

# Participate in Research

Evaluating grip strength in response to auditory stimulus: concussed vs. non-concussed.



## Principal Investigator:

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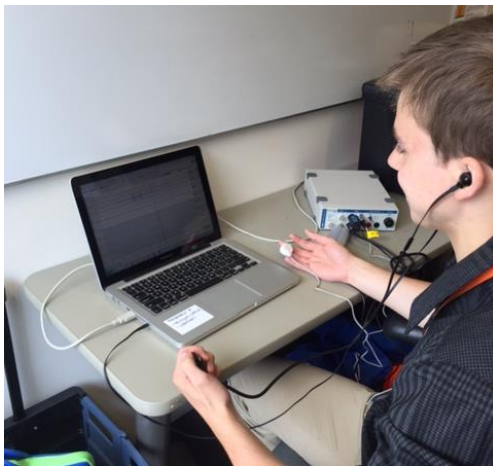
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## Centre for Leadership:

Acquired Brain Injury



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## TO ASK QUESTIONS OR TO SIGN UP, CONTACT

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## Do you want to help us learn what happens to the grip strength and auditory reaction time after a concussion in youth? Consider participating in a research study!

### What is this study about:

- We want to learn more about recovery from sports-related concussion in children and youth.
- Effect of mTBI (mild traumatic brain injury) on grip strength and reaction time.
- The aim of this study is to provide methods to objectively measure recovery.

### Who can participate?

We are looking to recruit 40 youth with the following profile:

- 20 youth who have **sustained a concussion** withing the past 2 weeks;
- 20 youth who have **sustained a concussion** prior to the last 2 weeks, who still have post-concussion symptoms;
- Between the ages of 13-18 years;
- Do not currently have a skull fracture;
- Have no degenerative, cardiovascular, metabolic, or respiratory disorders;
- Have no drug or alcohol-related conditions;
- Have no prior history of a psychiatric disease or mental health conditions;
- Are not currently using any drugs that alter or have an impact on brain state;
- Can read and understand English.

We will also be recruiting 20 youth who have not sustained a concussion to compare results between the groups.

### What's involved?

- The session will last 30 minutes.
- You will wear earphones that will play an auditory tone. As soon as you hear the tone, you will squeeze your hand as hard and as quickly as possible. This will be done 3 times on both hands.
- We will also place a sensor on your finger to measure your heart rate.
- The session will be held at Holland Bloorview and conducted at convenient time for you.

### What are the benefits of participating?

- By taking part in this research study you are helping to better understand the effect and recovery of concussions.
- Help drive understanding of concussions to help guide rehab programs.
- **Contacting us does not obligate you to participate in the study.**

### What are the possible risks?

- The study protocol could cause some frustration to participants, if this occurs participants can take a break or withdraw from the study.
- There is a low risk that auditory stimuli that is played may cause or exacerbate headaches and other concussion symptoms .