

Accelerometer data: Derived physical activity variables

30 year follow-up (Q30)

2010-2012

Participants who attended the BRHS 30 year follow-up physical examination in 2010-12 (Q30) were asked to wear an Actigraph GT3x accelerometer (Pensacola, Florida) over the right hip on an elasticated belt for 7 days, during waking hours, removing it for bathing, swimming or showering and returning the device by post.

1. Derived physical activity variables from accelerometer data

Counts per minute (CPM) were derived from the accelerometer data. CPM quantify physical activity intensity by summing up raw movement data over a one-minute interval. The number of minutes per day spent in sedentary behaviour (SB), light physical activity (LIPA), and moderate to vigorous physical activity (MVPA) was categorised using count-based intensity thresholds (counts per minute) developed for older adults: <100 CPM for SB, 100–1040 CPM for LIPA, and >1040 CPM for MVPA.

More details on the methods can be found in Reference 1 below.

References

1. Sartini C, Wannamethee SG, Iliffe S, Morris RW, Ash S, Lennon L, Whincup PH, Jefferis BJ. Diurnal patterns of objectively measured physical activity and sedentary behaviour in older men. BMC Public Health. 2015 Jul 4;15:609. doi: 10.1186/s12889-015-1976-y. PMID: 26141209; PMCID: PMC4490705.

Note: The slight discrepancy in the numbers reported in Reference 1 (1,455 participants) compared to the 1,454 presented in the table below is due to one participant being included in the Reference 1 data who did not attend for a physical examination.

Derived variables for those who attended the 30-year follow-up physical examination

Variable description	units	BRHS Variable name	Min	Max	N	NMISS
<100 CPM, % of time spent in SB, per day	%	Q30actg_SB	38.0	99.0	1454	268
100-1040 CPM, % of time spent in light PA	%	Q30actg_LIPA	0.69	49.1	1454	268
>1040, % of time spent in mod/vigorous PA	%	Q30actg_MVPA	0.05	22.6	1454	268
Total number of steps, per day		Q30actg_steps	121.1	17842	1454	268
Daily average CPM		Q30actg_CPM	9.80	754.5	1454	268