

Physical Therapy and Huntington's Disease

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Fact Sheet

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What is Huntington's Disease (HD)?

Huntington's disease (HD) is a rare, inherited genetic disease. Each child of a parent with HD has a 50-50 chance of having HD. Symptoms of HD usually start between the ages of 30 and 50 years. HD damages cells in many parts of the brain. The disease causes a triad of symptoms including movement abnormalities, impaired cognition, and psychiatric disturbances.

In the early stage of HD, people may notice mild involuntary uncontrolled movements (called chorea) and problems with smooth movements. Typically, people are still able to care for themselves early on, but may have difficulties with problem solving, organization, and prioritizing tasks. Depression and irritability are also common.

In the middle stage of HD, chorea and movement abnormalities become more pronounced, often leading to difficulty walking and falls. Speaking and swallowing may also become affected. Additionally, problems with memory, lack of insight, and hallucinations can also occur. Progression of movement abnormalities in conjunction with cognitive disturbances can make completing daily activities difficult to do without assistance.

In the late stages of the disease there are severe movement disturbances that affect eating, sitting, and sleeping. During this stage, people can benefit from specialized equipment and support from caregivers to maximize their engagement with desired activities and loved ones.

How Can Physical Therapy Help?

Physical therapists are movement specialists who can play a critical role in managing mobility challenges throughout the stages of HD. A Clinical Practice Guideline on the management of HD in Physical Therapy outlines the following interventions which may be beneficial:

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Aerobic Exercise and Strengthening

- It is highly recommended that aerobic exercise and full body strengthening be incorporated at least 3x/week to improve fitness and stabilize or improve function.
- Aerobic exercise should be at a moderate intensity, something where you can speak in short sentences but not sing - for example brisk walking, cycling, or water aerobics.

Supervised Walking

- One-on-one walking training is strongly recommended to improve one's walking pattern, speed, and overall function.

Balance Exercises

- Individualized balance exercises can help improve balance and balance confidence in people with HD.
- Exercises may include standing in variable positions, walking on uneven surfaces, or walking in different directions.

Breathing Exercises

- Breathing exercise may be used to improve respiratory muscle strength and cough effectiveness.
- Exercises may include resisted breathing, variable breathing techniques, postural adjustments to improve ease of breathing, or assisted techniques to clear mucus from the lungs.

Adaptive Equipment

- In the middle stage, assistive devices may be recommended to promote safety with mobility.
- In the later stages of HD, specialized wheelchairs and supports may be utilized to optimize posture and engagement in daily activities.

Caregiver Training

- Caregivers should be trained in how to utilize adaptive equipment, safely assist with mobility, and promote ongoing activity and participation.

Reference: 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.

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