Info for readme file to accompany PloSOne data archive

Archived data pertaining to article: Chowdhury, E.A., Western, M.J., Nightingale, T.E., Peacock, O.J. & Thompson, D. (2017) **Assessment of laboratory and daily energy expenditure estimates from consumer multi-sensor physical activity monitors**

Missing data points are denoted as NA in the dataset.

**Daily Energy Expenditure**

Reflects the total energy expenditure (EE) estimates for the free-living day of wear from relevant apps for consumer devices or software for research devices. One individual does not have data for daily EE as devices were incorrectly worn. One data point is not available for the Apple Watch device as the participant placed the device in an exercise mode but did not deactivate this mode for 8 hours. One data point for the Actiheart is missing as data was not available to perform an individual calibration of the Actiheart data for this individual.

**Resting Energy Expenditure**

Resting EE data for the two devices that provided these estimates through associated apps. One data point is not available for the Apple Watch device due to the inappropriate activation of exercise mode described above.

**Active Time Metrics**

Metrics related to active time. The exact description of the metric from the related app for each device is provided. Data for Microsoft Band device was converted from hours to minute equivalents.

**Laboratory Data**

This data is separated into the individual activities completed in the laboratory. Additionally, the overall estimates for the laboratory protocol combined are included. Four individuals do not have Sensewear data across all data points due to monitor download failure. One individual does not have data across all data points due to an individual calibration not being available for this individual. Where data is missing for an individual activity, data for all other activities is still included for estimation of individual activities. In these instances the total energy expenditure for the entire protocol is still available. The only time this is not the case is if a baseline reading was not able to be obtained as is the case for two individuals.

**Typing**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices. Two Microsoft Band, one Fitbit Charge HR and one Apple Watch data point are missing due to delays with the device/app updating, resulting in the baseline data being greater than follow up. One additional Microsoft Band data point is missing due to energy expenditure data not being collected due to experimenter error.

**Dishwasher**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices. One Microsoft Band data point is missing due to energy expenditure data not being collected due to experimenter error.

**Sweeping**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices. One Microsoft Band data point is missing due to energy expenditure data not being collected due to experimenter error.

**Stairs**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices. One Microsoft Band data point is missing due to energy expenditure data not being collected due to experimenter error.

**Walking**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices.

**Load Carriage**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices. Three Apple Watch data points are missing as the associated app did not update following the activity.

**Cycling**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices.

**Jogging**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices. One Microsoft Band data point is missing due to the relevant exercise mode not being activated for the run.

**Recovery 1-4**

Data is provided as the estimate for the period calculated from minute by minute data for the research devices and Cosmed, and the difference between the start and end energy expenditure for the period for the commercial devices.

**Overall for Protocol**

Data is provided as the combined total energy expenditure for the two parts of the laboratory protocol. Three Microsoft Band data points are missing, two due to a lack of baseline estimates and one due to exercise mode not being activated for a run. One Fitbit Charge HR and one Apple Watch data point is missing due to a lack of a baseline estimate.