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Validity of a Multi-Sensor Armband for Estimating Energy Expenditure during Eighteen Different Activities

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Data and Statistical Analysis

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EE u ⊠16 , **u** η _ u . . F u =0.58 (. <0.001) u u E ⊠16 ∫ =0.70 (. <0.01). u

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. A , u u 95% CI F -5.07 u u 4.85 E E . 95% CI -2.8 3.0 u ... u u u u u ⊠8,15,17,18 , EE . u $\mathbf{u} \neq \mathbf{v}$

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- Galvani CG (2007) Comparison of Activity Monitors Accuracy to Estimate Energy Expenditure of Daily Living Activities. Annual Meeting of the American College of Sports Medicine.
- Jakicic JM, Marcus M, Gallagher KI, Randall C, Thomas E, et al. (2004) Evaluation of the Sensewear Pro Armband to Assess Energy Expenditure During Exercise. Med Sci Sports Exerc 36: 897-904.
- King GA, Torres N, Potter C, Brooks TJ, Coleman KJ (2004) Comparison of Activity Monitors to Estimate Energy Cost of Treadmill Exercise. Med Sci Sports Exerc 36: 1244-1251.
- Wadsworth DD, Howard T, Hallam JS, Blunt G (2005) A Validation Study of a Continuous Body Monitoring Device: Assessing Energy Expenditure at Rest and During Exercise. Annual Meeting of the American College of Sports Medicine.
- Crandall CG, Taylor SL, Raven PB (1994) Evaluation of the Cosmed K2 Portable Telemetric Oxygen Uptake Analyzer. Med Sci Sports Exerc 26: 108-