

Supplementary Material 4. Descriptions of treadmill-based validation studies from which speed- and wear location-specific mean absolute percentage error (MAPE) values were obtained.

Study	<i>n</i>	Person-bouts [†]	Device Makes/Models Tested by Wear Location	Walking Speeds
Abel 2011 ¹	59	295	<i>Waist:</i> ActiGraph 7164, Omron HJ-112, three New Lifestyles NL-1000s, three Walk4Life Pros, three Yamax DigiWalker SW-701s	0.98, 1.12, 1.33, 1.57, 1.78 m/s
An 2017 ²	35	175	<i>Wrist:</i> Basis B1 Band, Fitbit Flex, Garmin Vivofit, Jawbone UP24, Misfit Shine, Nike+ FuelBand SE, Polar Loop <i>Waist:</i> FitBit Zip, Withings Pulse <i>Upper arm:</i> SenseWear Armband Mini	0.89, 1.12, 1.34, 1.56, 1.79 m/s
Beets 2005 ³	20	100	<i>Waist:</i> Two Yamax DigiWalker SW-200, two Yamax DigiWalker SW-701, two Walk4Life 2505, two Sun TrekLINQ	0.67, 0.90, 1.12, 1.33, 1.57 m/s
Höchsmann 2018 ⁴	20	80	<i>Wrist:</i> Garmin VivoFit 2, ActiGraph GT3X+ <i>Waist:</i> ActiGraph GT3X+	0.44, 0.89, 1.33, 1.67 m/s
Kanoun 2009 ⁵	42	168	<i>Thigh:</i> ActivPAL	0.45, 0.67, 0.90, 1.33 m/s
Le Masurier 2004 ⁶	12	60	<i>Waist:</i> Yamax DigiWalker SW-200, Omron HJ-105, Sportline 330, CSA model 7164	0.90, 1.12, 1.33, 1.57, 1.78 m/s
Leong 2017 ⁷	48	240	<i>Waist:</i> Three Samsung Galaxy S4 GT-I9500 smartphones with either Pacer Works, Runtastic, or Tayutau app <i>Upper arm:</i> Three Samsung Galaxy S4 GT-I9500 smartphones with either Pacer Works, Runtastic, or Tayutau app	0.89, 1.12, 1.34, 1.56, 1.79 m/s
Maddocks 2010 ⁸	40	200	<i>Waist:</i> Yamax DigiWalker SW-401 <i>Thigh:</i> ActivPAL <i>Ankle:</i> PALlite	0.60, 0.80, 1.00, 1.20, 1.40 m/s
Ryan 2006 ⁹	20	100	<i>Thigh:</i> ActivPAL	0.90, 1.12, 1.33, 1.56, 1.78 m/s
Takacs 2014 ¹⁰	30	150	<i>Waist:</i> Two Fitbit Ones	0.90, 1.12, 1.33, 1.54, 1.78 m/s
Tudor-Locke 2006 ¹¹	9	9	<i>Waist:</i> Kellogg 's Special K Step Counter, Yamax DigiWalker SW-200	1.33 m/s

[†] Person-bouts = (sample size) * (number of bouts per participant)

References for Supplemental File 4

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