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Increasing Physical Activity Amounts and Intensity in Older Adults Using Low Cost Wearable Devices - “Cadence Training”

Catrine Tudor-Locke
University of Massachusetts Amherst

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Increasing Physical Activity Amounts and Intensity in Older Adults Using Low Cost Wearable Devices - “Cadence Training”

Catrine Tudor-Locke
PhD, FACSM, FNAK
I have no actual or potential conflict of interest in relation to this presentation.
New generation consumer tracking devices
Expected values for special populations

Tudor-Locke et al., Preventive Medicine, 2009
Alternative Terms for Cadence

- Step frequency
- Step rate
- Stride frequency
- Stride rate
- Walking tempo
- Steps/min
- SPM
- Steps·min⁻¹
6135 steps/day

Cadence (steps/min)

24-hour time clock

Department of Kinesiology
Tudor-Locke et al., in progress
Heel Toe Gap 2 (too in/out)

Bilateral Parameters:
- Step Time (sec): 0.59/2.6, 0.61/1.8
- Cycle Time (sec): 1.19/1.2, 1.19/1.1
- Step Length (cm): 65.76/3.1, 66.06/2.5
- Stance Length (cm): 131.86/2.1, 132.06/2.8
- Single Support (SSG): 34.7/3.1, 34.6/3.2
- Double Support (SSG): 30.7/2.2, 30.9/1.9
- Swing (SSG): 34.3/3.2, 34.9/3.1
- Stance (SSG): 65.7/9, 65.17/1.7
- Step/Extremity Ratio: .00, .00
- Toe In/Out (deg): 17, 12

Parameters:
- Distance (cm): 527.3
- Ambulation Time (sec): 4.77
- Velocity (cm/sec): 110.5
- Mean Normalized Velocity: 0.0
- Number of Steps: 0
- Cadence (Steps/Min): 180.6

Primary Dr:
Sample Normal Values:

money
Synthesis of 7 treadmill/track/corridor studies

Metabolic Equivalent (MET); 1 MET = 3.5 ml oxygen consumption per kg per minute

Tudor-Locke et al., *IJBNPA*, 2011
THANK YOU!