

# FOOTBALL INJURIES

Data from the 2004/05-2008/09 Seasons

American football is played on nearly every continent. In 2008-09, there were 633 NCAA member institution teams and 64,879 participants. The average squad size was 103 players.

## Injury Overview

- The overall injury rate in NCAA football is 8.1 injuries per 1,000 athlete exposures (games and practices combined). There were more than 41,000 injuries and 25 million athlete exposures from 2004 to 2009.
- Football players are nearly seven times more likely to be injured during a game than in practice.
- Ligament sprains are the most common injury reported, accounting for more than 30 percent of all injuries, with the lateral ligaments of the ankle and medial collateral ligaments of the knee most commonly affected.
- Concussions make up 7.4 percent of all injuries in college football players.
- The preseason has the highest injury rate (9.7 per 1,000 athlete exposures) compared with in-season (7.5) and the postseason (4.2). (Note: does not include spring ball.)
- The greatest incidence for adverse events such as fatalities, heat illness and collapse is more often during transitions such as the first and second day of preseason and after a break period from practice.

## Catastrophic Injuries\*

During this five-year time period, there were no fatalities from direct catastrophic injuries in NCAA football, but there were 23 non-fatal direct catastrophic injuries. There were 11 fatalities from indirect catastrophic injuries, however. Indirect fatalities, as defined by the National Center for Catastrophic Sports Injury Research, are those fatalities that are caused by systemic failure as a result of exertion while participating in a football activity or by a complication that was secondary to a nonfatal injury. Heart issues, heat illness, complications from sickle cell trait, and respiratory conditions rank among the top causes of death during physical exertion. Catastrophic spinal cord injuries are significant life-changing events and can sometimes result in death. From 2004 to 2009, there were three reported catastrophic spinal cord injuries in college football. The incidence of sudden cardiac death in the NCAA is roughly 1 in every 40,000 student-athletes per year. Although cardiac conditions are the leading medical cause of sudden death in all sports, complications due to sickle cell trait while participating in conditioning are the leading cause in football players.

## Heat Illness-Related Deaths\*

Heat illness is preventable and everyone, including administrators, coaches, athletes and health care professionals, should work diligently to prevent it. Nationwide, across all sport levels, there have been more deaths from heat stroke in the 2005-2009 time block than any other five-year block during the past 35 years.

## Injury Percentage Breakdown

Concussions  
7.4%

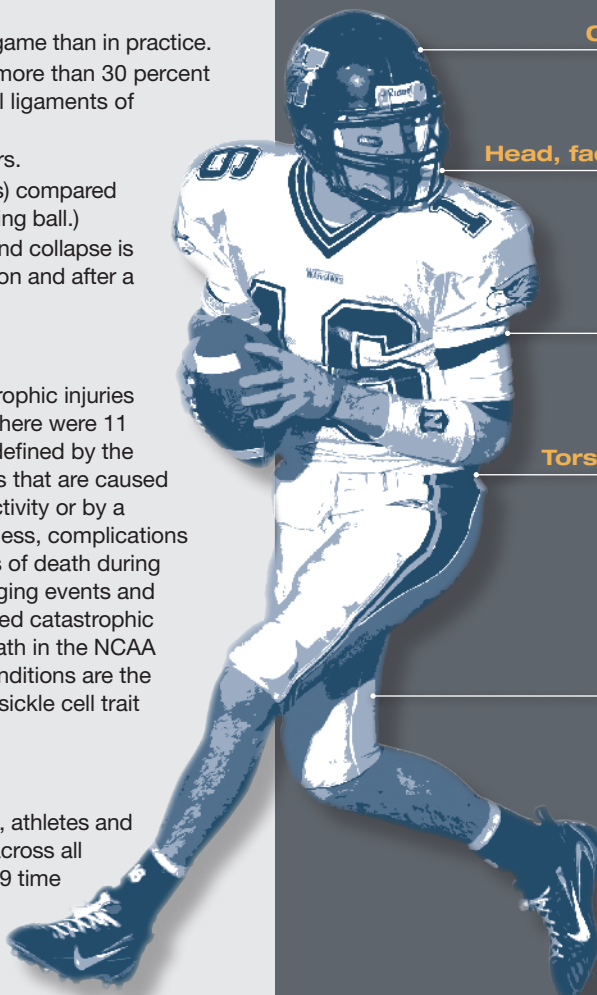
Head, face and neck  
4.3%

Upper limb  
16.9%

Torso and pelvis  
11.9%

Lower limb  
50.4%

Other  
9.1%



\*National Center for Catastrophic Sports Injury Research



## Concussions

- A concussion is a brain injury.
- Concussions can occur from blows to the body as well as to the head.
- Concussions can occur without loss of consciousness or other obvious signs.
- Concussions can occur in *any* sport.
- All concussions are serious and change a student-athlete's behavior, thinking or physical functioning.
  - Recognition and proper response to concussions when they first occur can help prevent further injury or even death.
    - Athletes can suffer a concussion even if they wear a helmet.

## Injury Prevention Tips

- All on-field personnel should review, practice and follow their venue emergency plan and be trained in administering first aid, AED use, and cardiopulmonary resuscitation (CPR).
- Regarding concussions, if in doubt, sit them out.
- Athletes with a concussion must be removed from practice or competition and should not return that day and not until given clearance by an approved medical provider according to the institution's concussion management plan.
- Football players should have unrestricted access to water during practice or competition and replace every pound lost with 20 ounces of fluid before the next practice.
- Football players should be given adequate time to acclimatize and recover during preseason training.
- Practices should be avoided during the hottest times of day and have at least three hours between two-a-day practices.
- Have a preseason physical examination and follow your doctor's recommendations.
- Wear properly fitted protective equipment, such as a helmet, pads and mouthguard.
- Tackle with the head up and do not lead with the helmet.
- Speak with a sports medicine professional or athletic trainer if you have any concerns about football injuries or football injury prevention strategies.

## Playing Rules and Safety

- 1916:** First NCAA Football Rules Code developed and published.
- 1939:** All players required to wear helmets.
- 1964:** No player may deliberately and maliciously use his helmet or head to butt or ram an opponent.
- 1973:** All players required to wear mouth protectors.
- 1975:** Published Heat Illness Prevention Guideline.
- 1976:** Sparring redefined as "the deliberate use of the helmet in an attempt to punish the opponent."
- 1994:** Published Concussion Guideline.
- 1996:** If the ball carrier's helmet comes off, the play is blown dead immediately.
- 2002:** A "defenseless player" is defined for added protection of players.
- 2003:** Mandated new preseason training schedule. Mandated preparticipation medical examinations.
- 2006:** Eye shields must be completely clear to allow for quick medical diagnoses of student-athletes.
- 2008:** The horse-collar tackle is illegal; players protected from a chop-block; and focus on eliminating hits on defenseless players and blows to the head.
- 2010:** Mandated Concussion Management Plan.
- 2010:** Mandated that any injured player be removed from play and cleared by medical personnel before returning to play. Limited blocking schemes on kick plays to not more than two players shoulder to shoulder.

## More Facts

### about Collegiate Football Injuries

- The knee is the most common location of injury in college football players in both practice and competition, accounting for 17.1 percent of the injuries overall with a median seven days lost from participation.
- The majority of time-loss injuries (31.0 percent) caused three to six days of time loss, while injuries accounting for 21 or more days were ranked second at 19.5 percent overall.
- The most common activity at the time of injury was general play (23.9 percent), but was followed by running plays (offense: 18 percent; defense: 15.6 percent) and passing plays (offense: 14.9 percent; defense: 9.2 percent).
- Special teams (kickoffs, punts, field goals, and point-after attempts) account for 13.6 percent of all competition injuries.
- Acute noncontact (24.1 percent) was the most common injury mechanism followed by tackling, being tackled and blocking. More than 7 percent of injuries were attributed to the playing surface.
- Linebackers are injured most often, accounting for 13.5 percent of all injuries. Running backs and receivers follow at just more than 11 percent each. Quarterbacks account for 5.8 percent of the injuries.
- Regular practices account for 91.8 percent of the injuries occurring during practices, while walk-throughs account only for 1.3 percent.
- Team drills (62.4 percent), followed by individual drills (19.1 percent), account for the majority of practice-related injuries.
- Reinjury accounted for just more than 13 percent of all injuries.
- Surgery resulted from 7.5 percent of injuries.
- Most concussions occurred to defensive players during run plays (17.8 percent), followed by offensive players during passing plays (16.3 percent).

## Resources

### NCAA Sports Medicine Handbook.

Available at [www.NCAA.org](http://www.NCAA.org).

### NCAA Concussion Fact Sheets and Video for Coaches and Student-Athletes.

Available at [www.NCAA.org](http://www.NCAA.org).

### Heads Up: Concussion Tool Kit CDC.

Available at [www.cdc.gov/TraumaticBrainInjury](http://www.cdc.gov/TraumaticBrainInjury).

### Heads Up Video from the National Athletic Trainers' Association.

Streaming online at [www.nata.org/consumer/headsup.htm](http://www.nata.org/consumer/headsup.htm).



[www.stopsportsinjuries.org](http://www.stopsportsinjuries.org)

Injury Prevention  
Tips are provided in  
collaboration with  
STOP Sports Injuries.



**DATALYSCENTER**

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