SOP #2002

Berg Balance Scale / Échelle de Berg

- Always review the SOP before beginning administration of the measurement tool.
- Always read the SOP instructions verbatim to the participant.
- Never modify the procedure or instructions (a modified test is invalid/incomplete).
- Always notify the coordinator if you have any doubt or questions about the SOP.

Description

The Berg Balance Scale assesses balance and identifies fall risk. This five level (0 to 4) ordinal scale consists of 14 items and the maximum total score ranges from 0 (maximum impairment) to 56 (no impairment detected). This generic scale assesses various dimensions of balance, including ability to maintain multiple positions, automatic postural responses during changes in posture or voluntary limb movements and ability to produce effective balance and protection reactions.

Equipment



☐ 30 cm ruler	☐ Step or stool (height : 15 -19.5 cm)
☐ Stopwatch	☐ Box of tissues
☐ Chair without armrests (or adjustable plinth), 43-46 cm in height	☐ Chair with arm rests, 43-46 cm in height
☐ Gait belt	

Equipment preparation

- ☐ All equipment must be placed in the assessment room. The height of the chairs or plinth must be checked and adjusted as appropriate.

Participant preparation

- ☐ The participant must wear comfortable clothing and shoes suitable for walking.
- ☐ If the participant is wearing unsuitable shoes that could affect the assessment, the assessment may be performed barefoot, and the examiner must note this on the scoring sheet.
- ☐ Orthotics used during the test must be noted on the scoring sheet. The same orthotics must be used during subsequent visits for the same data collection.
- ☐ Walking aids are not permitted for this scale.

Examiner instructions

- ☐ The examiner must place a gait belt on the participant prior the start of the test.
- ☐ The examiner must stay close to the participant throughout the assessment to ensure safety and avoid talking to the participant during the task performance.
- ☐ The examiner rates the participant's performance on a five-level scale (0 to 4), with 0 indicating the lowest level of function and 4 indicating the highest.

Test administration

Demonstration

The examiner may do a demonstration if necessary.

Practice

No practice trials are provided for the participant.

Supplementary Instructions

- For item #11, the participant can start the task by turning in the direction of their choice.
- For items # 13 and 14, the participant can choose which lower limb they will use to perform the task.
- For all items, the participant performs the task only once. However, a second trial may be allowed if the examiner considers that the instructions seem to have been misunderstood or that performance was submaximal.

Procedure

The following section describes the instructions to be given to the participant and the scoring criteria for each item:

1) 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

2) 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.

3) 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

4) 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

5) 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

6) 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

7) 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

8) 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

9) PICK UP OBJECT FROM THE FLOOR FROM A STANDING POSITION

INSTRUCTIONS: Pick up the shoe/slipper, which is place 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

10) 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

11) 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



12) PLACE ALTERNATE FOOT ON STEP OR STOOL (Height: 15 to 20 CM – 6 to 8 INCHES) WHILE STANDING UNSUPPORTED

INSTRUCTIONS: Place each foot alternately on the step/stool. Continue until each foot has touch 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



13) 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



14) 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



Trial(s)

The scale is assessed only once.

Results

A total score out of 56 is calculated by adding the scores for the 14 items.

References

1. BOGLE THORBAHN, L.D., et R.A. NEWTON. (1996). « Use of the Berg Balance Test to Predict Falls in Elderly Persons ». Physical Therapy, 76(6) : 576-83.
2. Berg KO, Wood-Dauphinee SL, Williams JI, Maki B. Measuring balance in the elderly: validation of an instrument. Can J Public Health. 1992 Jul-Aug;83 Suppl 2:S7-11. PMID: 1468055.
3. Berg KO, Maki BE, Williams JI, Holliday PJ, Wood-Dauphinee SL. Clinical and laboratory measures of postural balance in an elderly population. Arch Phys Med Rehabil. 1992 Nov;73(11):1073-80. PMID: 1444775.
4. SHUMWAY-COOK, A., M. BALDWIN, N.L. POLISSAR et W. GRUBER. (1997). « Predicting the probability for falls in community-dwelling older adults ». Physical Therapy. 77(8) : 812-19.