

## Participant Recruitment Letter



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## Research Participants Needed

### *‘NeuroCare:’ Determining readiness for return to activity after youth concussion*

A concussion, also known as mild Traumatic Brain Injury (mTBI for short), is a common form of head and brain injury, and can be caused by a direct or indirect hit to the head or body (for example, a car crash, fall or sport injury). This hit to the head causes a change in brain function, which results in a variety of symptoms. To learn more about concussions, visit Think First Canada at [www.thinkfirst.ca](http://www.thinkfirst.ca) or the BrainFit Lab at [www.brainfitlab.com](http://www.brainfitlab.com).

To help youth athletes with concussion, we are looking to determine how the youth brain and body recover after a concussion and if there are improved ways that we can measure if young people are ready to return to activity (sport, school etc.) Through this research, we hope to change the way we manage concussion in youth athletes and to improve the lives of children across the world.

We want to learn more about recovery from sports-related concussion in children and youth. Specifically, we want to know how youth athletes feel after a concussion. Things like headaches, feeling sick to their stomach or feeling more tired than normal. We want to know if these feelings affect performance on brain and body fitness tests. This information can help create return-to-activity (school, sport etc.) guidelines specific to youth athletes.

We also want to learn more about a new approach using heart rate as a way of knowing if the brain is ready to take on more activity after a concussion. We will compare this new approach to other approaches more commonly used in the past (balance, thinking, strength, brain scanning/imaging). We hope that this new approach will let us know if young athletes like you are ready to return to activity after a concussion.

All participants will complete a 1-2 hour baseline (or pre-injury) assessment of thinking ability, balance, strength and heart rate at the start of their sport season. Athletes who get a concussion during their sport season will do the same assessment after the injury at different times so we can track changes in performance and recovery (immediately following the injury, weekly until post-concussion symptoms have gone away, as well as 1-week, 1 month, 3 months and 6 months after post-concussion symptoms have gone away). This testing will match up with rehabilitation services and care provided at the Holland Bloorview Kids Rehabilitation Hospital within the BrainFit Lab. Some participants will also take part in other parts of the study looking at brain imaging and heart rate monitoring.

Some athletes who have orthopedic injuries (sprained ankle, broken arm etc.) and who do not have any injury during their sport season will also complete the same testing. This will let us compare concussed and non-concussed athletes.

You do not have to pay anything to take part in this research project.

We are looking for male and female athletes between the ages of 10 to 18 years who participate in competitive sports that have a high risk for concussion (hockey, lacrosse, football, rugby, soccer, cheerleading). You cannot take part in the study if: 1) You cannot read or understand English; 2) you cannot understand the study and show you can consent on your own to participate in it (e.g. cannot answer any questions about what you will be doing in the study); 3) you have a prior history of a neurological or cardiovascular condition; 3) you have a prior history of a psychiatric disease or mental health condition; 4) you are currently taking medication that may influence heart rate or blood pressure. You can still participate in this study if you have had a concussion before.

This study will be conducted by Dr. Michelle Keightley at the Holland Bloorview Kids Rehabilitation Hospital. Michelle is a Clinician Scientist and Neuropsychologist at the hospital. Michelle and her clinical team specialize in providing care to young athletes following concussion and researching improved ways of evaluating recovery after this injury.

If you are interested in participating, please contact Michelle Keightley ([mkeightley@hollandbloorview.ca](mailto:mkeightley@hollandbloorview.ca)) or Nick Reed ([nreed@hollandbloorview.ca](mailto:nreed@hollandbloorview.ca)).

I have attached a consent form that talks about the study in further detail for your reference.

Thank you for thinking about being involved!