

# HiMAT: HIGH LEVEL MOBILITY ASSESSMENT TOOL

DATE.....  
 DATE OF ACCIDENT.....  
 DIAGNOSIS.....  
 AFFECTED SIDE LEFT / RIGHT

PATIENT ID LABEL
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ITEM	PERFORMANCE	SCORE					
		0	1	2	3	4	5
WALK	sec	X	> 6.6	5.4-6.6	4.3-5.3	< 4.3	X
WALK BACKWARD	sec		>13.3	8.1-13.3	5.8-8.0	< 5.8	X
WALK ON TOES	sec		> 8.9	7.0 - 8.9	5.4-6.9	< 5.4	X
WALK OVER OBSTACLE	sec		> 7.1	5.4-7.1	4.5-5.3	< 4.5	X
RUN	sec		> 2.7	2.0-2.7	1.7-1.9	< 1.7	X
SKIP	sec		> 4.0	3.5-4.0	3.0-3.4	< 3.0	X
HOP FORWARD (AFFECTED)	sec		> 7.0	5.3-7.0	4.1-5.2	< 4.1	X
BOUND (AFFECTED)	cm		< 80	80-103	104-132	> 132	X
	1) 2) 3)						
BOUND (LESS-AFFECTED)	cm		< 82	82-105	106-129	> 129	X
	1) 2) 3)						
UP STAIRS DEPENDENT (Rail <b>OR</b> not reciprocal: if not, score 5 and rate below)	sec		>22.8	14.6-22.8	12.3-14.5	<12.3	
UP STAIRS INDEPENDENT (No rail <b>AND</b> reciprocal: if not score 0 and rate above)	sec		> 9.1	7.6-9.1	6.8-7.5	< 6.8	X
DOWN STAIRS DEPENDENT (Rail <b>OR</b> not reciprocal: if not score 5 and rate below)	sec		>24.3	17.6-24.3	12.8-17.5	<12.8	
DOWN STAIRS INDEPENDENT (No rail <b>AND</b> reciprocal: if not score 0 and rate above)	sec		> 8.4	6.6-8.4	5.8-6.5	< 5.8	X
	SUBTOTAL						

TOTAL HiMAT SCORE      /54

Please notify Gavin Williams at [gavin@neuro-solutions.net](mailto:gavin@neuro-solutions.net) or [gavin.williams@epworth.org.au](mailto:gavin.williams@epworth.org.au) so that the use of the HiMAT can be tracked.

# HiMAT: High-level Mobility Assessment Tool

## Instructions

- Subject suitability:** The HiMAT is appropriate for assessing people with high-level balance and mobility problems. The minimal mobility requirement for testing is independent walking over 20m without gait aids. Orthoses are permitted.
- Item testing:** Testing takes 5-10 minutes. Patients are allowed 1 practice trial for each item.
- Instructions:** Patients are instructed to perform at their maximum safe speed except for the bounding and stair items.
- Walking:** The middle 10m of a 20m trial is timed.
- Walk backward:** As for walking.
- Walk on toes:** As for walking. Any heel contact during the middle 10m is recorded as a fail.
- Walk over obstacle:** As for walking. A house brick is placed across the walkway at the mid-point. Patients must step over the brick without contacting it. A fail is recorded if patients step around the brick or make contact with the brick.
- Run:** The middle 10m of a 20m trial is timed. A fail is recorded if patients fail to have a consistent flight phase during the trial.
- Skipping:** The middle 10m of a 20m trial is timed. A fail is recorded if patients fail to have a consistent flight phase during the trial.
- Hop forward:** Patients stand on their more affected leg and hop forward. The time to hop 10m meters is recorded.
- Bound (affected).** A bound is a jump from one leg to the other with a flight phase. Patients stand behind a line on their less affected leg, hands on hips, and jump forward **landing on their more affected leg**. Each bound is measured from the line to the heel of the landing leg. The average of three trials is recorded.
- Bound (less-affected).** Patients stand behind a line on their more affected leg, hands on hips, and jump forward **landing on their less affected leg**. The average of three trials is recorded.
- Up stairs:** Patients are asked to walk up a flight of 14 stairs as they normally would and at their normal speed. The trial is recorded from when the patient starts until both feet are at the top. Patients who use a rail or a non-reciprocal pattern are scored on **Up Stairs Dependent**. Patients who ascend the stairs reciprocally without a rail are scored on **Up Stairs Independent** and get an additional 5 points in the last column of Up Stairs Dependent.
- Down stairs:** As for Up stairs.
- Scoring:** All times and distances are recorded in the 'performance' column. The corresponding score for each item is then circled and each column is then subtotaled. Subtotals are then added to calculate the HiMAT score.