

Table S1. Dual-Task Questionnaire (DTQ) Items

DTQ

1. Need to stop an activity to talk
2. Paying attention to more than one thing at once
3. Being unaware of others speaking to you when doing another activity
4. Following or taking part in a conversation where several people are speaking at once
5. Walking deteriorating when you are talking or listening to someone
6. Busy thinking your own thoughts, so not noticing what is going on around you
7. Spilling a drink when carrying it
8. Spilling a drink when carrying it and talking at the same time
9. Bumping into people or dropping things if doing something else as well
10. Difficulty eating and watching television or listening to the radio at the same time

DTQ-Expanded

1. Walking deterioration when turning and talking
 2. Difficulty continuing to talk while walking
 3. Difficulty recalling information while walking
 4. Thoughts slowing down when doing another activity
 5. Walking deterioration when distracted by a noise (ie, airplane overhead) or object in the environment (ie, bicyclist across the street)
-

Table S2. Confidence Intervals for Ambulation Group Comparisons

Variable	Group differences		
	PDDS score 3-4 – <3	PDDS score 5-6 – <3	PDDS score 5-6 – 3-4
	Mean (95% CI)		
Age	6.93 (–2.72, 16.57)	9.96 (0.56, 19.36)	3.03 (–8.5, 14.57)
MFIS	18.36 (8.16, 28.56)	24.45 (14.74, 34.16)	6.09 (–5.97, 18.15)
<u>LMSQoL</u> scale	1.6 (–4.33, 1.12)	3.19 (0.59, 5.79)	1.59 (–1.64, 4.81)
	Median (95% CI)		
Years after dx	2 (–2, 6)	6 (0, 12)	3 (–2, 11)
FES-I	6 (3, 10)	18 (14, 23)	12 (6, 18)
MSWS-12	26.19 (19.05, 33.3)	61.91 (52.28 to 71.43)	35.71 (23.81 to 50)
DTQ	–0.01 (–0.4, 0.1)	–0.3 (–0.7, 0)	–0.1 (–0.6, 0.3)
DTQ-E	–0.02 (–0.47, 0)	–0.47 (–0.8, –0.13)	–0.2 (–0.667, 0.2)
SECM	–2.93 (–4.14, –1.71)	–5.43 (–6.29, –4.43)	–2.29 (–3.89, –0.86)

CI, confidence interval; DTQ, dual-task questionnaire; DTQ-E, dual-task questionnaire expanded; dx, diagnosis; FES-I, Falls Efficacy Scale–International; LMSQoL, Leeds Multiple Sclerosis Quality of Life; MFIS, Modified Fatigue Impact Scale; MSWS-12, Multiple Sclerosis Walking Scale-12; PDDS, Patient-Determined Disease Steps; SECM, self-efficacy for community mobility.

Table S3. Differences in Environmental Features Across Ambulation Groups

	PDDS scale score			H_2	P	Group differences ^a
	<3	3-4	5-6			
Distance	2.0	3.0	5.0	25.11	.000	(1,3)
Temporal	1.0	2.25	3.0	28.73	.000	(1,2), (1,3)
Ambient	2.33	3.83	4.0	28.06	.000	(1,2), (1,3)
Terrain	1.4	1.9	3.2	35.92	.000	(1,3), (2,3)
Physical load	1.5	2.5	4.5	32.98	.000	(1,3), (2,3)
Postural transitions	1.0	2.0	3.0	19.31	.000	(1,3), (2,3)
Attention	1.3	2.17	3.67	25.79	.000	(1,3), (2,3)
Density	1.0	2.0	4.0	25.12	.000	(1,3), (2,3)
Summary score	1.69	2.42	3.74	36.79	.000	(1,2), (1,3), (2,3)

Note: Differences are given as medians.
PDDS, Patient-Determined Disease Steps.
^a $P < .05$.

Table S4. Median Differences and CIs for Group Comparisons of Environmental Dimensions

	PDDS scale score		
	3-4 – <3	5-6 – <3	5-6 – 3-4
Distance	1 (0, 2)	3 (2, 4)	1 (0, 3)
Temporal	1 (-0.5, 1.5)	2 (1.5, 2.5)	1 (0, 2)
Ambient	1.33 (0.67, 1.83)	1.5 (1, 2)	0.17 (-0.33, 0.83)
Terrain	0.4 (0.2, 0.9)	2 (1.6, 2.05)	1.35 (0.8, 1.8)
Physical load	1 (0, 1.5)	3 (2, 3.5)	2 (1, 2.5)
Postural transitions	0.5 (0, 1)	1.5 (1, 2)	1 (0.5, 2)
Attention	0.33 (0, 1.33)	2 (1.33, 2.5)	1.3 (0.667, 2.33)
Density	0 (0, 1)	2 (2, 3)	2 (1, 3)
Summary score	0.8 (0.32, 1.25)	2.08 (1.69, 2.37)	1.2 (.75, 1.73)

Note: Differences are given as medians (95% CIs).
CI, confidence interval; PDDS, Patient-Determined Disease Steps.

Table S5. Median Differences and CIs for Group Comparisons of Environmental Features

Variable	Group differences, median (95% CI)		
	PDDS score 3-4 – <3	PDDS score 5-6 – <3	PDDS score 5-6 – 3-4
Distance			
Long distances	1 (0, 2)	2.5 (2, 3)	1 (0, 2)
Temporal			
Crossing street traffic light	1 (0, 1)	2 (1, 2)	1 (0, 2)
Crossing busy street	1 (0, 2)	2 (2, 3)	1 (0, 2)
Ambient			
Dark	1 (1, 2)	2 (1, 3)	0 (0, 1)
Snowing	1 (0, 2)	2 (1, 3)	1 (0, 1)
Hot	1 (1, 2)	1 (0, 2)	0 (0, 1)
Cold	1 (1, 2)	2 (1, 2)	0 (0, 1)
Icy	1 (0, 2)	2 (1, 2)	0 (0, 1)
Wet	1 (0, 2)	1 (1, 2)	0 (0, 1)
Terrain			
Single flight stairs	1 (0, 1)	2 (2, 3)	1 (1, 2)
Two flights stairs	1 (0, 2)	2 (2, 3)	1 (0, 2)
Escalator	0 (0, 0)	2 (1, 3)	2 (0, 3)
Curbs	0 (0, 0)	1 (1, 2)	1 (1, 2)
Uneven surfaces	1 (0, 1)	2 (2, 3)	1 (1, 2)
Physical load			
Carrying 2 items	2 (0, 2)	3 (2, 3)	1 (1, 2)
Manual doors	0 (0, 1)	3 (2, 3)	2 (1, 3)
Postural transitions			
Reach above <u>shldr</u>	0 (0, 1)	2 (1, 2)	1 (0, 2)
Reach below knee	0 (0, 1)	1 (1, 2)	1 (0, 2)
Attention			
Traveling alone	0 (0, 1)	2 (2, 3)	2 (1, 3)
Noisy places	0 (0, 2)	2 (2, 3)	1 (0, 2)
Unfamiliar places	0 (0, 1)	2 (1, 2)	1 (0, 2)
Density			
Crowded places	0 (0, 1)	2 (2, 3)	2 (1, 3)

CI, confidence interval; PDDS, Patient-Determined Disease Steps; shldr, shoulder.