

Pediatric Gait Trainers

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Introduction

Pediatric gait trainers are addressed by this guideline.

Criteria

A **pediatric gait trainer** (HCPCS E8000-E8002) is medically necessary for an individual (≤ 18 years of age) when **all** of the following conditions are present:

- The individual requires assistance to walk due to an injury or a disease that affects the muscles and nerves.
- The individual has tried crutches and other less restrictive assistive aids, but they are not supportive enough for the individual to stand and take steps.
- The individual has tried a gait trainer, and with the device's specialized support, the individual is able to stand and take steps.
- The individual will use the gait trainer with an exercise program.

Definitions

A **pediatric gait trainer** ("posture control walker" or "support walker") is a supported walking device that provides trunk and pelvic support to enhance mobility and activity. The device consists of a wide-based steel frame with four casters or wheels and a rigid or flexible seat. Additional components may be added to offer additional support and control.

The **Gross Motor Function Classification System (GMFCS)** was developed and validated for use in children with cerebral palsy (CP). Motor function is categorized into five (I-V) levels, with level I being the mildest and V being the most severe motor functional deficit.

- GMFCS Level I: The child walks without restrictions; however, more advanced gross motor skills may be limited.
- GMFCS Level II: The child walks without assist devices but may have limitations walking outdoors and in the community.
- GMFCS Level III: The child walks with assistive mobility devices and may have limitations walking outdoors and in the community.

- **GMFCS Level IV:** The child has severely limited walking ability even with the use of assistive devices. The child uses a wheelchair most of the time and may propel their own power wheelchair.
- **GMFCS Level V:** The child has severely limited self-mobility in all areas of motor function. The child has physical impairments that restrict voluntary movement control and the ability to maintain head and neck position against gravity. The child cannot sit or stand independently. The child may be able to use powered mobility.

Gait trainers may have an anterior or posterior orientation:

- **Anterior orientation** may facilitate ease of transfers.
- **Posterior orientation** have been noted to encourage more upright posture; however, these devices may make transfers more difficult.

Gait trainer features:

- **Frame style:** U-shaped frames are either in front, behind, or on the side. Sling, solid dynamic, or solid seats can be used with U-frames.
- **Wheel and caster options:** Two directionally fixed wheels and two swivel caster systems can either be rear, front, or midwheel drive.
- **Arm support options:** Vertical handles and arm gutters may assist with managing spasticity in children using handheld walkers. A hands-free gait trainer may promote upright posture.
- **Leg and thigh support systems:** Straddle type gait trainers typically have the option for solid adductor supports between the thighs and ankles. U-shaped frames typically have options for soft ankle cuffs, articulating leg cuffs, or an extended seat with an abduction skirt to limit adduction at the thighs.
- **Head support options:** A gait trainer may have the addition of neck or head supports mounted to the gait trainer.

Evidence Discussion

Medical Background

The United States Food and Drug Administration (FDA) considers pediatric gait trainers to be Class I devices. As such, they are considered to be low to moderate risk, and manufacturers are not required to complete premarket notification or seek premarket approval for these items (FDA, 2024).

Examples (not all-inclusive) of these devices include the Buddy Roamer™ (Moorings Mediquip, Ballymena Ireland), the Pacer (Rifton®, Rifton NY), the Kidwalk (Prime Engineering, Fresno, CA), and the Mustang and Pony (R82®, Gedved, Denmark).

Literature Review

- Paleg et al. (2015) conducted a systematic review including 17 studies involving 182 children to evaluate the evidence regarding the use of gait trainers at home or school. The majority of the studies included children with cerebral palsy (CP) who were unable to walk without support. The authors acknowledged that children with the more severe forms of CP (GMFCS level IV or V) may be appropriate candidates for the use of gait trainers due to an increased need for support. Moreover, the authors noted that in children with mild to moderate forms of CP (GMFCS level II or III), use of a gait trainer may facilitate weight bearing against gravity and environmental exploration during early critical periods of development.
- Booth et al. (2018) performed a systematic review including 41 studies and 11 randomized controlled trials to investigate the effects of functional gait training in individuals with CP. The authors found strong evidence that functional gait training results in clinically important benefits for children and young adults with CP, with a therapeutic goal of improved walking speed. In addition, the authors acknowledged weaker evidence that functional gait training can also benefit walking endurance and gait-related gross motor function.
- Gharib et al. (2019) conducted a randomized controlled trial which assessed the effects of gait trainer assisted exercises on walking performance in children with CP. Participants in the experimental and control groups received a traditional physical therapy exercise program. In addition, the experimental group received gait trainer based exercises which aimed to improve walking performance. Treatment was provided three times per week for three successive months. The participants received baseline and post-treatment assessments to evaluate gait parameters including: average step length, walking speed, time on each foot (percentage of gait cycle), and ambulation index. At the three month follow-up, the authors found that the use of the gait trainer was associated with an improved ambulation index and time of support on each foot. Thus, the investigators concluded that a gait trainer combined with traditional physical therapy increases the chance of improving gait performance in children with spastic hemiparetic CP.

Professional organizational /societies:

- A 2022 Developmental Medicine & Child Neurology clinical practice guideline by Jackman and colleagues evaluated interventions to improve physical function in individuals with cerebral palsy (CP). The guideline included three systematic reviews, 30 randomized trials, and five before–after studies. The authors provided a strong recommendation for general mobility training for all children with CP, regardless of GMFCS. Moreover, to improve walking speed and endurance, the authors suggested over ground training (with or without a walker).

Codes included

The inclusion of any code in this table does not imply that the code is under management or requires prior authorization. Refer to the applicable health plan for management details. Prior authorization of a code listed in this table is not a guarantee of payment. The Certificate of Coverage or Evidence of Coverage policy outlines the terms and conditions of the member's health insurance policy.

HCPCS	Description
E8000	Gait trainer, pediatric size, posterior support, includes all accessories and components
E8001	Gait trainer, pediatric size, upright support, includes all accessories and components
E8002	Gait trainer, pediatric size, anterior support, includes all accessories and components

References

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3. Gharib NM, El-Maksoud GM, Rezk-Allah SS. Efficacy of gait trainer as an adjunct to traditional physical therapy on walking performance in hemiparetic cerebral palsied children: a randomized controlled trial. *Clin Rehabil*. 2011;25(10):924-934. doi:10.1177/0269215511400768.
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