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**FACTSHEETS FOR HEALTHCARE PROFESSIONALS:**  
**Assessing Physiotherapy Needs of People Living with Huntington Disease**

Huntington disease (HD) is a fatal neurodegenerative disease that involves a number of motor symptoms, as well as cognitive and behavioural issues (see chart on page 2).

Throughout the course of the disease, physiotherapists can help to alleviate some of the physical symptoms of Huntington’s by suggesting exercises to keep muscles functioning as long as possible and maintain range of motion. They can also provide strategies to avoid falls and compensate for loss of function in early-stage HD.

The first step in determining potential treatment strategies is to identify the problem and its potential causes. In addition to evaluating limitations in functional activities, a physiotherapy assessment should include the following:

**Neuromuscular evaluation**

- Dystonia: abnormal, sustained posturing of any part of the body
- Chorea: involuntary writhing movements (evaluate using the Unified Huntington’s Disease Rating Scale)
- Balance: both proactive (such as reaching ability) and reactive (such as response to external perturbations)

- Vision: difficulties with saccadic eye movements and smooth pursuit
- Bradykinesia: slowness of movement
- Akinesia: delayed initiation of movement

**Musculoskeletal evaluation**

- Posture and range of motion, especially as they apply to daily living activities
- Strength, especially in lower limbs: use manual muscle testing or functional observation during task performance
- Pain: use a scale of 1 to 10

**Cardiorespiratory and cardiovascular evaluation**

- Obstructive or restrictive disorders (evaluate using lung function tests)
- Weakness of diaphragm (measure vital capacity in supine and upright positions)
- Dyspnea (evaluate using the Medical Research Council dyspnea scale or modified Borg scale)
- Effectiveness of cough (assess whether the patient is able to clear secretions) independently
- Swallowing problems
- Breathing pattern
- Lung sounds
- Exercise capacity

	<b>Pre-symptomatic and early stage</b>	<b>Mid-stage</b>	<b>Late stage</b>
<b>Main impairments</b>	<input type="checkbox"/> Chorea <input type="checkbox"/> Impaired balance <input type="checkbox"/> Lack of flexibility	<input type="checkbox"/> Postural changes <input type="checkbox"/> Impaired balance <input type="checkbox"/> Weakness of stabilizing muscles <input type="checkbox"/> Dystonia <input type="checkbox"/> Decreased range of motion <input type="checkbox"/> Chorea	<input type="checkbox"/> Postural changes <input type="checkbox"/> Pain <input type="checkbox"/> Skin breakdown <input type="checkbox"/> Respiratory limitations <input type="checkbox"/> Risk of pneumonia
<b>Main functional limitations</b>	<input type="checkbox"/> Fine motor problems <input type="checkbox"/> Unsteady gait	<input type="checkbox"/> Unsteady ambulation	<input type="checkbox"/> Falls <input type="checkbox"/> Mobility problems
<b>Goal of PT intervention</b>	<input type="checkbox"/> Delay the onset of mobility restriction	<input type="checkbox"/> Maintain function and delay further deterioration	<input type="checkbox"/> Limit impact of complications
<b>Preventive strategies</b>	<input type="checkbox"/> Falls prevention <input type="checkbox"/> Environmental modifications	<input type="checkbox"/> Falls prevention <input type="checkbox"/> Maintain safety during functional activities	
<b>Restorative strategies</b>	<input type="checkbox"/> Balance training <input type="checkbox"/> Core stability training <input type="checkbox"/> Development of a consistent exercise program <input type="checkbox"/> General flexibility and strengthening as required	<input type="checkbox"/> Active or active/assistive exercises to maintain mobility, stability, range of motion <input type="checkbox"/> Ambulation training and walking programs <input type="checkbox"/> Functional training for daily life skills (sit to stand, bed transfers) <input type="checkbox"/> General strengthening <input type="checkbox"/> Aquatic exercises	<input type="checkbox"/> Exercises for range of motion and postural alignment
<b>Compensatory strategies</b>		<input type="checkbox"/> Assistive devices for ambulation <input type="checkbox"/> Environmental modifications for home	<input type="checkbox"/> Seating systems to maintain posture and maximize comfort

**For more information**

- *Physiotherapy Interventions for Huntington Disease* (an HSC factsheet)
- *Physiotherapy Outcome Measures in Huntington Disease* (an HSC factsheet)

Adapted from: *European Huntington's Disease Network Physiotherapy Guidance Notes*, EHDN Physiotherapy Working Group, July 2008

<http://www.euro-hd.net/html/network/groups/physio/physiotherapy-guidance-doc-2009.pdf>