

Table S11

Correlation between data measured using physical activity questionnaires and other outcome measures in CF

Participants N, age category	Questionnaire/ diary	Parameter (units)	Comparison (units)	Result	Statistic	Author
Cross sectional correlation with other clinical measures						
<i>Cross sectional correlation between questionnaires and other clinical measures</i>						
101 adults with CF 45 females adults with CF	IPAQ	Physical activity (MET-min/week)	Lung function	p=NS	Pearson's	Rasekaba 2013 [A:38]
			FEV ₁	Total p=NS Work p=NS Transport p=NS Domestic p=NS Total walking p=NS Total vigorous r=0.31, p<0.05		
			FEV ₁ % predicted	Total p=NS Work r=0.32, p<0.05 Transport p=NS Domestic p=NS Total walking p=NS Total vigorous r=0.34, p<0.05		
			FVC	Total r=0.33, p<0.05 Work p=NS Transport p=NS Domestic p=NS		

Physical Activity Assessment in CF (Mar 2015)

				Total walking p=NS Total vigorous r=0.32, p<0.05		
			FVC % predicted	Total r=0.42, p<0.05 Work r=0.30, p<0.05 Transport p=NS Domestic r=0.34, p<0.05 Total walking p=NS Total vigorous r=0.42, p<0.05		
			FEV ₁ /FVC	Total p=NS Work p=NS Transport r=- 0.4, p<0.05 Domestic p=NS Total walking r=-0.32, p<0.05 Total vigorous p=NS		
			FEV ₁ /FVC % predicted	Total p=NS Work p=NS Transport r=- 0.39, p<0.05 Domestic p=NS Total walking r=-0.31, p<0.05 Total vigorous		

Physical Activity Assessment in CF (Mar 2015)

56 males adults			Lung function	p=NS Any physical activity category p=NS	Pearson's	Rasekaba 2013 [A:38]
20 adults	HAES	Physical activity category (weekday and weekend)	VO _{2peak}	p=NS	Spearman's	Savi 2013 [A:2]
			Watt max	p=NS		
			6MWT	p=NS		
22 Adolescents and children	QAPACE	Time spent in physical activity hrs/week	Gender	p=NS	Not available	Hafen 2013 [A:37]
			FEV ₁	p=NS		
			Age	p=NS		
212 children and adolescents	HAES	Rate of change in Total activity (hrs/d) over 9 years	Change in FEV ₁ decline	r=0.19, p<0.007	Correlation analysis	Schneiderman 2013 [A:19]
			Change in VO _{2peak}	p=NS		
41 adolescents and adults	HAES	Time spent active (min/d)	W _{max}	p=NS	Spearman's	Ruf 2012 [A:9]
			VO _{2peak}	p=NS		
109 children and adolescents	HAES	Week day total activity (hrs/d)	VO _{2peak}	r=0.24, p=0.02	Mixed model regression	Schneiderman 2005 [A:22]
			FEV ₁ decline	p=0.02 (girls) p=NS (boys)		
36 children and adolescents	HAES	Time somewhat active + active (%)	BMP	p=NS	Pearson's	Boucher 1997 [A:24]
21 female children and adolescents			FEV ₁	p=NS		
11 children and adolescents (+ severe airflow obstruction)			BMP	r=-0.466, p=0.033		
81 children and adolescents	Adapted HAES (adaption not fully reported)	Time spent in moderate to vigorous activity	Whole Body Bone Mineral Content	p=NS	Multiple regression	Grey 2008 [A:21]

Physical Activity Assessment in CF (Mar 2015)

		(hours/d)				
39 children and adolescents	Baecke Questionnaire	Physical Activity Score	BMD	p=NS	Spearman's	Neri 2008 [A:25]
151 adults	Baecke Questionnaire	Physical Activity Score	BMD	p<0.05	Principal Component Analysis	Haworth 1999 [A:27]
35 adults	Baecke Questionnaire (energy requirements estimated using Schofield formulas)	Energy requirements (kcal)	Energy intake (kcal)	r=0.38, p<0.05	Pearson's	Hollander 2005 [A:26]
56 adults	Physical Activity Status Questionnaire (not reported see Wilson 1986)	Activity score (METs/d)	BMD	r=0.53, p=NR	Spearman's	Ionescu 2003 [A:30]
		Activity score (METs/d)	FFM	r=0.37, p=NR		
40 adults	Physical Activity Status Questionnaire (not reported fully see Wilson 1986)	Physical Activity (METs)	VC	r=0.334, p<0.01	Pearson's	Enright 2007 [A:29]
			TLC	r=0.42, p<0.01		
30 children's and adolescents	Kriska's Modifiable Activity Questionnaire	Physical activity (MET-hrs/wk)	VO _{2peak}	p=NS	Spearman's	Nixon 2001 [A:28]
			FEV ₁ %	p=NS		
			MMEFR%	p=NS		
			Weight	p=NS		
10 children and adolescents with FEV ₁ <80% predicted	Kriska's Modifiable Activity Questionnaire	Vigorous activity >6METs (mean hrs/wk)	VO _{2peak}	r=0.83, p=0.003	Spearman's	Nixon 2001 [A:28]
			FEV ₁ %	r=0.78, p=0.008		
			MMEFR %	r=0.77, p=0.009		
		Physical activity (MET-hrs/wk)	FEV ₁ %	r=0.72, p=0.019		
			MMEFR %	r=0.75, p=0.013		
			VO _{2peak}	p=NS		
10 children and adolescents with BMI	Kriska's Modifiable Activity Questionnaire	Physical activity (MET-hrs/wk)	VO _{2peak}	p=NS	Spearman's	Nixon 2001 [A:28]
			FEV ₁ %	p=NS		
			MMEFR%	p=NS		

Physical Activity Assessment in CF (Mar 2015)

<90%predicted			Weight	p=NS		
50 children and adolescents with CF	Kriska's Modifiable Activity Questionnaire	Energy expenditure (Kcal/wk)	Age	p=NS	Spearman's	Orenstein 1993 [A:17]
			FEV ₁	p=NS		
			VO ₂	p=NS		
41 adolescents and adults	Lipid Research Clinics Questionnaire	Activity category	W _{max}	r=0.46, p=0.002	Spearman's	Ruf 2012 [A:9]
			VO _{2peak}	r=0.32, p=0.041		
87 adults	7D-PAR (reported as Five city project PA recall (see Sallis, 1986))	Physical activity (METs)	BMD (femoral neck)	r=0.3, p=0.0002	Spearman's	Elkin 2001 [A:35]
		Physical activity (METs)	BMD (lumbar spine)	r=0.23, p=0.03		
		Physical activity (METs)	NTx levels	r=-0.25, p=0.03		
41 adolescents and adults	7D-PAR	Time spent active (min/d)	W _{max}	p=NS	Spearman's	Ruf 2012 [A:9]
			VO _{2peak}	p=NS		
114 adolescents and adults	Physical Activity Status Questionnaire (not reported fully see Wilson 1986)	Physical Activity (METs/d)	BMD	p<0.05	Spearman's	Conway 2000 [A:32]
16 adolescents	30-Day Physical Activity Recall Questionnaire (adapted from Sallis et al 1993 and Sallis et al 1996)	Vigorous physical activity (MET-hours/30-days)	VO _{2peak}	Baseline: r=0.49, p=0.05 Post-training: r=0.60, p=0.01	Pearson's	Baker and Wideman 2006 [A:36]
		Strenuous subscale	VO _{2peak}	Baseline: r=0.639, p=0.008 Post-training: r=0.617, p=0.025		
28 children and adolescents with CF	Harvard Alumni Survey	Energy expenditure (Kcal/wk)	Age	p=NS	Spearman's	Orenstein 1993 [A:17]
		Energy expenditure Kcal/wk	FEV ₁	p=NS		
		Energy	VO _{2peak}	p=NS		

Physical Activity Assessment in CF (Mar 2015)

		expenditure Kcal/wk				
<i>Cross sectional correlation between diaries and other clinical measures</i>						
70 children, adolescents and adults	Bouchard Diary	Energy expenditure (MJ/d)	Anaerobic power	p<0.01	Spearman's	Selavadurai 2004 [A:13]
			Aerobic capacity	p<0.01		
			Quality Well being	p<0.01		
			Body mass percentile	p<0.05		
			Lung function	p=NS		

Abbreviations: 7D-PAR=7-Day Physical Activity recall Interview; BMD=bone mineral density, BMP=body mass percentile, d=day; FFM=fat free mass; FEV₁=Forced expiratory volume in one second; HAES=Habitual Activity Estimation Scale; hrs=hours; Kcal=kilocalories; IPAQ=International Physical Activity Questionnaire; MJ=mega joules; MMEFR %=Maximum Mid-Expiratory Flow Rate%; NTx=urinary pyridinium crosslink; IDECG=International Dietary Energy Consultative Group; TLC=Tidal lung capacity; Quantification de L'Activitie Physique en Altitude chez les Enfants (QAPACE) VC=vital capacity; VO_{2peak}=peak oxygen consumption; wk=week; W_{max}=workload max

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