

Rivermead Motor Assessment

General instructions: Go through the items in order of difficulty. Score '1' if patient can perform activity, '0' if he cannot. Three tries are allowed for each item. You may stop the 'Gross function' section and 'Arm' section after 3 consecutive '0' scores for 3 consecutive items.

In the 'Leg and Trunk' section all items should be tested, even if there are three consecutive '0' scores. Give no feed-back of whether correct or incorrect, just give general encouragement.

Repeat instructions and demonstrate them to the patient if necessary. All exercises to be carried out independently unless otherwise stated. All armtests refer to the affected side unless otherwise stated.

'Gross function' section can be assessed simply by asking, which makes it a rapid measure.

Section Item	Score
A. Gross function	
1. Sit unsupported <i>Without holding on, on edge of bed, feet unsupported.</i>	<input type="text"/>
2. Lying to sitting on side of bed <i>Using any method.</i>	<input type="text"/>
3. Sitting to standing <i>May use hands to push up. Must stand up in 15 sec and stand for 15 sec, with an aid if necessary</i>	<input type="text"/>
4. Transfer from wheelchair to chair towards unaffected side <i>May use hands.</i>	<input type="text"/>
5. Transfer from wheelchair to chair towards affected side <i>May use hands.</i>	<input type="text"/>
6. Walk 10 m indoors with an aid <i>Any walking aid. No stand-by help.</i>	<input type="text"/>
7. Climb stairs independently <i>Any method. May use bannister and aid--must be a full flight of stairs.</i>	<input type="text"/>
8. Walk 10 m indoors without an aid <i>No stand-by help. No caliper, splint or walking aid.</i>	<input type="text"/>
9. Walk 10m , pick up bean bag from floor, turn and carry back <i>Bend down any way, may use aid to walk if necessary. No stand-by help. May use either hand to pick up bean bag.</i>	<input type="text"/>
10. Walk outside 40 m <i>May use walking aid, caliper or splint. No stand-by help.</i>	<input type="text"/>
11. Walk up and down four steps <i>Patient may use an aid if he would normally use one, but may not hold on to rail. This is included to test ability to negotiate curb or stairs without a rail.</i>	<input type="text"/>
12. Run 10 m <i>Must be symmetrical.</i>	<input type="text"/>
13. Hop on affected leg five times on the spot <i>Must hop on ball of foot without stopping to regain balance. No help with arms.</i>	<input type="text"/>
Gross function Total	<input type="text"/>

Section Item	Score
B. Leg and trunk	
1. Roll to affected side Starting position should be lying, not crook lying.	
2. Roll to unaffected side Starting position should be lying, not crook lying.	
3. Half-bridging Starting position -- half-crook lying. Patient must put some weight through affected leg to lift hip on affected side. Therapist may position leg, but patient must maintain position even after movement is completed.	
4. Sitting to standing May not use arms-- feet must be flat on floor--must put weight through both feet.	
5. Half-crook lying: lift affected leg over side of bed and return it to the same position. Affected leg in half-crook position. Lift leg off bed on to support; for example, box, stool, floor, so that hip is in neutral and knee at 90 degrees while resting on support. Must keep affected knee flexed throughout movement. Do not allow external rotation at hip. This tests control of hip and knee.	
6. Standing, step unaffected leg on and off block Without retraction of pelvis or hyperextension of knee. This tests knee and hip control while weight bearing through the affected leg.	
7. Standing, tap ground lightly five times with unaffected foot Without retraction of pelvis or hyperextension of knee. Weight must stay on leg. This again tests knee and hip control while weight bearing through the affected leg but is more difficult than in 6.	
8. Lying, dorsiflex affected ankle with leg flexed Physiotherapist may hold affected leg in position, knee at 90 degrees. Do not allow inversion. Must have half range of movement of unaffected foot.	
9. Lying, dorsiflex affected ankle with leg extended Same conditions as in 8, with leg extended. Do not allow inversion or knee flexion. Foot must reach plantigrade (90°).	
10. Stand with affected hip in neutral position, flex affected knee Therapist may not position leg. This is extremely difficult for most hemiplegic patients, but is included to assess minimal dysfunction.	
Leg and trunk function total	

Section Item	Score
C. Arm	
1. Lying, protract shoulder girdle with arm in elevation <i>Arm may be supported.</i>	
2. Lying, hold extended arm in elevation (some external rotation) for at least 2 sec <i>Therapist should place arm in position and patient must maintain position with some external rotation. Do not allow pronation. Elbow must be held within 30 degrees of full extension.</i>	
3. Flexion and extension of elbow, with arm as in 2 above <i>Elbow must extend to at least 20 degrees full extension. Palm should not face out during any part of movement.</i>	
4. Sitting, elbow into side, pronation and supination <i>Three-quarters range is acceptable, with elbow unsupported and at right angles.</i>	
5. Reach forward, pick up large ball with both hands and place down again <i>Ball should be on table so far in front of patient that he has to extend arms fully to reach it. Shoulders must be protracted, elbows extended, wrist neutral or extended, and fingers extended throughout movement. Palms should be kept in contact with the ball.</i>	
6. Stretch arm forward, pick up tennis ball from table, release on affected side, return to table, then release again on table. Repeat five times <i>Shoulder must be protracted, elbow extended and wrist neutral or extended during each phase.</i>	
7. Same exercise as in 6 above with pencil <i>Patients must use thumb and fingers to grip.</i>	
8. Pick up a piece of paper from table in front and release five times <i>Patient must use thumb and fingers to pick up paper and not to pull it to edge of table. Arm position as in 6 above.</i>	
9. Cut putty with a knife and fork on plate with non-slip mat and put pieces into container at side of plate <i>Bite-size pieces.</i>	
10. Stand on spot, maintain upright position, pat large ball on floor with palm of hand for 5 continuous bounces	
11. Continuous opposition of thumb and each finger more than 14 times in 10 sec <i>Must do movement in consistent sequence. Do not allow thumb to slide from one finger to the other.</i>	

12. Supination and pronation on to palm of unaffected hand 20 times in 10 sec
Arm must be away from body, the palm and dorsum of hand must touch palm of good hand. Each tap counts as one. This is similar to 4 above, but introduces speed.

13. Standing, with affected arm abducted to 90 degrees with palm flat against wall. Maintain arm in position. Turn body towards wall and as far as possible towards arm, i.e. rotate body beyond 90 degrees
Do not allow flexion at elbow, and wrist must be extended with palm of hand fully in contact with wall.

14. Place string around head and tie bow at back
Do not allow neck to flex. Affected hand must be used for more than just supporting string. This tests function of hand without help of sight.

15. 'Pat-a-cake' seven times in 15 sec
Mark crosses on wall at shoulder level. Clap both hands together (both hands touch crosses.) Each sentence counts as one. Give patients three tries. This is a complex pattern which involves co-ordination, speed, and memory, as well as good arm function.

Arm function total