SUPPLEMENTARY MATERIAL

Normality and homogeneity were verified by the Shapiro-Wilk and Levene tests, respectively. The range of CoP, peak of CoP velocity, and iEMG of MG and TA were log10-transformed due to a non-normal distribution. The log10-transformed values are presented in Table S1. A two-way ANOVA was conducted with factors for group (fallers vs. non-fallers) and stimulation condition (2 mA vs. sham), with repeated measures for the second factor. The effect size of ANOVA was reported in terms of Partial eta-squared (η_p^2) (small = 0.21 to 0.50, medium = 0.51 to 0.79, and large ≥ 0.80 effect) [30].

Table S1 – Log-transformed values of CoP and EMG parameters expressed as mean and standard deviation.

	Faller (n = 12)		**Non-faller (n = 10)**	
	Active	**Sham**	**Active**	**Sham**
Range of CoP (cm)	0.55 ± 0.11	0.54 ± 0.12	0.49 ± 0.10	0.50 ± 0.08
Peak of CoP vel. (cm/s)	1.20 ± 0.13	1.20 ± 0.12	1.15 ± 0.11	1.16 ± 0.07
iEMG MG (μV/ms)	1.06 ± 0.25	0.99 ± 0.30	0.96 ± 0.38	0.93 ± 0.37
iEMG TA (μV/ms)	0.85 ± 0.31	1.03 ± 0.40	0.84 ± 0.65	0.90 ± 0.52

Vel. = velocity; iEMG = Magnitude of muscle activation - integral; MG = Medial gastrocnemius; TA = Tibialis anterior.

Table S2 – Statistical analysis of CoP and EMG parameters presented by f-value, p-value, and partial eta-squared.

	Main effects	
	Group	**Condition**
Range of CoP	$F_{(1,20)} = 1.193$; $p = 0.288$; $\eta_p^2 = 0.056$	$F_{(1,20)} = 0.001$; $p = 0.979$; $\eta_p^2 < 0.001$
Peak of CoP velocity	$F_{(1,20)} = 0.864$; $p = 0.364$; $\eta_p^2 = 0.041$	$F_{(1,20)} = 0.166$; $p = 0.688$; $\eta_p^2 = 0.008$
iEMG MG	$F_{(1,20)} = 0.379$; $p = 0.545$; $\eta_p^2 = 0.019$	$F_{(1,20)} = 1.344$; $p = 0.260$; $\eta_p^2 = 0.063$
iEMG TA	$F_{(1,20)} = 0.134$; $p = 0.718$; $\eta_p^2 = 0.007$	$F_{(1,20)} = 2.220$; $p = 0.152$; $\eta_p^2 = 0.100$
CI MG/TA	$F_{(1,20)} = 0.040$; $p = 0.843$; $\eta_p^2 = 0.002$	$F_{(1,20)} = 0.338$; $p = 0.567$; $\eta_p^2 = 0.017$

iEMG = Magnitude of muscle activation - integral; MG = Medial gastrocnemius; TA = Tibialis anterior.