

## Making Assistive Technology and Rehabilitation Engineering a Sure Bet

### **The Biomechanical Analysis Of Passive Standing Among People With Paraplegia Utilizing A Standing Wheelchair**

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#### **ABSTRACT**

Standing wheelchairs provide an effective means to counterbalance many of the negative effects of stationary sitting. However, little has investigated the kinematic and kinetic profile of low extremities during passive standing. The aim of the study was to measure the kinematic, and kinetic variables during passive standing while utilizing a standing wheelchair. The results showed that certain degrees of hip/knee joint motion are necessary for a user. Up to one-fifth of body weight could put on the knee, and large portion of body weight would transferred to the ankle joint during passive standing. These findings suggested some contraindications and precautions for a standing wheelchair user

#### **KEYWORDS**

Stand-up; Wheelchairs; Spinal Cord Injuries; Kneepad

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