Supplementary Digital Content 2: Associations of average acceleration and MVPA with body fatness (Sample 1 and 2) and physical function (Sample 2).

	Model 1		Model 2		Model 3*		Independent effect*
	Coefficient	95% CI	Coefficient	95% CI	Coefficient	95% CI	(Model 3)
SAMPLE 1 (Adolescent girls)	Pairwise N= 1527 to 1638		Listwise N = 1521		Listwise N = 1521		
[a]MVPA$_{TOTAL}$							
Generalised estimating equations							
Percent body fat							
Average acceleration (m*g*)	**-0.09**	**-0.13, -0.05**	0.02	-0.01, 0.06	-	-	-
[a]MVPA$_{TOTAL}$ (min)	**-0.03**	**-0.05, -0.02**	0.00	-0.01, 0.02	-	-	-
Body mass index z-score							
Average acceleration (m*g*)	-0.01	-0.01, 0.00	0.01	-0.00, 0.01	-	-	-
[a]MVPA$_{TOTAL}$ (min)	-0.00	-0.01, 0.00	**0.01**	**0.00, 0.01**	-	-	-
SAMPLE 2 (Adults with type 2 diabetes)	Pairwise N= 260 to 291		Listwise N = 253-279		Listwise N = 253-279		
[a]MVPA$_{TOTAL}$							
Multiple regression							
Percent body fat							
Average acceleration (m*g*)	**-0.13**	**-0.26, -0.00**	**-0.15**	**-0.26, -0.05**	-	-	-
[a]MVPA$_{TOTAL}$ (min)	**-0.04**	**-0.06, -0.01**	**-0.04**	**-0.06, -0.15**	-	-	-
Body mass index (kg.m^{-2})							
Average acceleration (m*g*)	**-0.13**	**-0.21, -0.05**	**-0.15**	**-0.23, -0.08**	-	-	-
[a]MVPA$_{TOTAL}$ (min)	**-0.03**	**-0.05, -0.01**	**-0.04**	**-0.05, -0.02**	-	-	-
Average grip strength (kg)							
Average acceleration (m*g*)	0.12	-0.03, 0.28	0.09	-0.04, 0.23	-	-	-
[a]MVPA$_{TOTAL}$ (min)	0.04	-0.00, 0.08	0.02	-0.02, 0.06	-	-	-
Sit-to-stand 60 (repetitions)							
Average acceleration (m*g*)	**0.25**	**0.11, 0.40**	**0.22**	**0.06, 0.38**	-	-	-
[a]MVPA$_{TOTAL}$ (min)	**0.06**	**0.03, 0.10**	**0.06**	**0.02, 0.09**	-	-	-
Short Physical Performance Battery (SPPB)							

	Model 1		Model 2		Model 3*		Independent effect*
	Coefficient	95% CI	Coefficient	95% CI	Coefficient	95% CI	(Model 3)
Average acceleration (m*g*)	**0.06**	**0.03, 0.09**	**0.04**	**0.01, 0.07**	**-**	**-**	-
[a]$MVPA_{TOTAL}$ (min)	**0.02**	**0.01, 0.02**	**0.01**	**0.00, 0.02**	**-**	**-**	-
[b]$MVPA_{BOUTS}$							
Percent body fat							
Average acceleration (m*g*)	**-0.13**	**-0.26, -0.00**	**-0.15**	**-0.26, -0.05**	-0.12	-0.25, 0.01	X
[b]$MVPA_{BOUTS}$ (min)	**-0.08**	**-0.16, -0.01**	-0.06	-0.12, 0.00	-0.04	-0.10, 0.02	X
Body mass index (kg.m^{-2})							
Average acceleration (m*g*)	**-0.13**	**-0.21, -0.05**	**-0.15**	**-0.23, -0.08**	-0.10	-0.19, 0.00	X
[b]$MVPA_{BOUTS}$ (min)	**-0.05**	**-0.09, -0.01**	**-0.06**	**-0.10, -0.01**	-0.04	-0.08, 0.02	X
Average grip strength (kg)							
Average acceleration (m*g*)	0.12	-0.03, 0.28	0.09	-0.04, 0.23	**0.15**	**0.00, 0.30**	✓
[b]$MVPA_{BOUTS}$ (min)	0.03	-0.05, 0.11	-0.01	-0.07, 0.05	-0.04	-0.10, 0.02	X
Sit-to-stand 60 (repetitions)							
Average acceleration (m*g*)	**0.25**	**0.11, 0.40**	**0.22**	**0.06, 0.38**	0.15	-0.07, 0.37	X
[b]$MVPA_{BOUTS}$ (min)	0.07	-0.02, 0.16	0.07	-0.02, 0.16	0.05	-0.04, 0.14	X
Short Physical Performance Battery (SPPB)							
Average acceleration (m*g*)	**0.06**	**0.03, 0.09**	**0.04**	**0.01, 0.07**	0.04	-0.00, 0.07	X
[b]$MVPA_{BOUTS}$ (min)	0.02	-0.00, 0.03	0.01	-0.00, 0.02	0.00	-0.01, 0.02	X

[a]$MVPA_{TOTAL}$: Total accumulated moderate-to-vigorous physical activity (MVPA) for adolescent girls (>200 m*g*) and adults with type 2 diabetes (>125 m*g*)
[b]$MVPA_{BOUTS}$: MVPA accumulated in 10-min bouts (>100 m*g*).
Model 1 adjusted for clustering at school level only (sample 1) or unadjusted (sample 2). Model 2 adjusted for potential co-variates. Model 3 further adjusted for alternate activity metric.
95% CI = 95% confidence interval
*The final column indicates whether the associations with each activity metric were independent of the other metric (from Model 3). A dash (-) indicates multicollinearity was evident (VIF > 5) preventing the estimation of independent effects.
Significant associations are denoted in bold.