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Opportunities](#)[Funding  
Decisions](#)[IA > IA Showcase](#)

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## Institute of Aging (IA)

### February 2006 Age Plus Prize Winner

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#### Manuel Montero-Odasso, University of Western Ontario

#### Gait Velocity as a single predictor of adverse events in healthy seniors aged 75 years and older

Human life expectancy has increased in the last decades; however, disability-free life expectancy has not increased proportionately. Mobility problems are one of the most common causes of disability, as they can lead to motor disabilities, balance problems, falls, and fractures. Despite the variety of mobility tests available, there has been a gap in applying research knowledge into clinical practices for detecting and preventing mobility problems. One strategy for decreasing this gap is to develop reliable instruments for assessment or screening. With this goal in mind, Dr. Manuel Montero Odasso studied whether gait velocity measurement (how fast a person walks) can detect early stages of vulnerability to mobility disability in healthy seniors.

Dr. Montero Odasso worked with 102 high-functioning persons over 75 years of age, with the goal of assessing whether a low gait velocity can predict future adverse events. After a 2-year follow-up, he found that participants with a slow gait velocity had higher incidences of hospitalization, requirement for a caregiver, nursing home placement, falls, fractures, and death. Gait velocity was even shown to predict adverse events in seniors that had normal performance in more complex mobility tests. One specific finding of the study showed that slowness on gait, compared to more complex mobility tests, was an earlier predictor of falls. This finding has important clinical implications, given that the first fall in an elderly person can result in serious injuries and subsequent disability. Dr. Montero Odasso believes that gait velocity should be tested by clinicians as a "vital sign" in older adults due to its simplicity and predictive value for future adverse outcomes. Once vulnerability to mobility disability is detected in healthy seniors, proper interventions can be provided to increase their quality of life.

Dr. Montero Odasso is a geriatrician (a physician who focuses on the care of the elderly) with research interests that directly apply to clinical practice. He is currently an Assistant Professor in the Department of Medicine and Division of Geriatric Medicine at the University of Western Ontario, and is an Adjunct Scientist at the Lawson Research Institute in London, Ontario. His research is aimed at further defining whether subtle changes in gait can predict progress to dementia in people with memory problems. He is exploring novel interventions for improving mobility, and preventing future disability in older adults.

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[Top of Page](#)[Important Notices](#)