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- Affordable
- Comfortable
- Effective

Our research team consists of:

- Biomedical Engineering Students
- Interdisciplinary team from Kennedy Krieger Institute

Our team developed a novel mechanical orthosis (GaitAssist) to address this issue.

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**Objectives:**

- Describe an interdisciplinary effort to develop a novel orthotic, GaitAssist
- Facilitate discussion regarding additional areas for improvement

**Description:**

GaitAssist utilizes two connected blocks strapped on the user’s thighs as a physical barrier to keep the legs from crossing. The two blocks are connected by a metallic bolt that slides on a C-shaped rail, so the two blocks can slide past each other to accommodate walking.

**Preliminary Results:**

- Increase in base of support with GaitAssist in 6/6 participants
- Safe (no subjects have experienced falls or had an adverse skin reaction)
- 4/6 participants report device is comfortable
- Participant and parent suggestions for improvement: appearance, color, padding, straps
- Barriers/design limitations: participant recruitment, unable to adjust thigh width and rail length on current design, difficult to control hip internal rotation

**Significance:**

The collaboration between Biomedical Engineering students and staff of an urban academic outpatient center has allowed the development of a possible solution to the long standing issue of scissoring in children with cerebral palsy.

**Goal:** To make an individually adaptable, inexpensive GaitAssist device that will improve the quality of life of children with cerebral palsy by increasing their ability to safely participate in activities in home, school and community environments.

**Areas for future study:** trials with children ambulating in varied surface environments and with use of 3D gait analysis.