

Supplementary Table 1 - Relationship between pre-frontal cortex activation and behavioral measures

Spearman's rho (p)				Turn Duration	Turn Velocity	Gait Speed	Stride Length	Foot Strike Angle	Stride Time Variability
BASELINE	Turning	180° turn	Prior	-0.058 (0.782)	0.111 (0.596)				
			During	0.083 (0.693)	-0.188 (0.367)				
		360° turn	Prior	0.160 (0.455)	-0.265 (0.211)				
			During	-0.092 (0.669)	-0.060 (0.779)				
	Walking	Single	Early			0.104 (0.628)	0.015 (0.946)	-0.042 (0.847)	0.001 (0.994)
			Late			0.094 (0.661)	0.039 (0.855)	-0.223 (0.294)	-0.034 (0.876)
		Dual	Early			-0.109 (0.613)	-0.079 (0.715)	-0.047 (0.827)	0.003 (0.989)
			Late			-0.098 (0.648)	0.031 (0.887)	-0.123 (0.565)	0.003 (0.991)
CLOSED-LOOP	Turning	180° turn	Prior	0.107 (.618)	.062 (.773)				
			During	0.205 (.336)	-.100 (.640)				
		360° turn	Prior	0.382 (.072)	-.219 (.316)				
			During	-0.282 (.193)	.227 (.297)				
	Walking	Single	Early			0.386 (0.069)	0.362 (0.090)	0.239 (0.272)	-0.652 (0.001)
			Late			-0.093 (0.674)	-0.038 (0.864)	0.252 (0.247)	0.188 (0.390)
		Dual	Early			0.024 (0.915)	0.030 (0.892)	0.114 (0.603)	-0.013 (0.953)
			Late			-0.045 (0.839)	-0.088 (0.691)	0.134 (0.543)	0.067 (0.762)
OPEN-LOOP	Turning	180° turn	Prior	0.123 (0.576)	0.123 (0.576)				
			During	0.230 (0.290)	0.134 (0.543)				
		360° turn	Prior	0.089 (0.692)	-0.317 (0.150)				
			During	-0.421 (0.051)	0.385 (0.077)				
	Walking	Single	Early			-0.131 (0.552)	-0.257 (0.237)	0.128 (0.561)	0.179 (0.414)
			Late			-0.063 (0.775)	-0.098 (0.656)	0.165 (0.452)	-0.131 (0.551)
		Dual	Early			-0.025 (0.911)	-0.074 (0.737)	0.170 (0.439)	0.075 (0.734)
			Late			-0.067 (0.760)	-0.093 (0.672)	0.066 (0.765)	0.027 (0.901)

