

SUPPLEMENTARY TABLES

Supplementary Table 1A. Association of baseline seasonal and diurnal behavioural correlates with changes in total sedentary time and prolonged sedentary bouts (n=1536).

Correlate (Per hr/week)	Season/diurnal period	Total sedentary time (Min/day/yr)						Prolonged sedentary bouts (Min/day/yr)					
		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
		β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Walking	Summer	0.0	-0.1, 0.04	0.0	-0.1, 0.04	0.0	-0.1, 0.04	-0.1	-0.2, 0.04	-0.1	-0.2, 0.03	-0.1	-0.2, 0.04
	Winter	0.0	-0.1, 0.04	-0.1	-0.1, 0.04	0.0	-0.1, 0.04	-0.1	-0.2, 0.04	-0.1	-0.2, 0.04	-0.1	-0.2, 0.05
Cycling	Summer	-0.2	-0.4, -0.04	-0.2	-0.4, -0.04	-0.2	-0.4, -0.04	-0.3	-0.6, -0.09	-0.3	-0.6, -0.09	-0.3	-0.6, -0.09
	Winter	-0.4	-0.8, -0.003	-0.4	-0.8, -0.08	-0.4	-0.8, -0.04	-0.7	-1.2, -0.3	-0.8	-0.3, -0.3	-0.8	-1.2, -0.3
Gardening	Summer	0.0	-0.06, 0.1	-0.1	-0.1, 0.03	-0.1	-0.1, 0.03	0.0	-0.1, 0.09	-0.1	-0.2, 0.003	-0.1	-0.2, 0.01
	Winter	-0.1	-0.3, 0.03	-0.3	-0.4, -0.10	-0.3	-0.4, -0.1	-0.1	-0.2, 0.1	-0.2	-0.4, -0.03	-0.2	-0.4, -0.03
Computer use	Daytime	-1.3	-2.2, -0.4	-0.4	-1.3, 0.5	-0.2	-1.2, 0.8	-1.1	-2.3, 0.7	0.0	-1.2, 1.1	-0.3	-1.5, 1.0
	Evening	-0.7	-1.8, 0.5	-0.2	-1.4, 0.9	-0.2	-1.3, 1.0	-0.7	-2.2, 0.8	-0.2	-1.7, 1.3	-0.3	-1.8, 1.3

Supplementary Table 1B. Association of change in seasonal and diurnal behavioural correlates with changes in total sedentary time and prolonged sedentary bouts (n=1536).

Change in correlate (Per hr/week/yr)	Season/diurnal period	Total sedentary time (Min/day/yr)						Prolonged sedentary bouts (Min/day/yr)					
		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
		β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Walking	Summer	-0.4	-0.7, -0.2	-0.5	-0.7, -0.2	-0.67,	-1.0, -0.4	-0.2	-0.5, 0.13	-0.2	-0.6, 0.09	-0.5	-0.8, 0.08
	Winter	-0.5	-0.8, -0.2	-0.6	-0.8, -0.3	-0.8	-0.08, -0.5	-0.2	-0.6, 0.2	-0.3	-0.6, 0.1	-0.5	-0.9, 0.06
Cycling	Summer	0.8	-0.1, 1.7	0.8	-0.08, 1.7	0.4	-0.7, 1.5	1.3	0.08, 2.4	1.3	0.2, 2.5	0.8	-0.6, 2.1
	Winter	1.3	-0.1, 2.7	1.3	-0.05, 2.7	0.9	-0.7, 2.4	2.0	0.07, 3.9	2.1	0.2, 3.9	1.1	-1.0, 3.1
Gardening	Summer	-0.4	-0.7, -0.2	-0.4	-0.6, -0.08	-0.5	-0.9, -0.2	-0.4	-0.8, -0.07	-0.4	-0.7, -0.01	-0.6	-1.0, -0.2
	Winter	0.1	-0.4, 0.6	0.2	-0.3, 0.7	-0.2	-0.8, 0.4	-0.2	-0.9, 0.5	-0.1	-0.8, 0.5	-0.5	-1.2, 0.2

^aModel 1 was adjusted for season and wear time at baseline and follow-up, and baseline total sedentary time.

^bModel 2 was the same as model 1 plus mutually adjusted for age and sex.

^cModel 3 was the same as Model 2 plus mutually adjusted for potential socioeconomic and environmental confounders (occupational class, educational level, job status, urban-rural status, smoking status, BMI).

Supplementary Table 2A. Complete case analysis.

Baseline Characteristic	Category/Unit	Total sedentary time (Min/day/yr)						Prolonged sedentary bouts (Min/day/yr)					
		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
		β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Sex	Male (ref)												
	Female	-3.1	-4.9, -1.4	-2.4	-4.1, -0.7	-2.5	-4.2, -0.7	-5.0	-7.3, -2.7	-4.2	-6.4, -1.9	-4.0	-6.3, -1.6
Age	Per year of age	0.6	0.5, 0.8	0.6	0.4, 0.7	0.6	0.4, 0.7	0.8	0.6, 1.0	0.8	0.6, 1.0	0.8	0.6, 1.1
Employment	Yes (ref)												
	No	2.8	0.7, 4.9	0.7	-1.4, 2.9	0.7	-1.4, 2.9	3.0	0.3, 5.8	0.6	-2.3, 3.4	0.6	-2.2, 3.4
Education level	O level or less (ref)												
	A level or above	-0.8	-2.6, 1.0	-0.8	-2.5, 1.0	-0.6	-2.4, 1.2	0.9	-1.5, 3.3	0.7	-1.6, 3.0	0.7	-1.7, 3.1
Smoking status	Current (ref)												
	Former	0.4	-5.2, 6.0	-2.4	-7.9, 3.0	-3.4	-8.8, 2.1	2.1	-5.3, 9.4	-1.4	-8.5, 5.7	-2.9	-10.0, 4.2
	Never	-0.8	-6.3, 4.8	-3.2	-8.7, 2.2	-3.8	-9.3, 1.6	-0.1	-7.4, 7.2	-3.0	-10.0, 4.1	-4.2	-11.3, 2.8
Body Mass Index	Per kg/m ²	0.3	0.07, 0.5	0.3	0.1, 0.5	0.4	0.1, 0.6	0.4	0.2, 0.7	0.5	0.2, 0.8	0.5	0.3, 0.8
Occupational classification	Professional (ref)												
	Manager	0.1	-3.0, 3.1	0.1	-2.79, 3.07	-0.2	-2.94, 2.91	-2.2	-6.2, 1.8	-2.2	-6.1, 1.6	-2.3	-6.1, 1.5
	Skilled non-manual	-1.1	-4.7, 2.5	-0.3	-3.78, 3.11	-0.7	-4.18, 2.76	-1.7	-6.4, 3.0	-0.5	-5.0, 4.0	-0.5	-5.0, 4.0
	Skilled manual	0.5	-2.8, 3.8	0.8	-2.38, 4.06	0.6	-2.66, 3.84	-2.2	-6.6, 2.2	-1.9	-6.1, 2.3	-2.0	-6.2, 2.3
	Semi-skilled	0.5	-3.4, 4.5	0.5	-3.34, 4.29	0.0	-3.88, 3.85	-2.1	-7.3, 3.1	-2.1	-7.0, 3.0	-2.1	-7.2, 2.9
Urban-rural status	City, town or fringe (Ref)												
	Village, hamlet or isolated dwelling	-1.4	-3.3, 0.5	-1.6	-3.46, 0.21	-1.8	-3.73, 0.06	-1.5	-3.9, 1.0	-1.6	-4.0, 0.8	-1.5	-3.9, 1.0

^aModel 1 was adjusted for season and wear time at baseline and follow-up, and baseline total sedentary time.

^bModel 2 was the same as model 1 plus mutually adjusted for age and sex.

^cModel 3 was the same as Model 2 plus mutually adjusted for potential socioeconomic and environmental confounders (occupational class, educational level, job status, urban-rural status, smoking status, BMI).

Association of baseline demographic correlates with changes in total sedentary time and prolonged sedentary bouts (n=953).

Supplementary Table 2B. Complete case analysis.

Correlates	Category/Unit	Total sedentary time (Min/day/yr)						Prolonged sedentary bouts (Min/day/yr)					
		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
		β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Walking	Per hour/week	-0.1	-0.2, 0.05	-0.1	-0.2, 0.02	-0.1	-0.2, 0.03	-0.1	-0.2, 0.07	-0.1	-0.2, 0.04	-0.1	-0.2, 0.06
Cycling	Per hour/week	-0.3	-0.6, 0.07	-0.3	-0.6, 0.02	-0.3	-0.6, 0.03	-0.3	-0.7, 0.3	-0.3	-0.8, 0.007	-0.3	-0.7, 0.1
Garden	Per hour/week	-0.1	-0.2, 0.09	-0.2	-0.4, -0.09	-0.2	-0.4, -0.9	-0.1	-0.3, 0.09	-0.3	-0.4, -0.1	-0.3	-0.4, -0.1
Housework	Per hour/week	0.0	-0.06, 0.09	0.1	-0.02, 0.1	0.1	-0.03, 0.1	0.0	-0.1, 0.06	0.0	-0.07, 0.1	0.0	-0.07, 0.1
Dog walking	No (ref)												
	Yes	-1.2	-3.3, 1.0	-0.8	-2.9, 1.3	-0.9	-3.0, 1.3	-0.6	-3.4, 2.2	0.3	-2.4, 3.0	0.4	-2.3, 3.2
Transport method <1 mile	Car (ref)												
	Walk	2.0	-0.4, 4.4	1.0	-1.4, 3.3	1.2	-1.1, 3.6	3.6	0.5, 6.8	2.3	-0.7, 5.4	2.9	-0.2, 5.9
	Public transport	6.2	-4.7, 17.0	3.1	-7.4, 13.7	3.5	-7.0, 13.9	4.3	-10.0, 18.6	1.2	-12.5, 14.9	2.3	-11.4, 15.9
	Cycle	1.2	-3.0, 5.4	-0.2	-4.3, 3.9	0.2	-3.9, 4.3	1.5	-4.0, 7.0	-0.2	-5.5, 5.1	0.7	-4.7, 6.0
Transport method 1-5 miles	Car (ref)												
	Walk	-0.2	-3.1, 2.7	-0.5	-3.3, 2.3	-0.3	-3.1, 2.6	-0.1	-3.9, 3.7	-0.3	-4.0, 3.3	0.1	-3.6, 3.8
	Public transport	0.6	-2.1, 3.2	-0.2	-2.8, 2.4	-0.3	-2.9, 2.4	1.1	-2.4, 4.6	0.1	-3.3, 3.5	0.2	-3.3, 3.6
	Cycle	1.0	-2.0, 3.9	0.4	-2.4, 3.3	0.6	-2.2, 3.5	-1.5	-5.3, 2.4	-2.0	-5.7, 1.7	-1.4	-5.1, 2.3
Transport method >5 miles	Car (ref)												
	Walk	7.9	-10.6, 26.4	4.3	-13.6, 22.2	4.5	-13.2, 22.3	5.6	-18.8, 29.9	1.6	-21.7, 25.0	2.7	-20.6, 25.9
	Public transport	0.3	-3.4, 3.9	-0.7	-4.2, 2.8	-0.6	-4.2, 2.9	-2.1	-6.9, 2.6	-3.5	-8.1, 1.1	-3.3	-7.9, 1.3
	Cycle	-10.9	-20.8, 1.0	-11.9	-21.6, 2.3	-13.6	-23.2, 4.0	-4.1	-17.1, 9.0	-5.4	-17.9, 7.2	-7.5	-20.0, 5.1
TV	Per hour/week	0.6	-0.01, 1.1	0.4	-0.1, 1.0	0.2	-0.4, 0.8	0.4	-0.3, 1.2	0.3	-0.4, 1.0	0.2	-0.6, 1.0
Radio	≤Several times/yr (ref)												
	Several times/month	-1.9	-5.0, 1.2	-2.2	-5.2, 0.7	-2.2	-5.2, 0.7	-0.8	-4.9, 3.3	-1.1	-5.0, 2.8	-0.9	-4.8, 3.0
	≥Several times/week	-1.8	-4.1, 0.5	-2.2	-4.5, 0.02	-1.9	-4.1, 0.4	-0.5	-3.5, 2.6	-1.0	-3.9, 1.9	-0.6	-3.5, 2.3
Newspaper	≤Several times/yr (ref)												
	Several times/month	0.1	-4.1, 4.4	0.5	-3.6, 4.7	1.2	-2.9, 5.3	-2.8	-8.4, 2.8	-1.9	-7.3, 3.5	-1.5	-6.9, 3.9
	≥Several times/week	2.2	-1.3, 5.6	1.1	-2.2, 4.5	1.7	-1.7, 5.0	1.4	-3.1, 5.9	0.1	-4.3, 4.5	0.4	-3.9, 4.8
Books	≤Several times/yr (ref)												
	Several times/month	-0.8	-3.8, 2.3	-0.3	-3.2, 2.7	0.2	-2.8, 3.2	-1.3	-5.4, 2.7	-0.4	-4.2, 3.6	0.1	-3.8, 4.0
	≥Several times/week	-1.8	-3.8, 0.2	-1.5	-3.4, 0.5	-1.1	-3.1, 0.9	-2.5	-5.1, 0.06	-1.8	-4.3, 0.7	-1.6	-4.1, 1.0
Computer use	Per hour/week	-0.7	-1.45, 0.04	-0.3	-1.1, 0.4	-0.1	-0.9, 0.7	-0.1	-0.9, 1.0	0.5	-0.5, 1.5	0.6	-0.5, 1.6

Association of baseline behavioural correlates with changes in total sedentary time and prolonged sedentary bouts (n=953).

Supplementary Table 2C. Complete case analysis.

Change in Correlate	Category/ Unit	Total sedentary time (Min/day/yr)						Prolonged sedentary bouts (Min/day/yr)					
		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
		β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Employment change	Remains retired (Ref)												
	Becomes employed	1.2	-7.1, 9.4	0.6	-7.5, 8.6	0.9	-7.1, 9.0	3.5	-7.6, 14.6	2.4	-8.4, 13.1	2.7	-8.1, 13.5
	Remains employed	4.0	1.0, 7.0	2.0	-1.0, 5.0	1.8	-1.3, 4.8	4.0	-0.1, 8.1	1.3	-2.8, 5.4	0.9	-3.2, 5.1
	Becomes retired	1.5	-2.4, 5.3	2.1	-1.6, 5.9	1.3	-2.5, 5.0	2.1	-3.1, 7.2	2.9	-2.1, 7.9	2.1	-3.0, 7.2
Body Mass Index	Per kg/m ² /yr	4.8	2.3, 7.4	5.2	2.6, 7.7	5.7	3.2, 8.2	2.6	-0.9, 6.1	3.2	-0.2, 6.6	3.1	3.9, 1.7
Walking	Per hour/week/yr	-0.7	-1.0, -0.3	-0.7	-1.0, -0.3	-0.8	-1.1, -0.4	-0.3	-0.8, 0.2	-0.3	-0.8, 0.1	-0.4	-0.9, 0.2
Cycling	Per hour/week/yr	1.1	-0.3, 2.4	0.9	-0.4, 2.3	0.2	-1.3, 1.8	2.4	0.6, 4.2	2.2	0.5, 4.0	0.9	-1.0, 2.9
Gardening	Per hour/week/yr	-0.9	-1.5, -0.3	-0.7	-1.3, -0.2	-1.2	-1.8, -0.5	-0.8	-1.6, 0.02	-0.6	-1.4, 0.2	-1.0	-0.9, -0.1
Housework	Per hour/week/yr	-0.3	-0.6, 0.02	-0.3	-0.7, 0.2	-0.3	-0.6, 0.08	-0.2	-0.6, 0.2	-0.3	-0.7, 0.2	-0.2	-0.6, 0.3
TV	Per hour/week/yr	4.0	0.4, 7.7	4.3	0.7, 7.8	4.5	0.7, 8.3	3.4	-1.6, 8.3	3.7	-1.1, 8.5	4.5	-0.8, 9.8

^aModel 1 was adjusted for season and wear time at baseline and follow-up, and baseline total sedentary time.

^bModel 2 was the same as model 1 plus mutually adjusted for age and sex.

^cModel 3 was the same as Model 2 plus mutually adjusted for potential socioeconomic and environmental confounders (occupational class, educational level, job status, urban-rural status, smoking status, BMI).

Association of change in correlates with change in total sedentary time and prolonged sedentary bouts (n=856).