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Clinically feasible strategies to achieve high intensity gait training: A case series

Brian Wadsworth

NYU Langone Medical Center, USA

Gait difficulties are a common complaint of individuals who suffer a stroke, spinal cord injury or traumatic brain injury. The locomotors clinical practice guidelines promoted high intensity gait training (HIGT) as a vital strategy to improve walking within these populations[i]. Research based HIGT protocols are often unrealistic for the clinical setting[ii,iii,iv,v]. The purpose of this case series was to provide examples of clinically feasible HIGT interventions to promote knowledge translation and close the gap between research and rehabilitation. A convenience sample was taken of patients (n = 3) with one of each of the following diagnoses: stroke, acquired brain injury, and incomplete spinal cord injury. Interventions included over ground and treadmill based locomotors training with the goal of achieving HIGT during 30-60 minute sessions for 10 sessions. Successful HIGT was determined by measuring heart rate every five minutes. Results indicated that HIGT was clinically feasible. Overall, HIGT was achieved 85.5% of the time with combined modes of intervention. Isolated treadmill training and over ground training achieved HIGT 84.4% and 85.6% of the time, respectively. In a 30 minute span, on average, 24.3mins were spent actively targeting HIGT and of that 19.3mins were spent achieving it. The most consistently effective treadmill interventions included: increasing speed; weighting impaired limb; and changing surface gradient. Effective over ground interventions included: running; jumping activities; stairs; and resisted walking. This case series showed that HIGT can be clinically feasible and provided examples of exercises that promote the knowledge translation of this approach.

Biography

Brian Wadsworth is a Physical Therapist at Rusk Rehabilitation at NYU Langone Health in New York City. He completed his Residency in Neurologic PT at NYU Rusk in 2017-2018 after graduating with his DPT in July 2017.