

## Timeline of head impact actions, research and interventions

### Elite rugby

Date	Implemented	Description
2002-03 season	<a href="#">Professional Rugby Injury Surveillance Project (PRISP)</a>	Established injury surveillance monitoring of England men's team and Premiership Rugby. One of the longest running injury monitoring projects in world sport.
2012	Pitch Side Concussion Assessment (PSCA) which later became the Head Injury Assessment (HIA)	Introduction of an evidence-based off-field assessment, PSCA, which became the HIA in the men's adult elite game to assess players with potential or suspected concussion.
2016-17 season	Real-time video replay	Introduction of real-time video replay system and pitchside reviewer to monitor game footage in real-time, responsible for referring any suspicious head injuries to the team doctor for their review.
2017-18 season	<a href="#">Women's Rugby Injury Surveillance Project (WRISP)</a>	Injury surveillance monitoring in England women's team and Premier 15s.
2020-21 season	Head Injury Assessment (HIA)	Introduction of an evidence-based off-field assessment (HIA) in the men's adult elite game to assess players with potential or suspected concussion.
2020-21 season	Saliva miRNA tests	<p>Saliva samples will continue to be collected in Premiership and Premier 15s clubs as part of the Head Injury Assessment (HIA) process to identify a concussion.</p> <p>The 2021-22 season was the first in which samples were collected in the Premier 15s and will enable research partners at the University of Birmingham and Marker diagnostics to determine if differences in the biomarker signal exist after a head injury in men and women. In addition to the miRNA samples being analysed to identify a concussion with a long-term goal to create a commercially viable test that can be used across the professional and community games.</p> <p>In the 22-23 season they will also be collected as a potential marker of recovery.</p>
2021-22 season	Instrumented Mouthguard (iMGs) study	Study with England senior women's team and Harlequins men, Bristol Bears women and Northampton Saints using 'smart' technology to measure head impacts.
2021-22 season	Contact training load guidance	Guidance provided about the amount of contact training given

March 2021	<a href="#">Head Contact Process</a>	<p>World Rugby’s Head Contact Process rolled-out with zero tolerance of foul play, especially where head contact occurs.</p> <p>The focus is on the actions of those involved, not the injury - the need for an HIA does not necessarily mean that there has been illegal head contact.</p>
July 2021	<a href="#">World Rugby Coaching Intervention Programme</a>	<p>The World Rugby Coaching Intervention Programme was introduced in July 2021 to add to the deterrents that were already in place in the form of red cards and playing sanctions, set at a minimum entry point of six weeks for foul play involving contact with the head.</p> <p>Any player who has been sanctioned by a Disciplinary Panel for foul play involving contact with the head may apply to substitute the final week/match of their sanction for a coaching intervention.</p> <p>In order to be approved, the coaching intervention must be a targeted and technique-focused measure, designed to analyse tackle/contact technique and identify and implement positive modifications to change the player’s behaviour and ultimately reduce the risk of injury. This intervention will be reviewed and overseen by an independent expert coaching review group and will only be available to first-time offenders.</p>
October 2021 (published)	<a href="#">BRAIN Study</a>	<p>“The BRAIN study – published in Alzheimer’s &amp; Dementia: The Journal of the Alzheimer’s Association – worked with nearly 150 retired elite players now aged 50+ who played for either England, Oxford University or Cambridge University in the pre-professional era. It concluded that retired male elite rugby union players aged 50+ who suffered three or more rugby-related concussions during their career have no worse average cognitive function than those who had experienced no, one or two concussions.</p>
November 2021	<a href="#">Advanced Brain Health Clinic</a>	<p>The Advanced Brain Health Clinic opened to provide confidential specialist assessment information and a pathway for ongoing support for retired elite, male and female rugby players, aged 30-55 years, who have</p>

		concerns about their brain health. The clinic is funded by RFU and Premiership Rugby with the assessment run independently, and patient data held confidentially.
November 2021 onwards	Advanced Brain Health clinic research	Aligned to the assessments for former players is a research project being run by Imperial College London looking at the effects of rugby participation on brain health.
2022-23 season	Instrumented Mouthguard rollout (iMGs)	<p>League-wide roll out of iMGs in Premiership Rugby and Premier 15s as well as England senior teams.</p> <p>The research phase demonstrated that the technology was able to quantify the frequency and magnitude of head contact and head accelerations and provide reliable and objective measures of both head impact and contact load to players and club coaches.</p> <p>Contact load data from the iMGs will be integrated with GPS data measuring running load to provide a much more comprehensive picture of player load. This will inform both club-based decisions about individual player load and performance in addition to league wide guidance on appropriate contact training load.</p>
2022-23 season	<a href="#">Graduated Return to Play (G RTP) (Individualised rehabilitation)</a>	Changes to the G RTP announced by World Rugby. Under the new G RTP protocols players in the elite game with a history of concussion will not be able to play for a minimum 12 days following a head injury.
September 2022	<a href="#">Active player head impact education video</a>	An educational video for active rugby players focusing on brain health. George Gregan, Kat Merchant and Professor Craig Richie speak about the importance of players being educated in the risk of head impact events in the game of rugby, and understanding what is known about it.
November 2022	<a href="#">World Rugby Brain Health video</a>	In Brain Health video, leading independent experts Professor Willie Stewart, Dr Craig Ritchie, Dr Fiona Wilson and Karen BK Chan explain how current and former players can better understand the 12 known modifiable risk factors that feed into our individual brain health, doing everything we can to support long-term brain health and reduce known risks that can be positively changed through our actions.

## Community game

Date	What	Description
2009-10	Adult Men - <a href="#">Community Rugby Injury surveillance Project (CRISP)</a>	Established injury surveillance monitoring of the community level (men's level 3-9).
2013	Headcase	<p>Education and awareness campaign <b>Don't be a Headcase</b> 4Rs (recognise, remove, recover, return)</p> <p>If in doubt sit them out.</p> <p>Our website &amp; hard copy resources recognised as the leading concussion awareness and education programme certainly in sport in UK. The guidelines were adopted as the National Concussion Guidelines for the Education Sector in England published in 2017.</p> <p>Programme is wider than this:</p> <ul style="list-style-type: none"> <li>• Concussion seminars and presentations to schools, parents, coaches and referees</li> <li>• Range of branded products and resources aimed at the same audiences which aim to continuously remind and inform people</li> </ul>
2015	<a href="#">Rugby Safe</a>	<p>RugbySafe, is the RFU's overarching player safety and wellbeing programme. The RugbySafe Toolkits are a series of online and downloadable resources designed to provide information and guidance on various player welfare topics and provides information and guidance to support clubs and other rugby activity organisers in delivering best practice. The RugbySafe Toolkits includes information on:</p> <ul style="list-style-type: none"> <li>• Being RugbySafe and the Club RugbySafe Lead role</li> <li>• Incident &amp; Injury Reporting</li> <li>• RugbySafe Essential Guides &amp; Resources</li> <li>• First Aid &amp; Immediate Care Provision and Training</li> <li>• HEADCASE</li> <li>• Activate</li> <li>• Mental Wellbeing Guidance</li> <li>• Player Welfare Research</li> </ul>

2017	Activate	In a three-year injury prevention and surveillance study on schoolboy injuries, published in May 2017, involving 40 schools and nearly 2,500 players aged 14–18 years, researchers found that overall injuries fell by 72% when players completed a new exercise programme at least three times a week. Concussion injuries were reduced by 59%. This programme (called Activate) is available for rugby coaches and teachers across the country on enlandrugby.com, with practical face-to-face sessions as well as online resources
2017	Rugby Safe Lead	Clubs must have a Rugby Safe Lead
2021-22	<a href="#">Armpit tackle height</a>	Tackle height at the armpit level for all age groups in the age grade game
2022-23	<a href="#">Waist height tackle trail</a>	Trial at festivals across the country for tackles at waist level. The evaluation is intended to further reduce high-risk tackle events in the age grade game by taking two heads out of the same air space.
2017-18	Age Grade - <a href="#">Community Rugby Injury surveillance Project (CRISP)</a>	The <b>Age Grade</b> strand of CRISP started in the 2017/18 season and initially collected match exposure and match injuries from schools across England at the under-13, under-15 and under-18 age groups. The project is expanding to include clubs and aims to gain a better understanding of the risk, types and mechanisms of injuries in the age grade game and across different age groups.
2021-22	Adult Women - <a href="#">Community Rugby Injury surveillance Project (CRISP)</a>	The <b>Adult Women</b> strand of CRISP started in the 2021-22 season (reported on in 22-23), with the intention of collecting match exposure and match injuries from women's teams across the championship and challenge leagues across England. The project will enable a better understand the risk, types and mechanisms of injuries in the women's game.
2021-22	First Aid specific Risk Assessment	First Aid specific Risk Assessment becomes mandatory (previously recommended)
2022-23	<a href="#">Age Grade Rugby First Aid minimum standards are mandated</a>	Demonstrating the importance placed on player welfare, all age grade contact matches and training sessions will require a pitch-side first aid level of cover. In addition, the cover must align with the RFU's Pitch-side First Aid & Immediate Care Standards or a club's

		specific risk assessment. These changes will improve the playing experience and demonstrate to players and parents how the game prioritises player welfare.
--	--	---