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## Sports-related concussions in children and adolescents

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Mild traumatic brain injury (concussion) is a relatively new area of concern for many pediatric specialist and neurologists, as well as speech-language pathologists, and physical and occupational therapists. However, concussions have occurred in children and adolescents for as long as they have played sports, fallen out of trees, or had other mild head injuries. Reports of youth concussions spiked by 71% between 2010 to 2015, according to a study of nearly 937,000 health insurance claims gathered by Blue Cross and Blue Shield. Davenport (2017) reported brain changes in high school American football players after one season of play. The incidence and prevalence studies may significantly underestimate the actual numbers of boys and girls with sports-related concussions because many individuals suffering from mild or even moderate TBI to not seek medical services.

This presentation will discuss several aspects of sports-related concussion, including the neuroanatomical effects

(e.g., tearing, shearing, and twisting of axons and dendrites and destruction of neurons); physical symptoms (e.g., being dazed and dizzy, headaches, nausea, drowsiness, and sleep problems); cognitive effects (e.g., attention, memory, orientation, reasoning, judgment, problem solving, and executive functions); and the behavioral, emotional and social effects (e.g., agitation, aggression, anger, low tolerance for frustration, emotional lability, egocentrism, disinhibition, impulsivity, and decreased social skills). In addition, the risk factors, such as history of concussions and gender of the athlete will be considered. The signs and symptoms of concussion observed by adults and those reported by children and adolescents will be presented. Hospital emergency department treatment practices for concussions will be reviewed. Intervention and management will be an emphasis in this presentation.

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