Parental misconceptions about concussions could hinder treatment and recovery

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With football season in full swing, there's no shortage of talk about young players—from high school down to the pee wee levels—suffering from concussions. Yet many parents may lack knowledge about this mild traumatic brain injury, according to two studies to be presented Friday, Oct. 10 at a pre-conference symposium on pediatric sports medicine at the American Academy of Pediatrics (AAP) National Conference & Exhibition in San Diego.

Nearly 175,000 children are treated in U.S. emergency rooms each year for concussions due to sports-related activities, according to the Centers for Disease Control and Prevention. Parental knowledge of the signs and symptoms of concussion and recognizing that this is a brain injury is important to ensure children are diagnosed in a timely manner and get appropriate treatment.

Two separate studies looked at parents' knowledge of concussion and common misconceptions. They will be presented as part of the Peds21 symposium, "1, 2, 3, Go! Sports in the World of Pediatrics—Playing it Safe and Making it Fun!" in the San Diego Convention Center.

For the first abstract, titled "Parental Knowledge of Concussion," 511 parents of children ages 5-18 years who sought care at a pediatric emergency department within two weeks of their child suffering a head injury filled out a 24-item survey. They were asked questions about their demographics, their child's head injury, and general questions related to their knowledge of concussion and its treatment.
Results showed about half of parents correctly identified a concussion as a brain injury that could lead to symptoms such as headache or difficulty concentrating. No parental demographics (age, sex, education or prior history of sports participation) significantly predicted parents' knowledge about concussions.

The survey also indicated that almost all parents (92 percent) were aware that they should stop their child from playing and see a physician if they suspected a concussion. Yet only 26 percent were aware of guidelines on when their child could return to sports and school work.

"Our study showed that the vast majority of parents knew what to do if they suspected a concussion in their child and in most cases understood the clinical importance of this injury as a brain injury," said lead author Kirstin D. Weerdenburg, MD, FAAP, pediatric emergency medicine fellow at Hospital for Sick Children, Toronto, Ontario, Canada.

"The study also highlights that a physician visit shortly after the injury is important to confirm the diagnosis for parents and to inform parents of return to play/learn guidelines to ensure a proper recovery and prevent a second concussion while the brain is still healing," Dr. Weerdenburg said.

The authors of the second abstract, "Parental Misconceptions Regarding Sports-Related Concussion," also surveyed parents to assess their knowledge of concussions. The online survey was completed by two groups—214 parents whose children were evaluated at a sports medicine clinic for musculoskeletal or mild traumatic brain injuries (group 1) and 250 parents of students at a local private school (group 2).

The survey included questions that gauged their knowledge of and attitudes about concussions as well as demographic information.
The majority of parents in both groups did well overall but had several misconceptions:

- About 70 percent in group 1 and 49 percent in group 2 incorrectly believed that brain imaging (CT/MRI scans) can be used to diagnose concussion.
- About 55 percent in group 1 and 52 percent in group 2 did not know that "bell ringer or ding" is synonymous with concussion.
- Reduced breathing rate was incorrectly identified as a symptom by 25 percent and 29 percent, respectively.
- Difficulty speaking was incorrectly identified as a symptom by 75 percent and 79 percent, respectively.

"Our study highlights the fact that many parents are still in need of education regarding concussion identification and post-injury evaluation. Even those highly educated parents were prone to misconceptions," said senior author Tracy Zaslow, MD, FAAP, medical director of the sports medicine and concussion program at Children's Orthopaedic Center, Children's Hospital Los Angeles. "False perceptions such as the ones pinpointed by our study may impact when medical care is sought after concussion and lead to less than optimal home care."

**More information:** The studies will be presented from 11:30 a.m. to 12:30 p.m. Friday, Oct. 10 in Ballroom 6 CDEF of the San Diego Convention Center.

Provided by American Academy of Pediatrics
