

The Rotterdam 9-Item Handicap Scale

Overview: The Rotterdam Handicap Scale can be used to measure a patient's functional ability and level of handicap. This can be used to monitor a patient's status over time and evaluate the effectiveness of interventions. The authors are from Erasmus University in Rotterdam The Netherlands.

Parameters:

- (1) mobility indoors
- (2) mobility outdoors
- (3) kitchen tasks
- (4) domestic tasks indoors
- (5) domestic tasks outdoors
- (6) leisure activities indoors
- (7) leisure activities outdoors
- (8) able to drive a car travel by bus and/or ride a bicycle
- (9) work or study

Parameter	Response	Points
Are you able to move from room to room negotiating doors carpets and polished surfaces?	not applicable	0
	unable to move between moves	1
	move between rooms mostly with the help of another person	2
	move between rooms most of the time independently sometimes needing help of another person	3
	move between rooms totally independently	4
Are you able to move outdoors from one place to another negotiating curbs and uneven grounds?	not applicable	0
	unable to move outdoors	1
	move outdoors mostly with the help of another person	2
	move outdoors most of the time independently sometimes needing the help of another person	3

	move outdoors totally independently	4
Are you able to fulfill tasks such as making a pot of tea/coffee and serving it? Are you able to collect items from high and low cupboard refrigerator etc.?	not applicable	0
	unable to fulfill any domestic tasks indoors	1
	able to fulfill only a minimum of tasks mostly needing the help of another person	2
	able to fulfill most of these tasks independently sometimes needing the help of another person	3
	able to fulfill all indoor domestic tasks independently	4
Are you able to fulfill house-cleaning tasks such as vacuum cleaning dishwashing doing the laundry dusting etc.?	not applicable	0
	unable to fulfill any outdoor domestic tasks	1
	able to fulfill only a minimum of tasks mostly needing the help of another person	2
	able to fulfill most of these tasks independently sometimes needing the help of another person	3
	able to fulfill all outdoor domestic tasks independently	4
Are you able to do the shopping manage the garden clean the car etc.?	not applicable	0
	unable to fulfill these activities	1
	able to fulfill only a minimum of these activities mostly needing the help of another person	2
	able to fulfill most of these activities independently sometimes needing the help of another person	3
	able to fulfill all of these activities independently	4

Are you able to read a newspaper magazine or book; use the telephone; fulfill a hobby (other than sporting)?	not applicable	0
	unable to fulfill these activities	1
	able to fulfill only a minimum of these activities mostly needing the help of another person	2
	able to fulfill most of these activities independently sometimes needing the help of another person	3
	able to fulfill all of these activities independently	4
Are you able to go to a party theater movies concerts museums meetings participate in sport?	not applicable	0
	unable to fulfill these activities	1
	able to fulfill only a minimum of these activities mostly needing the help of another person	2
	able to fulfill most of these activities independently sometimes needing the help of another person	3
	able to fulfill all of these activities independently	4
Are you capable to drive a car go on a bus or subway or ride a bicycle?	not applicable	0
	unable to fulfill any of these tasks	1
	able to fulfill only 1 of these tasks with the help of another person if needed	2
	able to fulfill 2 of these tasks with the help of another person if needed	3
	able to fulfill all of these tasks independently	4
Are you able to fulfill your prior (before becoming ill) job or study?	not applicable	0
	unable to fulfill prior job or study	1
	able to fulfill (partly) adapted job or study	2
	able to fulfill partially the prior job or	3

	study	
	able to fulfill completely the prior job or study	4

where:

- The ability to move independently does not necessarily mean that the person can walk. The person may be in a wheelchair or require a walking device.
- The original wording for the 8th item was "Are you able to". There is a footnote that discusses the patient who does not have a driver's license.

total score = SUM(points for all 9 items)

total score if less than 9 items completed = SUM(points of applicable items) * (9 / (9 – (number of nonapplicable items)))

Interpretation:

- minimum score: 0 (none of the items applicable)
- minimum score with all items applicable: 9
- maximum score with all items applicable: 36
- The higher the score the better a person's functional ability.

Performance (page 375):

- Validity: The scale shows face validity with scores varying with clinical severity. The score also correlates well with the Rankin scale.
- Reliability: Reliability was good for inter- and intra-observer scoring.
- Responsiveness: The Rotterdam score increased in patients who responded to therapy. The standardized response mean indicated good responsiveness in these patients.

References:

Merkies ISJ Schmitz PIM et al. Psychometric evaluation of a new handicap scale in immune-mediated polyneuropathies. Muscle & Nerve. 2002; 25: 370-377 (Table 1 page 372).