

Supplemental Methods 1.

Methods for Intention-to-Treat and Per-Protocol analysis – Actical Data Processing Procedures.

Data processing procedures for the Actical were consistent with those outlined by Colley et al.¹ All processing was conducted using SAS 9.4 (SAS Institute, Cary, NC). Devices were initialized to record in 1-minute epochs with data collected prior to midnight on the first day of recording removed.

Children were asked to remove the device for aquatic activities and recorded their daily bed and wake times on a log sheet. Bed and wake times were manually verified by visually inspecting the accelerometer data, and adjusted if needed, using a previously validated approach.² Time spent sleeping, as well as non-wear time (defined as 60 consecutive minutes of zero counts while allowing for 1–2 min of non-zero counts),¹ was removed prior to deriving estimates of movement behaviours.

Participants' Actical data were scanned for biologically implausible count values (i.e., accelerations that humans cannot produce on their own). Those implausible counts were replaced with 0. Participants' data from malfunctioning devices were removed. Data were screened, and adjusted if necessary, to ensure that all devices were initialized at midnight with 1 min epochs.

A valid measurement day was defined as having ≥ 10 hours of accelerometer data;¹ all epochs from invalid measurement days were removed. Participants had to have at least 4 valid measurement days to be included³ in the main Actical database. Time spent in each movement intensity was classified according to established intensity cut-offs for the Actical accelerometer: vigorous: ≥ 6500 counts/min, moderate: between < 6500 and ≥ 1500 counts/min, light: between < 1500 and ≥ 100 counts/min,⁴ and sedentary: < 100 counts/min.⁵

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