

Title: Can the effects of cognitive and motor inhibition in balance-related tasks be predicted in young and older persons?

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Appendix 2.

Comprehensive correlations between the balance-related tasks and general tests for young and older adults

	YA	Step	Step	Gait	Step	Gait
		CI CoP onset	CI CoP duration	MI StopGo integrals	Total step execution (ms)	Success (%)
Balance-related tasks	CI CoP onset	1.000	-0.183	-0.143	0.498	0.244
	CI CoP duration	-0.183	1.000	-0.407	-0.309	0.060
	MI StopGo integrals	-0.143	-0.407	1.000	0.262	-0.417
	Total step execution (ms)	0.498	-0.309	0.262	1.000	0.032
	Success (%)	0.244	0.060	-0.417	0.032	1.000
Inhibition tests	Reaction time (ms)	0.719	-0.449	0.042	0.503	0.463
	Failure (%) in GNG	-0.246	0.639	-0.207	-0.380	-0.142
	SSRT (ms)	-0.162	-0.117	0.400	0.302	0.038
	Failure (%) in SST	-0.409	0.478	0.185	-0.125	0.187
Other executive functions test	TMT Difference (s)	0.166	-0.172	0.231	0.391	-0.753
	TMT A (s)	-0.017	0.073	-0.204	-0.340	0.025
	TMT B(s)	0.073	-0.077	0.046	0.059	-0.637
	Forward CBT	0.028	-0.385	-0.023	0.079	0.180
	Backward CBT	-0.119	-0.334	0.113	-0.188	-0.100
Physical functions test	Normal TUG (s)	0.313	0.150	-0.182	0.346	0.028
	Fast TUG (s)	0.164	-0.120	0.138	0.494	-0.226
	ABC (%)	0.358	0.074	0.013	0.143	0.036
	OA	Step	Step	Gait	Step	Gait
		CI CoP onset	CI CoP duration	MI StopGo integrals	Total step execution (ms)	Success (%)
Balance-related tasks	CI CoP onset	1.000	-0.134	-0.281	-0.120	-0.020
	CI CoP duration	-0.134	1.000	0.036	-0.098	-0.057
	MI StopGo integrals	-0.281	0.036	1.000	0.330	-0.382
	Total step execution (ms)	-0.120	-0.098	0.330	1.000	-0.064
	Success (%)	-0.020	-0.057	-0.382	-0.064	1.000
Inhibition tests	Reaction time (ms)	-0.278	0.007	0.186	0.415	-0.126
	Failure (%) in GNG	-0.267	-0.192	0.090	0.096	0.014
	SSRT (ms)	-0.127	-0.126	0.170	0.335	0.015
	Failure (%) in SST	0.142	-0.116	0.139	0.186	-0.206
Other executive functions test	TMT Difference (s)	-0.074	0.188	0.179	-0.060	-0.131
	TMT A (s)	0.130	-0.329	0.083	0.200	-0.231
	TMT B(s)	-0.057	0.083	0.208	-0.040	-0.147
	Forward CBT	0.262	0.308	-0.111	-0.096	-0.067
	Backward CBT	0.039	0.166	0.258	0.145	-0.124
Physical functions test	Normal TUG (s)	-0.142	-0.403	0.334	0.104	0.021
	Fast TUG (s)	-0.393	-0.237	0.355	0.212	-0.023
	BBT	0.393	0.059	-0.505	-0.323	-0.102
	ABC (%)	0.119	-0.043	-0.292	-0.139	0.195

ABC, the Activity-specific balance confidence scale; BBT, the Berg balance scale; CBT, the Corsi block test; CI, cognitive inhibition; CoP, Center of pressure; GNG, the Go/no-go test; MI, motor inhibition; OA, older adults; SSRT, stop signal reaction time; SST, the Stop-signal test; TMT, the Trail making test; TUG, the Timed-up & go; YA, young adults