

# Watch High Incidence of Arm and Elbow Injuries in Professional

## Physiotherapy in Canmore for Football

There are an estimated 600,000 to 1.2 million football-related injuries per year among young adults in North America. Some are severe enough, they can put athletic careers in peril, limiting the athletes' ability to follow their dreams. Much attention is given to injuries of the leg, such as the knee and ankle, but *upper extremity injuries* (hand and arm) appear to be much more common than any other type of injury, including concussions. Up to 30 percent of injuries involve the arm or shoulder.

Research on these injuries that is available is old, so researchers aren't aware of any particular patterns to the injuries, or on the most common locations for arm injuries or the risk factors. This type of information is important because it allows for prevention, action, to avoid the injuries in the first place. The authors of this article wanted to review how the injuries occurred, how often they occurred, and the resulting time lost from playing.

Researchers did a 10-year *retrospective* (looking back) review of the National Football League (NFL) Sports Injury Management System. Injuries entered into the system were considered to be significant if they caused the player to stop participating early in practice or game, or training. Delayed injuries, ones that were treated later, were also in the database. The injuries were divided into eight classifications: general trauma, overuse, muscle/tendon injuries, fractures, ligament or joint instability, cartilage damage, nonspecific joint injury, and miscellaneous.

The researchers found 24,432 injuries in all and 859 (4 percent) involved wrist, forearm, or elbow. The most common injury was the stability of a joint, the elbow (51 percent of the time) and the wrist (72 percent) of the time. Fractures were the most common injury of the forearm (78 percent), with the fractures of the wrist coming in (17 percent). With regard to sprains, the most commonly injured joint although the elbow was a very frequently injured joint as well. Elbow *hyperextension* (bending the elbow the wrong way) occurred in 24 percent of elbow injuries, but if the wrist and forearm injuries were combined, they made up 14 percent of all the injuries.

Looking at when the injuries occurred, during practices or games, was important. The researchers found that the injuries occurred more often during actual games (74 percent) than in practices, despite the fact that the players spend much more time on the game field.

Among the athletes who had elbow injuries, there was an average of 22 days lost per injury, although this did range from 0 to 260 days, depending on the injury and the athlete. Of the forearm injuries, there was an average of 42 days lost (ranging from 0 to 260 days). Wrist injuries resulted in an average of 27 days lost (zero to 260 days). What was interesting was the types of injuries that took as long to recover compared with those that took longer. Traumas were the quickest injuries to come back from (10 days), while injuries caused by overuse or inflammation followed closely at 10 days, although wrist inflammations took longer for recovery than did elbow inflammations. Ligament injuries and/or joint instability caused an average of 18 days lost, fractures and dislocations 56 days.

The injuries were most often caused while tackling (24 percent) or blocking (23 percent), with the elbow being the most commonly injured area there: 53 percent from tackling and 63 percent from blocking. Being on the receiving end of the tackle or block also caused many injuries, with 52 percent occurring while being tackled and 67 percent while being blocked.

The position played also had a role in the injuries. Offensive and defensive linemen had the highest (20 percent) number of arm injuries. The elbow was the most commonly injured area of all, except for wide receivers. Seventy six percent of injuries affected linemen and 74 percent affected defensive linemen. They sustained more wrist injuries. Quarterbacks had fewer arm injuries (6 percent). In fact, quarterbacks had the lowest arm injury rate overall, at 6 percent. Cornerbacks and safeties had the highest number of arm injuries.

The results of the study show that the way to prevent injuries is to be able to recognize which injuries occur most often and how to prevent them. It's important that those responsible for sports and safety identify these injuries and the risks, and implement measures to help reduce them. This may mean changing some rules, modifying equipment, and altering training routines. The authors note that there was a dramatic reduction in head and neck injuries when changes were brought in in 1976, so it is possible to reduce the number of injuries.

When looking at the number of injuries that occur on the football field, the authors do acknowledge that part of the increase is due to more players in the league, due to expansion and the addition of more teams. Nevertheless, there still are more elbow injuries overall, than there were a few decades ago. Because of this, the authors feel that this area needs more research.

In conclusion, the authors did note that there were some flaws to the study, as there are in all studies. These included that the study was retrospective and was based on collecting data, without any opportunity to standardize diagnosis or coaching decisions. The authors also note that the players should return to play or sit out a longer period. As well, there was no information in the database regarding whether there was an injury that occurred in training but was aggravated or returned while playing a game.

Reference: John C. Carlisle, MD, et al. Upper Extremity Injuries in the National Football League. In *American Journal of Sports Medicine*. October 2008. Vol. 36. No. 10. Pp. 1944-1952.