

Expert Views

Scrum, Sweat, and Tears: Understanding Rugby in Life Underwriting

Extreme Sports
An Underwriting series

SCOR
The Art & Science of Risk

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Contents

Executive Summary.....	3
Key Messages	3
Author’s Introduction	4
Introduction to Rugby.....	6
Overview of Rugby	7
Risks Associated with Rugby	9
Implications and Recommendations for Underwriting.....	14
Case Study 1	14
Case Study 2.....	14
Conclusion.....	17
Endnotes	18



Executive Summary

Rugby is an extraordinary sport. Even compared to its highly popular cousins, such as football (soccer) or American football, no other sport matches the type of excitement, pride, and emotions rugby brings to people. It may be because of the history and culture it represents. Or it could be the high athleticism and bravery of players who run, kick, jump, tackle, and crash, all done with very little protection gear. Despite this high-risk nature of the sport, over 10 million enthusiastic players participate in rugby.

In this report, SCOR's underwriting experts talk about health and life risks associated with professional and amateur rugby players, providing a deeper understanding of how complex and increasing risks should be considered during the professional rugby players' insurance application process. The analysis also features two fictitious underwriting cases from different markets to give readers a glimpse of how SCOR's professional underwriters assess cases. While this article does not offer in-depth medical or scientific advice on underwriting-specific cases, we aim to provide readers with essential knowledge and points to consider when underwriting applicants who engage in this exceptional sport.

Key Messages

- Rugby players are constantly exposed to high health and injury risks due to the sport's intensely high-contact or high-collision nature. The risks are becoming even higher in recent years, driven by multiple factors such as the growing size and weight of the players, the increasing number of matches, more hazardous drugs that are prevalent at higher levels, etc.
- Major health risks associated with rugby include injuries, concussions, traumatic brain damage, medical drug overuse, and cardiovascular issues.
- Group insurance coverage protecting rugby players against injury, disability, and fatal accidents is arranged by local governing bodies such as professional leagues, schools, and clubs. For additional individual life insurance coverage, rugby players will apply at regular life insurance companies and undergo the same process as regular consumers.
- In underwriting past/present rugby players, underwriters must understand the risks associated with this sport and assess each case with full attention and consideration.
- For more information, underwriters are recommended to consult medical advisors or guidelines published by global and local rugby governing bodies such as World Rugby, Rugby League, and Rugby Football Union (RFU).



Author's introduction

Rugby is entrenched in South African sports culture, notwithstanding one's sporting preference globally. Even if you are unfamiliar with rugby, you may have encountered a picture or video of this sport before, and I hope you have heard of the "Springboks," our beloved South African national rugby union team.

In South Africa and many other countries of all sizes worldwide, such as France, the UK, Ireland, New Zealand, Japan, Argentina, Fiji, and Samoa, rugby boasts high public interest and national pride. This love for rugby begins at the junior school level and continues through to the varsity, provincial, and, ultimately, professional levels. Along with the New Zealand national team known as the "All Blacks," the Springboks share the honor of having won three rugby world cups, as well as being the current world champions. As the country with the world's highest Gini Coefficient (income inequality index), sport in South Africa is important in bonding diverse societies and providing opportunities for economic improvement and equality. It is only fitting that we as insurance providers look to protect our athletes in a manner that compares to cover offered to other avocations or professions. In the case of professional athletes, due to the highly competitive nature within this sphere, these careers are relatively short-lived, rarely exceeding age 35 in most instances, competing constantly with the possibility of, unfortunately, a severe career-ending injury.



As an underwriter, I would like to share with you in-depth information and statistics about the wonderful game of rugby and the measures we have put in place to protect these individuals who provide the world with the entertainment that we all so enjoy.

Michael Vincent

Underwriting Manager – South Africa



It's with fond memories I think of the excitement of rugby weekends in Ireland. Living in a port town, hundreds of Welsh rugby supporters would spill off the ferry from Wales for International Rugby weekends, and the fun and banter would ensue, always friendly and thoroughly enjoyable. The fervent passion in these supporters was contagious. Rugby was ever present in my childhood and early adulthood, with my brother playing Rugby League during university with a subsequent transition back to union thereafter. An overseas rugby trip can also be thanked for him meeting his wife!

The Six Nations championship continues to bring Ireland to a standstill, with communities coming together with a shared purpose: to support the Irish! I'm grateful that the country in which I now call home, Australia, shares a similar passion for these sports.

However, rugby isn't without risk. That's why managing player condition and fitness is extremely important in the game. It can be dangerous and carries the risk of significant injury. It's extremely important for underwriters to be aware of what a history of rugby injuries may mean for longer-term mortality and morbidity and what that means in the context of the insurance products we offer in our markets.

Eimear Smith

Head of Underwriting – Australia





Introduction to Rugby

"Rugby is a game for barbarians played by gentlemen." – Oscar Wilde

Rugby is a high-contact sport played by close to 10 million worldwide, both at amateur and professional levels. Of all the competitive contact sports with a statistically high chance of injury, rugby goes on top – its injury incidence is one of the highest among major competitive sports. This article aims to highlight the various common injuries and other health risks associated with this sport. We will also cover insurance-related topics, discussing various insurance benefits offered to rugby players, the industry's risk appetite and areas of risk mitigation. Holistic risk analysis and fictitious underwriting cases provide underwriters and insurance professionals with a deeper understanding of what to consider during the underwriting process of the applicants who practice rugby on an extensive degree, amateur or professional.

Case 1:



Axil is a 27-year-old professional rugby player who earns a salary of approximately Euro 1.0 million per year, competing in Clubs and Team Premiership (championship competitions) as well as international games. He has been playing rugby in a forward specialist position for over 10 years, including five years at international level. He requests individual life insurance cover of Euro 2.5 million and disability cover of the same amount. Axil has been relatively injury-free during his rugby career, only suffering two left ankle ligament injuries, requiring surgery in 2018 and 2020, and a concussion in 2019. It is stated that he has recovered 100% from these occurrences. How would you underwrite his case?

While this article does not offer professional medical or scientific advice on underwriting specific and real cases, we hope to share essential knowledge and points to consider when underwriting applicants who play this highly popular sport.

Imagine that you are a life insurance underwriter and receive the two applications as shown below.

We will return to these cases in the Implications and Recommendations for Underwriting section at the end of this report.

Case 2:



Hugh is a 42-year-old retired professional rugby league player, currently employed at a real estate firm in Australia, earning AU\$150,000 per annum. He retired from a rugby league at age 32 due to injury. He had experienced recurrent knee injuries during his rugby career, requiring multiple surgical interventions, and he now has arthritis in both knee joints. He also experienced a shoulder dislocation during his playing career, and he had a head injury with a concussion, described as mild without loss of consciousness at age 27. Since retiring from professional rugby, he has experienced no residual problems other than some occasional knee pain. Hugh plays in a local rugby league team on weekends, recreationally only. He has done this since retiring from professional rugby and receives no income from playing.

Hugh would like Life and Total Permanent Disability (TPD) "own" insurance of AU\$2.0 million, critical illness insurance of AU\$750,000, and Income protection insurance to cover his salaried real estate income of AU\$8,750 month benefit. How would you underwrite this case?



Overview of Rugby

History of Rugby

The root of rugby traces back to medieval football in England, possibly as far back as the eighth century. However, it is widely believed that the modern form of rugby originated in 1823 with a man named William Webb Ellis, an English clergyman. While playing a football game at a public school in Rugby, Warwickshire, England, young Ellis suddenly decided to run through the goal while holding the ball (which was not allowed) instead of kicking it (allowed). The exact truth about this story is unknown, but Ellis is still respected in the rugby world to this day, as represented by the “William Ellis Cup,” given to the winner of the Rugby World Cup.

“Rugby” as a name of the sport was established when Albert Pell, a former Rugby School student, formed the first “rugby football” team when he was at Cambridge University. In 1871, the Rugby Football Union (RFU) was created in England as the governing body. As the population of rugby players grew and spread across the country, new issues such as players’ qualifications, disagreements in rules, and compensation styles emerged. As a result, in 1896, rugby football split into two groups - rugby union and rugby league - which resulted in different formats and rules, accommodating different playing groups and demographics’ needs.

Since then, rugby has spread across the globe. For rugby union only, it is now played by more than six million players, attracting more than 870 million followers and approximately 400 million fans worldwide.¹

Types of Rugby

As previously mentioned, there are two primary forms of rugby: rugby union and rugby league. Rugby union, governed by World Rugby, has a larger population, played in over 130 member countries, hosting high-profile international matches such as Rugby World Cup and the Six Nations Championship². Countries with the most

registered players include France, South Africa, England, Australia, and New Zealand.

Rugby league, governed by the International Rugby League (IRL), on the other hand, has a smaller population compared to rugby union, with around 50 member countries, but it is one of the most popular sports in places like Australia and Northern Ireland.³ Major differences between rugby union and rugby league are the number of players, positions, certain rules (e.g. after-a-tackle), and so on. In general, rugby union has more game-rule complexities and larger size, while rugby league is faster-paced and simpler. There are also other variants of rugby, including Rugby Union 7s (Olympic sport), Rugby Union 10s, X Rugby (modified contact rugby), and non-contact rugby.

Rugby is played by a wide variety of generation groups – youth, secondary school, college, amateur, and professionals. Games are played often, from local rugby matches to international matches, including U-18, U-20, the Olympics, and Rugby World Cup.

Key Rules of Rugby

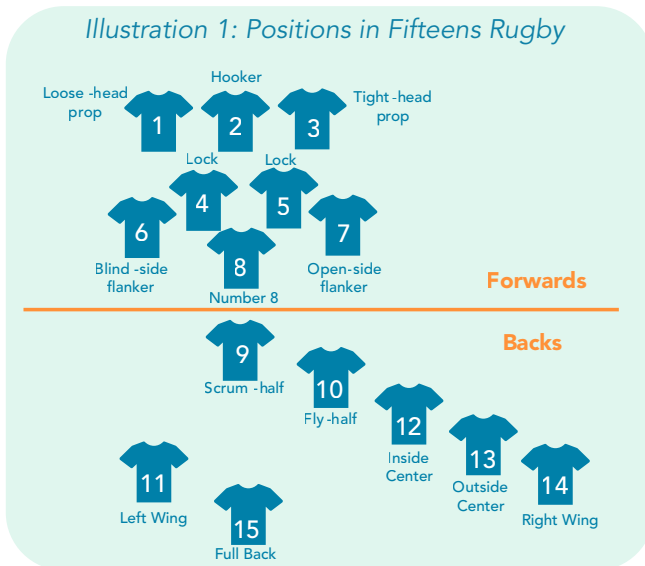
“Ballroom dancing is a contact sport. Rugby is a collision sport.” – Heyneke Meyer, South African Rugby National Team (Springboks) Coach

Rugby is played by players with no helmets or strong protection gear using a special oval-shaped ball. For those who are not familiar with this sport, rugby games may





Illustration 1: Positions in Fifteens Rugby



look chaotic, packed with a large group of players engaged in non-stop chains of multiple and fast actions - running, passing, tackling, kicking, jumping, lifting, and scrumming (opposing teams pushing each other with leads-down and arms interlocked). But in reality, those games are conducted in a strictly regulated manner under careful guidance.

Rugby rules (called “laws of the game”), especially those of rugby union, are highly complicated and not easy to understand. Here are some of the most fundamental laws of rugby:

- A rugby team consists of diverse types of players, each bringing their own physical attributes and skillset.
- Every team member has his/her position, divided into two general types – forward and back. But each has a more specific name for their position, such as prop, lock, wing, fullback, etc. (see Illustration 1).
- Players are only allowed to pass the ball backward or sideways not forward.
- There are several ways to score – tries (the ball is grounded over the opponent’s goal-line), conversions (kicking the ball over the crossbar after a try), penalty kicks (kicking the ball over the crossbar after the opponent receives a

penalty) and drop goals (kicking for goal by dropping the ball onto the ground and kicking it).

More detailed rules are found at the website of each governing body – World Rugby and Rugby League.⁴

Types of Life and Health Insurance Coverage for Rugby Players

Insurance coverage protecting rugby players against injury, disability, and fatal accidents is arranged by each country’s governing body and clubs. In the UK, for example, all the RFU-affiliated club players, including professionals and school/university players, are covered by personal accident insurance. It provides fixed benefit payments for death and permanently disabling or catastrophic injuries such as traumatic brain injury or spinal injury (subject to a different benefit scheme)⁵ caused by accident during the sport.⁶

In Australia, Rugby Australia also has the National Risk Management and Insurance Program.⁷ Sports injury and death coverage is also provided for statewide competition participants⁸ and other players of all ages.⁹

In South Africa, players are covered by general group insurance agreed between the rugby players’ association and South African Rugby Union but is limited to an accumulation limit of approximately GBP 25,000 per year for a maximum period of 48 months. Pre-existing injuries at time of new contract are normally excluded for a period of up to 400 hours of game time.¹⁰

For additional individual life insurance coverage, rugby players will apply at regular life insurance companies and go through the same process as regular consumers.



Risks Associated with Rugby

“If there is no blood on the line, it is no rugby league.” – Russell Crowe, actor, co-owner of the National Rugby League team South Sydney Rabbitohs

From beginners to the level of professional players, playing rugby comes with a high degree of health risks. Although studies in New Zealand show that their national rugby team (All Blacks) players’ longevity does not differ significantly from the general population, players face special types of risks due to the nature of the sport.¹¹ Risks can be affected by multiple factors, including the growing size of the players,¹² increasing number of matches top players are required to play, more hazardous drugs that are prevalent at higher levels, etc. Below are highlights of major health and mortality risks associated with intensive rugby playing.

1. Injuries

Rugby is one of the most high-contact sports of all. Anyone who has watched rugby games will immediately understand that players are well exposed to injury risks. Players wear only light protective gear, such as padded helmets, mouthguards, and body armor, akin to other similar contact sports, such as American football or hockey.

Rugby involves a great amount of running, so tendonitis in the knee or ankle, medial tibial stress syndrome (shin splints), and bursitis are common overuse injuries. Although these are usually not serious injuries, they can adversely

affect player performance and possibly lead to more complicated conditions if not adequately addressed.

The 2022 NZ-RugbyHealth study¹³ found that higher percentages of the elite rugby player group had sustained injuries of a given body-site type (e.g., neck sprain/strain, thigh bruising, hamstring strain) combination than the non-contact sports players. Higher percentages of the rugby groups reported having sustained injuries requiring hospitalization, injuries that stopped participation in sport permanently, and sport-related surgery during their playing career (see Table 1).

The National Library of Medicine on their NCBI site¹⁴ recently released statistics pertaining to the 2021/22 season of the semi-professional Rugby Europe Super Cup, Under-20 and Under-18 championships, as shown in Graphs 1 – 3 on the next page.

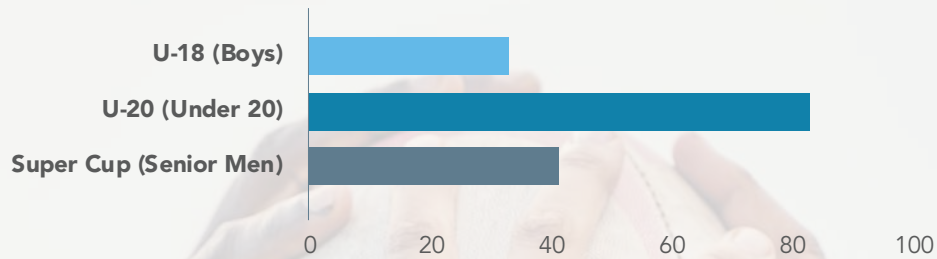
The data suggests that the frequency of injuries among senior levels and the under-18 cohort is similar, and injuries in the under-20 division exceed twice that of the professional and under-18 divisions (Graph 1). Lower limbs are the body parts that had the most reported injuries. Head, face, and neck were the second most frequently injured parts among senior players (Graph 2). As for the types of actions during the game (Graph 3), tackles account for almost two-thirds of all injuries – in equal occurrence for those being tackled as well as the tackler, highlighting World Rugby’s efforts to improve the rules and regulations regarding this part of the game and the emphasis

Table 1: Percentages of rugby groups reporting sustained injuries that resulted in complications (Source: NZ-RugbyHealth)

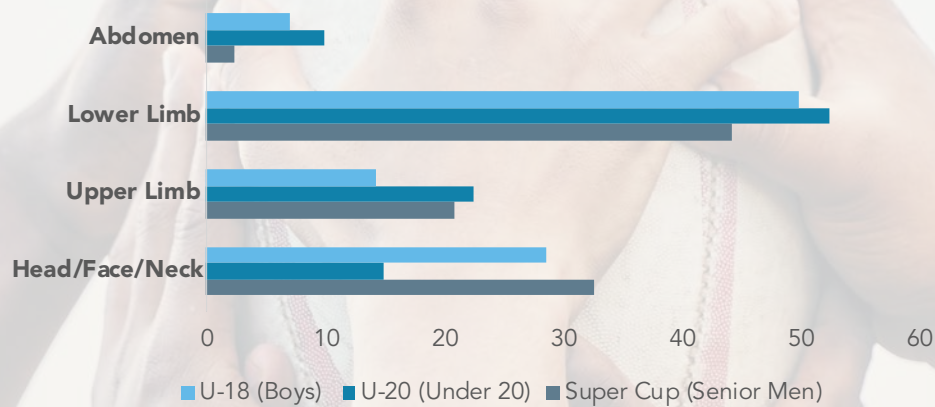
Sustained injury	Hospitalization required	Termination in sport	Sports-related surgery required during career
Neck sprain/strain	73%	28%	72%
Thigh bruising	46%	28%	46%
Hamstring strain	25%	11%	32%



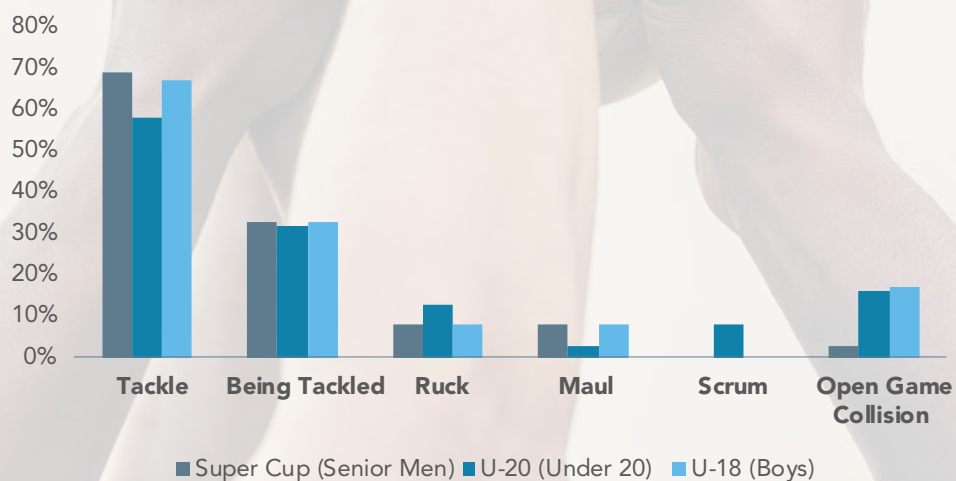
Graph 1: Injury incidence rate by age group in Rugby Europe competition (Source: NCBI)



Graph 2: Injury Location by Age Group in Rugby Europe Competition (Source: NCBI)



Graph 3: Injury Caused by Type of Contact by Age Group (Source: NCBI)





on practicing and perfecting tackling technique. As expected, lower limb sprains and ligament injuries were most frequently reported.

However, it is worth noting that other rugby statistics list the overall incidence in senior men's professional rugby up to 81 injuries per 1,000 player match hours, and most studies for school under 18 players report injury rates below 47 per 1,000 match hours. Rugby players are exposed to higher injury risks than footballers/soccer players. A study in New Zealand shows that rugby players incurred 2.7 times more match injuries than footballers.¹⁵

The British Journal of Sports Medicine also released statistics pertaining to injuries in English professional rugby union. The overall incidence of injury was 91 per 1000 player hours, resulting in an average of 18 days lost time per incident. Reoccurrences, which accounted for 18% of injuries, were significantly more severe, being 27 days lost time as opposed to new injuries being 16 days. They concluded that at any given time, 18% of their players will be unavailable to play competitively due to injury. Minor injuries (< seven days absence) accounted for 54% of injuries, moderate injuries (1-3 weeks absence) for 26% of injuries and major injuries (> three weeks absence) for 20% of injuries.

With the above information and analysis, it would now be relevant to investigate how this would affect the insurance industry with regard to mortality and morbidity related to rugby players. World Rugby estimates that there are, on average, three injury-related deaths among rugby players per year (although much higher in some other sources). The major cause of death is catastrophic head or neck injuries due to players not following proper techniques, accidental collisions, or playing without adequate protective gear.

2. Concussion, Traumatic Brain Injuries (TBIs) and Dementia Risks

Concussion is one of the most serious health concerns in rugby. Insufficiently shielded players are consistently exposed to violent collision

forces throughout the game and practices, jumping, crashing while running at full speed, locking, scrumming, and so on. Studies show that more than one in five rugby-related injuries are concussions, making it the most common rugby injury (Table 2).¹⁶ Head injuries with significant concussion occur when a player's head receives a "whiplash" on falling to the ground, usually during a high-speed collision or jumping for a high ball, rather than head-on-head clashes in tight play such as scrumming.

Recognizing concussions, however, is not easy, as the concussed patient's symptoms vary. Moreover, it is difficult to diagnose correctly how severe a concussion might be and to determine when an athlete has recovered from it completely so that it is safe to go back to playing. In addition, long-term effects of concussions are still unclear. Authorities are taking action to deploy effective management protocols such as the Head Injury Assessment "temporary replacement" and "recognize and remove," which are effective in preventing a dangerous fast swelling of the brain called "second impact syndrome."

Damage to young players is particularly alarming, as their brains are still developing. The young brain is more susceptible to concussion than the adult brain, and it could have long-lasting impact to their lives.¹⁷ In some places, lack of sufficient medical personnel available on the field to recognize and manage players' concussions is also a source of concern.¹⁸

Women are also more susceptible to than male players to brain injury. Over one-third (2.7 million) of global rugby participants are women and girls.¹⁹ According to a 2022 report from New Zealand, concussion was the most reported injury.²⁰ Studies suggest that female athletes are at greater risk of a TBI than male athletes, due to many possible factors, including female's physical structure, brain cell composition, and more.²¹

There is reportedly a higher incidence of rugby players suffering organic brain impairment or dying earlier than normal from latent brain injuries. Currently, there is at least one class action suit



being instigated by more than 200 former rugby union professional and ex-amateur players against World Rugby, the RFU and the Welsh Rugby Union.²² For rugby league, 145 former players who have been diagnosed with brain injuries they claim resulted from playing the rugby game launched actions against the governance bodies in the UK.

Multiple concussions over a long period of time also could lead to chronic traumatic encephalopathy (CTE), which could lead to dementia, including Alzheimer's Disease. This is a long-term process, which could take 10 to 20 years to determine the real effect of concussion on players' brains. Although only a small proportion of players suffer catastrophic consequences from brain injuries, longer-term monitoring will be needed to determine its true severity.²³ There has not been sufficient research investigating the long-term effects of concussion from playing rugby. A study of more than 40 elite rugby players led by Imperial College London found that as many as 23% of the players had signs of brain abnormalities, which need long-term monitoring to understand future implications and accurately assess risk.²⁴



A study by the University of Glasgow also showed that rugby players are more than twice as likely to develop neurodegenerative diseases such as dementia and 15 times more likely to develop a motor neuron disease, which progressively damages parts of the nervous system.²⁵

3. Chronic Pain, Medical Drug Overuse and Doping

Similar to many other physically and mentally challenging highly competitive sports, such as football and cycling, rugby is no stranger to chronic pain and drug usage issues, both legal and illegal. World Rugby follows the protocol of the World Anti-Doping Agency's (WADA) prohibited medication and substances list.²⁶

Although it may not be widely known, concerns endure about the excessive usage of legal drugs in rugby sports. Athletes are constantly in pain due to the high-contact nature of the sport, so painkillers are part of their daily life.

Some players take too much pain-killing medication and end up with addiction issues or overdosing. Some players say that there is a "culture of painkiller and prescription drug use in the game, particularly the powerful opioid tramadol." This phenomenon is observed both in rugby union and rugby league.²⁷ Tramadol is not on the current WADA's banned list, but it will be starting January 2024.²⁸

Rugby is no stranger to doping issues. According to UK Anti-Doping, rugby contributes to a large percentage of Anti-Doping Rule Violations.²⁹ Report shows that there have been more than 550 athletes banned due to doping between 2013 – 2022. The UK had the highest number of doping cases (148), followed by Australia (83) and South Africa (73). There have been several reported incidences worldwide of rugby players using illegal or recreational drugs and testing positive.³⁰ The most commonly used substances were the stimulant methylhexanamine, cannabis, and steroid stanozolol.³¹



4. Cardiovascular Risk and Sudden Death

The damaging effect of the high-contact nature of rugby is not only on players' heads and necks but also their chests and heart. The blunt force of physical attacks often causes trauma to the front of the chest, leading to cardiac arrest and sometimes even death.

An examination study said the sudden deaths occur due to sudden coronary insufficiency.³² A study of 6000 cases of sudden cardiac deaths showed that 17 cases were related to rugby, of which 16 were male and 11 were younger players (18 years or younger), according to a 2019 study in the UK.³³ This is a concerning trend, raising questions on providing sufficient safety measures and welfare guidelines to young players.³⁴

5. Overtraining Syndrome

Overtraining syndrome is a situation caused by excessive training where players' performance is impaired with an elevated risk of injury and illness. Overtraining syndrome appears in many forms of symptoms, such as chronic fatigue, unusual muscle soreness, increased blood pressure, delays in recovery, depression, mood swings, poor quality sleep, etc. If not properly treated, overtraining syndrome could lead to more serious outcomes.

Rugby is a year-round high-intensity sport, requiring players to compete at top level all the time, peaking several times, coinciding with several tournaments, league matches, regional and national championships, the Olympic Games, and the World Cup. This demanding schedule imposes enormous challenges on elite professional players. In South Africa, for example, players competing at the top level must play in at least three tournaments during the year. They also tour the northern hemisphere in December. Even those who do not play in the national team are required to play in the Currie Cup tournament, which runs in parallel to the Tri-nations tournament and continues until mid-October.

Unlike the American football players of the NFL, rugby players do not have a mandatory, lengthy (four months) off-season period.³⁵ Pressure is high on rugby players, and any deviation from peak performance will result in them losing their place on the team, and for professional players this has financial implications.

6. Mental Health

Mental health issues are often disassociated from rugby due to its "stiff upper lip" culture and traditions. But rugby players are not strangers to mental health issues. A study by Durham University in the UK found that former professional rugby players are more likely to show signs of depression, anxiety, and irritability compared to amateur rugby players and non-contact athletes.³⁶ It also found that players who suffered more than five concussions were almost twice as likely to have depression, anxiety, anger issues and irritability compared to those with fewer concussions.³⁷ Overtraining can also negatively affect rugby players' mental health, as discussed in the previous section. World Rugby and local governing bodies such as RFU provide mental health resources and guidelines, but more proactive approaches are expected to address these growing issues.

7. Risks by Playing Positions

According to a study, the positions that reported the most physical incidents were the three front row positions in forming a scrum (a signature rugby form where players bind together and shove against the opponent) – tight head prop, loosehead prop, and hooker.³⁸ Other studies found that flanks, hooker, and outside center positions are at the greatest risk of injury.



Implications and Recommendations for Underwriting

Case Study 1



Axil is a 27-year-old professional rugby player who earns a salary of approximately Euro 1.0 million per year, competing in Clubs and Team Premiership (championship competitions) as well as international games. He has been playing rugby in a forward specialist position for over 10 years, including five years at international level. He requests individual life insurance cover of Euro 2.5 million and disability cover of the same amount. Axil has been relatively injury-free during his rugby career, only suffering two left ankle ligament injuries, requiring surgery in 2018 and 2020, and a concussion in 2019. It is stated that he has recovered 100% from these occurrences. How would you underwrite his case?

Axil approached several local South African individual insurance companies for the Own Occupation Disability lump sum benefit without success due to the fact that professional rugby players do not qualify for this insurance benefit. Together with our local insurance company, however, we can offer him a defined benefit lump sum product called Functional Impairment for the same sum assured (Euro 2.5 million) at standard rates with a left ankle exclusion. This product pays for a myriad of events that will pay according to functional impairment severity criteria with an additional measure in some instances if a satisfactory recovery is not achieved after reasonable medical care and a time period allowed for "maximum medical improvement." Imagine that during his five policy years, he had made two claims to the product:

1. A right knee injury which kept him out of the game for four months. A claim for this injury was received after three weeks but rejected because the client had not gone through a period to allow the injury to respond to reasonable optimal treatment. After a period of four months, allowing for "maximum medical improvement," he returned to the

sport without any long-term impairment – thus, no claim was paid.

2. A fracture to the cervical spine, which kept the client out of the game for eight months. He had to undergo a fusion, which met the criteria for a 25% claim event in terms of the severity of the injury.

Although professional rugby players typically have short-term group cover protection, as previously indicated, they can also seek out individual cover protection through traditional life insurance offices and be protected from serious injuries under certain product definitions. It can readily be seen, though, that there is still no perfect solution for this class of athlete in terms of long-term Income Protection and Own Occupation Disability Protection.

Case Study 2



Hugh is a 42-year-old retired professional rugby league player, currently employed at a real estate firm in Australia, earning AU\$150,000 per annum. He retired from rugby league at age 32 due to injury. He had experienced recurrent knee injuries during his rugby career, requiring multiple surgical interventions, and he now has arthritis in both knee joints. He also experienced a shoulder dislocation during his playing career, and he had a head injury with a concussion, described as mild without loss of consciousness at age 27. Since retiring from professional rugby, he has experienced no residual problems other than some occasional knee pain. Hugh plays in a local rugby league team at the weekends, recreationally only. He has done this since retiring from professional rugby and does not receive any income from playing.

Hugh would like Life and TPD "own" insurance of AU\$2.0 million, critical illness insurance of AU\$750,000, and Income protection insurance to cover his salaried real estate income of AU\$8,750-month benefit. How would you underwrite this case?



Obtaining a medical report from Hugh's treating practitioner may be prudent to better understand the extent of the injury history and any residual problems.

In the absence of chronic pain but acknowledging the degenerative nature of arthritis, a bilateral knee exclusion may be reasonable to mitigate the risk this may present for the IP and TPD insurances. Hugh is now working in a relatively safe environment as a white-collar professional, earning a stable salary. It's generally reasonable to consider IP and TPD insurance coverages for this occupation. His new occupation doesn't present any concerns with regard to worsening the residual known knee arthritis.

He does continue to play recreationally, which is not without risk of injury. To mitigate, this consideration could be given to excluding his recreational rugby from IP and TPD insurance.

In the Australian and New Zealand markets, occupational-linked disability benefits are not generally available for professional rugby players, noting the aforementioned risks associated with the sport. Following retirement, depending upon the medical history of the individual and the occupation of choice post-retirement, IP and TPD insurance coverages may be available. However, close attention to the holistic risk presented is required, including the new occupation and any associated risk it presents; any impact the new occupation may have on worsening any existing medical ailments; the long-term mortality and morbidity risk of historical injuries; risk of any continued involvement in the sport.

UW Insight - France

Rugby is an exceptional sport that conveys good values and profound joy. Few other sports bring this much excitement and unity to so many people. Unfortunately, however, due to its high-intensity nature, playing rugby also involves considerable risks. In my opinion, the risk associated with concussions is most concerning. Although its severity is not fully quantified, repeated concussions' consequences can be catastrophic. In France, reported cases of concussions or class action lawsuits are very few. But the presence of this risk is undeniable. I hope more studies will lead to better protection of the players. This and other risks associated with the practice of rugby must be well understood, and the commitment to cover these risks should not be taken lightly. Last and most importantly, all this should not take away the fact that rugby is a great sport, bringing us together and sharing so much joy and good times with good people.



Sébastien Mauger, Underwriter, SCOR France



UW Insight - UK

"With a fine disregard for the rules of football as played in his time at Rugby school, William Webb Ellis first took the ball in his arms and ran with it."

As an RFU Coach and Referee, I have long had a passion for the game of rugby union, a game that provides core values from all of its participants, from those at the top of the game ready to perform over the next month to the six-year-old running around on a Sunday morning with their mates.

As the World Cup is in full swing, we will see some of the best players in the world put on a fantastic display in keeping with the core values of the game, including Integrity, Respect, Solidarity, Passion, and Discipline. However, this year, more than ever before, you will also see additional care being given to player welfare.

When rugby union became professional in the late 90s, very little thought was given to training practices. Many professional clubs would train with the same intensity throughout the week as they would play on game day.

While there is a degree of risk inherent with the game of rugby union or league underwriters should not lose sight of the fact that player training and wellbeing has significantly improved with the introduction of concussion protocols to the game. All players who have a suspected or diagnosed concussion must follow a graduated return-to-play program.

Training methods have significantly improved, with even international teams limiting tackle/contact time during training to a maximum of three minutes per session.

Clubs now also ensure player health by restricting game time to a maximum of 1 game per week, giving thought to player welfare and not overplaying certain individuals.

Additionally, it is common practice for many English clubs to have in place a mental health champion to aid with player wellbeing.



Rugby provides a great sporting outlet within a controlled environment, with many players having enjoyable playing careers with very few issues. World Rugby continues to make changes to the laws of the game to ensure players remain as safe as possible.

Jason Dorasamy, Senior Underwriter, SCOR UK



Conclusion

Rugby has a rich history and established presence, played by more than 10 million enthusiastic players worldwide, touching “the hearts of hundreds of millions across the globe,” as Nelson Mandela said at opening of the 1995 World Rugby Cup. With the 200th anniversary of the creation of rugby celebrated by the Rugby World Cup 2023 held in France, rugby has a promising future with robust growth. Efforts to improve safety measures are taking place to keep rugby safe for players at all levels.

In underwriting present or former rugby player applicants, underwriters must understand the risks associated with this extraordinary sport and assess each case with full attention and consideration.

We suggest underwriters who encounter applicants playing rugby at a professional or similar level conduct extra research and evaluation to assess the applicant’s risk properly. Consulting medical advisors or guidelines published by global and local rugby governing bodies such as World Rugby, Rugby League, and Rugby Football Union (RFU) or any other medical associations is highly recommended.

For further information or underwriting guidance, contact your local SCOR underwriting expert.

We invite you to follow this ongoing series as we tour the world of extreme sports, tapping into SCOR’s network of expert insurance professionals – and amateur athletes – whose passion and knowledge allow SCOR to break through common misconceptions and offer a better understanding of the true risks surrounding extreme sports for amateurs, professionals, and – occasionally – even spectators. We will also explore the most recent trends and the implications of new medical developments, predict how a changing climate and other evolving factors might impact these sports, and highlight the hidden links between Life and Health and Property and Casualty coverage in the world of extreme sports.

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