

Table S7**Characteristics of physical activity questionnaires and diaries used in studies* which assessed physical activity in CF
[*i.e. where information enabled identification of the questionnaire or diary]**

Questionnaire	Description and properties
Habitual Activity Estimation Scale (HAES) Savi 2013 Schneiderman 2013 Ruf 2012 Paranjape 2012 Wells 2008 Grey 2008 Schneiderman 2005 Klijn 2004 Boucher 1997 [A:2,19,9,20,11,21-24]	Description of questionnaire: Physical activity in one typical weekday and one typical Saturday in the past 2 weeks. % time spent in each of 4 time periods: bed – breakfast, breakfast – lunch, lunch – supper, supper-bedtime 4 domains: Inactive, Somewhat inactive, Somewhat active, Very active Output/units: <u>energy expenditure</u> – no <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – yes <u>other</u> – no Method of administration: Child: Two days in the life of my child - interviewer administered; Adolescent: Two days in my life- interviewer administered or supervised; Adult: Two days in my life - interviewer administered or supervised NB: A Standard Operating Procedure has been developed and available by JE Schneiderman. Scoring method: Excel score sheet Scoring range: 0-100% Instructions available: Available from author Length of time to administer: 15-20 minutes
Baecke Questionnaire Neri 2008 Hollander 2005 Haworth 1999 [A:25-27]	Description of questionnaire: 16-item questionnaire with 3 dimensions to assess physical activity in the previous 12 months: at work (work index), sport (sport index) and leisure (leisure index). Output/units: <u>energy expenditure</u> – no <u>step counts</u> – no <u>time spent in different intensities</u> – yes (total score for physical activity is represented in a work index, sport index and leisure index) <u>sedentary</u> – somewhat <u>other</u> – no Method of administration: Self-administered Scoring method: The total score for habitual physical activity is obtained by summing the work index, sport index and leisure index [Work index = ((6 – (points for sitting)) + SUM(points for the other 7 parameters)) / 8; Sport index = (SUM(points for all 4 parameters)) / 4; Leisure index = ((6 – (points for television watching)) + SUM(points for remaining 3 items)) / 4 Scoring range: n/a Instructions available: n/a Length of time to administer: n/a
Kriska's Modifiable	Description of questionnaire: Estimates of how physically active an individual was during the past (past year) and how physically

Physical Activity Assessment in CF (Mar 2015)

<p>Activity Questionnaire</p> <p>Nixon 2001 Orenstein 1993 [A:28,17]</p>	<p>active they are currently (past week) exploring participation in leisure time physical activity and sports, and occupational activities in adults. A list of common activities is read, and subjects are asked to provide information on the number of months, times per month or week, and the average duration of participation for each activity they participated in over the past year. Activities not listed that subjects commonly take part in can be added.</p> <p>Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – no <u>other</u> – no</p> <p>Method of administration: Interviewer administered</p> <p>Scoring method: Calculation of time spent doing physical activity (hours/week): Total time spent participating in physical activities (TOT-h·wk⁻¹), estimated relative intensity of all activities (MET-h·wk⁻¹), and time spent engaged in vigorous activities (VIG-h·wk⁻¹)</p> <p>Scoring range: n/a</p> <p>Instructions available: Yes</p> <p>Length of time to administer: n/a</p>
<p>Physical Activity Status Questionnaire</p> <p>Enright 2007 Ionescu 2003 Conway 2000 Ionescu 2000 [A:29-32]</p>	<p>Description of questionnaire: A recall questionnaire relating to physical activity in a preceding timeframe</p> <p>Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – no <u>sedentary</u> – no <u>other</u> – no</p> <p>Method of administration: n/a</p> <p>Scoring method: The activity score is expressed in metabolic equivalents (METs) [1 MET = the energy expended by a person at rest].</p> <p>Scoring range: n/a</p> <p>Instructions available: n/a</p> <p>Length of time to administer: n/a</p>
<p>Harvard Alumni Survey</p> <p>Orenstein 1993 [A:17]</p>	<p>Description of questionnaire: Assesses physical activity levels. Physical activity levels quantified assigning values to each activity based on energy expenditure. Questionnaire includes light sports (like bowling, biking, golf, light house work), strenuous sports (like running, skiing, swimming) total stairs climbed and blocks walked per day.</p> <p>Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – no <u>sedentary</u> – no <u>other</u> – no</p> <p>Method of administration: Survey</p> <p>Scoring method: n/a</p>

Physical Activity Assessment in CF (Mar 2015)

	<p>Scoring range: n/a Instructions available: n/a Length of time to administer: n/a</p>
<p>Physical Activity Questionnaire – for Children (PAQ-C)</p> <p>Buntain 2006 Buntain 2004 [A:33-34]</p>	<p>Description of questionnaire: The PAQ-C is a 7-day recall instrument for assessment of general levels of physical activity throughout the elementary school year for students in grades 4 to 8 and approximately 8 to 14 years of age. There are 10 items.</p> <p>Output/units: <u>energy expenditure</u> – no <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – no <u>other</u> – no</p> <p>Method of administration: Self-administered. Can be administered in a classroom setting</p> <p>Scoring method: 5-point scale. Score 1 (low physical activity) - 5 (high physical activity) for each of 9 items. Mean of the composite score of the 9 items. Item 10 is not included in the score.</p> <p>Scoring range: 1 (low physical activity) - 5 (high physical activity)</p> <p>Instructions available: Yes</p> <p>Length of time to administer: n/a</p>
<p>Lipid Research Clinics Questionnaire (LRC)</p> <p>Ruf 2012 [A:9]</p>	<p>Description of questionnaire: Assesses physical activity: very low, low, moderate, and high active based on two questions; regular, strenuous exercise and self-rating of physical activity relative to peers</p> <p>Output/units: <u>energy expenditure</u> – no <u>step counts</u> – no <u>time spent in different intensities</u> – no <u>sedentary</u> – no <u>other</u> – the individual’s activity level is categorized in very low, low, moderate, and high active</p> <p>Method of administration: n/a, usually self-administered</p> <p>Scoring method: Scale of 1-4. 1 - very low active to 4 - high active</p> <p>Scoring range: Scale of 1-4. 1 - very low active to 4 - high active</p> <p>Instructions available: n/a</p> <p>Length of time to administer: n/a</p>
<p>7-day Physical Activity Recall (Interview) (7-Day PAR)</p> <p>Ruf 2012 Elkin 2001 [A:9,35]</p>	<p>Description of questionnaire: Estimates an individual's time spent in physical activity, strength, and flexibility activities for the 7 days prior to the interview. The participant to recall time spent sleeping and doing physical activities for the past 7 days. Duration and intensity of the physical activities are determined.</p> <p>Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – no <u>other</u> – sleep</p>

Physical Activity Assessment in CF (Mar 2015)

	<p>Method of administration: Semi structured interview face to face. Can be administered by telephone or self-administered.</p> <p>Scoring method: The number of hours spent in sleep and different activity levels (moderate, hard, and very hard intensity) are obtained and an estimate of total kilocalories/day is calculated. Time spent in sleep (1 MET), light (1.5 METs), moderate (4 METs), hard (6 METs), and very hard (10 METs) activities for the past 7 d are multiplied by their respective MET values and then summed.</p> <p>Scoring range: n/a</p> <p>Instructions available: Yes</p> <p>Length of time to administer: n/a</p>
<p>30-day Physical Activity Recall (Interview) (30D PAR)</p> <p>Baker and Wideman 2006 [A:36]</p>	<p>Description of questionnaire: A 30-day PA recall (30D PAR) instrument adapted from: the 7-day PAR and the 1-day PAR</p> <p>Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – no <u>other</u> – information on 43 activities is collected</p> <p>Method of administration: Interviewer administered</p> <p>Scoring method: The MET value of every activity performed is multiplied by the times it occurred over 30 days to yield a MET-hour score. The 43 physical activities are grouped according to four intensity levels: light (<3 METS), moderate (3.0–5.9 METS), hard (6.0–8.9 METS), and very hard (≥9 METS). Subtotals for each intensity level are summed and a total MET-hour score is obtained.</p> <p>Scoring range: n/a</p> <p>Instructions available: Not specifically for 30D PAR</p> <p>Length of time to administer: n/a</p>
<p>Quantification de L'Activité Physique en Altitude chez les Enfants (QAPACE)</p> <p>Hafen 2013 [A:37]</p>	<p>Description of questionnaire: 18 questions in 13 categories, estimating time spent in daily activities covering all possible school or vacation activities over the past year. Participants estimate the average duration of each session in hours and minutes per day and the frequency of these sessions expressed in days per week.</p> <p>Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – no <u>sedentary</u> – no <u>other</u> – time spent in different activities: school and leisure activities estimated</p> <p>Method of administration: Self-administered</p> <p>Scoring method: Mean daily energy expenditure for school and vacation time along with the physical activity compendium were used to obtain the daily energy expenditure</p> <p>Scoring range: n/a</p> <p>Length of time to administer: 30 minutes</p>
<p>Past Year Activity Questionnaire</p>	<p>Description of questionnaire: Participants asked to estimate all leisure-time activities they had participated in a least 10 times in during the past year: provided an estimate of the average number of hours per week spent in each activity</p> <p>Output/units:</p>

Physical Activity Assessment in CF (Mar 2015)

<p>Kilbride 2012 [A:14]</p>	<p><u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – no <u>other</u> – time spent in different activities Method of administration: Self-administered Scoring method: hours per week summed to derive overall leisure-time physical activity estimate, this was converted to METs to derive composite estimate for each activity annually. An estimate of hours/week spent in vigorous activity over past year was calculated using activities >6 METs. Scoring range: n/a Instructions available: n/a Length of time to administer: n/a</p>
<p>International Physical Activity Questionnaire (IPAQ) Rasekaba 2013 [A:38]</p>	<p>Description of questionnaire: 7 day recall of work, transport, domestic and leisure related habitual physical activities, activities included if performed for at least 10 minutes, time and number of days are then converted to weighted MET minutes per week Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – no <u>other</u> – no Method of administration: self-administered Scoring method: work, transport, domestic and leisure activity and then a total physical activity score are calculated in MET/min/week; MET/min/week for walking, moderate and vigorous activities, and then a total physical activity score used to categorise patients as: Low, moderate or high physical activity category; Sitting score in time spent sitting Scoring range: Scored as per IPAQ protocol. Instructions available: IPAQ protocol available for scoring Length of time to administer: n/a</p>
<p>Diary</p>	<p>Description and properties</p>
<p>Bouchard's 3 Day Physical Activity Diary Schneiderman 2005 Selvadurai 2004 [A:22,13]</p>	<p>Description of diary: 3 day activity record for estimation of energy expenditure with 2 days any day of the week, and the 3rd day must be a Saturday or a Sunday. Each day is divided into 96 periods of 15 minutes. Energy expenditure is recorded for each 15 minute period on a 1-9 scale. Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – no <u>other</u> – sleep Method of administration: Self-administered</p>

Physical Activity Assessment in CF (Mar 2015)

	<p>Scoring method: Mean time (Minutes per day) spent in activities. Activities are converted to METs to compute daily energy expenditure Scoring range: n/a Instructions available: Some instructions are available in an appendix of the original research paper. Length of time to administer: n/a</p>
<p>Bratteby 7-Day Physical Activity Diary Wells 2008 Selvadurai 2002 [A:11,39]</p>	<p>Description of diary A 7-day physical activity diary - each day is divided into 15-min intervals and the subject asked to grade their activity into nine categories [1 sleep, 2 sitting, 3 standing, 4 walking inside, 5 walking outside, 6–9 represent low, moderate, high and maximum intensity activity. Output/units: <u>energy expenditure</u> – yes <u>step counts</u> – no <u>time spent in different intensities</u> – yes <u>sedentary</u> – no <u>other</u> – sleep Method of administration: Self-administered. Scoring method: Activities are converted to METs Scoring range: n/a Instructions available: n/a Length of time to administer: n/a</p>

Abbreviation: h:wk⁻¹=hours per week; METS=metabolic equivalents; n/a=information is not available

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