

Removal From Play Following Concussions In Pediatric Soccer Athletes

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ABSTRACT

Participation in youth soccer and sport-related concussion incidence has increased dramatically over the last decade. Established medical guidelines and Texas state law require immediate removal from play and prohibit athletes from same-day return to play if a concussion is suspected. However, there is limited literature examining the rate at which immediate removal from play is occurring. **PURPOSE:** To identify the frequency of immediate removal from play in pediatric soccer players with sport-related concussions. **METHODS:** A retrospective review was performed of 41 athletes diagnosed with a concussion sustained while playing soccer seen consecutively over a one year period. All patients were seen at a pediatric sports medicine center by a single provider. Medical records were reviewed for patient reported symptoms, as identified on the SCAT-3, and patient reported removal from play on the same day as the mechanism of injury. Demographics, previous history of concussion, soccer position, location of head impact, loss of consciousness, memory loss, and mechanism of injury were also reviewed when available. **RESULTS:** Of 41 patients treated for a soccer-related concussion, 14 were males and 27 were females, with a mean age of 14 (range 7-18). 16 (39%) patients reported delayed removal from play on the same day as initial injury. Although not considered statistically significant, 13 out of 27 females (48.1%) reported delayed removal from play after initial injury as compared to only 3 out of 14 males (21.4%). Additionally, no significant differences were noted in age, previous history of concussion, position, mechanism of injury, or impact location between those who were removed from play immediately and those who had delayed removal. Patients who experienced a loss of consciousness on day of injury were statistically more likely to experience immediate removal from play ($p < .05$). There were no statistically significant differences noted in severity of symptoms between groups on the day of injury. Patients who were delayed in their removal from play reported a more severe symptom of "not feeling right" ($p = .026$) on the day of initial clinic visit. **CONCLUSION:** With a goal of immediate removal from play and no same-day return to play, increased education may help athletes and coaches better identify concussion symptoms and comply with current medical guidelines and applicable Texas state law. In the future, reviewing a larger sample size may improve understanding of the impact of delayed removal from play on recovery patterns and return to play.