



## **EQUIPMENT IN RUGBY**

### **Medical Considerations for Protective Equipment**

All clothing, footwear and equipment worn or used during any rugby activity should comply with the latest World Rugby Regulations. Details of World Rugby compliant devices can be found here: <https://www.world.rugby/the-game/facilities-equipment/equipment/devices>

Compliant items / devices usually have a World Rugby approved label:



#### **MOUTHGUARDS**

Mouthguards, or gumshields, are typically worn in contact sports to protect the mouth from injury. The purpose of a mouthguard is to distribute the impact of a contact event evenly throughout the mouth, potentially reducing the risk of injury. A recent study showed that athletes wearing mouthguards have less than half the risk of orofacial injuries (injuries to the mouth, teeth, jaw and surrounding soft tissue) compared to athletes who don't wear a mouthguard (Knapik et al., 2019).

One study in New Zealand Rugby Union even reported a 47% reduction in dental injury claims following the introduction of compulsory wearing of mouthguards (Quarrie et al, 2005).

There is some limited evidence that mouthguards may help reduce the risk of concussion (Ono et al., 2020; Chisholm et al., 2020), however these studies are small so the primary reason for wearing a mouthguard should be to prevent orofacial injuries.

Since the beginning of the 2015/16 season, the wearing of mouthguards has been strongly recommended by the IRFU for players at all levels of rugby during training and games (including leisure rugby i.e. tag and touch rugby). The IRFU advise clubs and schools to adopt an approach of 'No Mouthguard, No Play'. Should a player have a legitimate medical reason for not being able to wear a mouthguard, this should be communicated and supported by a submission in writing and confirmed by a recognised medical practitioner / dentist to the club or school.



### *Role of the Player*

It is the player's responsibility to ensure that they wear adequate equipment to play the sport under World Rugby's [Laws of the Game, Law 4](#). The type of mouthguard a player should wear is a matter of personal preference, however custom-fitted mouthguards provide a better level of fit and protection compared to pre-moulded or boil-and-bite mouthguards. Mouthguards are considered as personal protective equipment (PPE) and therefore should have a 'CE' mark showing that it is compliant with EU testing and standards.

Mouthguards should cover all of your teeth, excluding the back molars, and you should be able to close your mouth comfortably with it in place. They should be comfortable, secure and allow you to speak and breathe without difficulty. Players should make sure they are wearing the mouthguard correctly during rugby activities.

The IRFU advise that *all players attend their dentist to get fitted for a player-specific mouthguard.*

Find a Dentist:

- Republic of Ireland: <https://portal.irishdentalassoc.ie/Find-A-Dentist>
- Northern Ireland: <https://bso.hscni.net/directorates/operations/family-practitioner-services/dental-services/find-a-dentist/>

### *Role of the Club / School / Organisers*

It is the responsibility of the club / school to inform players, parents and officials of this guideline.

### *Instrumented Mouthguards*

Instrumented Mouthguards (iMGs) are being used in the professional end of the game to monitor head acceleration events. This is an emerging technology and require high level of resources and expertise to use appropriately. Therefore, focus in the Domestic Game should be to encourage players to wear a normal mouthguard in the first instance.



- Knapik JJ, Hoedebecke BL, Rogers GG, et al. Effectiveness of Mouthguards for the prevention of orofacial injuries and concussions in sports: systematic review and meta-analysis. Sports Med 2019; 49:1217–32.
- Quarrie KL, Gianotti SM, Chalmers DJ, et al. An evaluation of mouthguard requirements and dental injuries in New Zealand rugby Union. Br J Sports Med 2005; 39:650–1.
- Chisholm DA, Black AM, Palacios-Derflingher L, et al. Mouthguard use in youth ice hockey and the risk of concussion: nested case-control study of 315 cases. Br J Sports Med 2020; 54:866–70.
- Ono Y, Tanaka Y, Sako K, et al. Association between sports-related concussion and Mouthguard use among College sports players: a case-control study based on propensity score matching. Int J Environ Res Public Health 2020; 17.

## **HEADGEAR**

Headgear (headguards or scrumcaps) for rugby matches or training is permitted once they meet [World Rugby Regulation 12](#) and should not cause harm or injury to any player. Headgear padding should not exceed an overall thickness of 12mm when uncompressed and should not have buckles or hard fastenings, in line with [Law 4](#). Soft, rubber buttons or Velcro type fastenings are allowed. Headgear should not significantly impair a player's hearing or field of vision when wearing.

Headgear can protect the head from minor injuries, such as cuts and abrasions and can also help prevent the development of 'cauliflower ears'. There is currently no published evidence to show that headgear can prevent injuries such as concussion or skull / face fractures (Barnes et al., 2017; Henley et al., 2023).

Protective equipment, such as headgear, can alter a player's behaviour potentially giving them a false sense of security and leading to poor tackle technique (Menger et al., 2016). Players and coaches should focus on correct tackle technique and increasing player robustness (<https://www.irishrugby.ie/running-your-club/levelup/engage/>), while also making sure players are aware of the purposes of protective equipment and their limitations.



- Barnes A, Rumbold JL, et al. Attitudes towards protective headgear in UK rugby union players. *BMJ Open Sport Ex Med* 2017 3.1: e000255.
- Henley S, Andrews K, et al. Soft-shell headgear in rugby union: a systematic review of published studies. *Sport Sci Health* 2023 19, 765–782.
- Menger R, Menger A, et al. Rugby headgear and concussion prevention: misconceptions could increase aggressive play. *Neurosurg Focus* 2016 40(4), E12.

### **BODY PADDING (SHOULDER AND BREAST)**

Shoulder pads (or body armour) can be worn provided they comply with the specifications set out in [World Rugby's Regulation 12](#). Body padding should not exceed an overall thickness of 12mm when uncompressed and should not contain rigid materials that could harm the wearer or other players during normal use.

Shoulder pads may reduce the impact of the tackle but do not increase the power of the tackler (Hughes et al., 2022; Usman et al., 2011). Chest padding is not allowed for men.

Specifically designed shoulder pads that include additional breast padding for women may also be worn (Brisbine et al., 2020). Current guidelines allow these provided the padding is incorporated into the garment and covers the shoulder and / or collar bone and / or chest only. There are two main types of breast issues that can occur in women's rugby:

1. Exercise-induced breast pain: Due to excessive movement when running or jumping
2. Impact-related breast injury: Due to being tackled or contact with the ground / ball

Exercise-induced breast pain can be prevented by wearing a properly fitted supportive sports bra. Sports bras, like any other piece of rugby equipment, should comply with [World Rugby Regulation 12](#) and therefore, players should avoid underwired sports bras so as not to injure themselves or others during rugby.

There are many different types of sports bras available and players and coaches in the women's and girl's game should familiarise themselves with the [IRFU Breast Health](#) resource to learn how to choose the right one for you. The risk of impact-related breast injuries may be reduced by wearing appropriate breast padding as per current World Rugby Guidelines (Wakefield-Scurr et al., 2024; World Rugby, 2020).



Learn more about [breast health issues](#) and sports bras on the Irish Rugby Website.

- Hughes, A., Carré, M. & Driscoll, H. Perceptions and Attitudes Towards Shoulder Padding and Shoulder Injury in Rugby Union. *J. of SCI. IN SPORT AND EXERCISE* 4, 66–73 (2022). <https://doi.org/10.1007/s42978-021-00140-2>
- Usman, Juliana, Andrew S. McIntosh, and Bertrand Fréchède. "An investigation of shoulder forces in active shoulder tackles in rugby union football." *Journal of Science and Medicine in Sport* 14.6 (2011): 547-552.
- Brisbane, Brooke R., et al. "Use and perception of breast protective equipment by female contact football players." *Journal of science and medicine in sport* 23.9 (2020): 820-825.
- Wakefield-Scurr, Joanna, et al. "Insights into breast health issues in women's rugby." *European Journal of Sport Science* 24.12 (2024): 1735-1742.
- World Rugby 2020. Advice for Female Rugby Players. <https://www.world.rugby/the-game/facilities-equipment/equipment/female-advice>

## GOGGLES

Wearing glasses is not allowed in any type of contact rugby activity (i.e. training and matches), however prescription glasses or sunglasses may be allowed in non-contact forms of the game, such as tag or touch.

Sport goggles may be worn to provide protection (e.g. for a medical condition or to protect the eye from injury) or enhance vision where contact lenses can't be worn. Sports goggles must be dispensed by a registered dispensing optician and players must have written confirmation that the goggles are required to correct the vision of the player or are required to protect the player's eyes due to a medical or optical condition, for them to be able to play rugby. Sports goggles should not substantially restrict any normal field of vision and should not pose a physical danger to the player wearing them or other players on the field. Sports goggles should be smooth and free from sharp edges which would cause discomfort or injury to the player wearing them or any other player on the field. Sports goggles should be able to be worn comfortably with and without padded headgear.

Rugby sports goggles have been designed, and currently [Raleri](#) are the only manufacturer to have been approved by World Rugby under Law 4, [Regulation 12](#). If a player has identified alternative sports goggles, they wish to wear, they should contact their Province prior to wearing during any rugby activity.



### FACEMASKS

If a player is advised to wear a facemask (or face shield), it must comply with the below criteria set out by [World Rugby in Regulation 12](#). Facemasks meeting these criteria would offer very little, if any, protection from facial injuries. For a facemask to be worn it must:

- Have no rigid materials or sharp edges
- Be less than 2mm thick and 60kg/m<sup>2</sup> density
- Not restrict vision
- Have a Velcro or similar fastening

While some high-profile players may previously have worn facemasks in matches, these do not meet the criteria above and are therefore not permitted to be worn during rugby activity. The majority of facemasks commercially available do not meet the above criteria and therefore cannot be worn. If a player has identified a facemask they wish to wear, they should contact their Province prior to wearing during any rugby activity.

### HEARING AIDS

Hearing aids are not specially set out as a banned item of equipment; however they must comply with the requirements of [World Rugby Regulation 12](#). Players should speak with their specialist before participating in any rugby activity. Hearing aids may pose an injury risk to the player wearing them, the other players on the field and may also be damaged during rugby. Therefore hearing aids, where possible, should be removed prior to taking part in any contact activity.

Hearing aids may be worn during non-contact versions of the game provided they are comfortable and securely fitted. If a player or club are unsure whether a device can be worn, they should contact their Province prior to wearing during any rugby activity.

Coaches and match officials should be made aware of any hearing impairment to help manage the player's communication needs and determine what, if any, accommodations may be needed.



### **INSULIN PUMPS**

Insulin pumps are not specially set out as a banned item of equipment; however they must comply with the requirements of [World Rugby Regulation 12](#). Players should speak with their specialist before participating in any rugby activity. Insulin pumps may pose an injury risk to the player wearing them, the other players on the field and may also be damaged during rugby. Therefore insulin pumps, where possible, should be removed prior to taking part in any contact activity. If a player or club are unsure whether a device can be worn, they should contact their Province prior to wearing during any rugby activity.

### **BASE LAYERS**

Players are permitted to wear upper body base layers and base layer leggings / tights, provided the material complies with the [World Rugby Regulation 12 guidelines](#).

### **HEADSCARVES & RELIGIOUS HEAD-DRESS**

Headscarves and other religious head-dress can be worn, providing they do not cause a danger to the wearer or other players and do not contravene World Rugby [Regulation 12](#). Any pins or metal / rigid fasteners should be removed.

### **SHIN GUARDS**

Shin guards may be worn according to World Rugby Guidelines; however they should be worn under socks with the padding incorporated within a non-rigid fabric. No part of the padding should be thicker than 5mm when compressed and hard plastic football style shin pads are not suitable in rugby.

### **BOOTS, STUDS AND BLADES**

Suitable footwear is important for both rugby matches, and training and it is recommended that a specifically designed rugby or football boot is worn. There are a large number of boots and studs available, so the responsibility is with the players / parents / guardians to make sure the boots and studs are appropriate and safe to play in.



Replaceable studs, blades and moulded boots are allowed provided they comply with the specifications set out by World Rugby in [Law 4](#) and [Regulation 12](#). Studs / blades made of metal, or a metal / plastic combination are acceptable but should be regularly checked as they can become sharp or broken.

Further details of the Regulation 12 can be found here:

<https://www.world.rugby/the-game/facilities-equipment/equipment/specifications/outsoles>

The match official should check boots and studs as part of their pre-match routine. By law they have the power to decide at any time that a player's clothing, equipment or footwear is dangerous or illegal.

Studs and blades come in many variations; however the traditional conical stud is used as the standard shape to measure against, under World Rugby Regulation 12.

The following criteria must be met for studs to be used in rugby:

- Must not be longer than 21mm
- Must be at least 10mm diameter at the end
- Must not have any external projections on its surface, except for text or logo (embossment details must be no more than 0.3mm)
- All edges must be finished smooth and rounded to a radius not less than 1mm
- Must not have any burring or sharp edges

### **BANNED ITEMS OF CLOTHING**

World Rugby's [Law 4](#) outlines items of clothing that are not permitted in rugby, including:

- Jewellery
- Firm headbands / clips (i.e. plastic hairbands with claws)
- Sharp or abrasive items (i.e. items containing buckles, rings, hinges, clips, zippers, screws, bolts or rigid material)
- Communication devices
- Shorts with padding sewn into them
- Any item contaminated by blood

If an item that is normally permitted in Law but in the referee's opinion is liable to cause injury, they may decide to not allow the item.