Supplementary Materials

Muscular and Kinematic Responses to Unexpected Translational Balance Perturbation: A Pilot Study in Healthy Young Adults

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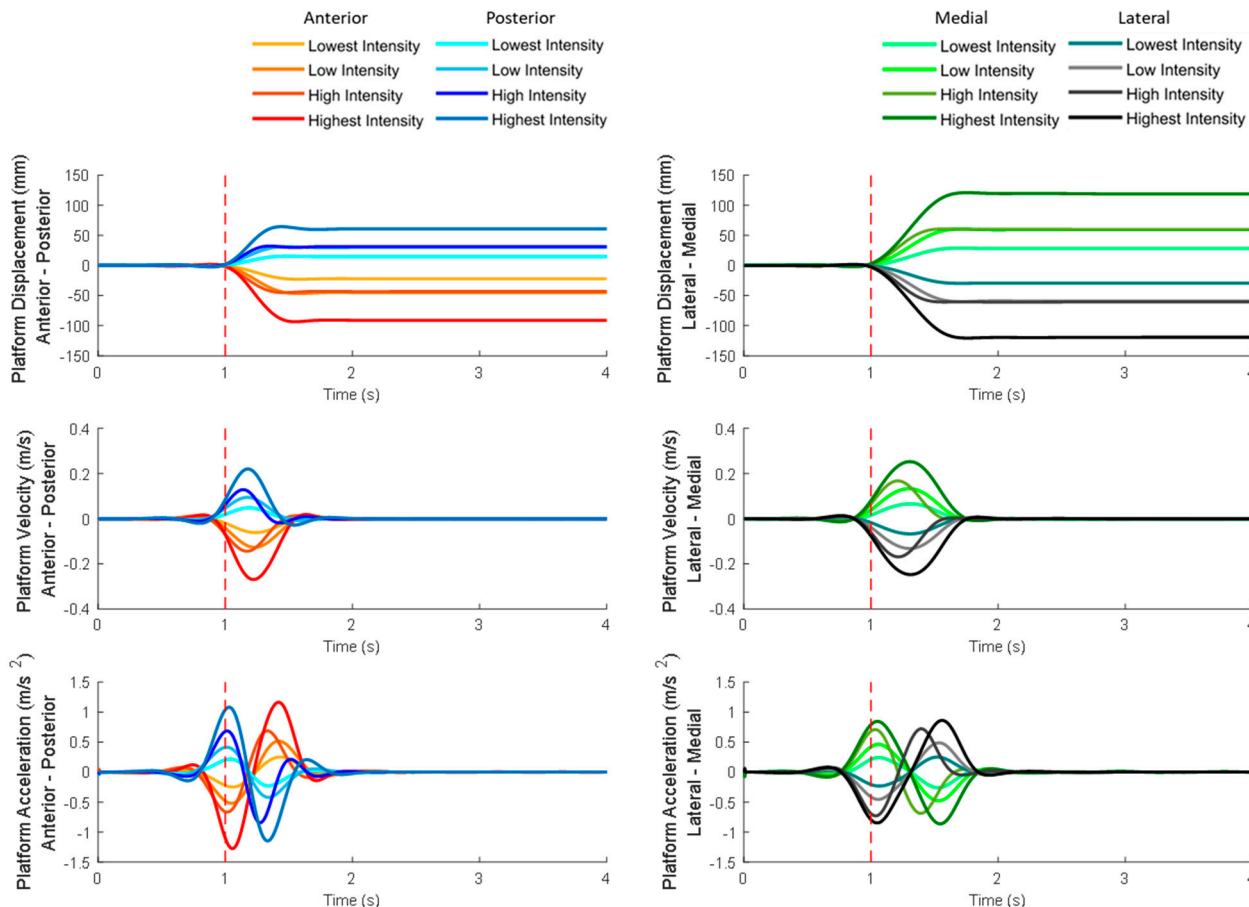† These authors contributed equally to this work.

Figure S1. The mean platform displacements, velocities, and accelerations of twelve subjects following the unexpected anterior, posterior, medial, and lateral perturbations with four intensities (*n* = 12). (Note: **Red dotted line** specifies the start of the balance perturbation.).

Table S1. Mean and ICC values of pulling parameters examining the reliability of the moving-platform balance perturbation system (*n* = 12).

Direc-tion	Inten-sity	Pulling Duration (s)		Max. Displacement of Platform (cm)		Normalized Max. Displacement of Platform (% Height)		Max. Velocity of Platform (m/s)		Max. Acceleration of Platform (m/s²)	
		Mean	ICC	Mean	ICC	Mean	ICC	Mean	ICC	Mean	ICC
Anterior	Highest	0.379	0.989*	9.4	0.859*	5.5	0.729*	0.27	0.930*	1.28	0.944*
	High	0.245	0.983*	4.5	0.968*	2.7	0.965*	0.14	0.981*	0.69	0.991*
	Low	0.359	0.979*	4.7	0.712*	2.7	0.703*	0.13	0.943*	0.53	0.987*
	Lowest	0.350	0.866*	2.3	0.919*	1.3	0.919*	0.06	0.934*	0.26	0.976*
Posterior	Highest	0.251	0.976*	6.5	0.716*	3.8	0.565*	0.22	0.849*	1.10	0.952*
	High	0.162	0.954*	3.4	0.631*	2.0	0.499*	0.13	0.822*	0.74	0.967*
	Low	0.238	0.979*	3.1	0.955*	1.8	0.936*	0.09	0.981*	0.43	0.994*
	Lowest	0.231	0.977*	1.5	0.268*	0.9	0.493*	0.05	0.971*	0.24	0.992*
Medial	Highest	0.507	0.995*	12.1	0.895*	7.1	0.703*	0.25	0.933*	0.85	0.971*
	High	0.328	0.976*	6.1	0.888*	3.6	0.213*	0.17	0.817*	0.72	0.988*
	Low	0.480	0.995*	6.0	0.725*	3.5	0.394*	0.13	0.913*	0.47	0.978*
	Lowest	0.466	0.992*	2.9	0.651*	1.7	0.535*	0.07	0.855*	0.25	0.958*
Lateral	Highest	0.440	1.000*	12.1	0.800*	7.1	0.521*	0.25	0.539*	0.86	0.949*
	High	0.472	0.999*	6.2	0.807*	3.6	0.620*	0.17	0.628*	0.74	0.973*
	Low	0.434	1.000*	6.0	0.912*	3.5	0.696*	0.13	0.897*	0.46	0.968*
	Lowest	0.434	0.999*	3.0	0.886*	1.7	0.718*	0.07	0.774*	0.24	0.944*

Note: The intraclass correlation coefficient (ICC) of three perturbations with the same direction and intensity in 12 subjects was calculated. Max.: Maximal. * Significant difference existed in the intraclass correlation coefficient test (*p* < 0.05).