



Injury Surveillance Report

Edition January 2024
based on the 2022-2023 Season – Rugby Europe 7s Competition

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1. INTRODUCTION

Understanding the incidence and nature of the injuries sustained during the practice of rugby is key in order to clarify the risks posed to players. Due to its nature as a contact sport, rugby, as well as ice hockey, lacrosse, and American football, has a higher injury incidence than non-contact sports. Through Injury Surveillance Studies in various competitions, it is possible to gain an understanding of how, where and when injuries happen, which is a fundamental requirement to advance player welfare standards across all ages and levels of the game.

Several Injury Surveillance Studies have been implemented previously in rugby sevens competitions [1][2][3], but only one in Rugby Europe's 7s competitions [4].

Rugby Europe is committed to implementing injury surveillance studies at all major Rugby Europe tournaments and to disseminate the results within the Rugby community.

The aims of these studies are:

- To identify injury trends in men and women, adults and U18's Rugby 7s competitions.
- To bring injury-related areas of concern to the attention of Rugby Europe's Chief Medical Officer and when appropriate to World Rugby's Chief Medical Officer.

This report continues the on-going study of Rugby Europe competitions by reporting injuries sustained during the men's and women's Rugby Europe's 7s Competitions.

2. METHODS

The study was conducted in accordance with the definitions and protocols described in the World Rugby approved consensus statement on definitions and procedures for injury surveillance studies in Rugby [5].

The definition of injury was: 'Any injury sustained during the 2022/2023 men's and women's Rugby Europe 7s competitions' matches that prevents a player from taking a full part in all normal training activities and/or match play for more than one day following the day of injury'. A recurrent injury was defined as 'An injury (as defined above) of the same type and at the same site as an index injury and which occurs after a player's return to full participation from the index injury'.

Injury location, type and cause together with the event leading to the injury were also recorded. In the report form, the details of each injury were collected: date of injury, playing position, period of the game, contact or no-contact injury, activity at the time of injury, location of the injury, type of injury and field location, categorized as they are provided in the Rugby consensus publication [5].

Only match injuries resulting in > 1 day of absence from training or from the match were recorded in this study. The rest of the injuries that were not included in this definition were not recorded.

Those matches which were cancelled, were not considered when calculating the exposure.

3. DATA COLLECTION

Prior to the tournament taking place, the purpose of the epidemiological study was outlined to each participating team. Informed consent was collected from the participants prior to the beginning of the tournaments, included in the terms of participation. Ethical approval was obtained from the ethical committee of the Camilo José Cela University's Ethics Committee.

Medical staff prospectively recorded match injuries sustained during the tournament. A member of the team's medical staff also recorded detailed information about each injury.

Andorra, Austria, Belgium, Bosnia & Herzegovina, Bulgaria, Croatia, Czechia, Denmark, England, Estonia, Finland, France, Georgia, Germany, Great Britain, Hungary, Ireland, Israel, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Malta, Moldova, Monaco, Montenegro, Norway, Poland, Portugal, Romania, San Marino, Scotland, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, Wales and Poland were involved in the 2022/23 Men's and Women's U18 and Adults' Rugby Europe 7s Competitions.

4. RESULT MATCH INJURIES

All participating teams reported data in accordance with the definitions and protocols described in the World Rugby approved consensus statement on definitions and procedures for injury surveillance studies in Rugby [5].

4.1. Injury Incidence

Table 1 summarizes the match injury frequency, incidence and match exposure data for players taking part in the 2022/23 Adults Men and Women's 7s Rugby Europe Championship, Trophy and Conference.

The total number of injuries sustained was 32 by men and 31 by women. The match incidences were from 27,0 to 81,6 injuries per 1000 player-match-hours in men, and between 40,5 and 72,0 injuries per 1000 player-match-hours.

Table 1. Senior match injury frequency, match exposure volume, and match injury incidence				
Seven's Competitions		Injuries (n)	Match Exposure (player-match-hours)	Incidence (95% confidence interval)
Men	Championship	16	218,9 (67*)	73,1 (38,6-107,6)
	Trophy	6	222,1 (68)	27,0 (5,7-48,3)
	Conference 1	6	84,9 (26)	70,7 (16,2-125,2)
	Conference 2	4	49,0 (15)	81,6 (5,0-158,3)
Women	Championship	16	222,1 (68)	72,0 (38,0-106,0)
	Trophy	9	222,1 (68)	40,5 (14,6-66,5)
	Conference	6	84,9 (26)	70,7 (16,2-125,2)

Note: Championship incidence appears with an asterisk in the table because one match was not played.

Table 2 summarizes the match injury frequency, incidence and match exposure data for players taking part in the 2022/23 U18 Men and Women's 7s Rugby Europe Championship, Trophy and Conference.

The total number of injuries sustained was 16 by men and 3 by women. The match incidences were from 63,0 to 70,6 injuries per 1000 player-match-hours in men, and between 15,2 and 23,6 injuries per 1000 player-match-hours in women.

Table 2. U18 match injury frequency, match exposure volume, and match injury incidence				
Seven's Competitions		Injuries (n)	Match Exposure (player-match-hours)	Incidence (95% confidence interval)
Men	Championship	7	111,1 (34)	63,0 (17,8-108,2)
	Trophy	9	127,4 (39)	70,6 (26,1-115,1)
Women	Championship	2	84,9 (26)	23,6 (0,0-55,8)
	Trophy	1	65,6 (21)	15,2 (0,0-44,9)

4.2. Injury Location

Table 3 summarizes the proportion of match injuries by injury location data for players taking part in the 2022/23 Men's Rugby Europe 7s competitions. The most common injury location in the RE Championship was the head/face (37,5%) followed by the knee (18,8%), and the posterior thigh (18,8%). In the Trophy and in Conference 1, the most common injury locations were the head/face and the knee (33,3%). In Conference 2, the four injuries were in different locations: Head/face, Neck/cervical spine, Shoulder/clavicle and Ankle (25,0%).

Table 3. Proportion of Men Senior match injuries by injury location				
Measure	n, [% (95% Confidence interval)]			
	Men			
	Championship	Trophy	Conference 1	Conference 2
Head / Neck	6, [37,5 (13,8-61,2)]	2, [33,3 (0,0-71,0)]	3, [50,0 (10,0-90,0)]	2, [50,0 (1,0-99,0)]
Head/face	6, [37,5 (13,8-61,2)]	2, [33,3 (0,0-71,0)]	2, [33,3 (0,0-71,0)]	1, [25,0 (0,0-67,4)]
Neck/cervical spine	-	-	1, [16,7 (7,4-26,0)]	1, [25,0 (0,0-67,4)]
Upper limb	2, [12,5 (0,0-28,7)]	-	1, [16,7 (7,4-26,0)]	1, [25,0 (0,0-67,4)]
Shoulder/clavicle	1, [6,3 (0,0-18,2)]	-	-	1, [25,0 (0,0-67,4)]
Upper arm	1, [6,3 (0,0-18,2)]	-	1, [16,7 (7,4-26,0)]	-
Elbow	-	-	-	-
Forearm	-	-	-	-
Wrist/hand/fingers	-	-	-	-
Trunk	-	-	-	-
Ribs/upper back	-	-	-	-
Abdomen	-	-	-	-
Low back	-	-	-	-
Sacrum/pelvis	-	-	-	-
Lower limb	8, [50,0 (25,5-74,5)]	4, [66,7 (29,0-100,0)]	2, [33,3 (0,0-71,0)]	1, [25,0 (0,0-67,4)]
Hip/groin	-	-	-	-
Thigh, anterior	2, [12,5 (0,0-28,7)]	-	-	-

Thigh, posterior	3, [18,8 (0,0-37,9)]	-	-	-
Knee	3, [18,8 (0,0-37,9)]	2, [33,3 (0,0-46,5)]	2, [33,3 (0,0-71,0)]	-
Lower leg	-	-	-	-
Ankle	-	1, [16,7 (7,4-26,0)]	-	1, [25,0 (0,0-67,4)]
Foot/toe	-	1, [16,7 (7,4-26,0)]	-	-

Table 4 summarizes the proportion of match injuries by injury location data for players taking part in the 2022/23 Women's Rugby Europe 7s competitions. The most common injury locations in the RE Championship were the head/face and the knee (31,3%). In the Trophy, the most common injury locations were the head/face and the elbow (22,2%); and in Conference, the most common injury location was the head/face (66,6%).

Table 4. Proportion of Women Senior match injuries by injury location

Measure	n, [% (95% Confidence interval)]		
	Women		
	Championship	Trophy	Conference
Head / Neck	5, [31,3 (8,6-54,0)]	2, [22,2 (0,0-49,4)]	4, [66,6 (28,9-100,0)]
Head/face	5, [31,3 (8,6-54,0)]	2, [22,2 (0,0-49,4)]	4, [66,6 (28,9-100,0)]
Neck/cervical spine	-	-	-
Upper limb	3, [18,8 (0,0-37,9)]	5, [44,4 (23,1-88,1)]	1, [16,7 (0,0-46,5)]
Shoulder/clavicle	2, [12,3 (0,0-28,4)]	1, [11,1 (0,0-31,6)]	-
Upper arm	-	-	-
Elbow	-	2, [22,2 (0,0-49,4)]	-
Forearm	-	-	-
Wrist/hand/fingers	1, [6,3 (0,0-18,2)]	1, [11,1 (0,0-31,6)]	1, [16,7 (0,0-46,5)]
Trunk	-	-	-
Ribs/upper back	-	-	-
Abdomen	-	-	-
Low back	-	-	-
Sacrum/pelvis	-	-	-
Lower limb	8, [50,0 (25,5-74,5)]	2, [22,2 (0,0-49,4)]	1, [16,7 (0,0-46,5)]
Hip/groin	-	-	-
Thigh, anterior	2, [12,3 (0,0-28,4)]	-	-
Thigh, posterior	-	-	-
Knee	5, [31,3 (8,6-54,0)]	1, [11,1 (0,0-31,6)]	-
Lower leg	-	-	-
Ankle	1, [6,3 (0,0-18,2)]	1, [11,1 (0,0-31,6)]	1, [16,7 (0,0-46,5)]
Foot/toe	-	-	-
Other/Not known	-	1, [11,1 (0,0-31,6)]	

Table 5 summarizes the proportion of match injuries by injury location data for players taking part in the 2022/23 U18's Rugby Europe 7s competitions. The most common injury location in the RE U18 Men's Championship was the head/face (42,8%). In the U18 Men's Trophy, the most common injury locations were the neck (cervical spine and the shoulder/clavicle (22,2%); while the only injury in the U18 Women's Trophy was in the head/face, and in the U18 Women's Championship, the three injuries were in different locations.

Table 5. Proportion of U18 match injuries by injury location

Measure	n, [% (95% Confidence interval)]			
	Men		Women	
	Championship	Trophy	Championship	Trophy
Head / Neck	3, [42,8 (8,5-77,1)]	3, [33,3 (0,6-66,0)]	2, [66,7 (13,4-100,0)]	1, [100,0]
Head/face	3, [42,8 (8,5-77,1)]	1, [11,1 (0,0-32,9)]	1, [33,3 (0,0-86,6)]	1, [100,0]
Neck/cervical spine	-	2, [22,2 (0,0-51,0)]	1, [33,3 (0,0-86,6)]	-
Upper limb	2, [28,6 (0,0-59,9)]	3, [33,3 (0,6-66,0)]	1, [33,3 (0,0-86,6)]	-
Shoulder/clavicle	1, [14,3 (0,0-38,6)]	2, [22,2 (0,0-51,0)]	-	-
Upper arm	-	-	1, [33,3 (0,0-86,6)]	-
Elbow	-	-	-	-
Forearm	-	-	-	-
Wrist/hand/fingers	1, [14,3 (0,0-38,6)]	1, [11,1 (0,0-32,9)]	-	-
Trunk	-	2, [22,2 (11,9-32,5)]	-	-
Ribs/upper back	-	1, [11,1 (0,0-32,9)]	-	-
Abdomen	-	-	-	-
Low back	-	1, [11,1 (0,0-32,9)]	-	-
Sacrum/pelvis	-	-	-	-
Lower limb	2, [28,6 (0,0-59,9)]	-	-	-
Hip/groin	-	-	-	-
Thigh, anterior	-	-	-	-
Thigh, posterior	-	-	-	-
Knee	2, [28,6 (0,0-59,9)]	-	-	-
Lower leg	-	-	-	-
Ankle	-	-	-	-
Foot/toe	-	-	-	-

4.3. Injury Type

Table 6 summarizes the proportion of senior men match injuries by injury type for players taking part in the 2022/23 Men's Rugby Europe 7s Competitions. The most common injury types were the muscle strain/cramp (31,25%) in Championship Tournament and sprain/ligament (30,0%) in the Conference. Trophy Tournament presented same percentage (16,7%) for all injuries.

Table 6. Proportion of Men Senior match injuries by injury type

Measure	n, [% (95% Confidence interval)]			
	Men			
	Championship	Trophy	Conference 1	Conference 2
Bone	-	1, [16,7 (0,0-46,5)]	1, [16,7 (0,0-46,5)]	-
Fracture	-	1, [16,7 (0,0-46,5)]	1, [16,7 (0,0-46,5)]	-
Other bone injury	-	-	-	-
C/PNS	2, [12,5 (0,0-28,7)]	1, [16,7 (0,0-46,5)]	1, [16,7 (0,0-46,5)]	1, [25,0 (0,0-67,4)]
Concussion	2, [12,5 (0,0-28,7)]	1, [16,7 (0,0-46,5)]	1, [16,7 (0,0-46,5)]	1, [25,0 (0,0-67,4)]
Nerve injuries	-	-	-	-

Joint (non-bone) / ligament	4, [25,0 (3,8-46,2)]	2, [33,3 (0,0-71,0)]	2, [33,3 (0,0-71,0)]	2, [50,0 (1,0-99,0)]
Dislocation / subluxation	1, [6,3 (0,0-18,2)]	-	-	-
Meniscus / Disc Injury	-	1, [16,7 (0,0-46,5)]	1, [16,7 (0,0-46,5)]	-
Sprain/ligament	3, [18,8 (0,0-37,9)]	1, [16,7 (0,0-46,5)]	1, [16,7 (0,0-46,5)]	2, [50,0 (1,0-99,0)]
Other	-	-	-	-
Muscle / tendon	7, [43,8 (19,5-68,1)]	1, [16,7 (0,0-46,5)]	2, [33,3 (0,0-71,0)]	1, [25,0 (0,0-67,4)]
Haematoma/bruise	2, [12,5 (0,0-28,7)]	1, [16,7 (0,0-46,5)]	-	1, [25,0 (0,0-67,4)]
Muscle strain/cramp	5, [31,3 (8,3-53,7)]	-	-	-
Tendon injury / tendinopathy	-	-	-	-
Other	-	-	-	-
Skin	3, [18,8 (0,0-37,9)]	-	2, [33,3 (0,0-71,0)]	-
Abrasion	-	-	-	-
Laceration	3, [18,8 (0,0-37,9)]	-	2, [33,3 (0,0-71,0)]	-
Other types	-	1, [16,7 (0,0-46,5)]	-	-
Visceral	-	1, [16,7 (0,0-46,5)]	-	-
Other	-	-	-	-

Note: where C/PNS means Central and Peripheral Nervous System

Table 7 summarizes the proportion of men senior women match injuries by injury type for players taking part in the 2022/23 Women's Rugby Europe 7s Competitions. The most common injury types were the sprain/ligament (37,5%) in Championship Tournament. Concussion (22,2%), dislocation/subluxation (22,2%) and haematoma/bruise (22,2%) presented same percentage in the Trophy and concussion (33,3%) obtained the most injuries in the Conference Tournament.

Table 7. Proportion of Women Senior match injuries by injury type

Measure	n, [% (95% Confidence interval)]		
	Women		
	Championship	Trophy	Conference
Bone	3, [17,8 (0,0-36,1)]	-	1, [16,7 (0,0-46,5)]
Fracture	2, [12,5 (0,0-28,7)]	-	1, [16,7 (0,0-46,5)]
Other bone injury	1, [6,3 (0,0-18,1)]	-	-
C/PNS	3, [17,8 (0,0-36,1)]	2, [22,2 (0,0-49,4)]	2, [33,3 (0,0-71,0)]
Concussion	3, [17,8 (0,0-36,1)]	2, [22,2 (0,0-49,4)]	2, [33,3 (0,0-71,0)]
Nerve injuries	-	-	-
Joint (non-bone) / ligament	6, [37,5 (13,8-61,2)]	5, [55,5 (23,0-88,0)]	1, [16,7 (0,0-46,5)]
Dislocation / subluxation	-	2, [22,2 (0,0-49,4)]	-
Meniscus / Disc Injury	-	-	-
Sprain/ligament	6, [37,5 (13,8-61,2)]	2, [22,2 (0,0-49,4)]	1, [16,7 (0,0-46,5)]
Other	-	1, [11,1 (0,0-31,6)]	-
Muscle / tendon	2, [12,5 (0,0-28,7)]	2, [22,2 (0,0-49,4)]	-
Haematoma/bruise	1, [6,3 (0,0-18,1)]	2, [22,2 (0,0-49,4)]	-

Muscle strain/cramp	1, [6,3 (00,0-18,1)]	-	-
Tendon injury / tendinopathy	-	-	-
Other	-	-	-
Skin	2, [12,5 (00,0-28,7)]	-	1, [16,7 (00,0-46,5)]
Abrasion	1, [6,3 (00,0-18,1)]	-	-
Laceration	1, [6,3 (00,0-18,1)]	-	1, [16,7 (00,0-46,5)]
Other types	-	-	1, [16,7 (00,0-46,5)]
Visceral	-	-	-
Other	-	-	1, [16,7 (00,0-46,5)]

Note: where C/PNS means Central and Peripheral Nervous System

Table 8 summarizes the proportion of match injuries by injury type for players taking part in the 2022/23 U18 Men and Women Rugby Europe 7s Competitions. The most common injury types were the sprain/ligament (28,6%), other bone injury (28,6%), haematoma/bruise (28,6%) in Men Championship and dislocation/subluxation (33,3%) in Men Trophy. According to the women injuries, were divided between fracture (33,3%), haematoma/bruise (33,3%) and other injuries (33,3%) during Championship. Women Trophy only showed one fracture (100%).

Table 8. Proportion of U18 match injuries by injury type				
Measure	n, [% (95% Confidence interval)]			
	Men		Women	
	Championship	Trophy	Championship	Trophy
Bone	-	-	1, [33,3 (00,0-86,6)]	1, [100]
Fracture	-	-	1, [33,3 (00,0-86,6)]	1, [100]
Other bone injury	1, [14,3 (00,0-42,3)]	-	-	-
C/PNS	1, [14,3 (00,0-42,3)]	2, [22,2 (00,0-49,4)]	-	-
Concussion	1, [14,3 (00,0-42,3)]	2, [22,2 (00,0-49,4)]	-	-
Nerve injuries	-	-	-	-
Joint (non-bone) / ligament	2, [28,6 (00,0-64,8)]	4, [44,4 (11,9-76,9)]	-	-
Dislocation / subluxation	2, [28,6 (00,0-64,8)]	3, [33,3 (2,5-64,1)]	-	-
Meniscus / Disc Injury	-	-	-	-
Sprain/ligament	-	1, [11,1 (00,0-31,6)]	-	-
Other	-	-	-	-
Muscle / tendon	3, [42,9 (3,3-82,5)]	2, [22,2 (00,0-49,4)]	1, [33,3 (00,0-86,6)]	-
Haematoma/bruise	2, [28,6 (00,0-64,8)]	2, [22,2 (00,0-49,4)]	1, [33,3 (00,0-86,6)]	-
Muscle strain/cramp	1, [14,3 (00,0-42,3)]	-	-	-
Tendon injury/tendinopathy	-	-	-	-
Other	-	-	-	-
Skin	1, [14,3 (00,0-42,3)]	-	-	-
Abrasion	-	-	-	-

Laceration	1, [14,3 (00,0-42,3)]	-	-	-
Other types	-	1, [11,1 (00,0-31,6)]	1, [33,3 (00,0-86,6)]	-
Visceral	-	-	-	-
Other	-	1, [11,1 (00,0-31,6)]	1, [33,3 (00,0-86,6)]	-

Note: where C/PNS means Central and Peripheral Nervous System

4.4. Field Location

Tables 9 to 11 identify the most common field locations, in which the players taking part in 2022/23 Men's RE 7s competitions were injured.

The biggest numbers of injuries happened: in the defensive 22 in the Men's Conference 1 (33,3%), Women's Championship (37,4%) and in U18 Womens' Trophy (100,0%); between defensive 22 and midfield in the Men's Championship (31,2%), and in the U18 Men's Championship (52,8%); between midfield and the offensive 22 in the Men's Trophy (50,0%), Men's Conference 2 (75,0%), Women's Trophy (55,6%); and in the offensive 22 in the U18 Men's Trophy (55,6%).

Table 9. Proportion of Men Senior match injuries by field location

Measure	n, [% (95% Confidence interval)]			
	Men			
	Championship	Trophy	Conference 1	Conference 2
Defensive 22	3, [18,8 (0,0-37,9)]	-	2, [33,3 (0,0-71,0)]	-
Between defensive 22 and midfield	5, [31,2 (8,5-53,9)]	2, [33,3 (0,0-71,0)]	1, [16,7 (0,0-46,5)]	1, [25,0 (0,0-67,4)]
Between midfield and offensive 22	3, [18,8 (0,0-37,9)]	3, [50,0 (10,0-90,0)]	1, [16,7 (0,0-46,5)]	3, [75,0 (32,6-100,0)]
Offensive 22	2, [12,4 (0,0-28,5)]	-	1, [16,7 (0,0-46,5)]	-
N/A	3, [18,8 (0,0-37,9)]	1, [16,7 (0,0-46,5)]	1, [16,7 (0,0-46,5)]	-

Table 10. Proportion of Women Senior match injuries by field location

Measure	n, [% (95% Confidence interval)]		
	Women		
	Championship	Trophy	Conference
Defensive 22	6, [37,4 (13,7-61,2)]	-	-
Between defensive 22 and midfield	2, [12,5 (0,0-28,7)]	2, [22,2 (0,0-49,4)]	2, [33,3 (0,0-71,0)]
Between midfield and offensive 22	3, [18,8 (0,0-37,9)]	5, [55,6 (23,1-88,1)]	2, [33,3 (0,0-71,0)]
Offensive 22	2, [12,5 (0,0-28,7)]	-	1, [16,7 (0,0-46,5)]
N/A	3, [18,8 (0,0-37,9)]	2, [22,2 (0,0-49,4)]	1, [16,7 (0,0-46,5)]

Table 11. Proportion of U18 match injuries by field location

Measure	n, [% (95% Confidence interval)]			
	Men		Women	
	Championship	Trophy	Championship	Trophy
Defensive 22	1, [14,3 (0,0-40,2)]	2, [22,2 (0,0-49,4)]	-	1, [100,0]
Between defensive 22 and midfield	3, [52,8 (15,8-89,8)]	1, [11,1 (0,0-31,6)]	-	-
Between midfield and offensive 22	-	-	1, [50,0 (0,0-100,0)]	-
Offensive 22	1, [14,3 (0,0-40,2)]	5, [55,6 (23,1-88,1)]	-	-
N/A	2, [28,6 (0,0-62,1)]	1, [11,1 (0,0-31,6)]	1, [50,0 (0,0-100,0)]	-

4.5. Injury Onset

Table 12 summarizes the proportion of match injuries by nature of onset data for players participating in the 2022/2023 Men's Rugby Europe 7s Tournaments. Trauma was the most common cause of onset from 75,0%-100% percentage among the competitions.

Table 12. Proportion of Men Senior injuries by cause of onset

Measure	n, [% (95% Confidence interval)]			
	Men			
	Championship	Trophy	Conference 1	Conference 2
Trauma	12, [75,0 (53,8-96,2)]	6, [100]	6, [100]	4, [100]
Overuse	4, [25,0 (3,8-46,2)]	-	-	-

Table 13 summarizes the proportion of match injuries by nature of onset data for players participating in the 2022/2023 Women's Rugby Europe 7s Tournaments. Trauma was the most common cause of onset from 88,9%-100% percentage among the competitions.

Table 13. Proportion of Women Senior injuries by cause of onset

Measure	n, [% (95% Confidence interval)]		
	Women		
	Championship	Trophy	Conference
Trauma	15, [93,7,0 (81,8-100,0)]	8, [88,9 (68,4-100,0)]	6, [100]
Overuse	1, [6,3 (0,0-18,2)]	1, [11,1 (0,0-31,6)]	-

Table 14 summarizes the proportion of match injuries by nature of onset data for players participating in the 2022/2023 U18 Men and Women's Rugby Europe 7s Tournaments. Trauma was the only cause of onset with the 100% percentage among the competitions.

Table 14. Proportion of U18 injuries by cause of onset

Measure	n, [% (95% Confidence interval)]			
	Men		Women	
	Championship	Trophy	Championship	Trophy
Trauma	7, [100]	9, [100]	1, [100]	1, [100]
Overuse	-	-	-	-

4.6. Cause of Injury Onset

Contact mechanism was the most common in all the competitions (66,7% to 100,0%) except in Men's Championship and Conference 2 (50,0%).

4.7. Match events leading to injury

Table 15 to 17 summarize the match events causing the injuries suffered by players taking part in 2022/23 RE 7s competitions.

The most common match event leading to injury in Senior Men and Women was tackling, except during Conference 1 that was tackled. In U18 Tournaments the most common match event leading to injury was tackled and collision in Men and tackling and collision in Women.

Table 15. Proportion of Men Senior match injuries by event

Measure	n, [% (95% Confidence interval)]			
	Men			
	Championship	Trophy	Conference 1	Conference 2
Non-contact	8, [50,0 (25,5-74,5)]	1, [16,7 (0,0-46,5)]	1, [16,7 (0,0-46,5)]	3, [75,0 (32,6-100,0)]
Contact	8, [50,0 (25,5-74,5)]	5, [83,3 (53,5-100,0)]	5, [83,3 (53,5-100,0)]	1, [25,0 (0,0-67,4)]
Tackling	4, [25,0 (3,8-46,2)]	2, [33,3 (0,0-71,0)]	-	1, [25,0 (0,0-67,4)]
Tackled	3, [18,8 (0,0-37,9)]	1, [16,7 (0,0-46,5)]	2, [33,3 (0,0-71,0)]	-
Collision	1, [6,3 (0,0-18,2)]	1, [16,7 (0,0-46,5)]	2, [33,3 (0,0-71,0)]	-
Ruck	-	-	-	-
Maul	-	-	-	-
Scrum	-	-	-	-
Lineout	-	1, [16,7 (0,0-46,5)]	-	-
Kicking	-	-	-	-
Other/Unknown	-	-	1, [16,7 (0,0-46,5)]	-

Note: The percentages of the contact injuries subcategories (tackling, tackled, collision...) have been calculated from all the injuries in each competition (contact + non-contact injuries)

Table 16. Proportion of Women Senior match injuries by event

Measure	n, [% (95% Confidence interval)]		
	Women		
	Championship	Trophy	Conference
Non-contact	2, [12,5 (0,0-28,7)]	1, [11,1 (0,0-31,6)]	2, [33,3 (0,0-71,0)]
Contact	14, [87,5 (71,3-100,0)]	8, [88,9 (68,4-100,0)]	4, [66,7 (29,0-100,0)]
Tackling	6, [37,5 (13,8-61,2)]	4, [44,4 (11,9-76,9)]	-
Tackled	5, [31,3 (8,7-54,3)]	3, [33,3 (2,5-64,1)]	2, [33,3 (0,0-71,0)]
Collision	2, [12,5 (0,0-28,7)]	-	-
Ruck	1, [6,3 (0,0-18,2)]	1, [11,1 (0,0-31,6)]	1, [16,7 (0,0-46,5)]
Maul	-	-	-
Scrum	-	-	-
Lineout	-	-	1, [16,7 (0,0-46,5)]
Kicking	-	-	-
Other/Unknown	-	-	-

Note: The percentages of the contact injuries subcategories (tackling, tackled, collision...) have been calculated from all the injuries in each competition (contact + non-contact injuries)

Table 17. Proportion of U18 match injuries by event

Measure	n, [% (95% Confidence interval)]			
	Men		Women	
	Championship	Trophy	Championship	Trophy
Non-contact	2, [28,6 (0,0-62,1)]	-	-	-
Contact	5, [71,4 (37,9-100,0)]	9, [100,0]	2, [100,0]	1, [100,0]
Tackling	1, [14,3 (0,0-40,2)]	2, [22,2 (0,0-49,4)]	-	1, [100,0]
Tackled	2, [28,6 (0,0-62,1)]	-	-	-
Collision	2, [28,6 (0,0-62,1)]	4, [44,4 (11,9-76,9)]	1, [50,0 (0,0-100,0)]	-
Ruck	-	2, [22,2 (0,0-49,4)]	-	-
Maul	-	-	-	-
Scrum	-	-	-	-
Lineout	-	-	-	-
Kicking	-	-	-	-
Other/Unknown	-	-	1, [50,0 (0,0-100,0)]	-

Note: The percentages of the contact injuries subcategories (tackling, tackled, collision...) have been calculated from all the injuries in each competition (contact + non-contact injuries)

4.8. Time of injury

Tables 18 to 20 summarizes the proportion of reported match injuries by time during match for players taking part in the 2022/23 Rugby Europe 7s competitions.

The highest number of match injuries happened during the second half in all senior competitions, except in Men's Conference 2 (50,0%), and Women's Conference (33,3%).

Table 18. Proportion of Men Senior injuries by time

Measure	n, [% (95% Confidence interval)]			
	Men			
	Championship	Trophy	Conference 1	Conference 2
First half	6, [37,5 (13,8-61,2)]	1, [16,7 (0,0-46,5)]	4, [33,3 (4,1-62,5)]	2, [50,0 (1,0-99,0)]
Second half	7, [43,8 (19,5-69,1)]	5, [83,3 (53,5-113,1)]	6, [66,7 (37,5-95,9)]	2, [50,0 (1,0-99,0)]
N/A	3, [18,7 (0,0-37,8)]	-	-	-

Table 19. Proportion of Women Senior injuries by time

Measure	n, [% (95% Confidence interval)]		
	Women		
	Championship	Trophy	Conference
First half	6, [37,5 (13,8-61,2)]	1, [11,1 (0,0-31,6)]	3, [50,0 (10,0-90,0)]
Second half	10, [62,5 (38,8-86,2)]	7, [78,8 (52,1-100,0)]	2, [33,3 (0,0-71,0)]
N/A	-	1, [11,1 (0,0-31,6)]	1, [16,7 (0,0-46,5)]

The highest number of match injuries happened in the first half in the U18 Men's Championship (42,8%), and in the U18 Women's Trophy (100,0%); while in the U18 Men's Trophy and in the U18 Women's Championship there were the same number of injuries in both halves.

Table 14. Proportion of U18 injuries by time				
Measure	n, [% (95% Confidence interval)]			
	Men		Women	
	Championship	Trophy	Championship	Trophy
First half	3, [42,8 (6,1-79,5)]	4, [44,4 (11,9-76,9)]	1, [50,0 (0,0-100,0)]	1, [100,0]
Second half	2, [28,6 (0,0-62,1)]	4, [44,4 (11,9-76,9)]	1, [50,0 (0,0-100,0)]	-
N/A	2, [28,6 (0,0-62,1)]	1, [11,2 (0,0-31,8)]	-	-

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