Table S3
Convergent validity of data obtained with objective physical activity monitors

Participants N, age category	Instrument Parameter (units)	Comparator Parameter (units)	Result	Statistic	Author
Convergent Validity (comparison between physical activity assessment tools)					
12 adults	SenseWear Energy expenditure (METS)	e-AR activity monitor (activity index)	r=0.64, p<0.0001	NR	Wieboldt 2012 [A:4]
17 adults	SenseWear Energy expenditure (kcal/min)	Indirect calorimetry Energy expenditure (kcal/min)	Flat walking: r=0.89, p<0.001	Pearson's	Dwyer et al 2009 [A:6]
			Flat walking: SenseWear overestimated p<0.001 +1.5 [95%CI: 0.9 to 2.1]	Paired t-test Mean difference	
			Incline walking: r=0.87, p<0.001	Pearson's	
			Incline walking: p=NS	Paired t-test Mean difference	
34 adults (CF + healthy)	SenseWear Step count (steps/min)	Manual Step count (steps/min)	Flat and incline walking: SenseWear underestimated p<0.05 -7 [95%CI: 5 to 9]	Paired t-test Mean difference	
			Flat and incline walking: r=0.66, p < 0.001	Pearson's	
20 adults with CF	SenseWear Mild activity (min/day) weekday	HAES somewhat active (min/day) weekday	p=NS	Spearman's correlation	Savi 2013 [A:2]
	SenseWear Moderate activity (min/day) weekday	HAES very active (min/day) weekday	p=NS		
	SenseWear Lying time (min/day) weekday	HAES total inactivity (min/day) weekday	p=NS		
	SenseWear Duration physical activity (min/day) weekday	HAES total activity (min/day) weekday	p=NS		
	SenseWear Mild activity (min/day) weekend	HAES somewhat active (min/day) weekend	p=NS		
	SenseWear Moderate activity (min/day) weekend	HAES very active (min/day) weekend	p=NS		
	SenseWear Lying time (min/day) weekend	HAES total inactivity (min/day) weekend	p=NS		
	SenseWear Duration physical activity (min/day) weekend	HAES total activity (min/day) weekend	p=NS		
14 children, adolescents and adults	ActiGraph Time spent active in each category (hr)	HAES Time spent active in each category (hr)	0.17 to 0.66, p<0.05	ICC	Wells et al 2008 [A:11]
			-2.3 to 2.9	Limits of agreement	

		3-Day version of Bratteby's Activity Diary Time spent active in each category (hr)	0.33 to 0.66, p<0.05	ICC	
			-1.8 to 2.3	Limits of agreement	
41 children, adolescents and adults	ActiGraph Time spent in MPA (min/d)	7D-PAR Time spent in moderate intensity activity (min/d)	r: p=NS ICC: p=NS	Pearson's + ICC	Ruf et al 2012 [A:9]
		7D-PAR Time spent in hard intensity activity (min/d)	r=0.661, p<0.001 ICC=0.448, p=0.001		
		7D-PAR Time spent in very hard intensity activity (min/d)	r=0.340, p=0.030 ICC=0.306, p=0.024		
		7D-PAR Time spent in moderate + hard + very hard intensity activity (min/d)	r=0.421, p=0.006 ICC: p=NS		
		7D-PAR Time spent in hard + very hard intensity activity (min/d)	r=0.639, p<0.001 ICC=0.337, p=0.015		
		HAES Time spent active (min/d)	r=0.403, p=0.009 ICC: p=NS		
		HAES Time spent somewhat active + active (min/d)	r: p=NS ICC: p=NS		
		LRC Activity level (category)	r: p=NS ICC: NA		
	ActiGraph Time spent in VPA (min/d)	7D-PAR Time spent in moderate intensity activity (min/d)	r: p=NS ICC: p=NS		
		7D-PAR Time spent in hard intensity activity (min/d)	r: p=NS ICC: p=NS		
		7D-PAR Time spent in very hard intensity activity (min/d)	r=0.321, p=0.041 ICC=0.267, p=0.044		
		7D-PAR Time spent in moderate + hard + very hard intensity activity (min/d)	r: p=NS ICC: p=NS		
		7D-PAR	r: p=NS		

		Time spent in hard + very hard intensity activity (min/d)	ICC: p=NS		
		HAES Time spent active (min/d)	r: p=NS ICC: p=NS		
		HAES Time spent somewhat active + active (min/d)	r: p=NS ICC: p=NS		
		LRC Activity level (category)	r: p=NS ICC: NA		
	ActiGraph Time spent in MVPA (min/d)	7D-PAR Time spent in moderate intensity activity (min/d)	r: p=NS ICC: p=NS		
		7D-PAR Time spent in hard intensity activity (min/d)	r=0.508, p<0.001 ICC=0.443, p=0.002		
		7D-PAR Time spent in very hard intensity activity (min/d)	r=0.409, p=0.008 ICC=0.408, p=0.004		
		7D-PAR Time spent in moderate + hard + very hard intensity activity (min/d)	r=0.330, p=0.035 ICC: p=NS		
		7D-PAR Time spent in hard + very hard intensity activity (min/d)	r=0.558, p<0.001 ICC=0.404, p=0.004		
		HAES Time spent active (min/d)	r=0.326, p=0.037 ICC: p=NS		
		HAES Time spent somewhat active + active (min/d)	r: p=NS ICC: p=NS		
		LRC Activity level (category)	r: p=NS ICC: p=NA		
T1:48, T2:43, T3:35 children and adolescents	Caltrac Activity (counts/hr)	LSI Activity (counts/hr)	T1: r=0.62, p<0.001 T2: r=0.86, p<0.001 T3: r=0.74, p<0.001	Spearman's	Orenstein 1993 [A:17]
T1:26, T2:31, T3:33 children and adolescents	Caltrac Activity (counts/hr)	Kriska Questionnaire Energy expenditure (Kcal/wk)	T1: p=NS T2: r=0.45, p<0.01 T3: p=NS		
T1:48, T2:42, T3:33 children and adolescents	Caltrac Activity (counts/hr)	Harvard alumni Energy expenditure (Kcal/wk)	T1: r=0.32, p<0.05 T2: r=0.44, p<0.01		

			T3: p=NS		
T1:26, T2:31, T3:33 children and adolescents	LSI Activity (counts/hr)	Kriska Questionnaire Energy expenditure (Kcal/wk)	T1: p=NS T2: r=0.35, p<0.05 T3: p=NS		
T1:48, T2:42, T3:33 children and adolescents	LSI Activity (counts/hr)	Harvard alumni Energy expenditure (Kcal/wk)	T1: p=NS T2: r=0.33, p<0.05 T3: p=NS		

Abbreviations: HAES=Habitual Activity Estimation Scale; ICC=intra-class correlation coefficient; LSI=Large Scale Integrated Motor Activity Monitor; LRC=Lipids Research Clinics Questionnaire; MPA=moderate physical activity; MVPA=moderate to vigorous physical activity; N=number; NR=not reported; NS=not significant; T1=Time 1 (baseline); T2=Time 2 (+3months); T3=Time 3 (+1year); VPA=vigorous physical activity; 7D-PAR=7 day physical activity recall

Note: All references are listed in the online supplementary material reference list