

Physical Activity Assessment in CF (Mar 2015)

**Table S9**

**Convergent validity of data obtained using physical activity questionnaires and diaries**

Participants N, age category	Instrument Parameter (units)	Comparator Parameter (units)	Results	Statistic	Author
<b>Convergent Validity (comparison between physical activity assessment tools)</b>					
<i>Convergent validity of questionnaires</i>					
20 adults with CF	HAES somewhat active (min/day) weekday	SenseWear Mild activity (min/d) weekday	p=NS	Spearman's correlation	Savi 2013 [A:2]
	HAES very active (min/day) weekday	SenseWear Moderate activity (min/d) weekday	p=NS		
	HAES total inactivity (min/day) weekday	SenseWear Lying time (min/d) weekday	p=NS		
	HAES total activity (min/day) weekday	SenseWear Duration physical activity (min/d) weekday	p=NS		
	HAES somewhat active (min/day) weekend	SenseWear Mild activity (min/d) weekend	p=NS		
	HAES very active (min/day) weekend	SenseWear Moderate activity (min/d) weekend	p=NS		
	HAES total inactivity (min/day) weekend	SenseWear Lying time (min/d) weekend	R=0.559, p=0.01		
	HAES total activity (min/day) weekend	SenseWear Duration physical activity (min/d) weekend	p=NS		
109 children and adolescents	HAES	Bouchard Activity Diary	Summer: r=0.62, p<0.002 Other seasons: p=NS	Mixed model regression	Schneiderman 2005 [A:22]
14 children, adolescents and adults	HAES Time spent active in each category (hr)	3 day version of Bratteby Activity Diary Time spent active in each category (hr)	ICC=0.22 to 0.67, p<0.0001	ICC	Wells 2008 [A:11]
	HAES Time spent active in each category (hr)	ActiGraph Time spent active in each category (hr)	ICC=0.17 to 0.66, p<0.05	ICC	
			-2.3 to 2.9 hr	Limits Agreement	
41 children, adolescents and adults	7D-PAR Time spent in moderate intensity activity (min/d)	ActiGraph Time spent in MPA (min/d)	r: p=NS ICC: p=NS	Pearson's product correlation	Ruf 2012 [A:9]
		ActiGraph Time spent in VPA (min/d)	r: p=NS ICC: p=NS		
		ActiGraph Time spent in MVPA (min/d)	r: p=NS ICC: p=NS		

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	7D-PAR Time spent in hard intensity activity (min/d)	ActiGraph Time spent in MPA (min/d)	r=0.661, p<0.001 ICC=0.448, p=0.001
		ActiGraph Time spent in VPA (min/d)	r: p=NS ICC: p=NS
		ActiGraph Time spent in MVPA (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)	ActiGraph Time spent in MPA (min/d)	r=0.340, p=0.030 ICC=0.306, p=0.024
		ActiGraph Time spent in VPA (min/d)	r=0.321, p=0.041 ICC=0.267, p=0.044
		ActiGraph Time spent in MVPA (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)	ActiGraph Time spent in MPA (min/d)	r=0.421, p=0.006 ICC: p=NS
		ActiGraph Time spent in VPA (min/d)	r: p=NS ICC: p=NS
		ActiGraph Time spent in MVPA (min/d)	r=0.330, p=0.035 ICC: p=NS
	7D-PAR Time spent in hard + very hard intensity activity (min/d)	ActiGraph Time spent in MPA (min/d)	r=0.639, p<0.001 ICC=0.337, p=0.015
		ActiGraph Time spent in VPA (min/d)	r: p=NS ICC: p=NS
		ActiGraph Time spent in MVPA (min/d)	r=0.558, p<0.001 ICC=0.404, p=0.004
	HAES Time spent active (min/d)	ActiGraph Time spent in MPA (min/d)	r=0.403, p<0.001 ICC: p=NS
		ActiGraph Time spent in VPA (min/d)	r: p=NS ICC: p=NS
		ActiGraph Time spent in MVPA (min/d)	r=0.326, p=0.037 ICC: p=NS
	HAES Time spent somewhat active + active (min/d)	ActiGraph Time spent in MPA (min/d)	r: p=NS ICC: p=NS
		ActiGraph Time spent in VPA (min/d)	r: p=NS ICC: p=NS
		ActiGraph Time spent in MVPA (min/d)	r: p=NS ICC: p=NS
	LRC Activity level (category)	ActiGraph Time spent in MPA (min/d)	r: p=NS ICC: NA
		ActiGraph Time spent in VPA (min/d)	r: p=NS ICC: NA

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		ActiGraph Time spent in MVPA (min/d)	r: p=NS ICC: NA		
12 adolescents	HAES (child self-reported)	vs. HAES (parent reported)	Parents reported lower activity than children, p<0.05	Paired t-test	Boucher 1997 [A:24]
T1:26, T2:31, T3:33 children and adolescents	Kriska's Modifiable Activity Questionnaire (Kcal/wk)	Caltrac (counts/hr)	Time 1: p=NS Time 2: r=0.45, p<0.01 Time 3: p=NS	Spearman's	Orenstein 1993 [A:17]
T1:26, T2:31, T3:33 children and adolescents	Kriska's Modifiable Activity Questionnaire (Kcal/wk)	LSI (counts/hr)	Time 1: p=NS Time 2: r=0.35, p<0.05 Time 3: p=NS		
T1:48, T2:42, T3:33 children and adolescents	Harvard Alumni Survey (Kcal/wk)	Caltrac (counts/hr)	Time 1: r=0.32, p<0.05 Time 2: r=0.44, p<0.01 Time 3: p=NS		
T1:26, T2:32, T3:41 children and adolescents	Kriska's Modifiable Activity Questionnaire (Kcal/wk)	Harvard alumni (Kcal/wk)	Time 1: r=0.73, p<0.001 Time 2: r=0.68, p<0.001 Time 3: r=0.58, p<0.001		
<b>Convergent validity of diaries</b>					
14 children, adolescents and adults	3 day version of Bratteby Physical Activity Diary Time spent active in each category (hr)	ActiGraph Time spent active in each category (hr)	ICC=0.33 to 0.66, p<0.05 -1.8 to 2.3 hr	ICC Limits Agreement	Wells 2008 [A:11]

Abbreviations: 7D-PAR=7 day Physical Activity Recall Interview; HAES=Habitual Activity Estimation Scale; hr=hour; ICC=intraclass correlation coefficient; Kcal/wk=kilocalories per week; LRC= Lipid Research Clinics Questionnaire; LSI=Large Scale Integrated Activity Monitor; MPA=moderate physical activity; MVPA=moderate to vigorous physical activity; NA=not applicable; NS= not significant; PI = pancreatic insufficiency; PS = pancreatic sufficiency; VPA=vigorous physical activity

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