

Title: Episode 10: Rehabilitation for people with Huntington's Disease with Lori Quinn

Description: In this episode, Dr. Lori Quinn talks to Parm about key features of Huntington's Disease for PTs to recognize and examine, treatment approaches, and her rehabilitation-based research with this population. This is a great learning opportunity for clinicians familiar with HD as well as those who may see it very rarely (or haven't seen it at all yet!). Lori also gives some great clinical pearls that apply to working with patients with any rare neurological condition.

#### Guest information

Lori Quinn, PT, EdD

Associate Professor of Movement Science & Kinesiology

Director: Neurorehabilitation Research Lab: <https://www.tc.columbia.edu/neurorehab/>

Columbia University

<https://www.tc.columbia.edu/faculty/lq2165/>

#### Referenced articles

##### **Engage HD**

Busse M, Quinn L, Dawes H, Jones C, Kelson M, Poile V, Trubey R, Townson J, Edwards RT, Rosser A, Hood K. Supporting physical activity engagement in people with Huntington's disease (ENGAGE-HD): study protocol for a randomized controlled feasibility trial. *Trials*. 2014 Dec 12;15:487

Busse M, Quinn L, Drew C, Kelson M, Trubey R, McEwan K, Jones C, Townson J, Dawes H, Tudor-Edwards R, Rosser A, Hood K. Physical activity self-management and coaching compared to social interaction in Huntington's disease: results from the ENGAGE-HD randomized, controlled, pilot feasibility trial. *Physical Therapy*. 2017; 97(6): 625-39

Quinn L, Trubey R, Godblat, Dawes H, Edwards RT, Jones C, Townson J, Drew C, Kelson M, Poile V, Rosser A, Hood K, Busse M. Development and delivery of a physical activity intervention for people with Huntington disease: facilitating translation to clinical practice. *Journal of Neurologic Physical Therapy*. 2016;40(2):71-80.

##### **TRAIN -HD**

Quinn L, Debono K, Dawes H, Rosser AE, Nemeth AH, Rickards H, Tabrizi SJ, Quarrell O, Trender-Gerhard I, Kelson MJ, Townson J, Busse M. Task-specific training in Huntington disease: a randomized controlled feasibility trial. *Physical therapy*. 2014; 94(11): 1555-68.

##### **Exert HD**

Quinn L, Hamana K, Kelson M, Dawes H, Collett J, Townson J, Roos R, van der Plas AA, Reilmann R, Frich JC, Rickards H, Rosser A, Busse M. A randomized, controlled trial of a multi-modal exercise intervention in Huntington's disease. *Parkinsonism and Related Disorders*. 2016; 31:46-52.

##### **PACE HD**

Drew C, Hamana K, William-Thomas R, Marsh L, Dimitropoulou P, Playle R, Griffin B, Kelson M, Schubert R, Muratori L, Reilmann R, Rosser A, Busse M. Physical activity and exercise outcomes in Huntington's disease (PACE-HD): protocol for a 12-month trial within cohort evaluation of a physical activity intervention in people with Huntington's disease. *Physical Therapy*. 2019. 99(9):1201-1210.

Trial registration: <https://clinicaltrials.gov/ct2/show/NCT03344601>

ENROLL HD: <https://www.enroll-hd.org>

## **CLINICAL GUIDELINES AND SYSTEMATIC REVIEW**

Quinn L, Kegelmeyer D, Kloos A, Rao AK, Busse M, Fritz NE. Clinical recommendations to guide physical therapy practice for Huntington disease. *Neurology*. 2020 Feb 4;94(5):217-228. doi: 10.1212/WNL.0000000000008887.

[https://n.neurology.org/content/neurology/early/2020/01/05/WNL.0000000000008887.full.pdf?fbclid=IwAR1MMkY7i-fHJsfAacwM8yskqVKrsf2-1gY\\_3cmiJTqx\\_1OtzJiRSzpbPKU](https://n.neurology.org/content/neurology/early/2020/01/05/WNL.0000000000008887.full.pdf?fbclid=IwAR1MMkY7i-fHJsfAacwM8yskqVKrsf2-1gY_3cmiJTqx_1OtzJiRSzpbPKU)

Fritz N, Rao A, Kegelmeyer D, Kloos A, Busse M, Quinn L. Physical therapy and exercise interventions in Huntington's disease: a mixed methods systematic review. 2017; 6(3):217-235.

## **B-FIT program**

Clark D, Danzl M, Ulanowski E. Development of a community-based exercise program for people diagnosed and at-risk for Huntington's disease: A clinical report. 2016 Apr; 32(3): 232-239

## Related links

- Huntington Study Group – Europe <https://huntingtonstudygroup.org/about/our-leadership/working-groups/>
- European Huntington Disease Network Physiotherapy Working Group: <http://www.ehdn.org/physiotherapy-wg/>
- Psychological resources that Lori mentioned to manage cognitive deficits: <https://www.hda.org.uk/media/1339/physiotherapy-guidance-doc-2009.pdf>
- Self-determination theory to promote independent disease management:

Teixeira PJ, Carrac,a EV, Markland D, Silva MN, Ryan RM. Exercise, physical activity, and self-determination theory: a systematic review. *Int J Behav Nutr Phys Act*. 2012;9:78. doi:10.1186/1479-5868-9-78.

Fortier MS, Duda JL, Guerin E, Teixeira PJ. Promoting physical activity: development and testing of self-determination theory-based interventions. *Int J Behav Nutr Phys Act*. 2012;9:20. doi:10.1186/1479-5868-9-20.

## Related articles

Fritz NE, Rao AK, Kegelmeyer D, Kloos A, Busse M, Hartel L, Carrier J, Quinn L. Physical Therapy and Exercise Interventions in Huntington's Disease: A Mixed Methods Systematic Review. *J Huntingtons Dis.* 2017;6(3):217-235.

Fritz NE, Busse M, Jones K, Khalil H, Quinn L; Members of the Physiotherapy Working Group of the European Huntington's Disease Network. A Classification System to Guide Physical Therapy Management in Huntington Disease: A Case Series. *J Neurol Phys Ther.* 2017 Jul;41(3):156-163

Mestre TA, Busse M, Davis AM, Quinn L, Members of the MDS Committee on Rating Scales Development, et. al. Rating Scales and Performance-based Measures for Assessment of Functional Ability in Huntington's Disease: Critique and Recommendations. *Mov Disord Clin Pract.* 2018 May 9;5(4):361-372

Mestre TA, Carlozzi NE, Ho AK, Burgunder JM, Members of the MDS Committee on Rating Scales Development, et. al. Quality of Life in Huntington's Disease: Critique and Recommendations for Measures Assessing Patient Health-Related Quality of Life and Caregiver Quality of Life. *Mov Disord.* 2018 May;33(5):742-749.

Playle R, Dimitropoulou P, Kelson M, Quinn L, Busse M. Exercise Interventions in Huntington's Disease: An Individual Patient Data Meta-Analysis. *Movement Disorders Clinical Practice.* 2019; 6(7): 567-575

Steventon JJ, Collett J, Furby H, Hamana K, et. al. Alterations in the metabolic and cardiorespiratory response to exercise in Huntington's Disease. *Parkinsonism Relat Disord.* 2018 Sep;54:56-61