

Participate in Research

Brain and Muscle Responses to Robotic Training in Children with Motor Impairments: Typically Developing Cohort



PRINCIPAL INVESTIGATORS:

Dr. Tom Chau

TO ASK QUESTIONS OR TO SIGN UP, CONTACT:



YARA CORKY

PhD Candidate

ycorky@hollandbloorview.ca

416-425-6220 ext. 3169



Do you have a child between 4-12 of age who is typically developing?

Consider participating in our research study!

WHAT IS THIS STUDY ABOUT

This study looks at how the brain and muscles respond when walking with the Trexo robotic exoskeleton. We want to learn about the muscle and brain activity patterns of typically developing children walking in the Trexo. We will compare this to its use by children with cerebral palsy to help us understand the ways it can help with their movement.

WHO CAN PARTICIPATE?

We are looking for typically developing children who:

- Are 4–12 years old.
- Have a height that falls roughly between 85 cm and 130 cm (about 2'9" to 4'3") and weigh up to 56 kg (125 lbs).
- Can say if they feel any discomfort or pain.
- Have no conditions limiting physical activity (e.g., epilepsy, heart issues).

WHAT'S INVOLVED?

- 1 session (2 hours) at Holland Bloorview Kids Rehab Hospital
- Walking with the assistance of the Trexo robotic exoskeleton
- Leg and lower back muscle recordings (using non-painful surface sensors) while walking
- Brain activity recording (soft head cap)

POTENTIAL BENEFITS AND RISKS

- Children will experience walking with the assistance of a robot.
- There's no personal benefit, but the study may help improve therapies for kids with mobility issues.
- The Trexo is low-risk, but its use in the study may cause mild fatigue.
- The cap may feel cool; leg sensors may be sticky.
- No needles or medications.
- Children will be supervised by a physiotherapist during all of the walking that is done in the Trexo

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Participants will receive a small token of appreciation to thank them for their time.