



“I Have Some Questions About High-Intensity Gait Training...”

FAQ for Physicians, Administrators, and anyone else interested in HIGT

1. Can HIGT improve the functional outcomes of patients with neurologic conditions such as stroke and incomplete spinal cord injury?

For patients with neuromuscular conditions such as stroke and incomplete spinal cord injury, HIGT has been shown to result in improvements in:

- Walking-related outcomes: gait speed, 6-minute walk test, gait symmetry^{1,2,3,4,5,6}
- Balance-related outcomes: Berg Balance Score, Five-Times Sit to Stand, Timed Up and Go^{1,2,7}
- Discharge outcomes: decreased level of assistance for ambulation, increased incidence of discharge to home^{2,7}
- Health-related outcomes: improved cardiovascular fitness, endurance, decreased risk of secondary stroke, improved quality of life^{4,8,9,10,11, 12}

2. Is it safe for patients with neurologic conditions to participate in high-intensity exercise?

Yes, HIGT is safe. When appropriately monitored by a licensed physical therapist or physical therapist assistant, there is no evidence of serious adverse events when completing high-intensity exercise.^{8,9,13,14} In those with stroke, it has been shown that once a patient has surpassed the initial 24-hour window following onset of stroke, there is no long-term adverse events associated with high-intensity exercise.¹⁵ In those with incomplete spinal cord injury, it has been found that HIGT is well-tolerated with no serious adverse reactions observed^{6,16}

3. Is there strong evidence to support HIGT?

The Academy of Neurologic Physical Therapy sponsored a Clinical Practice Guideline in January 2020 that summarizes the evidence in support of HIGT for patients with chronic stroke, incomplete spinal cord injury, and traumatic brain injury.¹³ This CPG represents the current best evidence in the field of physical therapy and comprises of recommendations from 111 studies on the effects of HIGT. Based on the preponderance of evidence for individuals poststroke, limited evidence in individuals with iSCI, and no evidence for individuals with TBI, task-specific gait training should be completed at 60-80% heart rate reserve or 70-85% of maximum heart rate.¹³

4. The Locomotor Clinical Practice Guideline is for patients with chronic neurologic deficits, can HIGT be used in inpatient rehab?

Although the CPG only provides specific recommendations for those with chronic neurologic conditions, there is also a significant amount of research supporting the use of HIGT for those with subacute stroke. Studies conducted in the inpatient rehabilitation setting have demonstrated similar improvements in walking-related and balance outcomes following administration of HIGT.^{1,3,6,17,18,19}

5. How is HIGT different than standard physical therapy practice?

HIGT is walking practice. Walking practice, or gait training, is a vital component of standard physical therapy (PT) practice. Physical therapists are specially trained to administer and monitor patient response to gait training. The two differences between HIGT and standard PT practice are the prioritization of walking practice over all other types of practice and the intensity at which it occurs.

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