

On the Uptake

childhood
disability
LINK



Hôpital de Montréal
pour enfants
Centre universitaire
de santé McGill



Montreal Children's
Hospital
McGill University
Health Centre



McGill
UNIVERSITY



Heads Up : Kids and Concussions

Kids love to get out and play. Sometimes, this can lead to concussions and pose serious health risks. With the right diagnosis and treatment, kids can get back into the field.



*Dr. Isabelle Gagnon, Associate Professor
Clinician Scientist, Montreal Children's
Hospital*

Kids get a lot of concussions. In fact, it is in this group of the population that we most commonly find this injury. We generally recognize that someone has had a concussion because they have fallen or have been hit to the head or body, and they don't quite seem like themselves. For example, they could speak slowly or have headaches, or complain of things like dizziness, being sensitive to light, to sound

or to rapid movements. For most kids, recovery takes place over a few weeks, but for some, problems can last for a few months. Over the course of their recovery, children usually return to school and daily activities in a gradual manner, but only when they are completely recovered are they allowed to return to practicing their sports.

Over the last decade, media and public awareness around the problem of concussions in children has grown significantly. Although thinking, behavior

and physical problems are reported by children and their families, it can be difficult to objectively document these issues because a lot of the tests we currently use are perhaps not sensitive enough. In addition, not everyone is using the same ways to measure problems in clinic and research. It can be challenging, if not impossible, to combine and/or compare data or studies in meaningful ways. There's a lot of variety in the words used to describe a concussion, as well as in the tools used to categorize, assess and classify patients, interventions, and



recovery.

What does research say?

Three main issues are the object of much activity by researchers around the world. First, deciding when an injury is a concussion, or *making the diagnosis of concussion*. Doctors and other healthcare professionals who see children after an injury still have to rely on their judgement alone to make the diagnosis. There is no blood test, or CT-scan, or even another type of test that can say for sure that someone has or doesn't have a concussion. Many people are therefore trying to find better tests to achieve quick and accurate diagnosis. This is important because without a sensitive test, some milder injuries could be missed, putting children at risk of continuing their activities despite their brain not functioning properly.

The next important issue is *tracking recovery*. Right now, many people still rely on asking children how they feel in order to monitor how they recover from a concussion. This approach, although

important, cannot be taken out of the context of the child's state before the injury for these same symptoms. The symptoms reported after a concussion are very diverse and are not necessarily specific to concussions. For example, "headaches" are felt on a very regular basis by many people without injuries, or "not sleeping well" could be caused by many reasons having little to do with the injury. There is an urgent need to move beyond solely relying on self-reported symptoms to follow children's path to recovery. Researchers are currently looking at balance, eye movements, heart rate, memory and attention tests for example, to better track recovery after the injury.

The third issue capturing much attention is the *when and how children should be allowed to return to activities (school, sports, life)*. Most people agree that returning to risky sports should only take place once the child is completely recovered i.e. no symptoms, no abnormal tests, "feeling back to normal". The problem with this approach is the difficulty in tracking recovery. If we have

difficulties in evaluating how children are doing while they recover, determining when all problems are solved is also very difficult. As we learn more about better ways to diagnose and track recovery consistently, determining when things are back to normal should be easier to achieve.

Recent and exciting discoveries occur on a weekly basis in the field of concussion. For example, in the last 2 years, work from our group and others have shown that we can predict who, among children and adolescents presenting to the Emergency Room after a concussion, will still have symptoms after 1 month; that children take longer than adults to recover; that complete rest (staying in bed or not doing anything) is actually detrimental to recovery while gradual return to activities, within the limits of children's symptoms, would be a better strategy to promote recovery; and that a rehabilitation program that includes aerobic exercise, vision exercises and treatment decreasing dizziness is useful when children take longer to recover.



Childhood disability LINK is a bilingual website linking Information and New Knowledge on childhood disability to service providers and families. The website also focuses on enhancing the awareness and understanding of research on a variety of issues in childhood disability. Please visit us at: www.childhooddisability.ca.

Want to learn more on the topic?

Suggested readings:

- <http://www.thechildren.com/health-info/trauma/mch-trauma-concussion-kit>
- <http://www.thechildren.com/health-info/trauma/could-it-be-concussion-how-tell>
- <http://www.parachutecanada.org/injury-topics/item/concussion>
- <https://www.cdc.gov/headsup/youthsports/index.html>
- <http://onf.org/documents/guidelines-diagnosing-and-managing-pediatric-concussion>

Key points from the suggested readings:

Take home points for families

- It's important to look for signs and symptoms of concussions after a hit to the body or the head
- If you think your child has a concussion, see your family doctor
- Wait until symptoms have completely resolved before allowing your child to play sports

Take home points for clinicians

- The knowledge on concussion changes at a quick pace, you have to keep up to date.
- Education and early management are the keys to a seamless recovery
- If things don't evolve well, don't hesitate to send children to a multi-disciplinary team specialized in concussion care

