

1 **Supplementary:**

2 Table S1: Monthly Incidence and proportion of injuries across 16 rugby seasons.

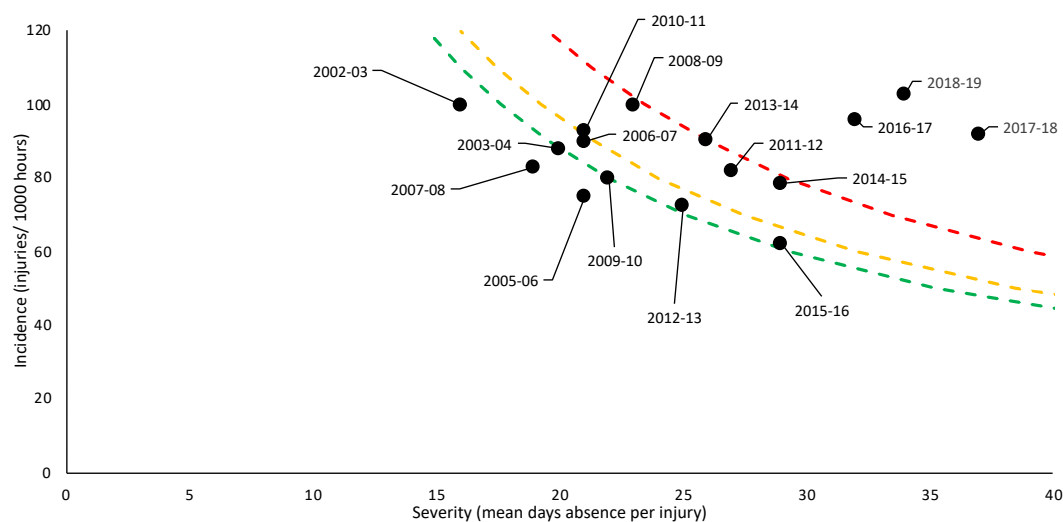
Month	Incidence: per 1000 hours (95% CIs)	Proportion of all injuries (%)
August	52 (48-57)	4.2 (3.8-4.6)
September	92 (87-97)	13.2 (12.5-13.8)
October	90 (86-95)	12.9 (12.3-13.6)
November	83 (79-87)	12.2 (11.5-12.8)
December	81 (76-85)	10.9 (10.3-11.5)
January	81 (77-86)	11.0 (10.4-11.7)
February	86 (81-91)	10.2 (9.6-10.8)
March	90 (85-95)	10.3 (9.8- 11.0)
April	97 (91-102)	10.3 (9.8- 10.9)
May	62 (57-68)	4.7 (4.3-5.1)
June	0	0

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4 Table S2: Incidence, Severity and Burden of Injury, categorised by time in game.

Time in Game	Incidence: per 1000 hours (95% CIs)	Severity: days absence (95% CIs)	Burden days per 1000 hours (95% CIs)
1 st Quarter	41 (39-44)	32 (31-34)	1338 (1267-1412)
2 nd Quarter	82 (79-86)	28 (26-29)	2264 (2178-2354)
3 rd Quarter	84 (81-87)	25 (24-26)	2110 (2031-2192)
4 th Quarter	84 (81-87)	24 (23-25)	1991 (1916-2069)

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7 Supplementary Figure 1(S1): Season on season match injury incidence and severity (2002-2019).

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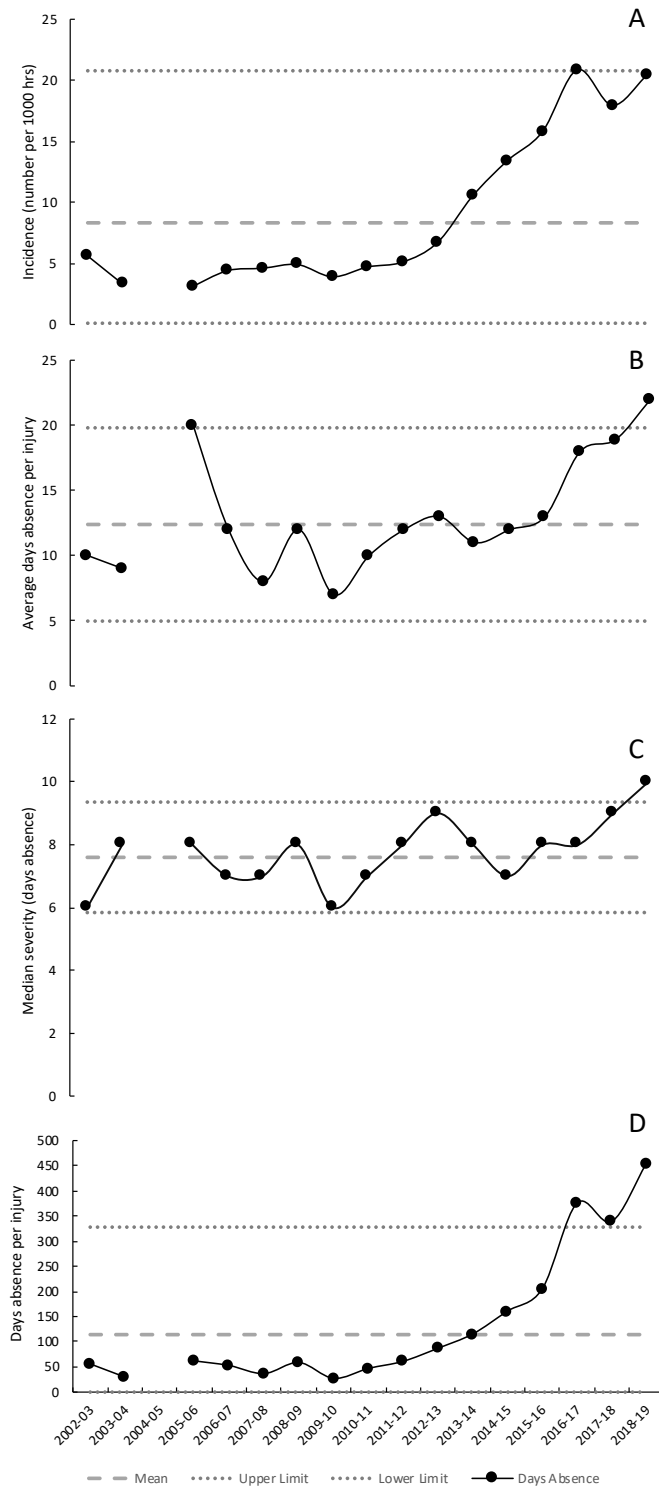
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16 Table S3: Incidence of injuries by injury severity.

SEASON	2-7 days DAYS	8-28 days DAYS	29-84 DAYS	>84 DAYS
2002-03	57	30	9	3
2003-04	45	26	14	4
2005-06	29	29	13	3
2006-07	47	28	11	5
2007-08	39	30	10	4
2008-09	48	31	14	6
2009-10	36	29	10	4
2010-11	44	32	11	5
2011-12	34	28	13	7
2012-13	26	30	13	4
2013-14	38	33	14	6
2014-15	33	25	12	9
2015-16	23	24	11	5
2016-17	36	33	20	10
2017-18	28	32	19	12
2018-19	32	39	22	10
Average (2002-19)	38 (37-39)	30 (29-31)	14 (13-14)	6 (5.6-6.4)

17 Note: Incidence: injuries per 1000 hours

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20 Supplementary Figure 2(S2): Trends in Concussion (2002-2019). Incidence (A), average severity (B), median

21 severity (C), burden (D)

22 Table S4: Incidence, severity and burden of injuries by location

	Injury Count	Incidence	Severity	Burden
Head/Neck	1996	16.0 (15.3-16.7)	17 (16-18)	272 (260-284)
Trunk	1031	8.3 (7.8-8.8)	14 (13-15)	118 (111-125)
Upper Limb	1909	15.3 (14.6-16.0)	32 (31-34)	494 (472-517)
Lower Limb	5675	45.4 (44.3-46.6)	28 (27-29)	1264 (1231-1297)

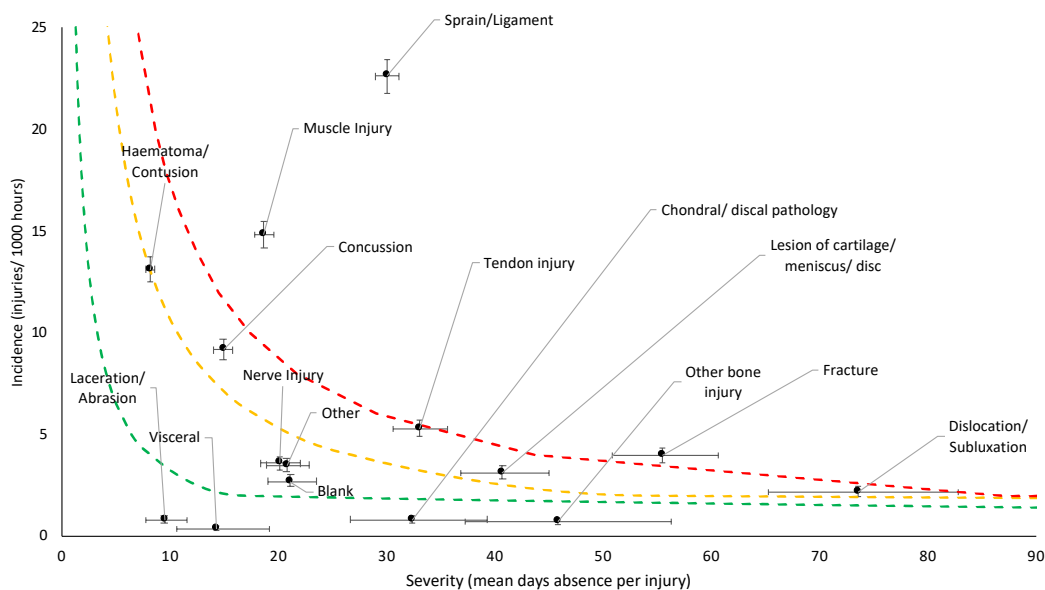
23 Note: Incidence: injuries per 1000 hours. Severity: days absence. Burden: days absence per 1000 hours. Number
 24 in brackets; 95% CIs

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26 Table S5: Incidence, severity and burden of injuries by type

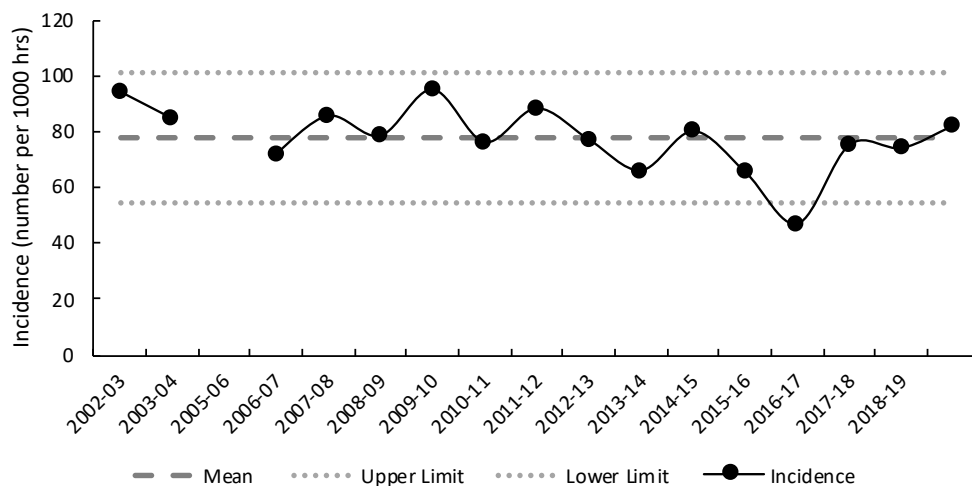
	Injury Count	Incidence (Injuries per 1000 hours; 95% CIs)	Severity (days absence; 95% CIs)	Burden (days absence per 1000 hours; 95% CIs)
Concussion	1145	9.2 (8.6-9.7)	15 (14-16)	137 (129-145)
Dislocation/ subluxation	270	2.2 (1.9-2.4)	74 (65-83)	159 (141-179)
Fracture	495	4.0 (3.6-4.3)	56 (51-61)	220 (201-240)
Haematoma/ contusion	1638	13.1 (12.5-13.8)	8 (8-9)	107 (102-113)
Laceration/ abrasion	101	0.8 (0.7-1.0)	10 (8-12)	8 (6-9)
Lesion of Cartilage/ meniscus/ disc	389	3.1 (2.8-3.4)	41 (37-45)	127 (115-140)
Chondral/ discal pathology	103	0.8 (0.7-1.0)	32 (27-39)	27 (22-32)
Muscle strain/ rupture/ cramps	1850	14.8 (14.1-15.5)	19 (18-20)	277 (265-290)
Nerve injury	448	3.6 (3.3- 3.9)	20 (18-22)	72 (66-79)
Other	436	3.5 (3.2-3.8)	21 (19-23)	73 (66-80)
Other bone injury	90	0.7 (0.6-0.9)	46 (37-56)	33 (27-41)
Sprain/ ligament	2824	22.6 (21.8-23.4)	30 (29-31)	680 (655-705)
Tendon injury/ rupture	658	5.3 (4.9-5.7)	33 (31-36)	174 (161-188)
Visceral	44	0.4 (0.3-0.5)	14 (11-19)	5 (4-7)

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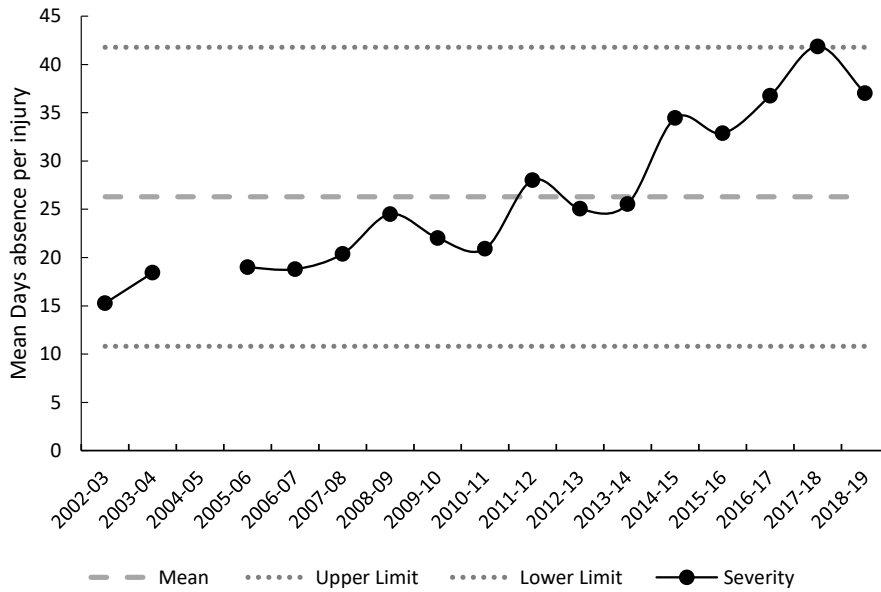
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Supplementary Figure 3(S3): Injury burden as a function of injury type for the seasons 2002/03 to 2018/19. The Y-axis represents incidence (number per 1000 player-hours) while the X-axis represents average severity (days absence). Green line: values to the left and below represent the under the 25th burden percentile, these are low risk injuries. Orange line: values to the left and below represent the under the 50th burden percentile, these are low-medium risk injuries. Red line: values to the left and below represent the under the 75th burden percentile, these are medium-high risk injuries. Values to the right and above the red line are the most high risk injuries.



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Supplementary Figure 4(S4): Incidence of Injury (excluding concussions), 2002-2019



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40 Supplementary Figure 5(S5): Severity of Injury (excluding concussions), 2002-2019

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