

Toward Ubiquitous Lower Limb Exoskeleton Use in Children and Young Adults

NCT06998134

Status RECRUITING
Sponsor National Institutes of Health Clinical Center (CC)
Enrollment 23 participants

Key Eligibility Criteria

Inclusion (8)

- In order to be eligible to participate in this study, an individual must meet all of the following criteria:
 - Provision of signed and dated separate informed consent and assent forms for screening purposes. Upon inclusion in the protocol, provision of signed and dated informed consent and assent forms to begin participation in the study will be necessary.
 - Stated willingness to comply with all study procedures and availability for the duration of the study, or alternatively, ability to do so based on parent report and physician observation during history and physical examination.
 - Age 5 to 25 years old. Importantly, we included young adults (18-25 years old) because longterm outcomes for adults with cerebral palsy include loss of ambulatory ability. While studies of conventional gait training in this population have been conducted, use of exoskeletons in this population is very limited. Given the potential benefit of exoskeletons to reduce knee extension deficiency, it is important to determine whether novel controllers we develop are also tolerated and effective in this age group.
 - Either has a gait pathology arising from a diagnosis of CP, MD, SB, or iSCI or has no gait pathology.
- ... and 3 more (see full listing online)

Exclusion (5)

- An individual who meets any of the following criteria will be excluded from participation in this study:
- Any neurological, musculoskeletal, or cardiorespiratory injury, health condition, or diagnosis other than CP, MD, SB, or iSCI that would affect the ability to walk as directed with the robotic exoskeleton.
- A history of uncontrolled seizures in the past year.
- Pregnancy based on self-reporting. We excluded pregnancy due to confounding factors of pregnancy on gait.
- Adult unable to consent for themselves at screening visit.

Locations (1 total)

National Institutes of Health Clinical Center, Bethesda, Maryland, United States