mahoney PT, DPT

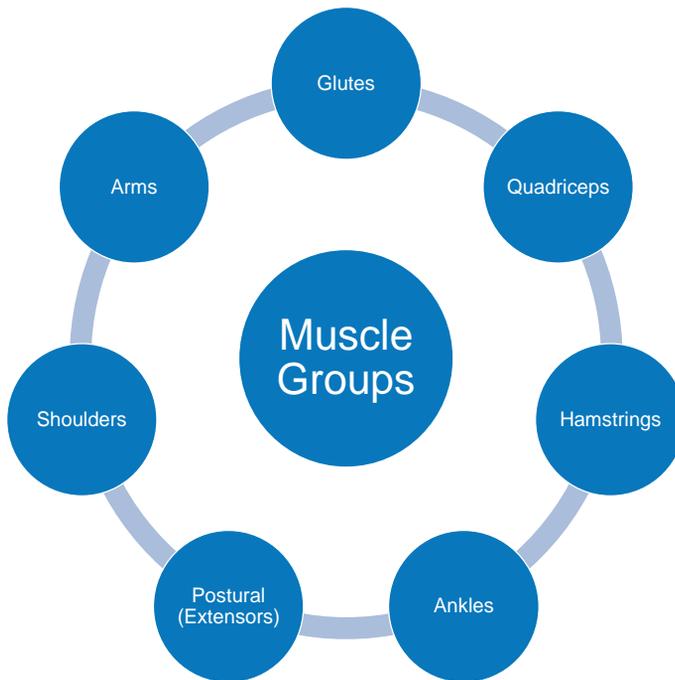


Objectives

- General exercise guidelines for people with PD
- Guidelines for strength training for people with PD
- Strength vs Motor control
- Guidelines for balance training for people with PD
- Balance principles







Benefits of Strength Training

- ↑ Strength
- ↑ Motor control
- ↑ Balance
- ↑ Walking endurance
- ↑ Ability to do stairs



<https://parkinsonsblog.stanford.edu/wp-content/uploads/2020/01/5-Methods-to-Enhance-Your-Brain-for-Greater-Productivity.jpg>



Common Reports

- “My legs are weak”
- “I can’t get up from a chair”
- “I have no strength”



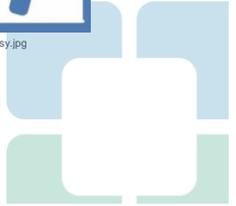
Muscular Strength vs Motor Control



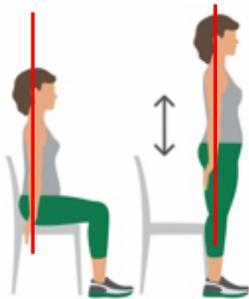
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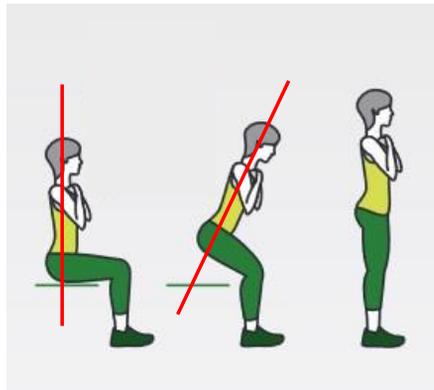
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Sit to Stand



<https://www.carouselpt.com/files/2020/10/unnamed.png>



<https://www.donaldmahler.com/wp-content/uploads/2021/02/Sit-to-Stand-Illustration.jpg>



Sit to Stand



Balance Training



https://www.ableneptsportsrehab.com/uploads/8/3/1/3/83130746/img-9784-2_orig.jpg



<https://i.pinimg.com/600x315/ed/5c/fa/ed5cfa87a17acb62e99e20f37911b00b.jpg>



Why Balance Training?

- Between 50% and 70% of people with PD experience 1 or more falls over a 12-month period¹.
- One out of five falls causes a serious injury such as broken bones or a head injury²



1. Wood BH, Bilclough JA, Bowron A, Walker RW. Incidence and prediction of falls in Parkinson's disease: a prospective multidisciplinary study. *J Neurol Neurosurg Psychiatry*. 2002;72:721-725.
2. Sterling DA, O'Connor JA, Bonadies J. Geriatric falls: injury severity is high and disproportionate to mechanism. *Journal of Trauma-Injury, Infection and Critical Care* 2001;50(1):116-9

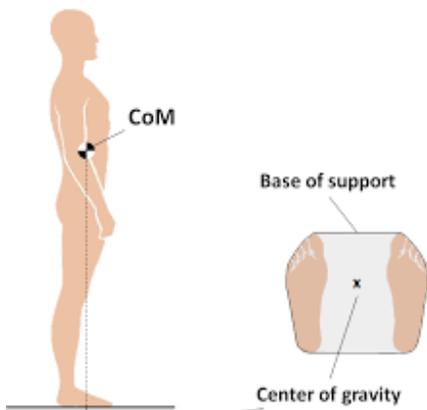


1. Sherrington C, Whitney JC, Lord SR, Herbert RD, Cumming RG, Close JC. Effective exercise for the prevention of falls: a systematic review and meta-analysis. *J Am Geriatr Soc*. 2008;56:2234-2243.

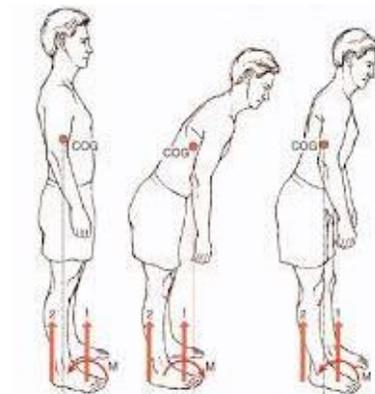




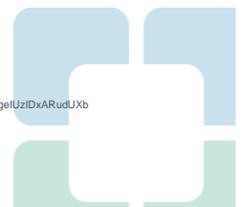
Balance Principles



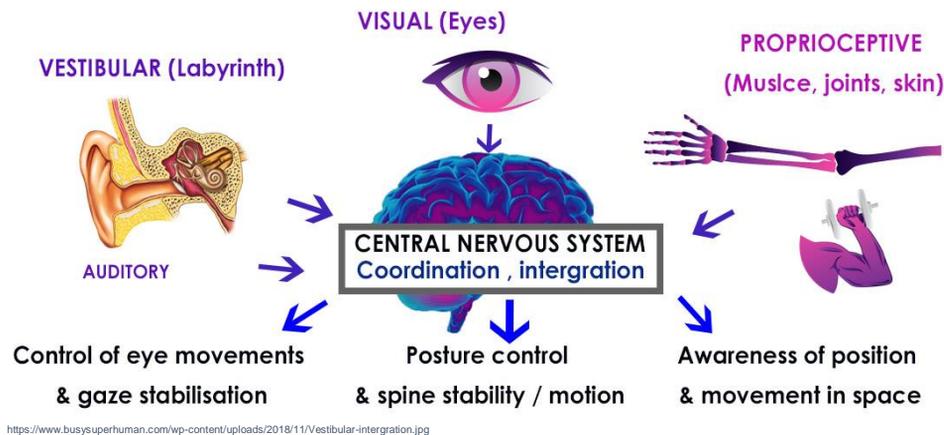
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Balance Principles



Why Physical Therapy?

- Analyze movement and identify deficits
- Individualize exercise program
- Modify exercises as the disease progresses
- Provide motivation and encouragement
- Help provide a path to accomplish goals



Key Takeaways

- Strength Training:
 - 2-3x/week, 1-3 sets, 8-12 repetitions
- Balance Training
 - 2-3x/week, 20-30 minutes, 50 hours
- Utilize a therapist to help guide you



Every life deserves world class care.