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Berg balance test calculator

Calculator DiagnosisRule OutPrognosisFormulaTreatmentAlgorithm The Berg Balance Scale (BBS) is a widely used clinical test to assess balance and fall risk in elderly or frail patients. It consists of 14 tasks that evaluate a person’s ability to maintain balance while performing various activities. The scale was developed to measure balance among older people with balance impairment by assessing their performance of specific functional tasks. 1. Understand the questions: The calculator presents 14 questions, each corresponding to a specific balance task from the Berg Balance Scale. 2. Assess the patient: For each task, observe the patient’s performance and select the appropriate score from the dropdown menu: 0: Unable to perform 1: Severe impairment 2: Moderate impairment 3: Mild impairment 4: No impairment 3. Complete all questions: Ensure you’ve selected a score for all 14 tasks. 4. Calculate the score: After completing all questions, click the “Calculate Score” button at the bottom of the page.The tool will display the total Berg Balance Scale score out of 56 points. 5. Interpret the results: Below the total score, you’ll find an interpretation of the results, which provides insight into the patient’s fall risk and level of independence: 45-56: Low fall risk, mostly independent 41-44: Significant fall risk, mostly independent but requires caution 21-40: High fall risk, may require assistance with some tasks 0-20: Very high fall risk, may be wheelchair-bound or require significant assistance 6. Use the results: Based on the score and interpretation, healthcare professionals can make informed decisions about patient care, including fall prevention strategies, rehabilitation plans, or the need for assistive devices. This calculator is a tool to aid clinical decision-making and should be used by healthcare professionals familiar with the Berg Balance Scale and its limitations. The results should always be interpreted in the context of a full clinical assessment. Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution — You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. How does this Berg balance scale calculator work? This health tool is used in the clinical setting to assess balance in elderly patients and predict fall risk. The 14 item scale includes static and dynamic activities with various degrees of difficulty and different mobility requirements. The items in the Berg balance scale calculator can be found as well in the below area with instructions on how to perform each task. As a functional balance test, the BBS addresses to the following populations: ■ Brain injury; ■ Stroke; ■ Traumatic and acquired brain injury; ■ Multiple sclerosis; ■ Spinal cord injury; ■ Parkinson’s disease; ■ Osteoarthritis; ■ Orthopedic surgery; ■ Vestibular dysfunction; ■ Community dwelling elderly. While the BBS has been validated and is established as reliable measurement, there is still the concept of the ceiling and floor effect which is said to affect the reported results of the Berg scale in community dwelling older patients. When subjects score high on initial evaluations, the BBS outcome measure is compromised for the following evaluation in the case of these patients. Berg balance scale assessment instructions In order to perform the evaluation of the 14 items, the following equipment is required: 2 chairs, one with arm rests, one without arm rests, footstool, yardstick, stopwatch and a 15 ft (approx. 4.5 m) walkway. The instructions from the original study, to be used in directing the subject, are as follows: At the beginning of the balance test the subject needs to be instructed about the tasks they are to be given and they need to understand that they must try to maintain their balance during the tasks. The recommendation is to deduct points progressively in case the subject doesn’t respect the requirements (of time or distance for example), performance requires supervision or the subject uses external assistance: 1. Sitting to standing – the subject is recommended not to use hands or any other means for support; 2. Standing unsupported – no support allowed for the two minutes of the test; 3. Sitting with back unsupported but feet supported on floor or on a stool – maintain position with arms folded for 2 minutes; 4. Standing to sitting – the subject must be in standing position at the beginning; 5. Transfers – chairs need to be arranged for pivot transfer and the subject asked to transfer from one to another, alternating the departure chair, once the one with arm rests and then the one without arm rests; 6. Standing unsupported with eyes closed – maintain a still position for 10 seconds; 7. Standing unsupported with feet together – performed without any support, point deducted if support is being used; 8. Reaching forward with outstretched arm while standing – arm should be lifted at 90 degrees and the subject instructed to stretch fingers and reach forward as much as possible. Rotation of the trunk should be avoided if it occurs by asking the subject to use both arms to reach; 9. Pick up object from the floor from a standing position – the object should be placed in front of the patient’s feet; 10. Turning to look behind over left and right shoulders while standing – recommendation for the assessor to hold an object for the subject to look at when they turn around for a better twist turn; 11. Turn 360 degrees – a complete full circle turn in one direction, followed by another complete turn in the other direction; 12. Place alternate foot on step/stool while standing unsupported – continue until each foot has touched the step/stool 4 times; 13. Standing unsupported one foot in front – the recommended position is one foot directly in front of the other, if this is not possible then the foot can be placed forward ahead of the toes of the other foot at a comfortable distance; 14. Standing on one leg – maintain the position for as long as possible. Score interpretation Each item in the Berg balance test is represented by a five point ordinal scale ranging from 0 to 4 points, therefore the maximum obtainable score is 56. 0 points are awarded to answers portraying the lowest level of function while 4 points are awarded to the highest level of function. According to the original study interpretation, there are three main ranges of scores: 41 – 56, 21 – 40 and 0 – 20, increasing in lack of balance for the patient and risk of falling. There is also the addition of a cut off point at 45 suggesting that patients scoring below 45 are at greater risks of fall than patients scoring 45 or above. Therefore the following results: ■ The 45 – 56 range is associated with patients who are mostly independent in their movement and have less risk of falling. ■ The 41 – 44 range is associated with patients who are mostly independent in their movement, however, present with significant risk of falling. ■ The 21 – 40 range is associated with almost 100% fall risk while the patient at the moment may be requiring assistance in performing certain activities of daily living such as walking. ■ The 0 – 20 range is associated with almost 100% fall risk and the patient is either already wheelchair bound or may be in the near future. The Shumway-Cook prediction of fall probability (with 91% sensitivity and 82% specificity) associates the following cut-offs and rules to the BBS interpretation: history of falls and BBS