

Physical activity in week after concussion associated with reduced risk of persistent postconcussive

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Among children and adolescents who experienced a concussion, physical activity within 7 days of injury compared with no physical activity was associated with reduced risk of persistent postconcussive symptoms at 28 days, according to a study appearing in the December 20 issue of *JAMA*.

Rest has long been considered the cornerstone of [concussion](#) management, and pediatric guidelines universally recommend an initial period of physical rest following a concussion until symptoms have resolved. No clear evidence has determined that avoiding physical activity expedites recovery. Roger Zemek, M.D., of Children's Hospital of Eastern Ontario Research Institute, Ottawa, Canada, and colleagues conducted a study that included 3,063 children and adolescents with acute concussion from 9 Pediatric Emergency Research Canada network emergency departments. Physical activity participation and postconcussive symptom severity were rated using standardized questionnaires in the emergency department and at days 7 and 28 postinjury. Persistent postconcussive symptoms (PPCS) were assessed at 28 days postenrollment.

The final study group included 2,413 participants, of whom PPCS at 28 days occurred in 733 (30 percent); 1,677 (70 percent) participated in physical activity within 7 days, primarily with light aerobic exercise. Of the patients who engaged in early physical activity, 31 percent were

symptom free and 48 percent had at least 3 persistent or worsening postconcussive symptoms at day 7. Of those reporting engaging in no physical activity at day 7, 80 percent had at least 3 persistent or worsening postconcussive symptoms at day 7. Resumption of physical activity within 7 days postconcussion was associated with a lower risk of PPCS as compared with no physical activity. This finding was consistent across analytic approaches and intensity of exercise.

"Early physical activity could mitigate the undesired effects of physical and mental deconditioning associated with prolonged rest. Regardless of potential benefit, caution in the immediate postinjury period is prudent; participation in activities that might introduce risk for collision (e.g., resumption of contact sports) or falls (e.g., skiing, skating, bicycling) should remain prohibited until clearance by a health professional to reduce the risk for a potentially more serious second concussion during a period of increased vulnerability," the authors write.

"A well-designed [randomized clinical trial](#) is needed to determine the benefits of early [physical activity](#) following concussion."

More information: *JAMA*, [DOI: 10.1001/jama.2016.17396](https://doi.org/10.1001/jama.2016.17396)

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