HD CLINICAL TIPS:

SEATING AND POSITIONING

For Physiotherapists and Healthcare Professionals Working with People with HD

EUROPEAN HUNTINGTON'S DISEASE NETWORK

Persons with HD, especially in the middle and later stages and often spend a majority of their day sitting. Although they may be able to walk independently or with some assistance, most have at least some difficulty with achieving a comfortable sitting position. They may have difficulty sitting in a chair with inadequate back and side support and many people with HD tend to slide down in their chairs, thus maintaining weight bearing through their lumbo-sacral spine as opposed to through the ischial tuberosities, buttocks and thighs. People with choreic movements may be prone to injuries if their chair is not properly padded. Effective positioning with the appropriate supports will enable people with HD to better interact with their environment and have an improved quality of life. It is especially important to maintain an upright position especially for feeding and drinking to minimise risk of aspiration in the later stages of the disease.

Specialised seating needs should be considered; this may include increased seat back height and depth, tilt and appropriate foot support. Hard surfaces and edges of assistive devices and wheelchairs should be protected with padding where necessary. Choosing the right kind of adaptive equipment is a collaborative process. Balancing independence and safety requires special consideration for each person's individual needs. Use of certain devices and equipment, such as those described above, may provide the necessary support to maximise a person's functional abilities.

Considerations for optimal seating include:

- chair measured to ensure the correct depth, height and width for the individual
- appropriate height for use at table or with lap tray
- protect from hard surfaces and sharp edges with proper padding
- maximise ease of transfers, and provide for independent mobility if appropriate
- solid, sturdy foot support
- minimal use of restraints

Progression from independent ambulation to using a wheelchair in daily life can be very traumatic for the person with HD. This is a sign of their continued functional decline. Recommending a wheelchair as a primary means of mobility should therefore be approached cautiously. This decision should be reached with the consent of the patient, the family and the interdisciplinary team and focussing on allowing the person with HD to make their own choices to the extent that their safety and the safety of others are maintained. If hoisting for transfers, walking hoists for those able to partially weight bear are useful. When dependent for transfers, tracking hoists are usually safer as there is less risk of injury from banging against any hard parts of the hoist. Slings need careful assessments for skin protection and for the correct position to be maintained during transfers.

Table 1. Seating-related problems and possible solutions for persons with HD

Problem	Possible Solutions	
Sliding down in chair (shearing of skin can occur as a secondary problem if sat on non-slip material)	• The range of movement of hips, knees and ankles and also the length of the hamstrings need to be maintained to maintain/improve seating position. Use an appropriate cushion to wedge the seat, so that the seat to back angle is decreased: adjust the angle at the hip (thigh-trunk segment) in conjunction with a tilt in space chair if appropriate. • Cushion: needs to have the appropriate rating for skin-care and to provide adequate support. An ischial cut-out to anchor pelvis in place could be considered. Check that the cushion seat length is not too long.	

Table 1 continued. Seating-related problems and possible solutions for persons with HD

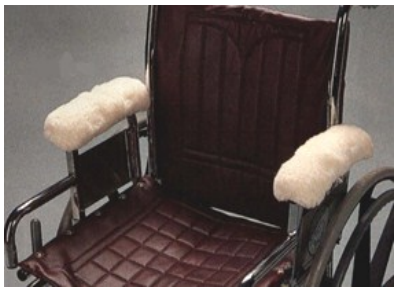
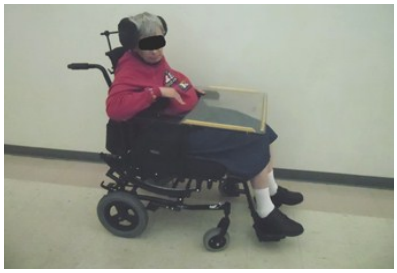
Problem	Possible Solutions	
Poor postural stability	• Chair measured for the individual. • A contoured seat with/without a pommel. • Lateral trunk/thoracic supports padded both sides. • Tilt-in space chair, possibly with a reclining back as well. • To secure the position of the pelvis use a thick, padded harness/belt, 4 point pelvic strap or groin straps. • A lap tray or table to provide upper body support.	
Bruises on arms/legs	• Use a chair with the least amount of chrome or metal exposed as possible. • Pad thickly to cover any exposed metal or hard surfaces on the chair, including the underneath of the tray; wrap the leg rests with padding. • If feet tend to move off footplates, a wide calf strap may be adequate to prevent the feet catching in the front wheels, however a padded footbox provides more protection. • Choose a chair which is not too confining and allows room for movements. • In the later stages, conforming wheelchairs with foam carved seats contoured for the individual giving postural support/sensory input, often quietening the chorea but still permitting movement.	 
Falls/leans to the side	• Provide padded lateral supports at head and trunk; padded lateral supports for the hips and thighs. Recline the back. Adjust the tilt of the chair. • In late stages there are definite advantages to having custom made wheelchair to provide good postural support.	 Posturite chair: www.lowzone.co.uk 

Table 1 continued. Seating-related problems and possible solutions for persons with HD

Problem	Possible Solutions	
Unable to tolerate upright chair **Falls out of standard chairs**	• Use a maximally adjustable chair with recline and tilt. A contoured seat with/ without a pommel. • Change positions frequently (e.g., 20 minutes upright, 20 minutes fully reclined). • Use pillows, padding to provide extra support/protection. • Consider the use of a bean bag chair, hammock, or padded floor bed.	 

Table 2. Wheelchairs and seating systems for consideration

Standard Wheelchairs
• The standard wheelchair (self-propelling or transit) can be modified with a seat cushion to promote better sitting posture or padding for the armrests and footrests to prevent bruising. For proper support during extended seating a lumbar roll may be beneficial.
Modifications to standard wheelchairs
• Padding for the armrests & footrests to prevent bruising. • Spoke guards to cover the wheel spokes.
Reclining Wheelchair
• The back of the chair moves to allow opening/closing the angle at the hips. • Provides ability to rest from upright position, but can encourage patient sliding down in a chair.
Dynamic seating systems
• Tilt-in-space to provide a pivoting system for a reclined, resting position whilst maintaining posture and pelvic stability, with leg and foot plate helping to maintain ankle at right angles.
Custom made indoor/outdoor wheelchairs
• Moulded seat and back providing the most suitable postural support. Padding on hard surfaces including the underside of the tray. Indoor/outdoor base allowing access to activities.

Resources:

Recliners: http://www.hslchairs.com/advice/riser-recliners/

Wheelchairs and arm chairs: www.invacare-rea.com/articles/invc-rea-azalea--44-66.php, www.Kirton-healthcare.co.uk, www.Careflex.co.uk, www.lowzone.co.uk

Supportive chairs: www.Carefoam.com

Tilt in space shower chairs: www.ergolet.com/en/

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