Children with mild traumatic brain injury appear more likely to have postconcussion symptoms

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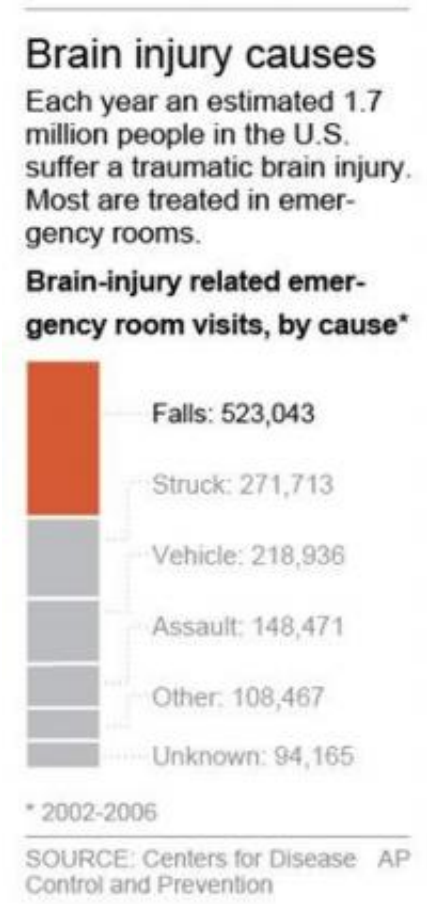

Graphic shows number of brain injuries in the U.S. by type

Children with mild traumatic brain injuries appear more likely to have

persistent postconcussion symptoms, including cognitive complaints such as inattention and forgetfulness, which can affect quality of life, according to a report published Online First by *Archives of Pediatrics & Adolescent Medicine*.

Mild traumatic brain injuries (TBIs) are common in children and adolescents, and each year more than 500,000 young people under the age of 15 sustain TBIs that require hospital care, the authors write in their study background.

Keith Owen Yeates, Ph.D., of Nationwide Children's Hospital and The Ohio State University, Columbus, and colleagues conducted a study of children ages 8 to 15 with mild TBI (186 children) or orthopedic injuries (99 children). They examined reliable change (a statistically reliable change across two occasions) in postconcussive symptoms and related functional consequences in the first year after an injury. Symptoms include somatic (headache and fatigue) and cognitive (inattention, forgetfulness and slowing) complaints.

Children with mild TBI were more likely to exhibit reliable increases in both cognitive and somatic symptoms than children with orthopedic injuries, researchers note. In addition, reliable symptom increases were more common among children with mild TBI who had experienced a loss of consciousness or had abnormalities on neuroimaging.

"These results extend previous findings by showing that many individual children with mild TBI show substantial and persistent increases in postconcussive symptoms relative to their preinjury functioning," the researchers suggest.

While acute increases in postconcussive symptoms were not related to educational intervention, reliable increases in somatic symptoms at three months after an injury appeared to predict an increased likelihood of

intervention, according to researchers.

"These results indicate that persistent postconcussive symptoms have functional consequences that are likely to reflect impairment in children's daily functioning" the authors conclude. "Health providers need to be able to identify children with mild TBI who are at risk for persistent postconcussive symptoms so that they can then target such children for appropriate management," researchers conclude.

In an editorial, Frederick P. Rivara, M.D., M.P.H., of the University of Washington, Seattle, and editor of *Archives of Pediatrics & Adolescent Medicine*, writes: "The overall message emerging from this research is that the group of injuries classified as 'mild TBI,' including sports-related concussions, should not necessarily be treated as minor injuries, which quickly resolve."

Rivara continues: "Although getting concussed in a football game is different from sustaining a blast-inducted TBI in combat, many of the same issues pertain to both."

"Millions of children engage in sports in the United States, and increased physical activity is an important part of the public health message to decrease obesity in both children and adults. Among high school girls, soccer is the most common source of sports-related concussions. How do we promote the engagement of youth in these sports and, at the same time, ensure that they are safe from concussion?"

More information: *Arch Pediatr Adolesc Med*. Published online March 5, 2012. doi:10.1001/archpediatrics.2011.1082 ; doi:10.1001/archpediatrics.2011.1602 .