

## Episode 3: Motor Learning in Parkinson's Disease with Lee Dibble

In this episode, our host Parm Padgett talks to Dr. Lee Dibble from the University of Utah about motor learning in people with Parkinson's Disease and other neurodegenerative diseases. Our discussion centers around how motor learning applies to balance tasks, including reactive balance. We also review the research about the impact of medication on motor learning.

### Guest information

Leland E. Dibble, P.T., Ph.D., A.T.

Lee Dibble's professional biography:

[https://faculty.utah.edu/u0035118-LEE\\_DIBBLE/hm/index.html](https://faculty.utah.edu/u0035118-LEE_DIBBLE/hm/index.html)

University of Utah Balance and Mobility Clinic:

<https://healthcare.utah.edu/locations/balance-mobility/>

On Facebook: <https://www.facebook.com/UniversityRehabilitationAndWellnessClinic>

University of Utah PT:

Twitter: <https://twitter.com/UofUPT>

Instagram: uofupt

Facebook: <https://www.facebook.com/uofupt/>

### Referenced & Related Articles

Hayes HA, Hunsaker N, Schaefer SY, Shultz B, Schenkenberg T, Boyd LA, White AT, Foreman KB, Dyer P, Maletsky R, Dibble LE. Does Dopamine Replacement Medication Affect Postural Sequence Learning in Parkinson's Disease? *Motor Control*. 2015 Oct;19(4):325-40. doi: 10.1123/mc.2014-0039.

Jessop RT, Horowicz C, Dibble LE. Motor learning and Parkinson disease: Refinement of movement velocity and endpoint excursion in a limits of stability balance task. *Neurorehabil Neural Repair*. 2006 Dec;20(4):459-67.

Lester ME, Cavanaugh JT, Foreman KB, Shaffer SW, Marcus R, Dibble LE. Adaptation of postural recovery responses to a vestibular sensory illusion in individuals with Parkinson disease and healthy controls. *Clin Biomech*. 2017 Oct;48:73-79. doi: 10.1016/j.clinbiomech.2017.07.008.

Olivier GN, Paul SS, Lohse KR, Walter CS, Schaefer SY, Dibble LE. Predicting Motor Sequence Learning in People With Parkinson Disease. *J Neurol Phys Ther*. 2019 Jan;43(1):33-41. doi: 10.1097/NPT.0000000000000251.

Broeder S, Nackaerts E, Nieuwboer A, Smits-Engelsman BC, Swinnen SP, Heremans E. The effects of dual tasking on handwriting in patients with Parkinson's disease. *Neuroscience*. 2014

Mar 28;263:193-202. doi: 10.1016/j.neuroscience.2014.01.019.

Paul SS, Dibble LE, Peterson DS. Motor learning in people with Parkinson's disease: Implications for fall prevention across the disease spectrum. *Gait Posture*. 2018 Mar;61:311-319. doi: 10.1016/j.gaitpost.2018.01.026.

Peterson DS, Dijkstra BW, Horak FB. Postural motor learning in people with Parkinson's disease. *J Neurol*. 2016 Aug;263(8):1518-29. doi: 10.1007/s00415-016-8158-4.

Full text: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4972681/>

Jessop RT, Horowicz C, Dibble LE. Motor learning and Parkinson disease: Refinement of movement velocity and endpoint excursion in a limits of stability balance task. *Neurorehabil Neural Repair*. 2006 Dec;20(4):459-67.

Paul SS, Schaefer SY, Olivier GN, Walter CS, Lohse KR, Dibble LE. Dopamine Replacement Medication Does Not Influence Implicit Learning of a Stepping Task in People With Parkinson's Disease. *Neurorehabil Neural Repair*. 2018 Dec;32(12):1031-1042. doi: 10.1177/1545968318809922

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