

Supplementary file

Appendix Table 1. Descriptive characteristics of participants lost to follow-up (n = 133), with p-value for difference from sample in Table 1*.				
	Boys (n = 79)	P for difference	Girls (n = 54)	P for difference
Age (years)	16.1 (0.4)	0.26	16.1 (0.4)	0.42
Height (cm)	176.7 (13.8)	0.31	164.5 (5.9)	0.18
Body weight (kg)	73.3 (18.0)	0.01	63.5 (1.9)	0.06
Body mass index (BMI kg/m ²)	23.4 (5.2)	0.01	23.4 (4.4)	0.02
Waist circumference (cm)	85.1 (13.9)	<0.01	80.0 (12.4)	0.02
Total Body Fat Mass (kg)	17.6 (12.8)	<0.01	22.8 (10.3)	0.01
Fat Mass Index (FMI kg/m ²)	5.6 (4.0)	<0.01	8.4 (3.5)	0.01
Total Body Lean Mass (kg)	53.9 (7.8)	0.46	38.6 (4.6)	0.33
Lean Mass Index (LMI kg/m ²)	17.2 (1.9)	0.43	14.2 (1.4)	0.42
Appendicular Lean Mass (kg)	25.3 (4.1)	0.49	17.4 (2.5)	0.48
Appendicular Lean Mass Index (aLMI kg/m ²)	8.1 (1.0)	0.41	6.4 (0.76)	0.29
Accelerometer variables				
Wear time per valid day	14.3 (1.2)	0.26	13.7 (1.0)	<0.01
Counts per minute	338.4 (112.1)	0.08	300.5 (121.5)	0.03
Minutes per day in different intensities				
Sedentary (cpm 0 – 99)	570.1 (82.6)	0.38	562.6 (68.9)	0.39
Light (cpm 100 – 1951)	244.3 (64.7)	0.05	223.4 (46.3)	0.04
Moderate (cpm 1952 – 5723)	42.9 (19.6)	0.15	33.0 (17.6)	<0.01
Vigorous (cpm ≥ 5724)	2.3 (2.9)	0.03	2.7 (5.1)	0.40
MVPA [#] (cpm ≥ 1952)	45.2 (21.0)	0.08	35.6 (20.0)	0.01
Meeting MVPA guidelines per day				
0 – 29 minutes	21 (26.6)		24 (44.4)	
30 – 59 minutes	41 (51.9)		23 (42.6)	
≥ 60 minutes	17 (21.5)		7 (13.0)*	

*: Statistically significantly different linear trend from sample included in manuscript (Table 1).

Appendix Table 2. Association between minutes per day spent in sedentary activity (CPM 0 – 99) at baseline and changes in body composition, adjusted for puberty[#].

	Boys (n = 143)			Girls (n = 258)		
	Beta	95% CI	p value	Beta	95% CI	p value
Δ BMI						
Model 1	-0.02	-0.14, 0.09	0.70	-0.05	-0.15, 0.05	0.32
Model 2	-0.01	-0.17, 0.14	0.85	-0.11	-0.24, 0.03	0.12
Model 3	0.03	-0.17, 0.23	0.76	-0.11	-0.27, 0.05	0.19
Δ waist circumference						
Model 1	0.12	-0.27, 0.51	0.55	-0.01	-0.42, 0.39	0.95
Model 2	0.24	-0.28, 0.77	0.36	-0.38	-0.91, 0.15	0.16
Model 3	0.37	-0.32, 1.06	0.29	-0.52	-1.14, 0.10	0.10
Δ FMI						
Model 1	-0.01	-0.12, 0.09	0.84	-0.01	-0.11, 0.08	0.81
Model 2	-0.01	-0.15, 0.13	0.85	-0.06	-0.18, 0.07	0.35
Model 3	0.01	-0.17, 0.20	0.90	-0.05	-0.20, 0.10	0.49
Δ LMI						
Model 1	0.00	-0.05, 0.06	0.90	-0.06	-0.09, -0.02	< 0.01
Model 2	0.01	-0.07, 0.08	0.89	-0.07	-0.12, -0.02	< 0.01
Model 3	0.02	-0.08, 0.11	0.74	-0.08	-0.13, -0.02	< 0.01
Δ aLMI						
Model 1	-0.00	-0.03, 0.03	0.91	-0.02	-0.04, -0.00	0.02
Model 2	0.00	-0.04, 0.04	0.92	-0.03	-0.05, -0.00	0.02
Model 3	0.01	-0.04, 0.07	0.59	-0.03	-0.06, 0.00	0.06

#: The table displays the association between minutes spent in sedentary activity and difference in BMI (kg/m^2), waist circumference, FMI (fat mass in kg/m^2), LMI (lean mass in kg/m^2) and aLMI (appendicular lean mass in kg/m^2) between Fit Futures 1 (2010-2011) and Fit Futures 2 (2012-2013). The models give the beta coefficient for 30 minutes increase in sedentary activity. All models were adjusted for baseline values of the outcome. In model 2 also adjusted for time between measurements and baseline values of pubertal development (pds (boys) and age at menarche (girls)), screen time on weekdays, study specialisation, age in half-years, regularity of eating breakfast and device wear time. In Model 3 adjusted also for minutes spent in Moderate-to-vigorous physical activity ($\text{CPM} \geq 1952$).

Appendix Table 3. Association between minutes per day spent in light activity (CPM 100 – 1951) at baseline and changes in body composition, adjusted for puberty[#].

	Boys (n = 143)			Girls (n = 258)		
	Beta	95% CI	p value	Beta	95% CI	p value
Δ BMI						
Model 1	0.05	-0.10, 0.20	0.53	0.04	-0.09, 0.18	0.54
Model 2	-0.00	-0.19, 0.18	0.97	0.11	-0.04, 0.27	0.15
Model 3	-0.03	-0.23, 0.17	0.76	0.11	-0.05, 0.27	0.19
Δ waist circumference						
Model 1	-0.01	-0.53, 0.51	0.97	0.53	-0.00, 1.07	0.05
Model 2	-0.34	-0.98, 0.30	0.30	0.50	-0.11, 1.11	0.11
Model 3	-0.37	-1.06, 0.32	0.29	0.51	-0.11, 1.13	0.10
Δ FMI						
Model 1	0.05	-0.09, 0.18	0.51	0.02	-0.11, 0.14	0.78
Model 2	0.00	-0.17, 0.18	0.97	0.06	-0.09, 0.20	0.43
Model 3	-0.01	-0.20, 0.17	0.90	0.05	-0.10, 0.20	0.49
Δ LMI						
Model 1	-0.01	-0.08, 0.06	0.84	0.04	-0.01, 0.09	0.08
Model 2	-0.01	-0.10, 0.07	0.80	0.08	0.02, 0.13	< 0.01
Model 3	-0.02	-0.11, 0.07	0.74	0.08	0.02, 0.13	< 0.01
Δ aLMI						
Model 1	0.00	-0.04, 0.04	0.93	0.02	-0.01, 0.04	0.17
Model 2	-0.01	-0.06, 0.04	0.73	0.03	0.00, 0.06	0.04
Model 3	-0.01	-0.07, 0.04	0.59	0.03	-0.00, 0.06	0.06

[#]: The table displays the association between minutes spent in light activity and difference in BMI (kg/m²), waist circumference, FMI (fat mass in kg/m²), LMI (lean mass in kg/m²) and aLMI (appendicular lean mass in kg/m²) between Fit Futures 1 (2010-2011) and Fit Futures 2 (2012-2013). The models give the beta coefficient for 30 minutes increase in light activity. All models were adjusted for baseline values of the outcome. In model 2 also adjusted for time between measurements and baseline values of pubertal development (pds (boys) and age at menarche (girls)), screen time on weekdays, study specialisation, age in half-years, regularity of eating breakfast and device wear time. In Model 3 adjusted also for minutes spent in Moderate-to-vigorous physical activity (CPM ≥ 1952).

Appendix Table 4. Association between minutes per day spent in MVPA (CPM \geq 1952) at baseline and changes in body composition, adjusted for puberty [#] .						
	Boys (n = 143)			Girls (n = 258)		
	Beta	95% CI	p value	Beta	95% CI	p value
Δ BMI						
Model 1	0.11	-0.08, 0.31	0.24	-0.00	-0.17, 0.16	0.97
Model 2	0.07	-0.15, 0.29	0.51	0.07	-0.11, 0.25	0.43
Δ waist circumference						
Model 1	0.28	-0.38, 0.95	0.40	-0.02	-0.68, 0.64	0.95
Model 2	-0.06	-0.82, 0.70	0.88	0.02	-0.69, 0.72	0.97
Δ FMI						
Model 1	0.02	-0.16, 0.20	0.80	-0.01	-0.17, 0.14	0.88
Model 2	0.05	-0.16, 0.25	0.66	0.06	-0.11, 0.22	0.52
Δ LMI						
Model 1	0.08	-0.02, 0.17	0.11	0.03	-0.03, 0.09	0.34
Model 2	0.01	-0.09, 0.11	0.84	0.03	-0.04, 0.09	0.42
Δ aLMI						
Model 1	0.05	-0.01, 0.10	0.09	0.02	-0.01, 0.05	0.13
Model 2	0.02	-0.04, 0.07	0.60	0.02	-0.01, 0.06	0.15

[#]: The table displays the association between minutes spent in moderate-to-vigorous physical activity (MVPA) and difference in BMI (kg/m^2), waist circumference, FMI (fat mass in kg/m^2), LMI (lean mass in kg/m^2) and aLMI (appendicular lean mass in kg/m^2) between Fit Futures 1 (2010-2011) and Fit Futures 2 (2012-2013). The models give the beta coefficient for 15 minutes increase in MVPA. Both models were adjusted for baseline values of the outcome. In model 2 also adjusted for time between measurements and baseline values of pubertal development (pds (boys) and age at menarche (girls)), screen time on weekdays, study specialisation, age in half-years, regularity of eating breakfast and device wear time.