



## Correction: Comparative validity of energy expenditure prediction algorithms using wearable devices for people with spinal cord injury

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Correction to: *Spinal Cord*

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Upon publication of the original article, the authors reported incorrect demographic information in the ‘Tsang’ and ‘Sample Size and Diagnoses’ row and column block of Table 1. Instead of:

“SCI (Paraplegia): 49

SCI (Tetraplegia): 18

Spina Bifida: 8

Cerebral Palsy: 2

Amputation: 2

Other: 7

Did not report: 4”

This should read:

“SCI: 28

Spina Bifida: 8

Cerebral Palsy: 2

Multiple Sclerosis: 1

Other: 6”

This has now been corrected in the original article and the corrected version of Table 1 is below:

**Table 1** EE prediction equations for MWUs.

Author	Sample size and diagnoses	Activity protocol	ActiGraph specifications	Equation (Units)	Reported accuracy
Nightingale [12]	Spinal Cord Injury (Paraplegia): 10 Spina Bifida: 3 Cerebral Palsy: 1 Amputee: 1 Scoliosis: 1 Able bodied MWU athlete: 1	Desk Work WP at: 2 km·h <sup>-1</sup> , 4 km·h <sup>-1</sup> , 6 km·h <sup>-1</sup> , 8 km·h <sup>-1</sup>	Wrist: Right Model: GT3X+ f <sub>c</sub> : 30 Hz Software: ActiLife 6	Eq. #1 PAEE = 0.000245 × VMC + 0.291708 (kcal·min <sup>-1</sup> )	R = 0.93 Standard Error of Estimation = 3.34 kJ·h <sup>-1</sup>
Nightingale [13]	Spinal Cord Injury (Paraplegia): 9 Fibromyalgia: 1 Spina Bifida: 2 Complex Regional Pain Syndrome: 1 Able-Bodied Individuals: 2	Resting Folding Clothes WP at 3 km·h <sup>-1</sup> , 4 km·h <sup>-1</sup> , 5 km·h <sup>-1</sup> , 6 km·h <sup>-1</sup> , 7 km·h <sup>-1</sup> WP with additional 8% body mass at 4 km·h <sup>-1</sup> WP on a 3% gradient at 4 km·h <sup>-1</sup>	Wrist: Right Model: GT3X+ f <sub>c</sub> : 30 Hz Software: ActiLife	Eq. #2 PAEE = 0.000929 × VMC - 0.284818 (kJ·min <sup>-1</sup> )	MAE = 0.69 ± 0.63 kcal·min <sup>-1</sup> MAPE = 33% ± 40%
Garcia-Massó [14]	Spinal Cord Injury (T2 - L5): 20	Lying Down; Body Transfers; Moving Items; Mopping; Watching TV; Working on a Computer; Arm-Ergometry exercise; Passive Propulsion Slow Propulsion; Fast Propulsion	Wrist: Dominant Model: GT3X f <sub>c</sub> : 30 Hz Software: Not Specified	Eq. #3 <sup>a</sup> O <sub>2</sub> = 4.1355 + 0.0376 × XC <sub>50</sub> - 0.0155 × XC <sub>90</sub> - 0.0047 × XC <sub>NΔ2</sub> + 0.0062 × XC <sub>SD1</sub> + 0.02 × ZC <sub>75</sub> - 0.0363 × ZC <sub>90</sub> + 0.0161 × VMC <sub>75</sub> + 0.0253 × VMC <sub>90</sub> (ml·kg <sup>-1</sup> ·min <sup>-1</sup> )	Mean Squared Error = 5.16 ml·kg <sup>-2</sup> ·min <sup>-2</sup> MAE = 1.67 ml·kg <sup>-1</sup> ·min <sup>-1</sup> Root Mean Square Error = 3.32 ml·kg <sup>-1</sup> ·min <sup>-1</sup> MAPE = 31% ± 7% MSPE = -9 ± 16% ICC (2.1) = 0.84
Tsang [11]	SCI: 28 Spina Bifida: 8 Cerebral Palsy: 2 Multiple Sclerosis: 1 Other: 6	WP on a flat tile surface at, slow normal, and fast self-selected speed WP at self-selected normal speed on a track, low pile carpeted surface, sidewalk, up/down a ramp; Wheelchair basketball; TheraBand Exercising; Weight Lifting; Arm Ergometry at self-selected slow, normal, fast speed; Watching TV; Washing dishes; Folding clothes/bedsheets; Cleaning house Reading; Using Computer; Playing Games; Propelling around neighborhood; Stretching, chair aerobic, and strength exercises	Wrist: Dominant Model: GT9X Link f <sub>c</sub> : 30 Hz Software: ActiLife (Version 4)	Eq. #4 EE = -0.006197602220975 + 0.000000088463 104 × BMR2 × VM + 0.000823693371782 × BMRI + 0.00057760782718 × X (kcal·min <sup>-1</sup> )	
Learmonth [15]	Spinal Cord Injury: 10 Spina Bifida: 5 Multiple Sclerosis: 4 Amputation: 2 Cerebral Palsy: 1 Congenital Bone Disorder: 2 Demyelinating disease: 1	Resting WP at 1.5 miles·h <sup>-1</sup> , 3 miles·h <sup>-1</sup> , and 4.5 miles·h <sup>-1</sup>	Wrist: Both Model: GT3X f <sub>c</sub> : 30 Hz Software: Not Specified	Eq. #5 - Right Handed O <sub>2</sub> = 0.0022 × VMC + 3.13 (ml·kg <sup>-1</sup> ·min <sup>-1</sup> )	R = 0.95 ± 0.37 R <sup>2</sup> = 0.90 ± 0.14
				Eq. #5 - Left Handed O <sub>2</sub> = 0.0021 × VMC + 3.14 (ml·kg <sup>-1</sup> ·min <sup>-1</sup> )	R = 0.93 ± 0.44 R <sup>2</sup> = 0.87 ± 0.19

MWU Manual Wheelchair User, WP Wheelchair Propulsion, PAEE Physical Activity Energy Expenditure, EE Energy Expenditure, MAE Mean Absolute Error, MAPE Mean Absolute Percent Error, MSPE Mean Signed Percent Error, ICC Intraclass Correlation Coefficient.

<sup>a</sup>During data analysis, it was noted that Eq. #3 as represented in the original article had abnormal results due to the last coefficient (0.253 × VMC<sub>90</sub>). The corresponding author was contacted who confirmed that the last coefficient should be (0.0253 × VMC<sub>90</sub>) as shown in Eq. #3 above.