

Participate in Research

BeFAST or BeSTRONG?

Brain change after Fun Athletic Sports-skill Training or
Brain change after Strength TRaining focusing ON Gait



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Participate in a research study looking at the relationship between changes in brain activity & changes in movement after walking-based training

What is this study about?

We are doing a research study at Holland Bloorview to learn how activity of the brain changes after two different programs of walking based training. We will also study change in movement and participation to see if these changes are linked to brain change.

Who can participate?

We are looking for:

- Twenty-two **children ages 7-17 with Cerebral Palsy** that affects just one side of their body, or mostly their legs, and who can walk on their own without a walking aid.

What's involved?

- Children will have **16 sessions of training** over 6 weeks (two-three times per week for 45 minutes). Each child will either have training that focuses on **sports-skills** like running, or training that focuses on **lower limb strength**.
- All children will have **two scans of their brain** done at SickKids using functional magnetic resonance imaging (fMRI). One brain scan will be before the training and the second scan will be after the training. Each visit is 2 hours.
- There will be **three assessments at Holland Bloorview**: Before and after the training, and again 4 months after the training is over. Each assessment is 2.5 hours.
- At the assessments, we will look at how children move. We will also ask questions about activities children participate in, and how they feel about these activities.

Potential Benefits?

The brain pictures may help us to understand how the brain changes after training, and help us understand how we can help children get better at walking-related skills. Children will have 16 sessions of training to work on their walking goals.

Potential Risks?

Children might find it a little bit uncomfortable lying still in the brain scanner. There is a chance that children may fall during the training, but the trainers will be very careful.

If they would like, all children will get pictures of their brains and a certificate of participation and volunteer time.