

Young athletes recover more slowly from concussions than adults

December 22 2015, by Katie Babcock

As many as one in five Canadians have suffered a sport-related concussion before the age of 18, according to a recent Angus Reid Institute [survey](#).

While most people are aware of the effect of concussions on professional athletes – such as the football players who are the subject of the movie *Concussion* – the prevalence of such injuries among young athletes is less known.

But the survey doesn't surprise Michael Hutchison, an assistant professor in U of T's Faculty of Kinesiology and Physical Education. As the director of the [concussion](#) program at the faculty's David L. MacIntosh Sport Medicine Clinic, Hutchison is at the forefront of investigating ways to manage these complex injuries. He is also taking a close look at the special implications of concussions suffered by young people.

Why is it important to study concussions in young athletes?

In the past, researchers primarily studied this injury in adults and [professional athletes](#). But new studies show young athletes are a unique population and recover more slowly from concussions than adults. This is partly because their brains are still developing, but it's also due to a lack of awareness. For example, a child could play on a community sports team, suffer a concussion and not have any trained professionals

around to identify the injury. Also, young athletes may not know they should tell an adult, or how to articulate their symptoms. It's important to have dedicated research to examine younger athletes. We want to manage their symptoms and recovery more effectively.

Why are brain injuries underreported?

We often rely on data from U.S. high school or university databases and [emergency room](#) visits. But the numbers don't necessarily reflect the "milder" injuries – many athletes who suffer a concussion don't go to the emergency room and there is no way to systematically capture this information. We also have difficulty diagnosing concussions because they don't show on common imaging technology, including CT scans.

How do you help young athletes cope with concussions?

The Faculty of Kinesiology and Physical Education developed one of the first comprehensive programs in the country to deal with concussions among [student athletes](#). We've worked closely with the MacIntosh Clinic to develop specific protocols. It is important to keep in mind that young athletes lead complex, busy lives, including school, social activities and sports. After suffering a concussion, [young athletes](#) might have trouble dealing with all of these activities. By managing and gradually re-introducing different physical, cognitive and sensory stressors, we help adolescents and adults return to their daily activities.

How is your research changing our understanding of concussions?

We're using sophisticated [imaging technology](#) with our colleagues at St. Michael's Hospital to study the structural, functional and metabolic

changes in the concussed brain. We're also partnering with Canada's Department of National Defence to study novel inflammatory markers in the blood. We're trying to identify and track the metabolic cascade of neurons over time and how this relates to recovery. Our hope is to improve the way we measure recovery as well as to identify those who might be at increased risk of injury or longer recovery time.

What advice would you give to concerned parents?

Unfortunately, there's no magic bullet to prevent or cure concussions. When participating in activities, there's always a risk of getting injured. Common sense is the best approach. In terms of prevention, we recommend using helmets and limiting risky behaviour. And if a young athlete does suffer a concussion, it's important to stop the activity immediately and seek medical attention.

Provided by University of Toronto

Citation: Young athletes recover more slowly from concussions than adults (2015, December 22) retrieved 27 April 2024 from

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