

Making Assistive Technology and Rehabilitation Engineering a Sure Bet

Assessment of Car Transfers and Wheelchair Loading Technique in Individuals Aging with Paraplegia

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ABSTRACT

For aging manual wheelchair users with spinal cord injury, community participation can be enhanced with independent use of a vehicle for transportation necessitating repetitive self-transferring and loading of the wheelchair into and out of the car. The purpose of this study was to compare and contrast the strategies utilized by persons with paraplegia performing car transfers and wheelchair loading and to determine the points of greatest difficulty of this task. We videotaped and analyzed the movement techniques of nine persons with paraplegia for a minimum duration of 10 years as they moved from their personal wheelchair to the driver's seat of their vehicle and loaded their wheelchair into the vehicle. Several common techniques were identified among participants and constraints or barriers to performance were dependent upon psychosocial, physical, and environmental factors. Many constraints are potentially modifiable to preserve and facilitate independence and community participation in aging manual wheelchair users.

Keywords

Wheelchair, paraplegia, car transfers, aging, participation

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