

## **Concussions in young children: Symptoms still present three months later**

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Concussions in children aged 6 and under continue to affect their health three months after the event. This is the finding of a study led by Miriam Beauchamp, a professor in the Department of Psychology at Université



de Montréal and researcher at Sainte-Justine hospital.

Using a new measurement tool for young children, Beauchamp and her team demonstrated that early childhood concussions cause significantly elevated post-concussive symptoms that are not attributable solely to the general effects of the injury.

The three-month-post-event effects include known <u>concussion</u> <u>symptoms</u> such as headache, nausea, balance problems and drowsiness, but also behavioral symptoms unique to this age group, such as excessive irritability, increased crying and comfort-seeking.

The results were **published** in JAMA Network Open.

## **Well-documented effects**

The consequences of concussion are well-documented in adults and <u>school-aged children</u>. But although a significant number of young children are seen in emergency rooms for concussions, little is known about the long-term consequences for them.

To gain a better understanding of post-concussion impacts, Beauchamp and her team evaluated 303 children between the ages of 6 months and 6 years, of whom 174 had been seen for a concussion, 60 had sustained an injury without a concussion, and 69 had no injury at all.

All were assessed using the Report of Early Childhood Traumatic Injury Observations & Symptoms (REACTIONS) inventory, a validated, toddler-friendly tool for measuring post-concussive symptoms.

The analysis showed that the children who had suffered a concussion had more symptoms than those with a limb injury or no injury, not only at the time of the initial visit to the <u>emergency room</u> but also ten days, one



month and three months later.

Even three months after the <u>concussion</u>, these children had more <u>physical symptoms</u>, including headaches, sleep problems, fatigue, noise sensitivity and vision problems.

## **Clear guidelines needed**

"The study highlights the importance of developing clear guidelines and an appropriate protocol for managing concussions in <u>young children</u>," Beauchamp said.

This study is the first to prospectively map the evolution of postconcussive symptoms in small children over a three-month period following a head injury, using a developmentally appropriate measure based on concrete observations.

The study's lead author, doctoral student Dominique Dupont said, "Our results suggest that the use of a tool ... such as the REACTIONS inventory, which can be used by parents as well as in a <u>clinical setting</u>, could help diagnose concussions and monitor symptoms in younger children."

More information: Post-concussive symptoms after early childhood concussion, *JAMA Network Open* (2024). DOI: <u>10.1001/jamanetworkopen.2024.3182</u>. jamanetwork.com/journals/jaman ... /fullarticle/2816596

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