

**Table S1. Baseline characteristics of study participants**

	Mean±SE	Range
Age (y)	58.6±1.1	42-69
EDSS	4.9±0.2	3-6.5
Gender	11M/16F	NA
Duration of MS (y)	30.4±1.6	17-49
Duration of SPMS (y)	9.4±1	8-22

**Table S2. The average structural measures of brain and spinal cord in people with secondary progressive multiple sclerosis**

Brain Measures	Mean	SE	Minimum	Maximum
GMV (mm <sup>3</sup> )	416,587.7	8511.23	331,156	508,001
WMV (mm <sup>3</sup> )	431,870.9	10,179.88	316,228	509,063
Cord CSA (mm <sup>2</sup> )	69.96	1.46	54.4	87.34
Cortical Thickness (mm)	2.3	0.02	2.13	2.52
Lesion Vol. (mm <sup>3</sup> )	11,893.11	1584.8	1779	36,287

**Table S3. Relationship between longitudinal changes in the postural sway measures (RMS and Range) and structural brain measures after 2 years in people with SPMS**

	Gray Vol	White Vol	Cortical Thickness	Cord CSA	T2 Lesion
RMS_EO	0.36	-0.4	0.37	-0.72 <sup>a</sup>	-0.31
Range_EO	0.25	-0.47	0.22	-0.73 <sup>a</sup>	-0.27
RMS_EC	-0.3	-0.12	-0.31	-0.07	-0.21
Range_EC	-0.08	-0.17	-0.14	0.24	0.03
RMS_ECC	-0.22	-0.01	-0.21	0.16	-0.38
Range_ECC	-0.17	-0.37	-0.12	0.23	-0.40

Note: Data are displayed as Spearman's correlation *r* value.

Abbreviations: EO: Eyes open, EC: Eyes closed, ECC: Eyes closed with cognitive task.

<sup>a</sup>*P* < .05.