

# Higher exercise volume after concussion tied to lower symptom burden in multicenter study

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For children with concussion, higher cumulative moderate-to-vigorous physical activity (cMVPA) during the first and second weeks post-injury is associated with lower symptom burden, according to a [study](#) published online Feb. 16 in *JAMA Network Open*.

Andrée-Anne Ledoux, Ph.D., from the Children's Hospital of Eastern Ontario Research Institute in Ottawa, Canada, and colleagues conducted a multicenter cohort study using data from a [randomized clinical trial](#) conducted from March 2017 to December 2019 at three Canadian

pediatric emergency departments. The association between cMVPA over two weeks and subsequent symptom burden, measured using the Health and Behavior Inventory (HBI), was examined among 267 children.

The researchers found that participants with greater cMVPA had significantly lower HBI scores at one week and two weeks post-injury (75th versus 25th percentile difference [258.5 versus 90.0 and 565.0 versus 237.0 minutes],  $-5.45$  and  $-2.85$ , respectively), but not at four weeks post-injury. At one and two weeks post-injury, symptom burden was not lower beyond the 75th percentile for cMVPA. The odds ratio was 0.48 for the association between the 75th and 25th percentile of cMVPA and persisting symptoms after [concussion](#) at two weeks.

"Among [children](#) and adolescents with acute concussions, engaging in higher volumes of MVPA within the first week post-injury (259 versus 90 minutes) or within the first two weeks post-injury (565 versus 237 minutes) was associated with lower [symptom](#) burden," the authors write.

**More information:** Andrée-Anne Ledoux et al, Optimal Volume of Moderate-to-Vigorous Physical Activity Postconcussion in Children and Adolescents, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2023.56458](#)

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