**DYNAMIC BALANCE PREDICTS WALKING SPEED AND ENDURANCE IN ADULTS WITH MULTIPLE SCLEROSIS**

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**Background:** Dynamic balance is not routinely assessed in multiple sclerosis (MS) clinical practice and may be a significant contributor to both a decline in ambulation and self-perception of walking limitation. **Objectives:** The purpose of this study was to determine whether dynamic balance impairment is predictive of walking speed, walking endurance, and self-reported limitations in walking in adults with MS. **Methods:** Seventeen adults with MS (8 male, 9 female; mean ± SD age, 47.2 ± 8.4 years) and moderate clinical disability (mean Expanded Disability Status Scale [EDSS] score, 4.2 ± 1.1; range, 3–6) were assessed on dynamic balance using the Dynamic Gait Index (DGI) and Four Square Step Test (FSST). In addition, the Timed 25-Foot Walk Test, the distance walked during the 6-Minute Walk Test, and the self-report Multiple Sclerosis Walking Scale–12 were measured. The relationship of dynamic balance impairment with walking speed, endurance, and self-reported limitations in walking was assessed by forward stepwise multiple linear regression. **Results:** Performance on the two dynamic balance measures was moderately correlated (r = −0.56, P < .05). Dynamic balance impairment was predictive of walking speed (R² = 0.67, P < .001) and walking endurance (R² = 0.51, P = .01). Of the two dynamic balance tests, the FSST was the stronger predictor of walking speed (R² = 0.62) and walking endurance (R² ≥ 0.51). Dynamic balance impairment was not predictive of self-reported limitation in walking (R² = 0.02, P = .16). **Conclusions:** These preliminary data suggest that dynamic balance impairment, as measured by the FSST, helps to predict walking speed and walking endurance. Despite the high correlations with accepted measures of ambulation in MS, dynamic balance did not correlate with self-report limitations of walking. Additional research is needed to determine whether dynamic balance training improves walking speed and endurance in adults with MS, and the factors that predict self-reported limitations in walking in adults with MS.

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