

ABSTRACT

THESIS: The Effect of Body Weight Support Treadmill Training on Paretic Leg Contribution in Hemiparetic Walking in Persons with Chronic Stroke

STUDENT: Elicia N. Ozimek

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PAGES: 75

The purpose of this study was to assess the effect of BWSTT on paretic limb function using the outcome measures of overground walking velocity, paretic leg propulsion, and the mechanical work produced by the hip, knee, and ankle of the paretic limb. Thirteen participants with chronic stroke, ranging in age from 40 to 80 years, completed 24 sessions of BWSTT over eight weeks. Overground walking velocity and bilateral kinematics and kinetics were collected prior to and following completion of the BWSTT intervention. All participants exhibited statistically significant increases in overground walking velocity post BWSTT. Neither the propulsive impulse of the paretic limb, relative to total propulsive impulse, nor the relative contribution of the paretic hip, knee, and ankle to total positive work significantly changed post BWSTT. The results suggest that paretic limb function remains unchanged following BWSTT, despite improvements in overground walking velocity.