

Fig. S1 Approximate entropy (ApEn) and sample entropy (SampEn) as a function of m, r and N for the mediallateral (ML) component of the centre of pressure displacement during quiet standing.









Fig. S2 Approximate entropy (ApEn) mean value (bars) and standard deviation (error lines) by group as a function of *r* for $m = \{2, 3, 4, 5\}$ (from top to bottom) and N = 1200 (i.e. 60 seconds) for the medial-lateral (ML) component of the centre of pressure displacement during quiet standing.









Fig. S3 Approximate entropy (ApEn) mean value (bars) and standard deviation (error lines) by group as a function of *r* for $m = \{2, 3, 4, 5\}$ (from top to bottom) and N = 600 (i.e. 30 seconds) for the anterior-posterior (AP) component of the centre of pressure displacement during quiet standing.





c) m = 4, N = 600





Fig. S4 Approximate entropy (ApEn) mean value (bars) and standard deviation (error lines) by group as a function of *r* for $m = \{2, 3, 4, 5\}$ (from top to bottom) and N = 600 (i.e. 30 seconds) for the medial-lateral (ML) component of the centre of pressure displacement during quiet standing.













Fig. S5 Sample entropy (SampEn) mean value (bars) and standard deviation (error lines) by group as a function of *r* for $m = \{2, 3, 4, 5\}$ (from top to bottom) and N = 1200 (i.e. 60 seconds) for the medial-lateral (ML) component of the centre of pressure displacement during quiet standing.













Fig. S6 Sample entropy (SampEn) mean value (bars) and standard deviation (error lines) by group as a function of *r* for $m = \{2, 3, 4, 5\}$ (from top to bottom) and N = 600 (i.e. 30 seconds) for the anterior-posterior (AP) component of the centre of pressure displacement during quiet standing.









1

0.8

n.s

n.s. n.s.

Young Non-Fallers Fallers n.s. = p>0.05 * = p<0.05



Fig. S7 Sample entropy (SampEn) mean value (bars) and standard deviation (error lines) by group as a function of r for $m = \{2, 3, 4, 5\}$ (from top to bottom) and N = 600 (i.e. 30 seconds) for the medial-lateral (ML) component of the centre of pressure displacement during quiet standing.

a) m = 2, N = 600