

Concussion in Rugby

How common is concussion in rugby?

This is a hard question to answer because of the difficulties we have identified with players admitting to concussion, the availability of expertise to correctly diagnose concussion (particularly at the amateur level) and the challenges of collecting accurate information across the whole game. There are various studies which have tried to identify how common it is and some which collect very good information on injuries in general from which we can gain a picture.

Research in English rugby has shown that head injuries are common in rugby and account for about 25% of injuries during play (this includes concussions, laceration, bruises etc). How common concussion is appears to vary depending on the level of play; studies in professional rugby have shown that it occurs at a rate of at least 6 per 1000 player hours (i.e. 1 concussion in every 3 games amongst all the players involved) whereas studies at amateur adult level suggest that concussion occurs at a rate of about 1.2 per 1000 player hours (i.e. 1 in every 21 games), although we suspect this is an underestimate.

Comparative concussion rates that have been presented by a range of sports:

Sport	Concussion rate per 1000 player hours
Horse racing (Amateur)	95
Horse racing (Jumps)	25
Horse racing (Flat)	17
Australian football (professional)	15
Boxing (professional)	13
Rugby union (professional)	6
Rugby union (amateur)	2
Soccer football (FIFA)	0.4

In most sports in UK where concussion occurs e.g. football, hockey, martial arts, gymnastics, netball, basketball, snow sports, ice sports, cycling etc...., unfortunately data is either not collected or not published. It is also difficult to compare with sports in the USA where there has been a lot of media attention on concussion and its long term effects, because the data is collected differently. American Football and Ice Hockey have been the focus of attention there and they have the highest rates in most studies. In these sports, there is free interchange of players during the game and concern has been raised about individuals sustaining multiple concussions within single games. In American Football the head has been described as a "weapon" in the tackle and to give some idea, it is estimated that NFL players sustain between 900 and 1500 head impacts per season.

According to the NHS Choices website (www.nhs.co.uk) the three main causes of concussion are:

- being involved in a road accident
- accidental trip or fall
- taking part in sporting or other recreational activities

The same site makes it clear that “Most doctors would argue that the physical benefits of regularly taking part in contact sports outweigh potential risks associated with concussion. But this is only if you (or your child) wear appropriate equipment, and are supervised by a suitably trained referee, umpire or trainer with experience in diagnosing and treating concussion. The exception to this is boxing, as most doctors, especially those who treat head injuries, have stated that the risks of serious brain injury associated with boxing are unacceptably high.”

What is rugby doing about concussion?

The RFU recognises the importance of concussion. There is however, a historical cultural legacy particularly within some circles in sport, where concussion has been seen as a “badge of honour” and players have “toughed it out”. Emerging brain injury research is however leading to a re-evaluation of how concussion is managed and the RFU aware of this took early steps in 2007 to start to address this with its first concussion awareness campaign. As further research has emerged, we have strengthened our campaign, resulting in the development of “Don’t be a Headcase” through 2012 and its launch in January 2013. Subsequently, the media started to take an interest in concussion in mid-2013, and this has led to a rapid growth in interest.

Over the years there have been a number of specific initiatives within rugby, and an on-going programme of player, coach and official training and education which all contribute to the prevention and improving management of concussion. Some of these include:

- **Laws:** The Laws of the game prohibit deliberate head contact, and this must be enforced by all involved in the game.
- **Regulations:** RFU Regulations require all matches and training sessions to have an appropriate level of first aid cover present to manage injuries that occur, and that concussion guidelines are followed. Youth Regulations and their associated guidance identify specific areas for prevention and highlight concussion issues in young players.
- **Guidelines.** As well as these guidelines, the RFU has been involved in and contributed to the development of current international guidelines on concussion management in sport and specifically in rugby, with the IRB. These guidelines have been developed utilising international research evidence and expert opinion and underpin what we develop in this area.

DON'T BE A HEADCASE STOP! CHECK FOR CONCUSSION

HEADACHE EMOTIONAL APPEARANCE DROWSINESS CONFUSION AGITATED SEIZURE EARS AND EYES

- Concussion awareness and education targeting players, coaches and officials:



- “Use your head”. This RFU campaign, launched in 2007 included posters, information leaflets and prompt cards sent to all RFU clubs and ERFSU schools. Over 30,000 cards were distributed, posters provided for every club and school, and 250,000 parents’ guides distributed through rugby clubs.

- “Don’t be a HEADCASE”. This is our latest campaign launched in January 2013, which is aimed principally at coaches and players. This website is the first phase of the campaign across the game and provides the resources that support a range of awareness and educational activities:

- Coach education. We continue to review and develop the content of our coaching courses and education modules to include concussion guidance. As each is reviewed now, we incorporate a section on concussion and in the new Level 1 Coaching Youth Rugby resources we have included prompt cards as well. We also provide a suite of courses/events focussing on injury prevention and concussion:

- In 2008, Rugby Ready was launched for new coaches coming into the game, which is mandatory for all coaches before taking a qualification course. Around 8000 new coaches take this course each year.
 - As part of our own and Premiership Club community coach education/CPD programmes we provide face to face concussion education courses. We are growing a network of health care professionals who can deliver these sessions to clubs and schools across the country.
 - We are also launching Rugby Smart, a player safety update course for existing coaches, which will be mandatory for all Licensed Coaches.

- First Aider education. In 2006 the RFU introduced its own first aid course for volunteers, coaches and officials. The RFU Emergency First Aid Course (EnglandRugby.com/firstaid) has a detailed section on concussion which most generic courses do not have. This section is kept up to date with developments in this area and attendees receive additional RFU concussion resources.

- Health Care Professional education. In 2005 the RFU introduced its own bespoke Pitch Side Immediate and Trauma Care course (Now called Immediate Care in Sport). This is a qualification aimed at health care professionals involved in rugby at all levels and involves annual re-certification. This includes specific training on concussion in rugby. Over 400 practitioner shave now taken the course. (EnglandRugby.com/firstaid)

- Professional Player Testing. The RFU and PRL conduct routine pre-season and post-concussion testing on all professional players as part of a comprehensive concussion management programme.

Note: In the Aviva Premiership and Internationals, a player with a head injury event can be removed from the pitch to be assessed for concussion. If there are obvious signs or symptoms of concussion they are permanently removed from play. Only if there is uncertainty as to whether the head injury event resulted in a concussion is the player assessed and if cleared to do so may return to play. Any doubt, and they are removed. The assessment is conducted by a doctor experience din the management of concussion and includes a battery of tests. It is important to recognise that this has been introduced because of concerns that players were remaining on the pitch when concussed and has resulted in more players being removed from the field of play with suspected concussion than has been the case in the past. Only those who are conclusively assessed as not having concussion are allowed to return to play. Even then, these players are re-assessed after the game and subsequently carefully monitored by the club medical teams.

