GaitAssist: A Novel Orthosis to Mitigate Scissoring Gait in CP Patients

Published date: March 17, 2017

Technology description

Unmet Need

Cerebral Palsy is a group of serious movement disorders that affects the lives of thousands of patients each day by limiting their mobility and fine motor control. A common form of Cerebral Palsy called spastic diplegia significantly impedes a patient’ s ability to walk normally because the knees and thighs can cross over each other in a scissor-like movement. This scissoring-gait can cause instability and difficulty in walking and standing. Currently, there are few methods or devices to treat scissoring-gait and those that do exist are cumbersome, uncomfortable, and relatively ineffective. There is a need for an easy-to-use and effective device to treat scissoring-gait, while remaining relatively inconspicuous for the patient.

Technology Overview

The inventors have created a novel GaitAssist device that reduces scissoring-gait through the use of a physical barrier to separate the legs. GaitAssist is a removable device to be worn between the legs outside the clothing. The device includes two specially fabricated lightweight blocks that form a physical barrier to maintain normal separation between the thighs and prevent unwanted leg scissoring. The blocks are moveably connected to allow them to slide past one another for a fixed distance during walking. The device ensures both legs are guided and supported throughout the entire gait cycle with minimal scissoring. Unique brace design allows for adjustment of the device for individual customization to each patient’ s needs.

Institution

Johns Hopkins University

Inventors

Pooja Nair
Undergrad Student
Najwa Faqih
Undergrad Student
Yu Xu

Undergrad Student
Biomedical Engineering WSE
Nathaniel Leon
Senior Staff Engineer
Mechanical Engineering
Ana Ainechi
Undergrad Student
Biomedical Engineering
Jacob Schick
Undergrad Student
Biology A&S
Tara Johnson
Research & Clinical Fellow
Pediatrics
Kevin Xin
Undergrad Student
Biomedical Engineering WSE
Kaiyuan Wang
Undergrad Student
Biomedical Engineering WSE
Robert Allen
Assistant Research Professor
Outside
Andie Seabrooke
Undergrad Student
Michael Ruiz
Undergrad Student

联系我们

叶先生

电 话：021-65679356

手 机：13414935137

邮 箱：yeyingsheng@zf-ym.com