

PHYSICAL THERAPY CLINIC

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Berg Balance Test (BBT)

Description: Measure of static and dynamic balance in the adult population

Equipment: Stopwatch, chair with arm rests, measuring tape/ruler, object to pick up off of floor, step stool, gait belt

<u>Therapist Instructions</u>: Read instructions from the standardized testing material; don gait belt for safety, only use if patient is unsafe; sum all items for total

<u>Patient Instructions:</u> "The following activities will aid in the assessment of your balance, please follow the instructions. I will be here at all times to ensure your safety." [Read instructions from standardized testing material.]

Interpretation:

Table 1: Normative Values for Community-dwelling Older Adults¹

Age	Gender	Mean
60-69	Male	55
	Female	55
70-79	Male	54
	Female	53
80-89	Male	53
	Female	50

Table 2: Cut-Off Scores for Predicting Fall Risk in Older Adults

Patient Population	Cut-off Score
Retirement Home Older Adults ²	56/56 indicates functional balance; <45/56 = may be at greater fall risk
Older Adults ³	≤51/56 + fall history OR ≤42/56 no fall history predicts falls
	\leq 40 = almost 100% fall risk

Table 3: Minimal Detectable Changes (MDCs) for BBT Sub-Groups in Elderly⁴

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Berg Balance Test Initial Score	MDC	
0-24	4.6	
25-34	6.3	
35-44	4.9	
45-56	3.3	

Table 4: MDCs Varying Diagnoses

Diagnosis	MDC
Institutionalized Older Adults ⁵	8.0
Parkinsonism ⁶	5.0
Stroke – Acute ²	6.9
Stroke – Chronic ⁷	4.66

¹ Steffen, T. and Seney, M."Test-retest reliability and minimal detectable change on balance and ambulation tests, the 36-item short-form health survey, and the unified Parkinson disease rating scale in people with parkinsonism." Physical Therapy 2008 88(6): 733-746.

² Berg, K. O., Maki, B. E., et al. (1992). "Clinical and laboratory measures of postural balance in an elderly population." Arch Phys Med Rehabil 73(11): 1073-1080.

³ Shumway-Cook, A., Baldwin, M., et al. (1997). "Predicting the probability for falls in community-dwelling older adults." Physical Therapy 77(8): 812-819.

⁴ Donoghue, D. and Stokes, E. K. (2009). "How much change is true change? The minimum detectable change of the Berg Balance Scale in elderly people." J Rehabil Med 41(5): 343-346.

⁵ Stevenson, T. J. (2001). "Detecting change in patients with stroke using the Berg Balance Scale." Aust J Physiother 47(1): 29-38.

⁶ Steffen, T. and Seney, M. (2008). "Test-retest reliability and minimal detectable change on balance and ambulation tests, the 36-item short-form health survey, and the unified Parkinson disease rating scale in people with parkinsonism." Physical Therapy 88(6): 733-746.

⁷ Hiengkaew, V., Jitaree, K., et al. (2012). "Minimal detectable changes of the Berg Balance Scale, Fugl-Meyer Assessment Scale, Timed "Up & Go" Test, gait speeds, and 2-minute walk test in individuals with chronic stroke with different degrees of ankle plantarflexor tone." Arch Phys Med Rehabil 93(7): 1201-1208.