EVIDENCE BASED PRACTICE TOOLS FOR HOME HEALTH REHABILITATION

November 2014

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“Many hands make light work.”

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We dedicate this e-book to the over 80 therapists that make up the BJC Home Care Rehab Department. Use these Evidence Based Practice Tools to help you assess and re-assess your patients, to guide your patient care, and improve the quality of their lives.

Fatigue Analog Scale

TEST NAME	**Fatigue Analog Scale**
CATEGORY	Chronic or Cancer Related Fatigue
EQUIPMENT NEED	None
TIME TO ADMINISTER	3-5 minutes
TEST INSTRUCTIONS	Ask patient/client to complete three Visual Analog Scales (VAS)
HOW TO SCORE TOOL	See scale
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	0-10 scale with 0 signifying no fatigue and 10 signifying severe fatigue
MDC/MCID (clinical significance)	MCID: 1.13-1.26
VALIDITY/RELIABILITY	Yes
PATIENT COPY	Electronic File
RESOURCE	STAR Program; Oncology Rehab Partners

Fatigue Visual Analog Scale (VAS)

FATIGUE SEVERITY (CIRCLE ONLY **ONE** NUMBER PER QUESTION)

A. Rate how severe your fatigue is right how:

0 1 2 3 4 5 6 7 8 9 10

(no fatigue) (unbearable)

B. Rate how severe your fatigue is on your worst day:

0 1 2 3 4 5 6 7 8 9 10

(no fatigue) (unbearable)

C. Rate how severe your fatigue is on average:

0 1 2 3 4 5 6 7 8 9 10

(no fatigue) (unbearable)

6 Minute Walk Test (6MWT)

TEST NAME	**6 minute walk test (6MWT)**
CATEGORY	Aerobic capacity/gait
EQUIPMENT NEED	Stopwatch, measuring wheel (Pt's assistive device if needed)
TIME TO ADMINISTER	6 minutes
TEST INSTRUCTIONS	Instruct the patient: "cover as much ground as possible over 6 minutes. Walk continuously if possible, but do not be concerned if you need to slow down and rest. The goal is to feel at the end of the test that more ground could not have been covered in the 6 minutes."
HOW TO SCORE TOOL	Distance in meters or feet
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	Normative values: Community dwelling elderly Age: Male: Female: 60-60 years 572 meters (1867 feet) 538 meters (1765 feet) 70-79 years 527 meters (1729 feet) 471 meters (1545 feet) 80-89 years 417 meters (1368 feet) 392 meters (1286 feet) Chronic heart failure: 310-427 meters (1017 to 1400 feet) depending on severity of heart disease COPD 380 meters (1246 feet) range 160-600 meters, distance of less than 200 meters (656 ft) is predictive of mortality or hospitalization. *meaningful change for geriatrics is 20-50 meters (65-164 feet)
MDC/MCID (clinical significance)	MDC Alzheimers 33.47 meters (109 feet) COPD 54 meters(177 feet)

	Geriatrics 58.21 meters (190 feet) Osteroarthritis 61.34 meters(201 feet) Parkinsons 82 meters (269 feet) SCI 45.8 meters (150 feet) Stroke 37.37 meters (112.76 feet) MCID COPD 54 meters Geriatrics and stroke 50 meters
VALIDITY/RELIABILITY	*Concurrent validity with chair stands (r=0.67), standing balance (r-0.52), and gait speed (r=0.73) *Correlation with 2 min. walk test in acute stroke (r-0.997) *Concurrent validity with TUG (r-0.89) 10 m comfortable gait speed (r=0.84), 10 m fast gait speed (r=0.94) in chronic stroke. *excellent retest reliability for stroke (ICC=0.97, 0.99) *excellent inter-rater and intra-rater reliability for stroke (ICC= 0.74-0.78) *excellent retest reliability for TBI (ICC=0.94-0.96) *excellent retest reliability for geriatrics (ICC=0.95)
PATIENT COPY	n/a
RESOURCE	Rehab Measures; BJH Evidence Based Practice Assessment Appraisal

Berg Balance Measure

TEST NAME	**BERG BALANCE MEASURE**
CATEGORY	BALANCE
EQUIPMENT NEED	STOP WATCH, , CHAIR/ BED, STEP FOR TOE TAPS AND SMALL OBJECT FOR PT TO PICK UP
TIME TO ADMINISTER	15 TO 20 MINUTES
TEST INSTRUCTIONS	SEE ATTACHED
HOW TO SCORE TOOL	0 TO 4 POINTS EACH ITEM: MAXIMUM OF 56 POINTS
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	41 -56: LOW FALL RISK/ NO GT DEVICE 21-40: MEDIUM FALL RISK/ GT DEVICE 0-20: HIGH FALL RISK/ WALKER OR W/C
MDC/MCID (clinical significance)	MDC: CHANGE OF 4 POINTS IS NEEDED TO BE 95% CONFIDENT TRUE CHANGE IF 45-56 INITIALLY. 5 POINTS IF SCORING 35-44 AND 7 POINTS IF SCORE 25-34 AND 5 POINTS IF INITIAL SCORE: 0-24. MCID: NOT ESTABLISHED
VALIDITY/RELIABILITY	95 TO 98%
PATIENT COPY	NO
RESOURCE	HOMEHEALTH SECTION TOOLBOX

Berg Balance Scale

SITTING TO STANDING
INSTRUCTIONS: Please stand up. Try not to use your hand for support.
( ) 4 able to stand without using hands and stabilize independently
( ) 3 able to stand independently using hands
( ) 2 able to stand using hands after several tries
( ) 1 needs minimal aid to stand or stabilize
( ) 0 needs moderate or maximal assist to stand

STANDING UNSUPPORTED
INSTRUCTIONS: Please stand for two minutes without holding on.
( ) 4 able to stand safely for 2 minutes
( ) 3 able to stand 2 minutes with supervision
( ) 2 able to stand 30 seconds unsupported
( ) 1 needs several tries to stand 30 seconds unsupported
( ) 0 unable to stand 30 seconds unsupported

If a subject is able to stand 2 minutes unsupported, score full points for sitting unsupported. Proceed to item #4.

SITTING WITH BACK UNSUPPORTED BUT FEET SUPPORTED ON FLOOR OR ON A STOOL
INSTRUCTIONS: Please sit with arms folded for 2 minutes.
( ) 4 able to sit safely and securely for 2 minutes
( ) 3 able to sit 2 minutes under supervision
( ) 2 able to able to sit 30 seconds
( ) 1 able to sit 10 seconds
( ) 0 unable to sit without support 10 seconds

STANDING TO SITTING
INSTRUCTIONS: Please sit down.
( ) 4 sits safely with minimal use of hands
( ) 3 controls descent by using hands
( ) 2 uses back of legs against chair to control descent
( ) 1 sits independently but has uncontrolled descent
( ) 0 needs assist to sit

TRANSFERS
INSTRUCTIONS: Arrange chair(s) for pivot transfer. Ask subject to transfer one way toward a seat with armrests and one way toward a seat without armrests. You may use two chairs (one with and one without armrests) or a bed and a chair.
( ) 4 able to transfer safely with minor use of hands
( ) 3 able to transfer safely definite need of hands
( ) 2 able to transfer with verbal cuing and/or supervision
( ) 1 needs one person to assist
( ) 0 needs two people to assist or supervise to be safe

STANDING UNSUPPORTED WITH EYES CLOSED
INSTRUCTIONS: Please close your eyes and stand still for 10 seconds.
( ) 4 able to stand 10 seconds safely
( ) 3 able to stand 10 seconds with supervision
( ) 2 able to stand 3 seconds
( ) 1 unable to keep eyes closed 3 seconds but stays safely
( ) 0 needs help to keep from falling

STANDING UNSUPPORTED WITH FEET TOGETHER
INSTRUCTIONS: Place your feet together and stand without holding on.
( ) 4 able to place feet together independently and stand 1 minute safely
( ) 3 able to place feet together independently and stand 1 minute with supervision
( ) 2 able to place feet together independently but unable to hold for 30 seconds
( ) 1 needs help to attain position but able to stand 15 seconds feet together
( ) 0 needs help to attain position and unable to hold for 15 seconds

Berg Balance Scale continued…

REACHING FORWARD WITH OUTSTRETCHED ARM WHILE STANDING
INSTRUCTIONS: Lift arm to 90 degrees. Stretch out your fingers and reach forward as far as you can. (Examiner places a ruler at the end of fingertips when arm is at 90 degrees. Fingers should not touch the ruler while reaching forward. The recorded measure is the distance forward that the fingers reach while the subject is in the most forward lean position. When possible, ask subject to use both arms when reaching to avoid rotation of the trunk.)
( ) 4 can reach forward confidently 25 cm (10 inches)
( ) 3 can reach forward 12 cm (5 inches)
( ) 2 can reach forward 5 cm (2 inches)
( ) 1 reaches forward but needs supervision
( ) 0 loses balance while trying/requires external support

PICK UP OBJECT FROM THE FLOOR FROM A STANDING POSITION
INSTRUCTIONS: Pick up the shoe/slipper, which is in front of your feet.
( ) 4 able to pick up slipper safely and easily
( ) 3 able to pick up slipper but needs supervision
( ) 2 unable to pick up but reaches 2-5 cm(1-2 inches) from slipper and keeps balance independently
( ) 1 unable to pick up and needs supervision while trying
( ) 0 unable to try/needs assist to keep from losing balance or falling

TURNING TO LOOK BEHIND OVER LEFT AND RIGHT SHOULDERS WHILE STANDING
INSTRUCTIONS: Turn to look directly behind you over toward the left shoulder. Repeat to the right. (Examiner may pick an object to look at directly behind the subject to encourage a better twist turn.)
( ) 4 looks behind from both sides and weight shifts well
( ) 3 looks behind one side only other side shows less weight shift
( ) 2 turns sideways only but maintains balance
( ) 1 needs supervision when turning
( ) 0 needs assist to keep from losing balance or falling

TURN 360 DEGREES
INSTRUCTIONS: Turn completely around in a full circle. Pause. Then turn a full circle in the other direction.
( ) 4 able to turn 360 degrees safely in 4 seconds or less
( ) 3 able to turn 360 degrees safely one side only 4 seconds or less
( ) 2 able to turn 360 degrees safely but slowly
( ) 1 needs close supervision or verbal cuing
( ) 0 needs assistance while turning

PLACE ALTERNATE FOOT ON STEP OR STOOL WHILE STANDING UNSUPPORTED
INSTRUCTIONS: Place each foot alternately on the step/stool. Continue until each foot has touched the step/stool four times.
( ) 4 able to stand independently and safely and complete 8 steps in 20 seconds
( ) 3 able to stand independently and complete 8 steps in > 20 seconds
( ) 2 able to complete 4 steps without aid with supervision
( ) 1 able to complete > 2 steps needs minimal assist
( ) 0 needs assistance to keep from falling/unable to try

STANDING UNSUPPORTED ONE FOOT IN FRONT
INSTRUCTIONS: (DEMONSTRATE TO SUBJECT) Place one foot directly in front of the other. If you feel that you cannot place your foot directly in front, try to step far enough ahead that the heel of your forward foot is ahead of the toes of the other foot. (To score 3 points, the length of the step should exceed the length of the other foot and the width of the stance should approximate the subject's normal stride width.)
( ) 4 able to place foot tandem independently and hold 30 seconds
( ) 3 able to place foot ahead independently and hold 30 seconds
( ) 2 able to take small step independently and hold 30 seconds
( ) 1 needs help to step but can hold 15 seconds
( ) 0 loses balance while stepping or standing

STANDING ON ONE LEG
INSTRUCTIONS: Stand on one leg as long as you can without holding on.
( ) 4 able to lift leg independently and hold > 10 seconds
( ) 3 able to lift leg independently and hold 5-10 seconds
( ) 2 able to lift leg independently and hold ≥ 3 seconds
( ) 1 tries to lift leg unable to hold 3 seconds but remains standing independently.
( ) 0 unable to try of needs assist to prevent fall

( ) TOTAL SCORE (Maximum = 56)

Fraility Injuries: Cooperative Studies of Intervention Techniques (FICSIT-4)

TEST NAME	**FICSIT-4 (FRAILITY & INJURIES: COOPERATIVE STUDIES OF INTERVENTION TECHNIQUES**
CATEGORY	BALANCE
EQUIPMENT NEED	NONE
TIME TO ADMINISTER	5 OR SO MINUTES
TEST INSTRUCTIONS	SEE ATTACHED
HOW TO SCORE TOOL	SEE ATTACHED
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	SEE ATTACHED
MDC/MCID (clinical significance)	
VALIDITY/RELIABILITY	VALIDITY IS CORRELATED WITH AGE TO DISCRIMINATED BALANCE RELIABILITY; 0.66
PATIENT COPY	NO
RESOURCE	JOURNAL OF GERONTOLOGY 1995

FICSIT-4

BACKGROUND. Two simple balance scales comprising three or four familiar tests of static balance were developed, and their validity and reliability are described. The scales were such that the relative difficulties of the basic tests were taken into consideration. METHODS. Using FICSIT data, Fisher's method was used to construct scales combining ability to maintain balance in **parallel, semi-tandem, tandem, and one-legged stances.** Reliability was inferred from the stability of the measure over 3-4 months. Construct validity was assessed by cross- sectional correlations. RESULTS. Test-retest reliability (over 3-4 months) was good ($r = .66$). Validity of the FICSIT-4 scale was suggested by its low correlation with age, its moderate to high correlations with physical function measures, and three balance assessment systems. The FICSIT-4 scale discriminated balance over a wide range of health status; the three-test scale had a substantial ceiling effect in community samples. CONCLUSION. A balance scale was developed that appears to have acceptable reliability, validity, and discriminant ability.

Timing is stopped if:

- ***the person displaces their stance foot***
- ***the suspended foot touches the ground***
- ***the suspended foot touches the other calf for support (cue the person to avoid this)***

INSTRUCTIONS: Demonstrate each position to the subject, then ask them to perform and time.

F-1. **FEET CLOSELY TOGETHER**, UNSUPPORTED, **eyes open** (ROMBERG POSITION)
INSTRUCTIONS: Stand still with your feet together as demonstrated for 10 seconds. *[Berg #7 = 60 seconds]*

☐4 able to stand 10 seconds safely
☐3 able to stand 10 seconds with supervision
☐2 able to stand 3 seconds
☐1 unable to stand 3 seconds but stays steady
☐0 needs help to keep from falling
If subject is able to do this, proceed to the next position, if not, stop.

F-2. **FEET CLOSELY TOGETHER**, UNSUPPORTED, **eyes closed** (ROMBERG POSITION)
INSTRUCTIONS: Please close your eyes and stand still with your feet together as demonstrated for 10 seconds.

☐4 able to stand 10 seconds safely
☐3 able to stand 10 seconds with supervision
☐2 able to stand 3 seconds
☐1 unable to keep eyes closed 3 seconds but stays steady
☐0 needs help to keep from falling
If subject is able to do this, proceed to the next position, if not, stop.

F-3. **SEMI-TANDEM**: **eyes open** HEEL OF 1 FOOT PLACED TO THE SIDE OF THE 1ST TOE OF THE OPPOSITE FOOT (SUBJECT CHOOSES WHICH FOOT GOES FORWARD)
INSTRUCTIONS: Please stand still with your feet together as demonstrated for 10 seconds.
☐4 able to stand 10 seconds safely
☐3 able to stand 10 seconds with supervision
☐2 able to stand 3 seconds
☐1 unable to stand 3 seconds but stays steady
☐0 needs help to keep from falling
If subject is able to do this, proceed to the next position, if not, stop.

F-4. **SEMI-TANDEM**: **eyes closed** HEEL OF 1 FOOT PLACED TO THE SIDE OF THE 1ST TOE OF THE OPPOSITE FOOT (SUBJECT CHOOSES WHICH FOOT GOES FORWARD)
INSTRUCTIONS: Please close your eyes and stand still with your feet together as demonstrated for 10 seconds.
☐4 able to stand 10 seconds safely
☐3 able to stand 10 seconds with supervision
☐2 able to stand 3 seconds
☐1 unable to keep eyes closed 3 seconds but stays steady
☐0 needs help to keep from falling
If subject is able to do this, proceed to the next position, if not, stop.

F-5. **FULL TANDEM**: **eyes open** HEEL OF 1 FOOT DIRECTLY IN FRONT OF THE OTHER FOOT (SUBJECT CHOOSES WHICH FOOT GOES FORWARD) *[Berg #14 = 30 seconds]*
INSTRUCTIONS: Please stand still with your feet together as demonstrated for 10 seconds.
☐4 able to stand 10 seconds safely
☐3 able to stand 10 seconds with supervision
☐2 able to stand 3 seconds
☐1 unable to stand 3 seconds but stays steady
☐0 needs help to keep from falling
If subject is able to do this, proceed to the next position, if not, stop.

F-6. **FULL TANDEM**: **eyes closed** HEEL OF 1 FOOT DIRECTLY IN FRONT OF THE OTHER FOOT (SUBJECT CHOOSES WHICH FOOT GOES FORWARD)
INSTRUCTIONS: Please stand still with your feet together as demonstrated for 10 seconds.
☐4 able to stand 10 seconds safely
☐3 able to stand 10 seconds with supervision
☐2 able to stand 3 seconds
☐1 unable to stand 3 seconds but stays steady
☐0 needs help to keep from falling
If subject is able to do this, proceed to the next position, if not, stop

F-7. **STANDING ON ONE LEG**: **eyes open** *[Same as Berg #13]*
INSTRUCTIONS: Stand on one leg as long as you can without holding.
☐4 able to lift leg independently and hold >10 seconds
☐3 able to lift leg independently and hold 5-10 seconds
☐2 able to lift leg independently and hold = or >3 seconds
☐1 tries to lift leg unable to hold 3 seconds but remains standing independently
☐0 unable to try or needs assist to prevent fall

Total FICSIT-4 Static Balance score = ___ / 28

from: Journals of Gerontolgy Series A: Biological Sciences and Medical Sciences, Vol. 50, Issue 6 M291-M297.

Modified Falls Efficacy Scale (m-FES)

TEST NAME	**Modified Falls Efficacy Scale**
CATEGORY	Balance
EQUIPMENT NEED	Paper/pencil or do verbally
TIME TO ADMINISTER	6-10 min
TEST INSTRUCTIONS	Have patient rate how confident they feel to perform various activities without falling; >80% balance confidence WFL; <80% impaired balance confidence; (+) fear of falling
HOW TO SCORE TOOL	0-10 point scale for each item; add items
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	>80% balance confidence WFL; <80% impaired balance confidence; (+) fear of falling
MDC/MCID (clinical significance)	unknown
VALIDITY/RELIABILITY	Reliability shown at 0.95
PATIENT COPY	Yes
RESOURCE	Carol Lewis Functional Tool Box; Hill, KD Schwartz, JA, Kalogeropolous AJ, Gibson, SJ "Fear of Falling Revisited" Archives of Physical Medicine and Rehabilitation, 1996; 77: 1025-1029; APTA Home Health Section Toolbox

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The Modified Falls Efficacy Scale

Name_____ **Date**_____

On a scale of 0 to 10, please rate how confident you are that you can do each of these activities without falling, with 0 meaning "not confident/not sure at all", 5 being "fairly confident/fairly sure", and 10 being "completely confident/completely sure".

Note:

* If you have stopped doing the activity at least partly because of being afraid of falling, score a 0
* If you have stopped an activity purely because of a physical problem, leave that item blank (these items are not included in the calculation of the average MFES score).
* If you do not currently do the activity for other reasons, please rate that item based on how you perceive you would rate it if you had to do the activity today.

		Not Confident					Fairly Confident				Completely Confident
	Activity	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1.	Get dressed and undressed											
2.	Prepare a simple meal											
3.	Take a bath or a shower											
4.	Get in/out of a chair											
5.	Get in/out of bed											
6.	Answer the door or telephone											
7.	Walk around the inside of your house											
8.	Reach into cabinets or closet											
9.	Light housekeeping											
10.	Simple shopping											
11.	Using public transport											
12.	Crossing roads											
13.	Light gardening or hanging out the washing *											
14.	Using front or rear steps at home											

* Rate most commonly performed of these activities

Score/Item Rated= _____/_____

Average= _____

Performance Orientated Mobility Assessment (POMA) or Tinetti Balance and Gait Assessment

TEST NAME	**Performance Orientated Mobility Assessment (POMA) or Tinetti Gait and Balance Assessment**
CATEGORY	Gait and Balance
EQUIPMENT NEED	Hard armless chair, assistive device if needed
TIME TO ADMINISTER	10-15 minutes
TEST INSTRUCTIONS	Follow instructions on tool
HOW TO SCORE TOOL	A three-point ordinal scale, ranging from 0-2. "0" indicates the highest level of impairment and "2" the individuals independence.
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	25-28 = low fall risk 19-24 = medium fall risk < 19 = high fall risk Elderly — Mean POMA scores •Age — Male — Female 65-79 years — 26.21 — 25.16 Over 80 years — 23.29 — 17.20
MDC/MCID (clinical significance)	5 points change is clinical significance/not established
VALIDITY/RELIABILITY	• Excellent test-retest reliability for POMA-B and POMA-G in older adults(ICC=0.72-0.86) (Faber 2006) • Excellent test-retest reliability for older adults with dementia (ICC=0.96) (van lersel 2007) • Excellent test-retest reliability for the use of POMA-G patients with stroke (ICC=0.874) (Canbek 2011) • Excellent intrarater reliability for frail elders (ICC=0.89) (Thomas 2005) • Excellent interrater reliability for older adults POMA-B and POMA-T(ICC=0.97), and POMA-G (ICC=0.88) (Sterke 2010)

	• Correlation between POMA-B and TUG (r=-0.55), between POMA-B and walking speed (r=0.48), between POMA-B and Tinetti gait (r=0.81) (Lin 2004)
PATIENT COPY	No
RESOURCE	http://geriatrictoolkit.missouri.edu; APTA Home Health Section Toolbox; BJH Evidence Based Toolbox

Tinetti Performance Oriented Mobility Assessment (POMA)*

Description:

The Tinetti assessment tool is an easily administered task-oriented test that measures an older adult's gait and balance abilities.

Equipment needed: Hard armless chair

Stopwatch or wristwatch

15 ft walkway

Completion:

Time: 10-15 minutes

Scoring: A three-point ordinal scale, ranging from 0-2. "0" indicates the highest level of impairment and "2" the individuals independence.

Total Balance Score = 16

Total Gait Score = 12

Total Test Score = 28

Interpretation: 25-28 = low fall risk

19-24 = medium fall risk

< 19 = high fall risk

* Tinetti ME. Performance-oriented assessment of mobility problems in elderly patients. *JAGS* 1986; 34: 119-126. (Scoring description: PT Bulletin Feb. 10, 1993)

Tinetti Performance Oriented Mobility Assessment (POMA)

- Balance Tests -

Initial instructions: Subject is seated in hard, armless chair. The following maneuvers are tested.

1. **Sitting Balance** Leans or slides in chair =0
   Steady, safe =1 _____

2. **Arises** Unable without help =0
   Able, uses arms to help =1
   Able without using arms =2 _____

3. **Attempts to Arise** Unable without help =0
   Able, requires > 1 attempt =1
   Able to rise, 1 attempt =2 _____

4. **Immediate Standing Balance** (first 5 seconds)
   Unsteady (swaggers, moves feet, trunk sway) =0
   Steady but uses walker or other support =1
   Steady without walker or other support =2 _____

5. **Standing Balance**
   Unsteady =0
   Steady but wide stance(medial heals > 4 inches apart) and uses cane or other support =1
   Narrow stance without support =2 _____

6. **Nudged** (subject at maximum position with feet as close together as possible, examiner pushes lightly on subject's sternum with palm of hand 3 times)

Begins to fall	=0	
Staggers, grabs, catches self	=1	
Steady	=2	_____

7. **Eyes Closed** (at maximum position of item 6)

Unsteady	=0	
Steady	=1	_____

8. **Turing 360 Degrees**

Discontinuous steps	=0	
Continuous steps	=1	_____
Unsteady (grabs, staggers)	=0	
Steady	=1	_____

9. **Sitting Down**

Unsafe (misjudged distance, falls into chair)	=0	
Uses arms or not a smooth motion	=1	
Safe, smooth motion	=2	_____

BALANCE SCORE: _____/16

Tinetti Performance Oriented Mobility Assessment (POMA)

- Gait Tests -

Initial Instructions: Subject stands with examiner, walks down hallway or across room, first at "usual" pace, then back at "rapid, but safe" pace (using usual walking aids)

10. **Initiation of Gait** (immediately after told to "go"

Any hesitancy or multiple attempts to start	=0	
No hesitancy	=1	_____

11. **Step Length and Height**

Right swing foot

Does not pass left stance foot with step	=0	
Passes left stance foot	=1	_____
Right foot does not clear floor completely with step	=0	
Right foot completely clears floor	=1	_____
Left swing foot Does not pass right stance foot with step	=0	
Passes right stance foot	=1	_____
Left foot does not clear floor completely with step	=0	
Left foot completely clears floor	=1	_____

12. **Step Symmetry**

Right and left step length not equal (estimate)	=0	
Right and left step length appear equal	=1	_____

13. **Step Continuity**

Stopping or discontinuity between steps	=0	
Steps appear continuous	=1	_____

14. **Path** (estimated in relation to floor tiles, 12-inch diameter; observe excursion of 1 foot over about 10 ft. of the course)

Marked deviation	=0	
Mild/moderate deviation or uses walking aid	=1	
Straight without walking aid	=2	_____

15. **Trunk**

Marked sway or uses walking aid	=0	
No sway but flexion of knees or back or spreads arms out while walking	=1	
No sway, no flexion, no use of arms, and no use of walking aid	=2	_____

16. **Walking Stance**

Heels apart	=0	
Heels almost touching while walking	=1	_____

GAIT SCORE = _____/12

BALANCE SCORE = _____/16

TOTAL SCORE (Gait + Balance) = _____/28

{< 19 high fall risk, 19-24 medium fall risk, 25-28 low fall risk}

Tinetti Performance Oriented Mobility Assessment (POMA)	Date	Date	Date	Date
Balance Tests: Subject is seated on hard, armless chair				
SITTING BALANCE Leans or slides in chair =0, Steady, safe =1				
ARISES Unable without help =0; Able, uses arms =1, Able without using arms = 2				
ATTEMPTS TO RISE: Unable w/o help=0; Able, requires > 1 attempt =1; Able in 1 attempt =2				
IMMEDIATE STANDING BALANCE (first 5 seconds) Unsteady (sway/stagger/feet move)=0; Steady, w/ support =1;Steady w/o support =2				
STANDING BALANCE Unsteady =0; Steady, stance > 4 inch BOS & requires support =1; Narrow stance, w/o support =2				
STERNAL NUDGE (feet close together) Begins to fall =0; Staggers, grabs, catches self =1; Steady =2				
EYES CLOSED (feet close together) Unsteady =0; Steady =1				
TURNING 360 DEGREES Discontinuous steps =0; Continuous steps =1				
TURNING 360 DEGREES Unsteady (staggers, grabs) =0;Steady =1				
SITTING DOWN Unsafe (misjudges distance, falls) =0;Uses arms, or not a smooth motion =1; Safe, smooth motion =2				
BALANCE SCORE TOTAL	/16	/16	/16	/16

GAIT INITATION (immediate after told "go") Any hesitancy, multiple attempts to start =0; No hesitancy =1				
STEP LENGTH R swing foot passes L stance leg =1; L swing foot passes R =1				
FOOT CLEARANCE R foot completely clears floor =1; L foot completely clears floor =1				
STEP SYMMETRY R and L step length unequal =0; R and L step length equal=1				
STEP CONTINUITY Stop/discontinuity between steps =0; Steps appear continuous =1				
PATH (excursion) Marked deviation =0; Mild/moderate deviation or use of aid =1; Straight without device=2				
TRUNK Marked sway or uses device =0; No sway but knee or trunk flexion or spread arms while walking =1; None of the above deviations=2				
BASE OF SUPPORT Heels apart =0; Heels close while walking =1				
GAIT SCORE TOTAL	/12	/12	/12	/12
ASSISTIVE DEVICE				
TOTAL SCORE (BALANCE + GAIT) **FALL RISK** **(minimal >23, Mod. 19-23, High < 19)**	/28	/28	/28	/28
Therapist initials				

Mini-Cog

TEST NAME	**Mini-Cog**
CATEGORY	Cognition
EQUIPMENT NEED	Paper and pencil
TIME TO ADMINISTER	5-10 minutes
TEST INSTRUCTIONS	See attached
HOW TO SCORE TOOL	See attached
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	Inability to remember any of the words or failure to draw clock correctly warrants further assessment/intervention.
MDC/MCID (clinical significance)	none
VALIDITY/RELIABILITY	Valid via Borson study
PATIENT COPY	no
RESOURCE	http://geriatrictoolkit.missouri.edu

Mini-Cog

Administration:

1. Say 3 nouns, e.g. rock, apple, shoe. Ask the person to repeat the words.
2. Instruct the person to draw a clock by first drawing a circle, then adding numbers, and then setting the time to show **8:20**. Instructions can be repeated and, if necessary, the subject can be told to draw a larger circle. There are no additional instructions, and no time limit is imposed. (Borson, 1999)
3. Then ask the person to repeat the 3 words.

Scoring and Referral:

Either of the following 2 conditions warrant referral to a physician for further cognitive testing

1. The person can only recall one word
2. The person cannot draw the clock correctly
   (see sample clock drawings in **appendix** of Borson, 1999)

The MIni-Cog is a tool for **screening for dementia**, and has been recommended for use in inconjunction with the STEADI Fall Risk Screening algorithm.

References:

- **Borson** S, Scanlan JM, Chen P, Ganguli M. (2003). The Mini-Cog as a screen for dementia: validation in a population-based sample. J Am Geriatr Soc. 51:1451–1454.
- **Borson** S, Brush M, Gil E, Scanlan J, Vitaliano P, Chen J, Cashman J, Sta Maria MM, Barnhart R, Roques J. (1999). The Clock Drawing Test: utility for dementia detection in multiethnic elders. J Gerontol A Biol Sci Med Sci. 54(11):M534-40.
- **Scanlan** J, Borson S. (2001). The Mini-Cog: receiver operating characteristics with expert and naïve raters. Int J Geriatr Psychiatry. 16(2):216-22.
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The Mini-Cog as a Screen for Dementia: Validation in a Population-Based Sample

Soo Borson, MD, James M. Scanlan, PhD,* Peijun Chen, MD, PhD,†‡ and Mary Ganguli, MD, MPH‡*

OBJECTIVES: To test the Mini-Cog, a brief cognitive screening test, in an epidemiological study of dementia in older Americans.

DESIGN: A population-based post hoc examination of the sensitivity and specificity of the Mini-Cog for detecting dementia in an existing data set.

SETTING: The Monongahela Valley in Western Pennsylvania.

PARTICIPANTS: A random sample of 1,119 older adults enrolled in the Monongahela Valley Independent Elders Survey (MoVIES).

MEASUREMENTS: The effectiveness of the Mini-Cog in detecting independently diagnosed dementia was compared with that of the Mini-Mental State Examination (MMSE) and a standardized neuropsychological battery.

RESULTS: The Mini-Cog, scored by an algorithm as "possibly impaired" or "probably normal," and the MMSE, at a cutpoint of 25, had similar sensitivity (76% vs 79%) and specificity (89% vs 88%) for dementia, comparable with that achieved using a conventional neuropsychological battery (75% sensitivity, 90% specificity).

CONCLUSION: When applied post hoc to an existing population, the Mini-Cog was as effective in detecting dementia as longer screening and assessment instruments. Its brevity is a distinct advantage when the goal is to improve identification of older adults in a population who may be cognitively impaired. Prior evidence of good performance in a multiethnic community-based sample further supports its validity in the ethnolinguistically diverse populations of the United States in which widely used cognitive screens often fail. J Am Geriatr Soc 51:1451–1454, 2003.

Key words: MMSE; MoVIES; epidemiology; brief dementia screens

With the recent availability of useful therapies and strong evidence that dementia is unrecognized in 40% to 75% of patients in primary care,[1–6] the development of rapid, easy-to-use dementia-detection systems has become an international priority for improving care of patients with this prevalent neuropsychiatric disorder of late life.[7] Although many primary care physicians endorse screening, practicing physicians do not commonly perform it and often consider it to be too time-consuming[8,9] or unhelpful.[10] Critical properties of dementia-screening tools proposed for broad application in primary care therefore include rapid administration, simple scoring, good balance between dementia sensitivity and specificity, patient acceptance, and superiority to spontaneous recognition of dementia by patients' primary physicians. Additional important features include minimal bias due to factors extraneous to dementia such as educational and ethnolinguistic differences, screening efficacy comparable with established procedures, and efficiency in epidemiological and clinical applications. A number of brief cognitive screens have been developed, and their known performance characteristics have recently been reviewed.[11] Limitations in published studies of many short screens are the absence of data about their performance in comparison with widely accepted procedures (such as the Mini-Mental State Examination (MMSE)) and in epidemiological samples, in which the relatively low rates of dementia encountered in the general older adult population challenge test effectiveness. Therefore, prospective testing of new dementia screening instruments in representative samples is the most desirable approach to establishing their validity and utility but is prohibitively labor-intensive during the early stages of test development. The use of existing data sets for this purpose allows initial evaluation of a proposed procedure before full-scale prospective testing is feasible or justified.

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0002-8614/03/$15.00

Global Deterioration Scale

TEST NAME	**Global Deterioration Scale**
CATEGORY	Dementia
EQUIPMENT NEED	None
TIME TO ADMINISTER	none
TEST INSTRUCTIONS	Use scale to stage dementia level; see tool
HOW TO SCORE TOOL	See test instructions
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	Higher the stage more advanced dementia
MDC/MCID (clinical significance)	If improvement (due to a reversible dementia) will improve a stage and would be clinically significant, most likely will increase in stages.
VALIDITY/RELIABILITY	Yes, yes
PATIENT COPY	Yes, would be good for caregivers
RESOURCE	http://geriatrictoolkit.missouri.edu Lanny Butler, OTR "Therapeutic Treatment for Dementia"

Global Deterioration Scale, Lanny Butler, OTR

STAGE 1: No Symptoms

Any problems can be explained away by stress

STAGE 2: Nobody Knows<>Compensatory Strategies used unknowingly

STAGE 3: Breakdown Begins

Still very functional

Individual knows but they don't tell anyone due to FEAR. This is when medical intervention should take place.

May need up to 30 seconds for processing and response.

STAGE 4: Others Aware

Individual will admit to decreased memory

Outside of own environment appear unsafe

Family make start to take things away which may make individual depressed which is masked by dementia.

Still functional

Introduce walker and functional aides now as still have new learning present (use 1x/wk to practice in case ever need)

STAGE 5: 5 Minute Memory<>don't remember they can't remember

Still functional

Still into persona of how look to others (still do makeup, etc) Normal walking with ability to turn head when walk

STAGE 6: A Time of Change

Cannot do 2 motor actions at same time (walk and turn head) Eye gaze is to floor (standing or sitting)

Decreased stride length and arm swing, shuffle gait

Loss of peripheral vision

Loss of depth perception

Temperature control change<>always cold

90 second rule<>may take up to 90 seconds to respond<>but WILL respond

STAGE 7: Dominated by Senses!

May stop talking but still can communicate

Only have bitter and sweet taste left (add sugar to food)
Love to “pick” (with hands)

Live on residual memories

Tips for Therapists/Caregivers

* Keep them independent. Have individual do things in THEIR usual way (use residual memory) not YOUR way. Example: how do they button their shirt, top down or bottom up? I only takes 3 days for a dementia person to “give in” and become dependent.

* Neon apple green contrasted with black is color we can continue to see as we age.

* Mini-mental is a SCREEN not an ASSESSMENT (biased towards previous knowledge)

* Could it be a medical issue causing dementia? Vitamin D deficiency, diabetic issues, UTI, etc.

* Use VALIDATION: enter into the confused persons reality. Example: If gets hair done every Thursday then Thursday becomes “hair day”.

* Stage 5: no longer need depression medications. Don’t remember

depressed and caregiver should not keep trying to drag back into

caregiver reality.

* Incontinence is NOT a normal part of dementia or aging. Toileting

schedule, Remember 90 sec rule, do it their way, don’t ask individual<>tell them it is time to go to restroom and individual needs to be able to relax<>make it warm (heat toilet seat with dryer or steam bathroom first)

11 *Stage 6: major vision issues: don't approach them from the side (or will startle), put food right in front of them, use of Full Spectrum lighting (change out the lightbulbs) to give better contrast, do not use bifocals<>2 pairs of glasses (one reading and one far), move items down where will see them.

12 ***** Once start shuffling use leather soled shoes to decrease stumbles.

13 ***If not having effective communication....get in their line of sight and WAIT for response (use a timer for a full 90 sec)....do not redirect in that 90 sec or have to start timer all over.

14 From course, Therapeutic Approaches to Dementia, by Lanny Butler, MS, OTR (www.iatbdementiacare.com)

Global Deterioration Scale from Geriatric Resources, Inc

The Global Deterioration Scale (GDS), developed by Dr. Barry Reisberg, provides caregivers an overview of the stages of cognitive function for those suffering from a primary degenerative dementia such as Alzheimer's disease. It is broken down into 7 different stages. Stages 1-3 are the pre-dementia stages. Stages 4-7 are the dementia stages. Beginning in stage 5, an individual can no longer survive without assistance. Within the GDS, each stage is numbered (1-7), given a short title (i.e., Forgetfulness, Early Confusional, etc. followed by a brief listing of the characteristics for that stage. Caregivers can get a rough idea of where an individual is at in the disease process by observing that individual's behavioral characteristics and comparing them to the GDS. For more specific assessments, use the accompanying Brief Cognitive Rating Scale (BCRS) and the Functional Assessment Staging (FAST) measures.

The Global Deterioration Scale for Assessment of Primary Degenerative Dementia

Level 1
No cognitive decline

No subjective complaints of memory deficit. No memory deficit evident on clinical interview.

Level 2
Very mild cognitive decline
(Age Associated Memory Impairment)

Subjective complaints of memory deficit, most frequently in following areas: (a) forgetting where one has placed familiar objects; (b) forgetting names one formerly knew well. No objective evidence of memory deficit on clinical interview. No objective deficits in employment or social situations. Appropriate concern with respect to symptomatology.

Level 3
Mild cognitive decline (Mild Cognitive Impairment)

Earliest clear-cut deficits. Manifestations in more than one of the following areas: (a) patient may have gotten lost when traveling to an unfamiliar location; (b) co- workers become aware of patient's relatively poor performance; (c) word and name finding deficit becomes evident to intimates; (d) patient may read a passage or a book and retain relatively little material; (e) patient may demonstrate decreased facility in remembering names upon introduction to new people; (f) patient may have lost or misplaced an object of value; (g) concentration deficit may be evident on clinical testing.

Objective evidence of memory deficit obtained only with an intensive interview. Decreased performance in demanding employment and social settings. Denial begins to become manifest in patient. Mild to moderate anxiety accompanies symptoms.

Level 4
Moderate cognitive decline (Mild Dementia)

Clear-cut deficit on careful clinical interview. Deficit manifest in following areas: (a) decreased knowledge of current and recent events; (b) may exhibit some deficit in memory of ones personal history; (c) concentration deficit elicited on serial subtractions; (d) decreased ability to travel, handle finances, etc. Frequently no deficit in following areas: (a) orientation to time and place; (b) recognition of familiar persons and faces; (c) ability to travel to familiar locations. Inability to perform complex tasks. Denial is dominant defense mechanism. Flattening of affect and withdrawal from challenging situations frequently occur.

Level 5
Moderately severe cognitive decline (Moderate Dementia)

Patient can no longer survive without some assistance. Patient is unable during interview to recall a major relevant aspect of their current lives, e.g., an address or telephone number of many years, the names of close family members (such as grandchildren), the name of the high school or college from which they graduated. Frequently some disorientation to time (date, day of week, season, etc.) or to place. An educated person may have difficulty counting back from 40 by 4s or from 20 by 2s. Persons at this stage retain knowledge of many major facts regarding themselves and others. They invariably know their own names and generally know their spouses' and children's names. They require no assistance with toileting and eating, but may have some difficulty choosing the proper clothing to wear.

Level 6
Severe cognitive decline (Moderately Severe Dementia)

May occasionally forget the name of the spouse upon whom they are entirely dependent for survival. Will be largely unaware of all recent events and experiences in their lives. Retain some knowledge of their past lives but this is very sketchy. Generally unaware of their surroundings, the year, the season, etc. May have difficulty counting from 10, both backward and, sometimes, forward. Will require some assistance with activities of daily living, e.g., may become incontinent, will require travel assistance but occasionally will be able to travel to familiar locations. Diurnal rhythm frequently disturbed. Almost always recall their own name. Frequently continue to be able to distinguish familiar from unfamiliar persons in their environment. Personality and emotional changes occur. These are quite variable and include: (a) delusional behavior, e.g., patients may accuse their spouse of being an impostor, may talk to imaginary

figures in the environment, or to their own reflection in the mirror; (b) obsessive symptoms, e.g., person may continually repeat simple cleaning activities; (c) anxiety symptoms, agitation, and even previously nonexistent violent behavior may occur; (d) cognitive abulla, i.e., loss of willpower because an individual cannot carry a thought long enough to determine a purposeful course of action.

Level 7
Very severe cognitive decline (Severe Dementia)

All verbal abilities are lost over the course of this stage. Frequently there is no speech at all -only unintelligible utterances and rare emergence of seemingly forgotten words and phrases. Incontinent of urine, requires assistance toileting and feeding. Basic psychomotor skills, e.g., ability to walk, are lost with the progression of this stage. The brain appears to no longer be able to tell the body what to do. Generalized rigidity and developmental neurologic reflexes are frequently present.

http://www.geriatric-resources.com/html/gds.html

Montreal Cognitive Assessment (MOCA)

TEST NAME	**Montreal Cognitive Assessment**
CATEGORY	Cognition
EQUIPMENT NEED	Paper, pencil
TIME TO ADMINISTER	10 min
TEST INSTRUCTIONS	See attached
HOW TO SCORE TOOL	See attached
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	• The following ranges may be used to grade severity: 18-26 = mild cognitive impairment, 10-17= moderate cognitive impairment and less than 10= severe cognitive impairment. However, research for these severity ranges has not been established yet. • Is there a cut-off score between mild cognitive impairment (MCI) and Alzheimer's disease (AD)? The cut-off score of 18 is usually considered to separate MCI from AD but there is overlap in the scores since, by definition, AD is determined by the presence of cognitive impairment in addition to loss of autonomy. The average MoCA score for MCI is 22 (range 19-25) and the average MoCA score for Mild AD 16 (range 11-21)
MDC/MCID (clinical significance)	See website
VALIDITY/RELIABILITY	See website
PATIENT COPY	yes
RESOURCE	www.mocatest.org (PERMISSION TO USE THE MoCA© CLINICAL USE Universities/Foundations/Health Professionals/Hospitals/Clinics/Public Health Institutes: MoCA© may be used, reproduced, and distributed

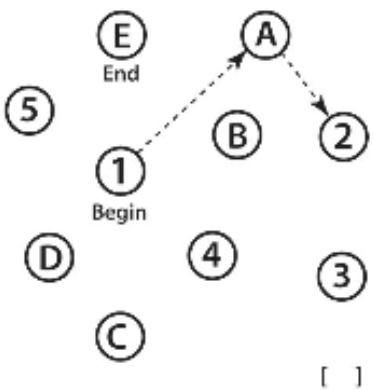
	WITHOUT permission. The test should be made available free of charge to patients.)

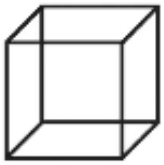
MONTREAL COGNITIVE ASSESSMENT (MOCA)

Version 7.1 Original Version

NAME :
Education : Date of birth :
Sex : DATE :

VISUOSPATIAL / EXECUTIVE





Copy cube

[ ] [ ]

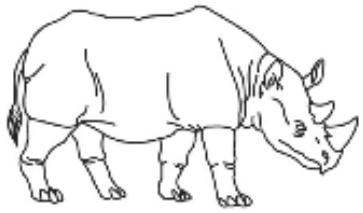
Draw CLOCK (Ten past eleven) (3 points)

[ ] Contour [ ] Numbers [ ] Hands

POINTS /5

NAMING

[ ]



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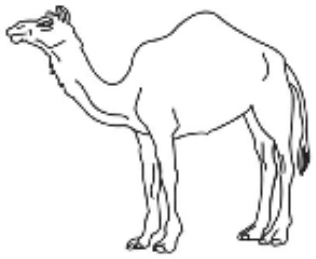

[ ]

/3

MEMORY

Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.

	FACE	VELVET	CHURCH	DAISY	RED
1st trial					
2nd trial					

No points

ATTENTION

Read list of digits (1 digit/ sec.). Subject has to repeat them in the forward order [ ] 2 1 8 5 4

Subject has to repeat them in the backward order [ ] 7 4 2

/2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors

[ ] F B A C M N A A J K L B A F A K D E A A A J A M O F A A B

/1

Serial 7 subtraction starting at 100 [ ] 93 [ ] 86 [ ] 79 [ ] 72 [ ] 65

4 or 5 correct subtractions: **3 pts**, 2 or 3 correct: **2 pts**, 1 correct: **1 pt**, 0 correct: **0 pt**

/3

LANGUAGE

Repeat : I only know that John is the one to help today. [ ]

The cat always hid under the couch when dogs were in the room. [ ]

/2

Fluency / Name maximum number of words in one minute that begin with the letter F [ ] _____ (N ≥ 11 words)

/1

ABSTRACTION

Similarity between e.g. banana - orange = fruit [ ] train – bicycle [ ] watch - ruler

/2

DELAYED RECALL

	Has to recall words WITH NO CUE	FACE [ ]	VELVET [ ]	CHURCH [ ]	DAISY [ ]	RED [ ]	Points for UNCUED recall only
Optional	Category cue						
	Multiple choice cue						

/5

ORIENTATION

[ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City

/6

www.mocatest.org

Normal ≥ 26 / 30

TOTAL /30

Add 1 point if ≤ 12 yr edu

Administered by: _____

Montreal Cognitive Assessment
(MoCA)

Administration and Scoring Instructions

The Montreal Cognitive Assessment (MoCA) was designed as a rapid screening instrument for mild cognitive dysfunction. It assesses different cognitive domains: attention and concentration, executive functions, memory, language, visuoconstructional skills, conceptual thinking, calculations, and orientation. Time to administer the MoCA is approximately 10 minutes. The total possible score is 30 points; a score of 26 or above is considered normal.

1. Alternating Trail Making:

Administration: The examiner instructs the subject: *"Please draw a line, going from a number to a letter in ascending order. Begin here* [point to (1)] *and draw a line from 1 then to A then to 2 and so on. End here* [point to (E)]."

Scoring: Allocate one point if the subject successfully draws the following pattern: 1 –A- 2- B- 3- C- 4- D- 5- E, without drawing any lines that cross. Any error that is not immediately self-corrected earns a score of 0.

2. Visuoconstructional Skills (Cube):

Administration: The examiner gives the following instructions, pointing to the **cube**: "*Copy this drawing as accurately as you can, in the space below*".

Scoring: One point is allocated for a correctly executed drawing.
- Drawing must be three-dimensional
- All lines are drawn
- No line is added
- Lines are relatively parallel and their length is similar (rectangular prisms are accepted)

A point is not assigned if any of the above-criteria are not met.

3. Visuoconstructional Skills (Clock):

Administration: Indicate the right third of the space and give the following instructions: *"Draw a **clock**. Put in all the numbers and set the time to 10 past 11".*

Scoring: One point is allocated for each of the following three criteria:
- Contour (1 pt.): the clock face must be a circle with only minor distortion acceptable (e.g., slight imperfection on closing the circle);
- Numbers (1 pt.): all clock numbers must be present with no additional numbers; numbers must be in the correct order and placed in the approximate quadrants on the clock face; Roman numerals are acceptable; numbers can be placed outside the circle contour;
- Hands (1 pt.): there must be two hands jointly indicating the correct time; the hour hand must be clearly shorter than the minute hand; hands must be centred within the clock face with their junction close to the clock centre.

A point is not assigned for a given element if any of the above-criteria are not met.

4. Naming:

Administration: Beginning on the left, point to each figure and say: *"Tell me the name of this animal".*

Scoring: One point each is given for the following responses: (1) lion (2) rhinoceros or rhino (3) camel or dromedary.

5. Memory:

Administration: The examiner reads a list of 5 words at a rate of one per second, giving the following instructions: *"This is a memory test. I am going to read a list of words that you will have to remember now and later on. Listen carefully. When I am through, tell me as many words as you can remember. It doesn't matter in what order you say them".* Mark a check in the allocated space for each word the subject produces on this first trial. When the subject indicates that (s)he has finished (has recalled all words), or can recall no more words, read the list a second time with the following instructions: *"I am going to read the same list for a second time. Try to remember and tell me as many words as you can, including words you said the first time."* Put a check in the allocated space for each word the subject recalls after the second trial.
At the end of the second trial, inform the subject that (s)he will be asked to recall these words again by saying, *"I will ask you to recall those words again at the end of the test."*

Scoring: No points are given for Trials One and Two.

6. Attention:

Forward Digit Span: Administration: Give the following instruction: "*I am going to say some numbers and when I am through, repeat them to me exactly as I said them*". Read the five number sequence at a rate of one digit per second.

Backward Digit Span: Administration: Give the following instruction: "*Now I am going to say some more numbers, but when I am through you must repeat them to me in the backwards order.*" Read the three number sequence at a rate of one digit per second.

Scoring: Allocate one point for each sequence correctly repeated, (*N.B.*: the correct response for the backwards trial is 2-4-7).

Vigilance: Administration: The examiner reads the list of letters at a rate of one per second, after giving the following instruction: "*I am going to read a sequence of letters. Every time I say the letter A, tap your hand once. If I say a different letter, do not tap your hand*".

Scoring: Give one point if there is zero to one errors (an error is a tap on a wrong letter or a failure to tap on letter A).

Serial 7s: Administration: The examiner gives the following instruction: *"Now, I will ask you to count by subtracting seven from 100, and then, keep subtracting seven from your answer until I tell you to stop."* Give this instruction twice if necessary.

Scoring: This item is scored out of 3 points. Give no (0) points for no correct subtractions, 1 point for one correction subtraction, 2 points for two-to-three correct subtractions, and 3 points if the participant successfully makes four or five correct subtractions. Count each correct subtraction of 7 beginning at 100. Each subtraction is evaluated independently; that is, if the participant responds with an incorrect number but continues to correctly subtract 7 from it, give a point for each correct subtraction. For example, a participant may respond "92 – 85 – 78 – 71 – 64" where the "92" is incorrect, but all subsequent numbers are subtracted correctly. This is one error and the item would be given a score of 3.

7. Sentence repetition:

Administration: The examiner gives the following instructions: *"I am going to read you a sentence. Repeat it after me, exactly as I say it* [pause]: ***I only know that John is the one to help today."*** Following the response, say: *"Now I am going to read you another sentence. Repeat it after me, exactly as I say it* [pause]: ***The cat always hid under the couch when dogs were in the room."***

Scoring: Allocate 1 point for each sentence correctly repeated. Repetition must be exact. Be alert for errors that are omissions (e.g., omitting "only", "always") and substitutions/additions (e.g., "John is the one who helped today;" substituting "hides" for "hid", altering plurals, etc.).

8. Verbal fluency:

Administration: The examiner gives the following instruction: *"Tell me as many words as you can think of that begin with a certain letter of the alphabet that I will tell you in a moment. You can say any kind of word you want, except for proper nouns (like Bob or Boston), numbers, or words that begin with the same sound but have a different suffix, for example, love, lover, loving. I will tell you to stop after one minute. Are you ready?* [Pause] *Now, tell me as many words as you can think of that begin with the letter F.* [time for 60 sec]. *Stop."*

Scoring: Allocate one point if the subject generates 11 words or more in 60 sec. Record the subject's response in the bottom or side margins.

9. Abstraction:

Administration: The examiner asks the subject to explain what each pair of words has in common, starting with the example: *"Tell me how an orange and a banana are alike"*. If the subject answers in a concrete manner, then say only one additional time: *"Tell me another way in which those items are alike"*. If the subject does not give the appropriate response *(fruit)*, say, *"Yes, and they are also both fruit."* Do not give any additional instructions or clarification. After the practice trial, say: *"Now, tell me how a train and a bicycle are alike"*. Following the response, administer the second trial, saying: *"Now tell me how a ruler and a watch are alike"*. Do not give any additional instructions or prompts.

Scoring: Only the last two item pairs are scored. Give 1 point to each item pair correctly answered. The following responses are acceptable:
Train-bicycle = means of transportation, means of travelling, you take trips in both;
Ruler-watch = measuring instruments, used to measure.
The following responses are **not** acceptable: Train-bicycle = they have wheels; Ruler-watch = they have numbers.

10. Delayed recall:

Administration: The examiner gives the following instruction: *"I read some words to you earlier, which I asked you to remember. Tell me as many of those words as you can remember."* Make a check mark (√) for each of the words correctly recalled spontaneously without any cues, in the allocated space.

Scoring: **Allocate 1 point for each word recalled freely without any cues.**

Optional:
Following the delayed free recall trial, prompt the subject with the semantic category cue provided below for any word not recalled. Make a check mark (√) in the allocated space if the subject remembered the word with the help of a category or multiple-choice cue. Prompt all non-recalled words in this manner. If the subject does not recall the word after the category cue, give him/her a multiple choice trial, using the following example instruction, *"Which of the following words do you think it was, NOSE, FACE, or HAND?"*
Use the following category and/or multiple-choice cues for each word, when appropriate:

FACE:	category cue: part of the body	multiple choice: nose, face, hand
VELVET:	category cue: type of fabric	multiple choice: denim, cotton, velvet
CHURCH:	category cue: type of building	multiple choice: church, school, hospital
DAISY:	category cue: type of flower	multiple choice: rose, daisy, tulip
RED:	category cue: a colour	multiple choice: red, blue, green

Scoring: **No points are allocated for words recalled with a cue.** A cue is used for clinical information purposes only and can give the test interpreter additional information about the type of memory disorder. For memory deficits due to retrieval failures, performance can be improved with a cue. For memory deficits due to encoding failures, performance does not improve with a cue.

11. Orientation:

Administration: The examiner gives the following instructions: "Tell me the date today". If the subject does not give a complete answer, then prompt accordingly by saying: *"Tell me the [year, month, exact date, and day of the week]."* Then say: *"Now, tell me the name of this place, and which city it is in."*

Scoring: Give one point for each item correctly answered. The subject must tell the exact date and the exact place (name of hospital, clinic, office). No points are allocated if subject makes an error of one day for the day and date.

TOTAL SCORE: Sum all subscores listed on the right-hand side. Add one point for an individual who has 12 years or fewer of formal education, for a possible maximum of 30 points. A final total score of 26 and above is considered normal.

Short Blessed

TEST NAME	**Short Orienteation-Memory-Concentration Test of Cognitive Impairment (Short Blessed)**
CATEGORY	Cognition
EQUIPMENT NEED	Quesionare
TIME TO ADMINISTER	5-10 minutes
TEST INSTRUCTIONS	"Now I would like to ask you some questions to check your memory and concentration. Some of the questions may be easy and some of them may be hard, but please try to answer them all."
HOW TO SCORE TOOL	Points taken off for missed or incorrect responses
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	0-8: Normal-minimum impairment 9-19: minimal to moderate impairment 20-28: Severe impairment
MDC/MCID (clinical significance)	Various Neurological Diseases: (Wade & Vergis, 1998; *n* = 38; mean age = 47.1 (11.4) years) 15 improvement greater than 6 points were found to indicate a real improvement in memory • deterioration of more than 2 points represented real declines MCID not established
VALIDITY/RELIABILITY	Stepwise regression of the 26 item Blessed measure revealed 5 items with high item-total correlations. These items were then used to create the final 6 item measure. Face Validity not assessed Reliability not established
PATIENT COPY	none
RESOURCE	Currently a risk tab

SHORT BLESSED TEST

"Now I would like to ask you some questions to check your memory and concentration. Some of them may be easy and some of them may be hard."

	Correct	Incorrect
1. What year is it now?	0	1
2. What month is it?	0	1

Please repeat this name and address after me:
John Brown, 42 Market Street, Chicago
John Brown, 42 Market Street, Chicago
John Brown, 42 Market Street, Chicago
(underline words repeated correctly in each trial)
Trials to learn _____ (if unable to do in 3 trials = C)

"Good, now remember that name and address for a few minutes."

3) Without looking at your watch or clock, tell me what time it is.
(If response is vague, prompt for specific response
Within one hour Correct (0) Incorrect (1)

4) Count aloud backwards from 20 to 1 0 1 2 Errors
Mark correctly sequenced numerals. If subject starts counting forward or forgets the task, repeat instructions and score one error
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

5) Say the months of the year in reverse order 0 1 2 Errors
If the tester needs to prompt with the last name of the month of the year, one error should be scored – mark correctly sequenced months.
D N O S A JL JN MY AP MR F J

6) Repeat the name and address you were asked to remember.
John Brown, 42 Market Street, Chicago 0 1 2 3 4 5 Errors
___ ____ __ _____ _____
Check Correct Items ("street" not required)

SCORING

Item # Final	Errors (0 - 5)	Weighting Factor	Item Score
1		X 4	
2		X 3	
3		X 3	
4		X 2	
5		X 2	
6		X 2	
		Sum Total = (Range 0 – 28)	

INTERPRETATION
0-4 = normal cognition
5-9 = questionable impairment
≥ 10 = Impairment consistent with dementia

Short Blessed Test (SBT) Administration and Scoring Guidelines[2]

A spontaneous self-correction is allowed for all responses without counting as an error.

1. What is the year?
Acceptable Response: The exact year must be given. An incomplete but correct numerical response is acceptable (e.g., 01 for 2001).

2. What is the month?
Acceptable Response: The exact month must be given. A correct numerical answer is acceptable (e.g., 12 for December).

3. The clinician should state: "I will give you a name and address to remember for a few minutes. Listen to me say the entire name and address and then repeat it after me."

It is important for the clinician to carefully read the phrase and give emphasis to each item of the phrase. There should be a one second delay between individual items.

The trial phrase should be re-administered until the subject is able to repeat the entire phrase without assistance or until a maximum of three attempts. If the subject is unable to learn the phrase after three attempts, a "C" should be recorded. This indicates the subject could not learn the phrase in three tries.

Whether or not the trial phrase is learned, the clinician should instruct "Good, now remember that name and address for a few minutes."

4. Without looking at your watch or clock, tell me about what time it is?
This is scored as correct if the time given is within plus or minus one hour. If the subject's response is vague (e.g., "almost 1 o'clock), they should be prompted to give a more specific response.

5. Counting. The instructions should be read as written. If the subject skips a number after 20, an error should be recorded. If the subject starts counting forward during the task or forgets the task, the instructions should be repeated and one error should be recorded. The maximum number of errors is two.

6. Months. The instructions should be read as written. To get the subject started, the examiner may state "Start with the last month of the year. The last month of the year is_____." If the subject cannot recall the last month of the year, the examiner may prompt this test with "December"; however, one error should be recorded. If the subject skips a month, an error should be recorded. If the subject starts saying the months forward upon initiation of the task, the instructions should be repeated and no error recorded. If the subject starts saying the months forward during the task or forgets the task, the instructions should be repeated and one error recorded. The maximum number of errors is two.

7. Repeat. The subject should state each item verbatim. The address number must be exact (i.e. "4200" would be considered an error for "42"). For the name of the street (i.e. Market Street), the thoroughfare term is not required to be given (ie. Leaving off "drive" or "street") or to be correct (ie. Substituting "boulevard" or lane") for the item to be scored correct.

8. The final score is a weighted sum of individual error scores. Use the table on the next page to calculate each weighted score and sum for the total.

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[2] These guidelines and scoring rules are based on the administration experience of faculty and staff of the Memory and Aging Project, Alzheimer's Disease Research Center, Washington University School of Medicine, St. Louis (John C. Morris, MD, Director & PI; morrisj@abraxas.wustl.edu). For more information about the ADRC, please visit our website: http://alzheimer.wustl.edu or call 314-286-2881.

Final SBT Score & Interpretation

Item #	Errors (0 - 5)	Weighting Factor	Final Item Score
1		X 4	
2		X 3	
3		X 3	
4		X 2	
5		X 2	
6		X 2	
			Sum Total = _____ *(Range 0 – 28)*

Interpretation

A screening test in itself is insufficient to diagnose a dementing disorder. The SBT is, however, quite sensitive to early cognitive changes associated with Alzheimer's disease. Scores in the impaired range (see below) indicate a need for further assessment. Scores in the "normal" range suggest that a dementing disorder is unlikely, but a very early disease process cannot be ruled out. More advanced assessment may be warranted in cases where other objective evidence of impairment exists.

- In the original validation sample for the SBT (Katzman et al., 1983), 90% of normal scores 6 points or less. Scores of 7 or higher would indicate a need for further evaluation to rule out a dementing disorder, such as Alzheimer's disease.
- Based on clinical research findings from the Memory and Aging Project[3], the following cut points may also be considered:
  - 0 – 4 Normal Cognition
  - 5 – 9 Questionable Impairment (evaluate for early dementing disorder)
  - 10 or more Impairment Consistent with Dementia (evaluate for dementing disorder)

[3] Morris JC, Heyman A, Mohs RC, Hughes JP, van Belle G, Fillenbaum G, Mellits ED, Clark C. (1989). The Consortium to Establish a Registry for Alzheimer's Disease (CERAD). Part I. Clinical and neuropsychological assessment of Alzheimer's disease. Neurology, 39(9):1159-65.

Patient Health Questionnaire (PHQ-9)

TEST NAME	**Patient Health Questionnaire (PHQ-9)**
CATEGORY	Depression
EQUIPMENT NEED	NA
TIME TO ADMINISTER	1-3 minutes
TEST INSTRUCTIONS	Can be self-administered or clinician administered.
HOW TO SCORE TOOL	This is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of —not at all,‖ —several days,‖ —more than half the days,‖ and —nearly every day,‖ respectively. PHQ 9 total score for the nine items ranges from 0 to 27. In the above case see table 3, page 5) the PHQ 9 depression severity score is 16 (3 items scored 1, 2 items scored 2, and 3 items scored 3). Scores of 5, 10, 15, and 20 represent cutpoints for mild, moderate, moderately severe and severe depression, respectively. Sensitivity to change has also been confirmed.
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	Designed to diagnose both the presence of depressive symptoms and to characterize severity of depression Certain scores on PHQ-9 are strongly correlated with subsequent major depression diagnosis. However, not everyone with elevated PHQ-9 is sure to have major depression. It's intended as a tool to assist clinicians with identifying and diagnosing depression but is not a substitute for trained clinician diagnosis.
MDC/MCID (clinical significance)	MCID: 5 points (older primary care patients) DMC: not established
VALIDITY/RELIABILITY	Reliability for Parkinson's Disease: adequate interrater reliability 95%Cl= 0.4 between PHQ-9 and SCID Stroke: excellent interrater reliability (ICC= 0.98)
PATIENT COPY	NA
RESOURCE	Rehabilitation Measures Database

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING 0 + _____ + _____ + _____

=Total Score: _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

Disabilities of the Arm, Shoulder, and Hand (DASH)

TEST NAME	**Disabilities of the Arm, Shoulder, and Hand (DASH)**
CATEGORY	Measures physical function and symptoms in people with any of several musculoskeletal disorders of the upper limb. The tool gives clinicians and researchers the advantage of having a single, reliable instrument that can be used to assess any or all joints in the upper extremity.
EQUIPMENT NEED	30-item, self-report questionnaire
TIME TO ADMINISTER	5-30 min
TEST INSTRUCTIONS	Ask client to answer every question, based on their condition in the last week, by circling the appropriate number.
HOW TO SCORE TOOL	The 30-item disability/symptom section (item responses range from 1 (e.g. no difficulty, not at all, not limited, none, strongly disagree) to 5 (e.g. unable, extremely, unable, strongly agree). DASH DISABILITY/SYMPTOM SCORE = [(sum of n responses) - 1] x 25, where n is equal to the number of completed responses.
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	A higher score indicates greater disability
MDC/MCID (clinical significance)	MDC: 10 MCID: 10
VALIDITY/RELIABILITY	Yes
PATIENT COPY	Yes
RESOURCE	dash.iwh.on.ca (website)

Please rate your ability to do the following activities in the last week by circling the number below the appropriate response.

	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. Open a tight or new jar.	1	2	3	4	5
2. Write.	1	2	3	4	5
3. Turn a key.	1	2	3	4	5
4. Prepare a meal.	1	2	3	4	5
5. Push open a heavy door.	1	2	3	4	5
6. Place an object on a shelf above your head.	1	2	3	4	5
7. Do heavy household chores (e.g., wash walls, wash floors).	1	2	3	4	5
8. Garden or do yard work.	1	2	3	4	5
9. Make a bed.	1	2	3	4	5
10. Carry a shopping bag or briefcase.	1	2	3	4	5
11. Carry a heavy object (over 10 lbs).	1	2	3	4	5
12. Change a lightbulb overhead.	1	2	3	4	5
13. Wash or blow dry your hair.	1	2	3	4	5
14. Wash your back.	1	2	3	4	5
15. Put on a pullover sweater.	1	2	3	4	5
16. Use a knife to cut food.	1	2	3	4	5
17. Recreational activities which require little effort (e.g., cardplaying, knitting, etc.).	1	2	3	4	5
18. Recreational activities in which you take some force or impact through your arm, shoulder or hand (e.g., golf, hammering, tennis, etc.).	1	2	3	4	5
19. Recreational activities in which you move your arm freely (e.g., playing frisbee, badminton, etc.).	1	2	3	4	5
20. Manage transportation needs (getting from one place to another).	1	2	3	4	5
21. Sexual activities.	1	2	3	4	5

	NOT AT ALL	SLIGHTLY	MODERATELY	QUITE A BIT	EXTREMELY
22. During the past week, *to what extent* has your arm, shoulder or hand problem interfered with your normal social activities with family, friends, neighbours or groups? *(circle number)*	1	2	3	4	5

	NOT LIMITED AT ALL	SLIGHTLY LIMITED	MODERATELY LIMITED	VERY LIMITED	UNABLE
23. During the past week, were you limited in your work or other regular daily activities as a result of your arm, shoulder or hand problem? *(circle number)*	1	2	3	4	5

Please rate the severity of the following symptoms in the last week. *(circle number)*

	NONE	MILD	MODERATE	SEVERE	EXTREME
24. Arm, shoulder or hand pain.	1	2	3	4	5
25. Arm, shoulder or hand pain when you performed any specific activity.	1	2	3	4	5
26. Tingling (pins and needles) in your arm, shoulder or hand.	1	2	3	4	5
27. Weakness in your arm, shoulder or hand.	1	2	3	4	5
28. Stiffness in your arm, shoulder or hand.	1	2	3	4	5

	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	SO MUCH DIFFICULTY THAT I CAN'T SLEEP
29. During the past week, how much difficulty have you had sleeping because of the pain in your arm, shoulder or hand? *(circle number)*	1	2	3	4	5

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
30. I feel less capable, less confident or less useful because of my arm, shoulder or hand problem. *(circle number)*	1	2	3	4	5

DASH DISABILITY/SYMPTOM SCORE = $\left[\frac{\text{(sum of n responses)}}{n} - 1\right] \times 25$, where n is equal to the number of completed responses.

A DASH score may not be calculated if there are greater than 3 missing items.

Function in Sitting Test (FIST)

TEST NAME	**Function in Sitting Test (FIST)**
CATEGORY	Functional/balance
EQUIPMENT NEED	Step stool or riser (to use at bedside to level patients feet if needed), watch or timer, tape measure, small lightweight object, FIST scoring manual.
TIME TO ADMINISTER	<15 min
TEST INSTRUCTIONS	Patient seated at edge of standard hospital bed (no overlay or specialized air mattresses) with bed flat. ½ femur length supported by mattress while sitting, hip and knees flexed to 90 deg.,feet flat on floor on supported on stool, thighs in neutral position of abd./add. and rotation, hands in lap unless needed for support. (see attached)
HOW TO SCORE TOOL	0-4 ordinal scale, for 14 items, total =56 points 0 = dependent 1 = needs assistance 2=upper extremity support 3=verbal cues increased time 4=independent Anterior nudge, posterior nudge, lateral nudge, static sitting, sitting move head side to side, sitting eyes closed, sitting lift feet, turn and pick up object from behind in preferred direction, reach forward with uninvolved hand outstretched at shoulder height, lateral reach with hand at shoulder height, pick object up of floor, posterior scooting (2”), anterior scooting (2”), and lateral scooting (2”) (see attached)
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	No benchmarks established
MDC/MCID (clinical significance)	5.5 points/ 6.5 points

VALIDITY/RELIABILITY	Concurrent validity with the FIM and BERG (ICC=0.71 and 0.85) Test and re-test reliability is (r=0.97) Intra-inter tester reliability is (r=0.98)
PATIENT COPY	n/a
RESOURCE	www.samuelmerritt.edu.fist

FIST Scoring Instructions

The FIST uses a consistent scoring scale for each test item. The FIST was designed this way to make it easier for the examiner to score items and to reduce the need to refer to the scoring scale while administering the test once familiar with the test items.

4 Independent

Completes the task independently and successfully

Comments: This would be the reaction, speed, and safety you would expect in someone without any sitting balance problems.

3 Verbal cues or increased time

Completes the task independently and successfully but may need verbal cues or excessive time

Comments: The performance of the activity is normal, but the patient needs more than necessary time or more cues than normally expected to complete the activity.

2 Upper extremity support

Unable to complete the task without using upper extremities for support or assistance

Comments: The patient must use their hands to successfully complete the task or for maintenance of balance during the task. It does not matter if the patient uses one or both upper extremities; any use as a requirement results in a score of 2

1 Needs assistance

Unable to complete task successfully without physical assistance (document level of physical assist required: min, mod, or max assist)

Comments: If the therapist doesn't provide physical assistance, the patient cannot complete the task or may lose balance or fall. Document the amount physical assistance required for safe performance of the task to track patient progress: min = 25% or less, mod = 26-74%, max = 75% or more.

0 Dependent

Requires complete physical assistance to perform task successfully, is unable to complete task successfully even with physical assistance, or dependent

Comments: Without the therapist's assistance, the patient could not complete any of the task successfully or safely.

Individual FIST Item Instructions

Remember, the patient should be repositioned as needed throughout the test so they are in the standard patient position before attempting each test item.

1. **Anterior nudge**
   (light pressure x 1 time, at sternum)

   Without warning, push participant with light pressure, once.

2. **Posterior nudge**
   (light pressure x 1 time, between scapular spines)

   Without warning, push participant with light pressure, once.

3. **Lateral nudge**
   (light pressure 1 time to dominant/stronger side, at acrominon)

   Without warning, push participant with light pressure, once only, at dominant/stronger side's acrominon.

4. **Static sitting**
   "Sit with your hands in your lap."

   Examiner times for 30 seconds.

5. **Sitting, move head side to side (nod 'no')**
   "Remain sitting steady and tall without using your hands unless you need them to help you balance. When I tell you to 'look right,' keep sitting straight, but turn your head to the right. Keep looking to the right until I tell you 'look left,' then keep sitting straight and turn your head to the left. Keep your head to the left until I tell you, 'look straight,' then keep sitting straight but return your head to the center."

   Patient needs to move head through full available ROM. Examiner scores entire sequence.

6. Sitting, eyes closed "Close your eyes and remain sitting still with your hands in your lap." Examiner times for 30 seconds.
7. Sitting, lift feet (dominant side, stronger side, least involved side only; do two repetitions) "Sit with your hands in your lap; lift your [uninvolved side] foot 1 inch off the floor, like this. [Demonstrate] Now do it one more time." Repeat so the subject lifts uninvolved, stronger, or dominant side twice.
8. Turn and pick up object from behind in preferred direction "Turn around and pick up the object that I've placed behind you." Patient may turn to their preferred direction and use their stronger/dominant/least involved hand. Examiner places object in midline, one hand's breadth [fingertip to base of palm] posterior to hips.
9. Reach forward with uninvolved hand outstretched at shoulder height "Reach with your stronger/least involved/less painful arm as far as you can while staying balanced, like this. [Demonstrate] Keep your other hand remaining in your lap." Examiner first performs movement passively to assess ROM. Patient must move through full available ROM or until abdomen contacts anterior thighs for highest score. Use available pain free ROM. If patient has pain, and make notation in Notes/Comments box.
10. Lateral reach with hand at shoulder height (lifts and moves towards the dominant or stronger side) "Reach out to the side as far as you can. Be sure to get all your weight off the opposite side of your bottom keeping your feet on the floor, like this. [Demonstrate]" Patient must complete full, available ROM maintaining upright upper trunk and upper extremity position, with contralateral trunk shortening and clearance of contralateral ischial tuberosity and return to midline for full score. Should move to preferred side, stronger side, or least affected side.

11. Pick object up off floor

"Pick this object up off the floor."

Examiner places object between patient's feet at level of 1st MTP joint.
Patient can use whatever hand they prefer to pick up the object.

12. Posterior scooting (2")

"Now, move backward 2 inches. Try not to use your hands, if you can."

Patient needs to move full 2 inches. Use tape measure to verify 2 inches.

13. Anterior scooting (2")

"Move forward 2 inches towards the edge of the bed without using your hands, if possible."

Use tape measure to verify 2 inches. Patient needs to move full 2 inches.

14. Lateral scooting (2")

(scored once to preferred direction)

"Move sideways 2 inches without your hands, and remember to try not to use your hands."
Patient needs to move the full 2 inches; use the tape measure to verify.

FUNCTION IN SITTING TEST (FIST) RESULTS

FIST Test Item ½ femur on surface; hips & knees flexed to 90° = Used seat/stool for positioning & foot support		Date:	Date:	Date:
Randomly Administered Once	**Anterior Nudge**: superior sternum			
	Posterior Nudge: between scapular spines			
	Lateral Nudge: to dominant side at acromion			
Static sitting: 30 seconds				
Sitting, shake 'no': left and right				
Sitting, eyes closed: 30 seconds				
Sitting, lift foot: dominant side, lift foot 1 inch twice				
Pick up object from behind: object at midline, hands breadth posterior				
Forward reach: use dominant arm, must complete full motion				
Lateral reach: use dominant arm, clear opposite ischial tuberosity				
Pick up object from floor: from between feet				
Posterior scooting: move backwards 2 inches				
Anterior scooting: move forward 2 inches				
Lateral scooting: move to dominant side 2 inches				
	TOTAL	/ 56	/ 56	/ 56
	Administered by:			
Notes/comments:				

Scoring Key:
4 = Independent (completes task independently & successfully)
3 = Verbal cues/increased time (completes task independently & successfully and only needs more time/cues)
2 = Upper extremity support (must use UE for support or assistance to complete successfully)
1 = Needs assistance (unable to complete w/o physical assist; document level: min, mod, max)
0 = Dependent (requires complete physical assist; unable to complete successfully even w/physical assist)

Lower Extremity Functional Scale (LEFS)

TEST NAME	**Lower Extremity Functional Scale (LEFS)**
CATEGORY	Functional mobility, ROM, Strength, ADL's.
EQUIPMENT NEED	Questionnaire
TIME TO ADMINISTER	5 min.
TEST INSTRUCTIONS	The individual fills out the questionnaire
HOW TO SCORE TOOL	Patients are provided with a 20 item instrument on paper and instructed to indicate their current level of difficulty with each activity. Scoring scale of 0-80 points All 20 items are scored with a maximum score 4 for each item. The columns of the scale are summed to obtain a final score
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	LEFS scores can be used to predict functional recovery after surgery with rapid improvements 7-8 weeks post with slower improvements after. Improvement adheres to bone and soft tissue healing as well as a regain of muscle inhibition secondary to decreased pain and swelling.
MDC/MCID (clinical significance)	MDC: *ACL reconstruction: 8.7 points *Various lower extremity injuries: 9 points *Lower extremity osteoarthritis: 9 points *Hip impairment: 7 points *Hip osteoarthritis: 9 points *TKA and THA: 9 points MCID *ACL reconstruction: 9 points *Various lower extremity injuries: 9 points *Hip impairment: 6 points

	*Hip osteoarthritis: 9.9 points *TKA and THA: 9 points
VALIDITY/RELIABILITY	Validity THA *Strong concurrent validity between the ASAP (Activity Scale for Arthroplasty Patients) (r=0.77) Ankle Fractures *Excellent concurrent validity between the Olerud-Mo Ankle Score at short and medium term follow-ups (r=0.80 and 0.87) respectively. Stroke *Adequate to excellent correlation between short form 36 function scale, BERG, 6MWT and TUG, (r=0.40 and 0.71)
PATIENT COPY	Yes, questionnaire
RESOURCE	Rehabmeasures.org

BJC Home Care Services
BJC HealthCare

LOWER EXTREMITY FUNCTIONAL SCALE

Patient's Name: _____ Date: _____

We are interested in knowing whether you are having any difficulty at all with the activities listed below because of your lower limb problem for which you are currently seeking attention. Please provide an answer for each activity.

Today, do you or would you have any difficulty at all with:

ACTIVITIES	Extreme Difficulty or unable to perform activity	Quite a bit of difficulty	Moderate Difficulty	A little bit of Difficulty	No Difficulty
a. Any of your usual work, housework or school activities	0	1	2	3	4
b. Your usual hobbies, recreational or sporting activities	0	1	2	3	4
c. Getting into or out of the bath	0	1	2	3	4
d. Walking between rooms	0	1	2	3	4
e. Putting on your shoes or socks	0	1	2	3	4
f. Squatting	0	1	2	3	4
g. Lifting an object, like a bag of groceries from the floor	0	1	2	3	4
h. Performing light activities around your home	0	1	2	3	4
i. Performing heavy activities around your home	0	1	2	3	4
j. Getting into or out of a car	0	1	2	3	4
k. Walking 2 blocks	0	1	2	3	4
l. Walking a mile	0	1	2	3	4
m. Going up or down 10 stairs (about 1 flight of stairs)	0	1	2	3	4
n. Standing for 1 hour	0	1	2	3	4
o. Sitting for 1 hour	0	1	2	3	4
p. Running on even ground	0	1	2	3	4
q. Running on uneven ground	0	1	2	3	4
r. Making sharp turns while running fast	0	1	2	3	4
s. Hopping	0	1	2	3	4
t. Rolling over in bed	0	1	2	3	4
Column Totals:	0	1	2	3	4

SCORE:_____/80

Modified Oswestry Low Back Pain Disability Index (ODI)

TEST NAME	**Modified Oswestry Low Back Pain Disability Index (ODI)**
CATEGORY	ADL's/Function: The ODI is a disease-specific disability measure used to establish a level of disability, state a patient's acuity status, and monitor change over time.
EQUIPMENT NEED	Questionnaire
TIME TO ADMINISTER	<10 min. 5 min. to complete and 1 min. to score.
TEST INSTRUCTIONS	Ask patient/subject to fill out the questionnaire
HOW TO SCORE TOOL	Questions are scored on a vertical scale of 0-5. Scores are totaled and multiplied by 2. Divide the number of sections answered multiplied by 10. (score___x2)/(___sections x 10) = _____% ADL If all 10 questions are answered you can simply double the total score for the percentage.
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	A score of 22% or more is considered significant activities of daily living disability. 0-20%: minimal disability: The patient can cope with most living activities. Usually no treatment is indicated apart from advice on lifting, sitting and exercise. 21-40%: moderate disability: The patient experiences more pain and difficulty with sitting, lifting and standing. Travel and social life are more difficult and they may be disabled from work. Personal care, sexual activity and sleeping are note grossly affected and the patient can usually manage by convservative means. 41-60% severe disability: Pain remains the main problem in this group but activities of daily living are affected. These patients require a detailed investigation.

	61-80% crippled: Back pain impinges on all aspects of the patients life. Positive intervention is required. 81-100% bedbound or exaggerated symptoms
MDC/MCID (clinical significance)	MDC is 10% points (Change of less than that may be attributed to error in measurement) MCID is 8-12 percentage points
VALIDITY/RELIABILITY	Validity Construct validity r=.51 in patients with LBP with the Roland Morris disability Scale Reliability Test-retest reliability (ICC= 0.83 -0.94) over 1-14 days and (ICC=.90) over 4 weeks in a group of patients judged stable.
PATIENT COPY	Questionnaire
RESOURCE	Spineline.net www.pittsburgh.va.gov/rehab/docs/PainQuestionaires.pdf Fritz JM, Irrgang JJ. A Comparison of a Modified Oswestry Disability Questionnaire and the Quebec Back Pain Disability Scale. Phys Ther 2001; 81:776-788. Fairbank JC, Pynsent PB. The Oswestry Disability Index. Spine 2000 Nov 15;25(22):2940-52. Davidson M and Keating J. A Comparison of Five Low Back Pain Disability Questionnaires: Reliability and Responsiveness. Phys Ther 2002;82:8-24.

Name_____ Date_____

Modified Oswestry Low Back Pain Questionnaire

This questionnaire is designed to enable us to understand how much you low back pain has affected your ability to manage your everyday activities. Please answer each section by marking in each section **one circle** that most applies to you. We realize that you may feel that more than one statement may relate to you, but please **just mark the circle that most closely describes your problem.**

Section 1 - Pain Intensity
O The pain comes and goes and is very mild.
O The pain is mild and does not vary much.
O The pain comes and goes and is moderate.
O The pain is moderate and does not vary much.

O The pain comes and goes and is severe.
O The pain is severe and does not vary much.

Section 2 - Personal Care
O I do not have to change my way of washing or dressing to avoid pain.
O I do not normally change my way of washing or dressing even though it causes me pain.
O Washing and dressing increase the pain, but I manage not to change my way of doing it.
O Washing and dressing increases the pain and I find it necessary to change my way of doing it.

O Because of the pain I am unable to do some washing and dressing without help.
O Because of the pain I am unable to do any washing and dressing without help.

Section 3 - Lifting (skip if you have not attempted lifting since the onset of your low back pain)
O I can lift heavy weights without extra low back pain.
O I can lift heavy weights but it causes extra pain.

O Pain prevents me lifting heavy weights off the floor.
O Pain prevents me lifting heavy weights off the floor, but I can manage if they are conveniently positioned, e.g. on a table.
O Pain prevents me lifting heavy weights but I can manage light to medium weights if they are conveniently positioned.
O I can only lift light weights at the most.

Section 4 - Walking
O I have no pain walking.
O I have some pain on walking, but I can still walk my required to normal distances.

O Pain prevents me from walking long distances.
O Pain prevents me from walking intermediate distances.
O Pain prevents me from walking even short distances.
O Pain prevents me from walking at all.

Section 5 - Sitting
O Sitting does not cause me any pain.
O I can sit as long as I need provided I have my choice of sitting surfaces.

O Pain prevents me from sitting more than 1 hour.
O Pain prevents me from sitting more than 1/2 hour.
O Pain prevents me from sitting more than 10 minutes.
O Pain prevents me from sitting at all.

Section 6 - Standing
O I can stand as long as I want without pain.
O I have some pain while standing, but it does not increase with time.

O I cannot stand for longer than 1 hour without increasing pain.
O I cannot stand for longer than 1/2 hour without increasing pain.
O I cannot stand for longer than 10 minutes without increasing pain.

O I avoid standing because it increases the pain immediately.

Section 7 - Sleeping
O I have no pain while in bed.
O I have pain in bed, but it does not prevent me from sleeping well.

O Because of pain I sleep only 3/4 of normal time.
O Because of pain I sleep only 1/2 of normal time.
O Because of pain I sleep only 1/4 of normal time.
O Pain prevents me from sleeping at all.

Section 8 - Social Life
O My social life is normal and gives me no pain.
O My social life in normal, but increases the degree of pain.
O Pain prevents me from participating in more energetic activities e.g. sports, dancing.
O Pain prevents me from going out very often.
O Pain has restricted my social life to my home.
O I hardly have any social life because of pain.

Section 9 - Traveling
O I get no pain while traveling.
O I get some pain while traveling, but none of my usual forms of travel make it any worse.
O I get some pain while traveling, but it does not compel me to seek alternative forms of travel.

O I get extra pain while traveling that requires me to seek alternative forms of travel.
O Pain restricts all forms of travel.
O Pain prevents all forms of travel except that done lying down.

Section 10 - Employment/Homemaking
O My normal job/homemaking duties do not cause pain.
O My normal job/homemaking duties cause me extra pain, but I can still perform all that is required of me.
O I can perform most of my job/homemaking duties, but pain prevents me from performing more

physically stressful activities e.g. lifting, vacuuming, etc.
O Pain prevents me from doing anything but light duties.
O Pain prevents me from doing even light duties.
O Pain prevents me from performing any job or homemaking chore.

SCORE_____

Dynamic Gait Index (DGI)

TEST NAME	DYNAMIC GAIT INDEX
CATEGORY	BALANCE WITH GAIT ACTIVITIES
EQUIPMENT NEED	SHOE BOX, 2 OBSTACLES (SAME SIZE), STEPS, 20' PATH
TIME TO ADMINISTER	10 TO 15 MINUTES
TEST INSTRUCTIONS	SEE ATTACHED
HOW TO SCORE TOOL	BASED ON 4 POINT SCALE: 3: NO DYSFUNCTION; 2: MINIMAL IMPAIRMENT; 1: MODERATE IMPAIRMENT; 0: SEVERE IMPAIRMENT. IF PT USES AN ASSISTIVE DEVICE: MAX SOCRE IS 19
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	<20/24: PREDICTIVE OF FALLS IN EDLERLY AND PTS WITH VESTIBULAR DISORDERS FOR 4 ITEMS: < 10 IS FALL RISK, <12/12: BALANCE ISSUE 8 ITEMS: 20-39 YRS: 24 40-59 YRS: 23.9 60-69 YRS: 23.2 70-79 YRS: 22
MDC/MCID (clinical significance)	MDC: ACUTE CVA: 4, PARKINSONS AND THE ELDERLY: 2.9, AND VESTIBULAR: 3.2 OR 4
VALIDITY/RELIABILITY	RELIABLE FOR PTS WITH MS, PARKINSONS, STROKE AND VESTIBULAR DYSFUNCTION AND COMMUNITY DWELLING OLDER ADULTS WITH BASELINE IMPAIRMENT VALIDITY: CONCURRENT WITH BERG FOR PTS WITH CENTRAL/PERFIPHERAL VESTIBULAR DISORDERS PERSON WHO SCORES 19/24 HAS A 28% PROBABILITY OF FALLING; 24/24: 6% CHANCE AND 0/24: 100% > 22/24: SAFE AMBULATORS
PATIENT COPY	NO
RESOURCE	HUANG 2011, HALL 2006, REISLEY 2003, ROMERO 2011 HONSDOTTIR 2007, McCONVEY 2005, HERMAN 2008, MEDLEY 2006

Dynamic Gait Index (original 8-item test)

Modified DGI (m-DGI)

The Modified DGI uses only the first four of the 8 items in the original DGI.

"The clinical psychometric properties of the 4-item DGI were equivalent or superior to those of the 8-item test."

Marchetti G. et. al. (2006) Construction and Validation of the 4-Item Dynamic Gait Index. PTJ 86:12 1651-1660

Description:

Developed to assess the likelihood of falling in older adults. Designed to test eight facets of gait.

Equipment needed: Box (Shoebox), Cones (2), Stairs, 20' walkway, 15" wide

Completion:

Time: 15 minutes

Scoring: A four-point ordinal scale, ranging from 0-3. "0" indicates the lowest level of function and "3" the highest level of function.
Total Score = 24

Interpretation: < 19/24 = predictive of falls risk in community dwelling elderly

1. Gait level surface _____

Instructions: Walk at your normal speed from here to the next mark (20')

Grading: Mark the lowest category that applies.

(3) Normal: Walks 20', no assistive devices, good sped, no evidence for imbalance, normal gait pattern
(2) Mild Impairment: Walks 20', uses assistive devices, slower speed, mild gait deviations.
(1) Moderate Impairment: Walks 20', slow speed, abnormal gait pattern, evidence for imbalance.
(0) Severe Impairment: Cannot walk 20' without assistance, severe gait deviations or imbalance.

2. Change in gait speed _____

Instructions: Begin walking at your normal pace (for 5'), when I tell you "go," walk as fast as you can (for 5'). When I tell you "slow," walk as slowly as you can (for 5').

Grading: Mark the lowest category that applies.

(3) Normal: Able to smoothly change walking speed without loss of balance or gait deviation. Shows a significant difference in walking speeds between normal, fast and slow speeds.
(2) Mild Impairment: Is able to change speed but demonstrates mild gait deviations, or not gait deviations but unable to achieve a significant change in velocity, or uses an assistive device.
(1) Moderate Impairment: Makes only minor adjustments to walking speed, or accomplishes a change in speed with significant gait deviations, or changes speed but has significant gait deviations, or changes speed but loses balance but is able to recover and continue walking.
(0) Severe Impairment: Cannot change speeds, or loses balance and has to reach for wall or be caught.

3. Gait with horizontal head turns _____

Instructions: Begin walking at your normal pace. When I tell you to "look right," keep walking straight, but turn your head to the right. Keep looking to the right until I tell you, "look left," then keep walking straight and turn your head to the left. Keep your head to the left until I tell you "look straight," then keep walking straight, but return your head to the center.

Grading: Mark the lowest category that applies.

(3) Normal: Performs head turns smoothly with no change in gait.
(2) Mild Impairment: Performs head turns smoothly with slight change in gait velocity, i.e., minor disruption to smooth gait path or uses walking aid.
(1) Moderate Impairment: Performs head turns with moderate change in gait velocity, slows down, staggers but recovers, can continue to walk.
(0) Severe Impairment: Performs task with severe disruption of gait, i.e., staggers outside 15" path, loses balance, stops, reaches for wall.

4. Gait with vertical head turns _____

Instructions: Begin walking at your normal pace. When I tell you to "look up," keep walking straight, but tip your head up. Keep looking up until I tell you, "look down," then keep walking straight and tip your head down. Keep your head down until I tell you "look straight," then keep walking straight, but return your head to the center.
Grading: Mark the lowest category that applies.
(3) Normal: Performs head turns smoothly with no change in gait.
(2) Mild Impairment: Performs head turns smoothly with slight change in gait velocity, i.e., minor disruption to smooth gait path or uses walking aid.
(1) Moderate Impairment: Performs head turns with moderate change in gait velocity, slows down, staggers but recovers, can continue to walk.
(0) Severe Impairment: Performs task with severe disruption of gait, i.e., staggers outside 15" path, loses balance, stops, reaches for wall.

5. Gait and pivot turn _____
Instructions: Begin walking at your normal pace. When I tell you, "turn and stop," turn as quickly as you can to face the opposite direction and stop.
Grading: Mark the lowest category that applies.
(3) Normal: Pivot turns safely within 3 seconds and stops quickly with no loss of balance.
(2) Mild Impairment: Pivot turns safely in > 3 seconds and stops with no loss of balance.
(1) Moderate Impairment: Turns slowly, requires verbal cueing, requires several small steps to catch balance following turn and stop.
(0) Severe Impairment: Cannot turn safely, requires assistance to turn and stop.

6. Step over obstacle ____
Instructions: Begin walking at your normal speed. When you come to the shoebox, step over it, not around it, and keep walking.
Grading: Mark the lowest category that applies.
(3) Normal: Is able to step over the box without changing gait speed, no evidence of imbalance.
(2) Mild Impairment: Is able to step over box, but must slow down and adjust steps to clear box safely.
(1) Moderate Impairment: Is able to step over box but must stop, then step over. May require verbal cueing.
(0) Severe Impairment: Cannot perform without assistance.

7. Step around obstacles _____
Instructions: Begin walking at normal speed. When you come to the first cone (about 6' away), walk around the right side of it. When you come to the second cone (6' past first cone), walk around it to the left.
Grading: Mark the lowest category that applies.
(3) Normal: Is able to walk around cones safely without changing gait speed; no evidence of imbalance.
(2) Mild Impairment: Is able to step around both cones, but must slow down and adjust steps to clear cones.
(1) Moderate Impairment: Is able to clear cones but must significantly slow, speed to accomplish task, or requires verbal cueing.
(0) Severe Impairment: Unable to clear cones, walks into one or both cones, or requires physical assistance.

8. Steps _____
Instructions: Walk up these stairs as you would at home, i.e., using the railing if necessary. At the top, turn around and walk down.
Grading: Mark the lowest category that applies.
(3) Normal: Alternating feet, no rail.
(2) Mild Impairment: Alternating feet, must use rail.
(1) Moderate Impairment: Two feet to a stair, must use rail.
(0) Severe Impairment: Cannot do safely.

TOTAL SCORE: ___ / 24

References:
1 Herdman SJ. ***Vestibular Rehabilitation***. 2nd ed. Philadelphia, PA: F.A.Davis Co; 2000.
2 Shumway-Cook A, Woollacott M. *Motor Control Theory and Applications*, Williams and Wilkins Baltimore, 1995: 323-324

Timed Up and Go (TUG)

TEST NAME	**Timed Up and Go (TUG)**
CATEGORY	Gait/balance
EQUIPMENT NEED	Stopwatch, standard arm chair, tape measure
TIME TO ADMINISTER	<5 min.
TEST INSTRUCTIONS	Stand up from the chair, walk to the line on the floor, turn around, walk back to the chair turn around and sit down.
HOW TO SCORE TOOL	2 attempts (one to practice) , must use same assistive device.
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	Less than 10 seconds (High mobility) (1) 10-19 seconds (typical mobility) (2) 20-29 seconds (Slower mobility) (3) 30+ seconds (diminished mobility) (4) Unable (5)
MDC/MCID (clinical significance)	MDC Alzheimers 4.09 sec Chronic stroke 2.9 sec. Parkinsons 3.5, 4.85, 11 seconds MCID Not established
VALIDITY/RELIABILITY	Validity Elderly adults *excellent correlation between TUG and BERG (r=0.81) *excellent correlation between TUG and gait speed (r=0.61) *excellent correlation between TUG and Barthel Index of ADL (r= 0.78) *excellent correlation between TUG and Functional gait assessment (r=0.84)

	Osteoarthritis *excellent correlation between the TUG and Kellengren-Lawrence radiological stages (r=0.628) Parkinsons *Significant correlation between TUG and BERG (r=0.47) Stroke *excellent correlation between TUG And 6MWT (r=0.92) Reliability Test-Retest Reliability *Alzheimers: excellent (ICC=0.987) *Community dwelling elderly: excellent(ICC=0.97) *osteoarthritis: excellent (ICC=0.75) *Parkinsons:excellent (ICC=0.80) *Stroke: excellent (ICC=0.96) *Traumatic Brain Injury: excellent (ICC=0.86) *Elderly adults: adequate (ICC=0.56) Interrater/Intrarater Reliability *Community dwelling elderly: inter-rater (ICC=0.99) *Parkinsons: inter-rater (ICC=0.99), intra-rater (ICC=0.98) *Osteroarthritis: inter-rater (ICC=0.87)
PATIENT COPY	N/A
RESOURCE	Rehabmeasures.org

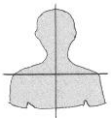
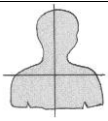
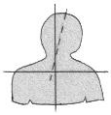
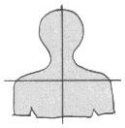
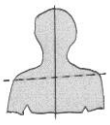
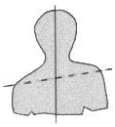
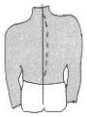
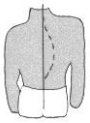
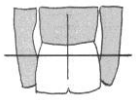
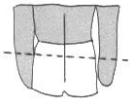
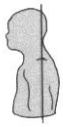
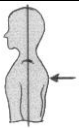
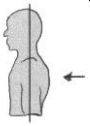
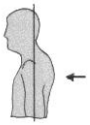
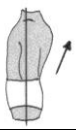
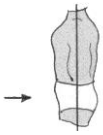
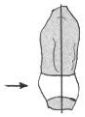
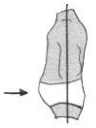
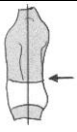
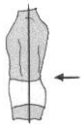
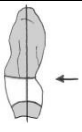
Simple Auditory Screening

TEST NAME	**Simple Auditory Screening**
CATEGORY	Hearing
EQUIPMENT NEED	None
TIME TO ADMINISTER	1-3 minutes
TEST INSTRUCTIONS	Therapists holds paper covering mouth and says ‘sa se si so su’ clearly. Patient then repeats 5 sounds.
HOW TO SCORE TOOL	Count number of correct responses
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	If 4 or fewer correct = hearing loss
MDC/MCID (clinical significance)	unknown
VALIDITY/RELIABILITY	No
PATIENT COPY	No
RESOURCE	Washington University Research

Posture Assessment

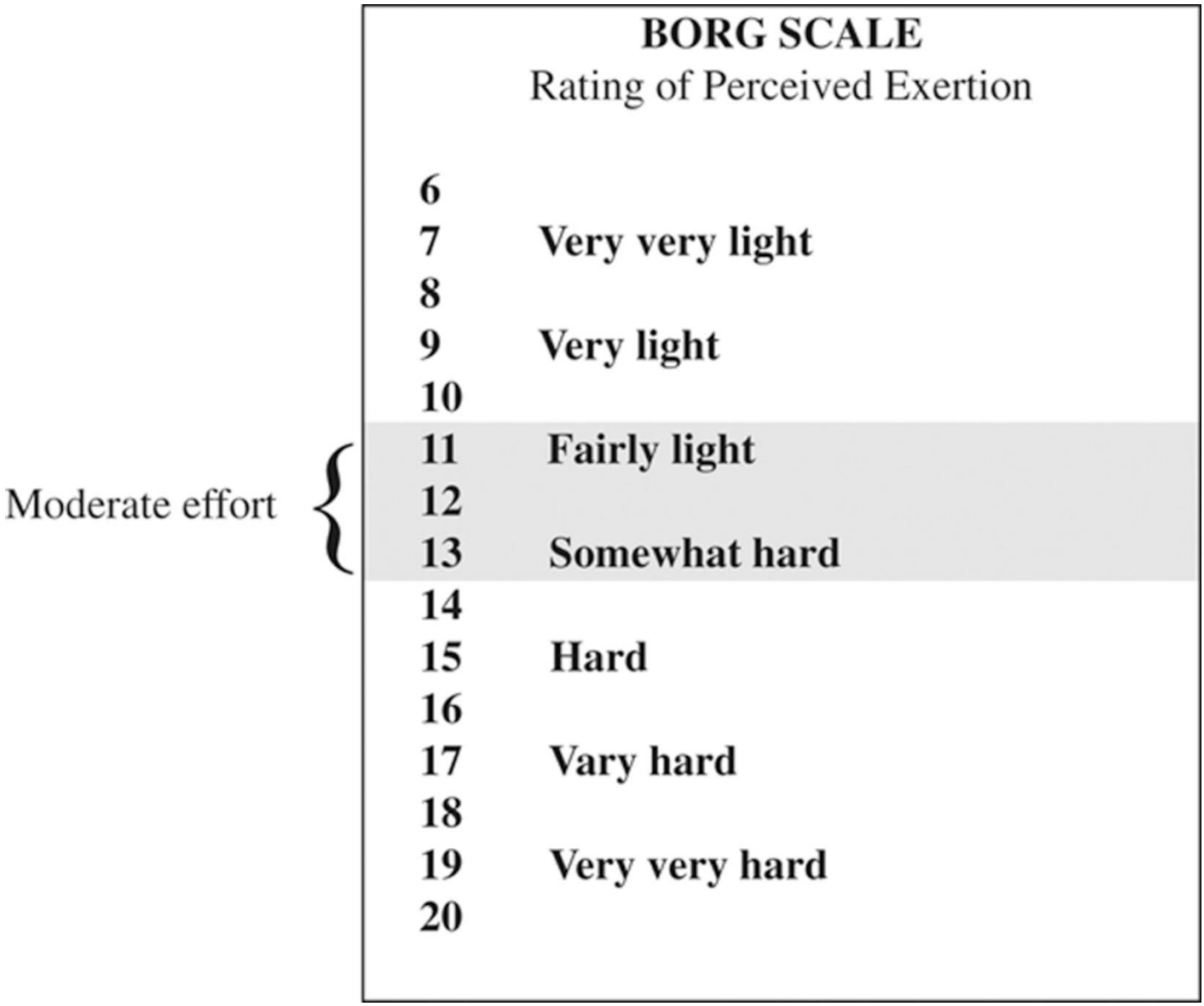
TEST NAME	**Postural Assessment (based on Reedco)**
CATEGORY	Posture
EQUIPMENT NEED	None
TIME TO ADMINISTER	3 minutes
TEST INSTRUCTIONS	Observe person posteriorly and laterally in standing position.
HOW TO SCORE TOOL	See score sheet. Can score in either direction (ie, in lower back section if has very flat back score accordingly from normal). Score between 0-10 in each category.
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	Best score 100. One article suggests a score of less than 59% is poor posture. Good to show postural deficits.
MDC/MCID (clinical significance)	An improvement in score is an improvement in posture but no studies.
VALIDITY/RELIABILITY	Maybe, one article showed overall reliability but specific scores not reliable
PATIENT COPY	no
RESOURCE	faculty.ksu.edu.sa/Emad/Documents/Article%20about%20; http://journals.lww.com/jgpt/Fulltext/2005/12000/Test_Retest_and_Interrater_Reliability_of_Two.44.aspx

Posture Evaluation

	Good – 10	Fair – 5	Poor – 0	
Head	 Head erect, gravity line passes through center	 Head twisted or turned slightly to one side	 Head twisted or turned markedly to one side	
Shoulders	 Shoulders level (horizontally)	 One shoulder slightly higher	 One shoulder markedly higher	
Spine	 Spine Straight	 Spine slightly curved laterally	 Spine markedly curved laterally	
Hips	 Hips level (horizontally)	 One hip slightly higher	 One hip markedly higher	
Ankles	 Feet pointed straight ahead	 Feet pointed out	 Feet pointed out markedly, ankles sag in pronation	
Neck	 Neck erect, chin in, head directly above shoulders	 Neck slightly forward, chin slightly out	 Neck markedly forward, chin markedly out	
Upper Back	 Upper back normally rounded	 Upper back slightly more rounded	 Upper back markedly rounded	
Trunk	 Trunk erect	 Trunk inclined slightly to rear	 Trunk inclined markedly to rear	
Abdomen	 Abdomen flat	 Abdomen protruding	 Abdomen protruding and sagging	
Lower Back	 Lower back normally curved	 Lower back slightly hollow	 Lower back markedly hollow	
			Final Score ≡	

Borg Rate of Perceived Exertion (RPE)

TEST NAME	**BORG RPE SCALE**
CATEGORY	CARDIOPULMONARY / PRECEIVED EXERTION
EQUIPMENT NEED	SEE ATTACHED
TIME TO ADMINISTER	ONE MINUTE
TEST INSTRUCTIONS	SEE ATTACHED
HOW TO SCORE TOOL	6 TO 20
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	SEE SCALE AND IMPLICATIONS OF LEVEL OF EFFORT AND PHYSICAL AND SHORTNESS OF BREATH
MDC/MCID (clinical significance)	NOT ESTABLISHED
VALIDITY/RELIABILITY	CORRELATIONS BETWEEN RATINGS AND HEART RATE RANGING FROM 0.80-0.90 HAVE BEEN FOUND
PATIENT COPY	YES
RESOURCE	BORG, G.(1982) PSYCHOPHYSICAL BASES OF PRECEIVED EXERTION. MEDICINE AND SCIENCE AND 1998



BJC Home Care Services
BJC HealthCare

Dyspnea Scale

TEST NAME	**Dyspnea Levels (Ventilatory Response Index)**
CATEGORY	Pulmonary Test
EQUIPMENT NEED	Stopwatch
TIME TO ADMINISTER	15 seconds
TEST INSTRUCTIONS	Inhale normally and count to 15 over a period of about 8 seconds (may demonstrate)
HOW TO SCORE TOOL	How many additional breaths it takes to count to 15
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	Exercise should not elicit more than a 2. If does decrease activity. Use in conjunction w/ O2 sat reading.
MDC/MCID (clinical significance)	unknown
VALIDITY/RELIABILITY	In a study by Sadowsky: "Concurrent validity was determined for the ventilatory response index (VRI) by assessing its correlation with oxygen consumption (VO2), heart rate (HR), venous lactate concentration ([La]), and rating of perceived exertion (RPE, Borg's 6-20 scale) responses to speed- and grade-incremented treadmill tests.
PATIENT COPY	Yes, could be helpful for patient who can use for self monitoring
RESOURCE	http://geriatrictoolkit.missouri.edu; **CRITERION-RELATED VALIDATION OF THE VENTILATORY RESPONSE INDEX FOR TREADMILL EXERCISE** H. Steven Sadowsky PT, RRT, MS, CCS **Journal of Cardiopulmonary Rehabilitation & Prevention** October 2005 Volume 25 Number 5 Pages 307 - 307 - See more at: http://www.nursingcenter.com/lnc/journalarticle?Article_ID=605748#sthash.gBsn4MG9.dpuf

Dyspnea Levels

How short of breath? **(inhale normally, and count to 15 over a period of about 8 seconds)**	
0	**Able to count to 15 easily without taking any additional breath**
1	**Able to count to 15 but must take one additional breath**
2	**Must take 2 additional breaths to count to 15**
3	**Must take 3 additional breaths to count to 15**
4	**Unable to count**

Lower Extremities Amputation Program (LEAP)

TEST NAME	**LEAP (LOWER EXTREMITIES AMPUATION PREVENTION)**
CATEGORY	SENSATION
EQUIPMENT NEED	MONIFILIMENT
TIME TO ADMINISTER	5 MINUTES
TEST INSTRUCTIONS	SEE ATTACHED
HOW TO SCORE TOOL	DOCUMENTION OF SENSATION
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	DOCUMENTATION OF SAFETY IN SENSATION AND FOOT WEAR AND NEUROPATHY
MDC/MCID (clinical significance)	
VALIDITY/RELIABILITY	
PATIENT COPY	NO
RESOURCE	

To order monofilaments for LEAP:

http://www.hrsa.gov/LEAPOrder/

Self Testing Instructions

(You may screen your own feet or ask a relative, friend, or neighbor to do it for you)

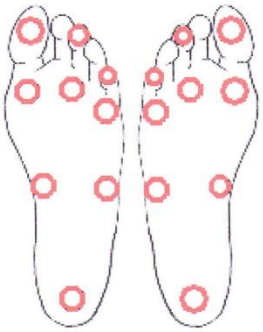
Step 1

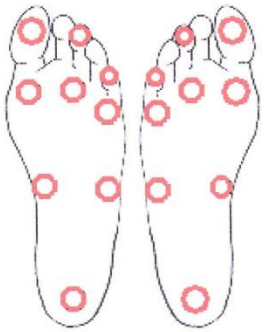
Step 2

1. Hold the red filament by the paper handle, as shown in Step1.
2. Use a smooth motion to touch the filament to the skin on your foot. Touch the filament along the side of and NOT directly on an ulcer, callous, or scar. Touch the filament to your skin for 1-2 seconds. Push hard enough to make the filament bend as shown in step 2.
3. Touch the filament to both of your feet in the sites circled on the drawing below.
4. Place a (+) in the circle if you can feel the filament at that site and a (-) if you cannot feel the filament at that site.
5. The filament is reusable. After use, wipe with an alcohol swab.

Foot Screen Test Sites

If you have a (-) in any circle, take this form to your health care provider as soon as possible.





Date _____

Date _____

Place Filament Here

Five Times Sit to Stand (FTSTS)

TEST NAME	5 TIMES SIT TO STAND TEST (FTSTS)
CATEGORY	LE STRENGTH (KNEE EXTENSORS & BACK MUSCLES). ALSO FUNC ASSESSMENT
EQUIPMENT NEED	STANDARD HEIGHT CHAIR 17'' (43-45 CM) PREFERABLY WITHOUT ARMS BUT THE ARMREST CAN BE USED IF NEEDED. STOPWATCH
TIME TO ADMINISTER	3 TO 5 MINUTES
TEST INSTRUCTIONS	CROSS ARMS ON CHEST, IF PT REFUSES, DOCUMENT THAT ARMS WERE USED. MOVE TO FRONT OF CHAIR, TIME HOW LONG IT TAKES TO STAND UP FROM CHAIR. SAY GO AND HAVE PT STAND UP STRAIGHT & AS QUICKLY AS POSSIBLE & DO 5 TIMES WITHOUT STOPPING IN BETWEEN. PT HAS TO TOUCH CHAIR EVERYTIME THEY SIT DOWN.
HOW TO SCORE TOOL	START STOPWATCH WHEN YOU SAY GO, STOP WHEN PT HAS STOOD THE 5TH TIME
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	COMMUNITY DWELLING MEN: 71-79: 13.2 SECONDS & 80+: 15.9 SECONDS COMMUNITY DWELLING WOMEN: 14.4 SECONDS & 16.1 SECONDS ALL 19-49: 6.2 SECONDS, 50-59: 7.1 SECONDS BEST WHEN USING A 10 SECOND CUT OFF SCORE FOR THOSE <60 AND 14 SECONDS > 60
MDC/MCID (clinical significance)	HEALTHY ADULTS: 4.2 SECONDS & CHRONIC CVA: 3.6 SECONDS VESTIBULAR + OR > 2.3 SECONDS
VALIDITY/RELIABILITY	.64 TO .96 (BOHANNON 2006)
PATIENT COPY	NO
RESOURCE	BOHANNON: PHYSIOTHER THEORY PRACTICE 2008 NOV-SEC

30 second Sit to Stand

TEST NAME	**30 SECOND CHAIR STAND TEST**
CATEGORY	LE STRENGTH / FUNCTIONAL MOBILITY
EQUIPMENT NEED	CHAIR: 17'' SEAT, STOPWATCH AND WALL SPACE
TIME TO ADMINISTER	5 MINUTES
TEST INSTRUCTIONS	PT SITS IN MIDDLE OF CHAIR, BACK STRAIGHT, FEET SHOULDER WIDTH, WITH ONE FOOT SLIGHTLY IN FRONT TO ASS'T IN BALANCE. ARMS CROSSED ON CHEST. DEMONSTRATE TASK BOTH SLOWLY AND QUICKLY. PT MAY PRACTICE. SIGNAL "GO" AND PT MUST FULL RISE TO STAND AND RETURN TO SEAT. ENCOURAGE AS MANY FULL STANDS IN 30 SECONDS AS POSSIBLE AND MUST FULLY SIT BETW EACH STAND.
HOW TO SCORE TOOL	THE SCORE IS THE TOTAL # OF STANDS IN 30 SECONDS (MORE THAN HALFWAY UP AT END OF 30 SECONDS COUNTS AS FULL STAND. INCORRECTLY EXECUTED STANDS DO NOT COUNT. SCORE OF LESS THEN 8 STANDS IS ASSOCIATED WITH LOWER LEVELS OF FUNCTIONAL ABILITY. IF PT MUST USE ARMS, SCORE IS 0
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	MODERATELY ACTIVE ADULT: AGE: 60 TO 64 WOMEN: 12-17 MEN: 14-19 65 to 69 11-16 12-18 70 to 74 10-15 12-17 75 to 79 10-15 11-17 80 to 84 9-14 10-15 85 to 89 8-13 8-14 90 to 95 4-11 7-12
MDC/MCID (clinical	MDC: NOT ESTABLISTED YET

significance)	MCID: 2.0 TO 2.6 : HIP OA; COMMUNITY DWELLING ELDERLY; 60-69 YRS; 2.4, 70-79: 3 AND 80-89 3.6 AND
VALIDITY/RELIABILITY	RELIABILITY: 0.90 AND RETEST: 0.96
PATIENT COPY	NO
RESOURCE	HOME HEALTH SECTION TOOL BOX

30 second Chair Stand Test

(Rikli, Jones 1999)

Chair height: 17" (43 cm), placed against wall for stability
Starting position: sitting in the middle of the chair, back straight, arms crossed over chest, feet flat on floor.

1. Take resting vital signs.
2. Demonstrate the movement, first slowly, then quickly.
3. Have the patient/client practice one or two repetitions to ensure proper form, and adequate balance
4. On the signal "go" the patient/client rises to a full stand, then returns to a fully seated position, as many times as possible in 30 seconds.
5. If a person is more than half way up at the end of the 30 seconds, count it as a full stand.
6. One trial.
7. Take post exercise vital signs.
8. Document any modifications (chair height, assistance needed)

Range of scores between the 25% and 75% percentiles

Age	Number of stands – Women	Number of stands – Men
60 - 64	12 - 17	14 - 19
65 - 79	11 - 16	12 - 18
70 - 74	10 -15	12 - 17
75 - 79	10 - 15	11 - 17
80 - 84	9 - 14	10 - 15
85 - 90	8 - 13	8 - 14
90 - 95	4 - 11	7 - 12

Scores less than 8 (unassisted) stands were associated with lower levels of functional ability

Population:

- community residing older adults ages 60-94
- n = 7,183 5,048 women, 2,135 men
- years education: 14.5
- chronic conditions: 1.7
- medications: 1.6
- performed moderate exercise ≥3 times/week: 65%

Exclusion criteria:

- advised not to exercise by physician
- CHF, joint pain, chest pain, dizziness, angina during exercise
- BP > 160/100

Rikli RE, Jones CJ (1999). Functional fitness normative scores for community residing older adults ages 60-94. Journal of Aging and Physical Activity, 7, 160-179.

Lighthouse Visual Acuity

TEST NAME	**LIGHTHOUSE VISUAL ACUITY**
CATEGORY	Vision
EQUIPMENT NEED	Lighthouse Near Acuity Test Chart
TIME TO ADMINISTER	10 to 15 minutes
TEST INSTRUCTIONS	Using the Lighthouse Near Visual Acuity Card have the client hold the card (or hold steady for client if needed) at the full length of the string from the side of the eye. Ask client to start at the top and read each letter , ask client to go as far as they can.
HOW TO SCORE TOOL	49 letters or fewer correct OR tested at 20 cm indicates visual acuity problems.
SCORE VALUES/ FUNCTIONAL IMPLICATIONS	If client is unable to read all 5 letters on the top line , fold string in half and test at 20 cm. If client is unable to read any letters on top row at 20 cm , record unable to read. Knowing accurate visual acuity score will allow therapist to correctly identify how well a patient can see to complete ADLs, such as reading medication bottles.
MDC/MCID (clinical significance)	
VALIDITY/RELIABILITY	Yes
PATIENT COPY	No
RESOURCE	Rehabmeasures.org.

Example of Lighthouse Visual Acuity