

## Concussion in community Australian football: epidemiological monitoring of the causes and immediate impact on play

Prevention of injuries to the head, neck and face, particularly concussion injuries, is an important priority in many sports. Concussion research in Australian football has largely focused on the use of helmets and on concussion management, primarily through return to play guidelines. There is limited understanding of what actually happens when a concussion injury occurs, particularly at the community level of Australian football.

This study aimed to improve our understanding of the causes of concussion in men's community Australian football. Data presented in this investigation were collected by trained data collectors as part of the Preventing Australian Football Injuries through Exercise (PAFIX) study.

A total of 1032 injuries were sustained by 1564 players within the PAFIX project. Of these, 143 (14%) injuries were to the head, neck and face of which 75 (53%) were to the head/neck, 56 (39%) were to the face and 12 (8%) were to the mouth and teeth. Most (97%) injuries to the head, neck and face occurred during competition games with only five occurring during training.

There were 34 injuries classified as a concussion, representing 3.3% of all injuries recorded in the PAFIX study. Detailed information on the circumstances associated with how each of the 34 cases of concussion occurred were presented in the paper, with most cases sustained through direct player-to-player contact.

Of the 34 cases of concussion 88% (n = 30) of all players left the competition immediately after the incident, four players continued to play. Fourteen of the 30 concussed players who left the competition (47%) returned to play later in the game.

The incidence rate of concussion in community Australian football presented in this investigation is relatively low in comparison with other football codes. Although cause for concern regarding negative health impacts from concussion is warranted, the results of this investigation do not support the idea that concussion rates in Australian football are greater than in other football codes. Due to the potential for serious outcomes and in light of poor adherence with return to play guidelines, additional research into detailed mechanisms of injury and further efforts to educate players and clubs on concussion is supported.