



2018 AFL Injury Report

Collaborators:

AFL Doctors Association

AFL Physiotherapists Association

AFL Football Operations Department

1 Key Indicators

All Injuries	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Incidence (new injuries per club per season)	36.9	37.4	35.8	34.4	34.1	34.8	35.3	34.0	34.6	36.9
Incidence (recurrent)	5.2	5.9	5.5	4.4	4.6	3.7	4.8	4.1	5.6	5.4
Incidence (total)	42.1	43.3	41.3	38.8	38.7	38.5	40.1	38.2	40.3	42.3
Prevalence (missed matches per club per season)	135.9	131.8	136.4	134.7	118.7	131.0	129.2	138.3	146.7	147.1
New injury severity (average missed matches)	3.2	2.9	3.1	3.5	3.0	3.2	3.2	3.6	3.4	3.5
Recurrent injury severity (average missed matches)	3.0	3.5	4.6	3.2	3.2	3.7	4.0	4.6	4.5	3.7
Recurrence rate	14%	16%	15%	13%	14%	11%	14%	12%	16%	15%
Clubs participating	16/16	16/16	16/16	16/16	16/16	16/16	16/16	16/16	16/16	16/16
Average players per club	41.7	41.4	43.4	43.0	42.2	42.8	43.3	43.9	44.2	44.6

All Injuries	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Incidence (new injuries per club per season)	37.8	38.7	38.4	38.1	41.5	36.1	37.7	37.0	35.1	39.1
Incidence (recurrent)	3.6	4.7	3.6	3.6	5.1	4.4	4.0	3.7	2.7	3.8
Incidence (total)	41.4	43.4	42.0	41.7	46.6	40.5	41.7	40.7	37.8	42.9
Prevalence (missed matches per club per season)	151.2	153.8	157.1	147.7	158.1	146.0	156.2	139.8	141.3	163.5
New injury severity (average missed matches)	3.4	3.4	3.7	3.4	3.3	3.4	3.5	3.4	3.5	3.7
Recurrent injury severity (average missed matches)	4.8	4.4	4.6	4.9	4.0	4.7	3.7	3.0	3.9	3.9
Recurrence rate	10%	12%	9%	9%	12%	12%	11%	10%	8%	10%
Clubs participating	16/16	16/16	17/17	18/18	18/18	18/18	18/18	18/18	18/18	18/18
Average players per club	46.1	46.4	46.9	46.7	45.4	45.1	45.4	45.8	45.3	44.9

Note: All injury statistics are club averages scaled to a consistent basis of a list of 40 players over a season of 22 matches.

2 Injury Incidence – New Injuries Per Club Per Season

Body Area	Injury	2017	2018
Head	Concussion	1.46	2.37
	Fracture (e.g. Skull, maxilla, nose, mandible)	0.47	0.52
	Other head/face injury (e.g. Laceration, contusion, dental, eye injuries)	0.14	0.09
Neck	Facet joint/disc injury	0.05	0.00
	Fracture (e.g. Vertebral arch, transverse process)	0.00	0.05
	Other neck injury	0.05	0.00
Shoulder	Gleno-humeral joint - sprain/subluxation/cartilage/labral injury	0.70	0.57
	Gleno-humeral joint - dislocation	0.42	0.28
	AC joint - sprain/dislocation	0.66	0.66
	Sterno-clavicular (SC) joint - sprain/dislocation	0.05	0.09
	Clavicle – fracture	0.28	0.24
	Scapula – fracture	0.14	0.09
	Pectoral muscle - partial/complete tear	0.00	0.14
	Other shoulder injury (e.g. Rotator cuff tendinopathy, subacromial bursitis, etc)	0.23	0.14
Arm	Humerus fracture	0.00	0.00
	Other arm injury (e.g. Contusion)	0.00	0.00
Elbow	Elbow joint dislocation	0.09	0.00
	Elbow joint sprain (e.g. Medial ligament)	0.05	0.00
	Elbow fracture (e.g. Radial head)	0.05	0.00
	Other elbow injury (e.g. Chondral joint injury, ruptured biceps tendon, etc)	0.00	0.05
Forearm	Forearm (radius/ulna) fracture	0.14	0.00
	Other forearm injury (e.g. Contusion, muscle injury)	0.00	0.00
Wrist	Wrist sprain (e.g. Scapho-lunate ligament, distal radio-ulna joint, etc)	0.09	0.14
	Wrist (carpal bone) fracture (e.g. Scaphoid)	0.09	0.14
	Other wrist injury	0.00	0.09
Hand	Thumb/finger ligament injury	0.19	0.09
	Thumb/finger dislocation	0.05	0.19
	Hand fracture	0.70	0.71
	Thumb/finger tendon injury	0.09	0.09
	Other hand injury	0.05	0.00
Trunk	Costo-chondral joint sprain	0.05	0.00
	Rib fracture (including costal cartilage fracture)	0.23	0.38
	Internal chest or abdominal injury (e.g. Pneumothorax, bruised lungs, bruised/lacerated liver/spleen)	0.14	0.09
	Other chest or abdominal injury	0.42	0.09
Thoracic Spine	Thoracic Joint injury (e.g. Ligament sprain, facet joint arthropathy, disc degeneration, costo-vertebral joint, etc)	0.05	0.05
	Thoracic spine fracture (vertebral body, transverse process)	0.00	0.00
	Other thoracic spine injury	0.05	0.00

Lumbar Spine	Facet joint/Sacro-iliac joint mediated pain	0.19	0.28
	Fracture (e.g. Acute transverse process/spinous process, pars stress fracture)	0.14	0.14
	Disc injury (e.g. Prolapse)	0.42	0.66
	Other lumbar spine injury	0.14	0.33
Groin/Hip	Hip joint pain (i.e. Any intra-articular hip pathology e.g. Chondral, labral, FAI)	0.61	0.19
	Acute adductor strain	0.80	1.18
	Acute iliopsoas strain	0.38	0.38
	Hip contusion (e.g. Iliac crest contusion)	0.05	0.09
	Chronic groin pain (including adductor tendinopathy, pubic bone stress, pubic symphysis overload)	0.75	0.66
	Other hip/groin injury	0.70	0.66
	Other buttock injury (e.g. Gluteal muscle strain, haematoma)	0.33	0.14
Hamstring	Hamstring strain	5.35	6.35
	Hamstring contusion	0.05	0.19
	Hamstring tendon rupture/avulsion	0.05	0.05
	Hamstring tendinopathy	0.19	0.38
	Other Hamstring (thigh) injury	0.19	0.38
Quadriceps	Quadriceps strain	0.99	1.23
	Quadriceps contusion	0.47	0.43
	Quadriceps tendon rupture/avulsion	0.00	0.00
	Quadriceps tendinopathy	0.00	0.00
	Other Quadriceps (thigh) injury	0.09	0.00
Knee	Meniscus injury	0.23	0.52
	Tibiofemoral joint articular cartilage (chondral) injury	0.38	0.24
	Patellofemoral joint articular cartilage (chondral) injury	0.05	0.24
	ACL injury	0.56	0.90
	MCL injury	0.56	0.95
	PCL injury	0.47	0.33
	LCL injury	0.14	0.05
	Patella tendon rupture/avulsion	0.00	0.05
	Patella tendinopathy	0.38	0.33
	Iliotibial band syndrome	0.05	0.05
	Other knee injuries	1.27	1.09
Leg	Acute leg (tibia and/or fibula) fracture	0.38	0.62
	Tibia stress fracture	0.05	0.19
	Fibula stress fracture	0.05	0.24
	Other leg injury	0.33	0.09
Calf	Calf strain	2.11	1.99
	Calf contusion	0.19	0.24
	Other calf (leg) injury	0.05	0.24
Achilles	Achilles tendon rupture/avulsion	0.00	0.19
	Achilles tendinopathy	0.47	0.71
Ankle	Cartilage injury	0.09	0.28
	Lateral/medial ligament sprain	1.22	1.42
	Syndesmosis injury	1.41	1.28
	Other ankle injury	0.47	0.57



Foot	Midfoot sprain (e.g. Lis franc injury)	0.19	0.38
	1st MTP joint sprain (turf toe)	0.42	0.24
	Acute foot fracture (e.g. Metatarsal)	0.33	0.38
	Foot stress fracture (e.g. Navicular, metatarsal, sesamoid)	0.80	0.76
	Plantar fascia rupture/avulsion	0.09	0.14
	Plantar fascia pain	0.00	0.19
	Other foot injury	0.52	0.57
Medical	Medical illness (including infections, mental health issues, etc)	2.30	2.37
Non-Specific	General soreness / management	0.28	0.00
	Non-football related injury	0.19	0.14
TOTAL		35.07	39.07

3 Injury Prevalence – Missed Matches Per Club Per Season

Body Area	Injury	2017	2018
Head	Concussion	4.18	5.45
	Fracture (e.g. Skull, maxilla, nose, mandible)	1.27	1.28
	Other head/face injury (e.g. Laceration, contusion, dental, eye injuries)	0.19	0.14
Neck	Facet joint/disc injury	0.47	0.00
	Fracture (e.g. Vertebral arch, transverse process)	0.00	0.28
	Other neck injury	0.42	0.00
Shoulder	Gleno-humeral joint - sprain/subluxation/cartilage/labral injury	3.05	2.70
	Gleno-humeral joint – dislocation	3.15	1.33
	AC joint - sprain/dislocation	1.92	1.14
	Sterno-clavicular (SC) joint - sprain/dislocation	0.09	0.28
	Clavicle – fracture	1.55	0.71
	Scapula – fracture	0.33	0.14
	Pectoral muscle - partial/complete tear	0.00	1.14
	Other shoulder injury (e.g. Rotator cuff tendinopathy, subacromial bursitis, etc)	1.17	0.43
Arm	Humerus fracture	0.00	0.00
	Other arm injury (e.g. Contusion)	0.00	0.00
Elbow	Elbow joint dislocation	0.33	0.00
	Elbow joint sprain (e.g. Medial ligament)	0.05	0.00
	Elbow fracture (e.g. Radial head)	0.33	0.00
	Other elbow injury (e.g. Chondral joint injury, ruptured biceps tendon, etc)	0.00	0.14
Forearm	Forearm (radius/ulna) fracture	0.56	0.00
	Other forearm injury (e.g. Contusion, muscle injury)	0.00	0.00
Wrist	Wrist sprain (e.g. Scapho-lunate ligament, distal radio-ulna joint, etc)	0.09	0.19
	Wrist (carpal bone) fracture (e.g. Scaphoid)	0.42	0.99
	Other wrist injury	0.00	0.62
Hand	Thumb/finger ligament injury	0.19	0.28
	Thumb/finger dislocation	0.14	0.28
	Hand fracture	2.02	1.37
	Thumb/finger tendon injury	0.56	0.71
	Other hand injury	0.05	0.00
Trunk	Costo-chondral joint sprain	0.14	0.00
	Rib fracture (including costal cartilage fracture)	0.89	0.76
	Internal chest or abdominal injury (e.g. Pneumothorax, bruised lungs, bruised/lacerated liver/spleen)	0.52	0.62
	Other chest or abdominal injury	1.27	0.19
Thoracic Spine	Thoracic Joint injury (e.g. Ligament sprain, facet joint arthropathy, disc degeneration, costo-vertebral joint, etc)	0.09	0.05
	Thoracic spine fracture (vertebral body, transverse process)	0.00	0.00
	Other thoracic spine injury	0.05	0.00

Lumbar Spine	Facet joint/Sacro-iliac joint mediated pain	0.38	0.47
	Fracture (e.g. Acute transverse process/spinous process, pars stress fracture)	0.70	1.04
	Disc injury (e.g. Prolapse)	1.36	1.66
	Other lumbar spine injury	0.28	1.18
Groin/Hip	Hip joint pain (i.e. Any intra-articular hip pathology e.g. Chondral, labral, FAI)	2.35	1.23
	Acute adductor strain	1.22	2.70
	Acute iliopsoas strain	0.52	0.76
	Hip contusion (e.g. Iliac crest contusion)	0.05	0.14
	Chronic groin pain (including adductor tendinopathy, pubic bone stress, pubic symphysis overload)	4.41	5.26
	Other hip/groin injury	2.58	1.04
	Other buttock injury (e.g. Gluteal muscle strain, haematoma)	0.38	0.14
Hamstring	Hamstring strain	18.87	25.19
	Hamstring contusion	0.28	0.95
	Hamstring tendon rupture/avulsion	0.42	0.19
	Hamstring tendinopathy	0.28	1.18
	Other Hamstring (thigh) injury	0.23	0.52
Quadriceps	Quadriceps strain	2.68	4.12
	Quadriceps contusion	0.80	0.80
	Quadriceps tendon rupture/avulsion	0.00	0.00
	Quadriceps tendinopathy	0.00	0.00
	Other Quadriceps (thigh) injury	0.09	0.00
Knee	Meniscus injury	0.47	2.56
	Tibiofemoral joint articular cartilage (chondral) injury	1.36	2.23
	Patellofemoral joint articular cartilage (chondral) injury	0.14	2.08
	ACL injury	14.22	15.96
	MCL injury	1.50	4.07
	PCL injury	5.12	3.13
	LCL injury	0.38	0.24
	Patella tendon rupture/avulsion	0.00	0.14
	Patella tendinopathy	0.80	0.62
	Iliotibial band syndrome	0.23	0.28
	Other knee injuries	4.27	4.07
Leg	Acute leg (tibia and/or fibula) fracture	4.13	5.16
	Tibia stress fracture	0.14	2.37
	Fibula stress fracture	0.09	0.66
	Other leg injury	1.41	0.14
Calf	Calf strain	6.01	5.45
	Calf contusion	0.23	0.33
	Other calf (leg) injury	0.05	0.99
Achilles	Achilles tendon rupture/avulsion	0.14	1.66
	Achilles tendinopathy	2.11	2.46
Ankle	Cartilage injury	0.09	1.37
	Lateral/medial ligament sprain	3.85	3.79
	Syndesmosis injury	8.07	7.53
	Other ankle injury	1.08	2.94



Foot	Midfoot sprain (e.g. Lis franc injury)	1.69	2.32
	1st MTP joint sprain (turf toe)	2.72	1.28
	Acute foot fracture (e.g. Metatarsal)	1.64	3.79
	Foot stress fracture (e.g. Navicular, metatarsal, sesamoid)	7.18	5.63
	Plantar fascia rupture/avulsion	0.14	0.85
	Plantar fascia pain	0.00	0.33
	Other foot injury	2.25	3.88
Medical	Medical illness (including infections, mental health issues, etc)	4.65	5.21
Non-Specific	General soreness / management	0.33	0.00
	Non-football related injury	1.36	0.14
TOTAL		141.26	163.46

4 Injury Recurrence – Same Injury Type on Same Side Within Same Season

Body Area	Injury	2017	2018
Foot	Plantar fascia rupture/avulsion	0%	67%
Lumbar Spine	Other lumbar spine injury	0%	29%
Foot	Plantar fascia pain	0%	25%
Groin/Hip	Acute adductor strain	0%	24%
Ankle	Syndesmosis injury	13%	22%
Hamstring	Hamstring strain	14%	20%
Knee	Tibiofemoral joint articular cartilage (chondral) injury	38%	20%
Achilles	Achilles tendinopathy	0%	20%
Foot	1st MTP joint sprain (turf toe)	33%	20%
Shoulder	Gleno-humeral joint – dislocation	0%	17%
Leg	Acute leg (tibia and/or fibula) fracture	0%	15%
Groin/Hip	Chronic groin pain (including adductor tendinopathy, pubic bone stress, pubic symphysis overload)	0%	14%
Knee	PCL injury	50%	14%
Calf	Calf strain	4%	14%
Groin/Hip	Acute Iliopsoas strain	0%	13%
Foot	Midfoot sprain (e.g. Lis franc injury)	0%	13%
Foot	Foot stress fracture (e.g. Navicular, metatarsal, sesamoid)	6%	13%
Quadriceps	Quadriceps strain	0%	12%
Ankle	Lateral/medial ligament sprain	15%	10%
Knee	Meniscus injury	0%	9%
Shoulder	Gleno-humeral joint - sprain/subluxation/cartilage/labral injury	7%	8%
Ankle	Other ankle injury	0%	8%
Foot	Other foot injury	9%	8%
Lumbar Spine	Disc injury (e.g. Prolapse)	11%	7%
Head	Concussion	6%	4%
Knee	Other knee injuries	11%	4%
Medical	Medical illness (including infections, mental health issues, etc)	6%	4%
Head	Fracture (e.g. Skull, maxilla, nose, mandible)	0%	0%
Head	Other head/face injury (e.g. Laceration, contusion, dental, eye injuries)	0%	0%
Neck	Facet joint/disc injury	0%	0%
Neck	Fracture (e.g. Vertebral arch, transverse process)	0%	0%
Neck	Other neck injury	0%	0%
Shoulder	AC joint - sprain/dislocation	0%	0%
Shoulder	Sterno-clavicular (SC) joint - sprain/dislocation	0%	0%
Shoulder	Clavicle – fracture	0%	0%
Shoulder	Scapula – fracture	0%	0%
Shoulder	Pectoral muscle - partial/complete tear	0%	0%
Shoulder	Other shoulder injury (e.g. Rotator cuff tendinopathy, subacromial bursitis, etc)	20%	0%
Arm	Humerus fracture	0%	0%
Arm	Other arm injury (e.g. Contusion)	0%	0%
Elbow	Elbow joint dislocation	0%	0%



Elbow	Elbow joint sprain (e.g. Medial ligament)	0%	0%
Elbow	Elbow fracture (e.g. Radial head)	0%	0%
Elbow	Other elbow injury (e.g. Chondral joint injury, ruptured biceps tendon, etc)	0%	0%
Forearm	Forearm (radius/ulna) fracture	0%	0%
Forearm	Other forearm injury (e.g. Contusion, muscle injury)	0%	0%
Wrist	Wrist sprain (e.g. Scapho-lunate ligament, distal radio-ulna joint, etc)	0%	0%
Wrist	Wrist (carpal bone) fracture (e.g. Scaphoid)	0%	0%
Wrist	Other wrist injury	0%	0%
Hand	Thumb/finger ligament injury	0%	0%
Hand	Thumb/finger dislocation	0%	0%
Hand	Hand fracture	0%	0%
Hand	Thumb/finger tendon injury	0%	0%
Hand	Other hand injury	0%	0%
Trunk	Costo-chondral joint sprain	0%	0%
Trunk	Rib fracture (including costal cartilage fracture)	0%	0%
Trunk	Internal chest or abdominal injury (e.g. Pneumothorax, bruised lungs, bruised/lacerated liver/spleen)	0%	0%
Trunk	Other chest or abdominal injury	22%	0%
Thoracic Spine	Thoracic Joint injury (e.g. Ligament sprain, facet joint arthropathy, disc degeneration, costo-vertebral joint, etc)	0%	0%
Thoracic Spine	Thoracic spine fracture (vertebral body, transverse process)	0%	0%
Thoracic Spine	Other thoracic spine injury	0%	0%
Lumbar Spine	Facet joint/Sacro-iliac joint mediated pain	0%	0%
Lumbar Spine	Fracture (e.g. Acute transverse process/spinous process, pars stress fracture)	0%	0%
Groin/Hip	Hip joint pain (i.e. Any intra-articular hip pathology e.g. Chondral, labral, FAI)	8%	0%
Groin/Hip	Hip contusion (e.g. Iliac crest contusion)	0%	0%
Groin/Hip	Other hip/groin injury	0%	0%
Groin/Hip	Other buttock injury (e.g. Gluteal muscle strain, haematoma)	0%	0%
Hamstring	Hamstring contusion	0%	0%
Hamstring	Hamstring tendon rupture/avulsion	0%	0%
Hamstring	Hamstring tendinopathy	25%	0%
Hamstring	Other Hamstring (thigh) injury	0%	0%
Quadriceps	Quadriceps contusion	0%	0%
Quadriceps	Quadriceps tendon rupture/avulsion	0%	0%
Quadriceps	Quadriceps tendinopathy	0%	0%
Quadriceps	Other Quadriceps (thigh) injury	0%	0%
Knee	Patellofemoral joint articular cartilage (chondral) injury	0%	0%
Knee	ACL injury	0%	0%
Knee	MCL injury	17%	0%
Knee	LCL injury	0%	0%
Knee	Patella tendon rupture/avulsion	0%	0%
Knee	Patella tendinopathy	25%	0%
Knee	Iliotibial band syndrome	0%	0%
Leg	Tibia stress fracture	0%	0%
Leg	Fibula stress fracture	0%	0%
Leg	Other leg injury	0%	0%



Calf	Calf contusion	0%	0%
Calf	Other calf (leg) injury	0%	0%
Achilles	Achilles tendon rupture/avulsion	0%	0%
Ankle	Cartilage injury	0%	0%
Foot	Acute foot fracture (e.g. Metatarsal)	0%	0%
Non-Specific	General soreness / management	0%	0%
Non-Specific	Non-football related injury	0%	0%
	AVERAGE INJURY RECURRENCE RATE	8%	10%

5 2018 Injury Incidence Breakdown

Injury Category	2018 Incidence	Per 1000 Player Hours	Match	Training	Other
Concussion	2.37	2.62	90%	8%	2%
Other Head and Neck	0.66	0.81	93%	7%	0%
Shoulder	2.23	2.31	87%	11%	2%
Elbow, Wrist and Hand	1.52	1.71	81%	16%	3%
Trunk and Back	2.04	1.41	60%	30%	9%
Groin and Hip	3.31	2.62	59%	40%	1%
Hamstring	7.34	7.85	74%	25%	1%
Quadriceps	1.66	1.61	63%	37%	0%
ACL (Knee)	0.90	1.11	63%	37%	0%
MCL, PCL, LCL (Knee)	1.33	1.91	96%	4%	0%
Other Knee	2.51	2.21	62%	32%	6%
Ankle	3.55	3.32	72%	19%	9%
Calf	2.46	2.62	60%	37%	4%
Achilles	0.90	0.60	63%	37%	0%
Other Leg and Foot	3.79	4.23	71%	21%	8%
Medical Illnesses	2.37	-	-	-	-
General Soreness / Management	0.00	-	-	-	-
Non-Football Injuries	0.14	-	-	-	-
TOTAL	39.07	36.94	72%	25%	4%

6 2018 Injury Prevalence Breakdown

Injury Category	All Injuries	New Injuries	Recurrent Injuries	Onset Prev Year	Match	Training	Other
Concussion	5.45	4.97	0.47	0.00	70%	13%	17%
Other Head and Neck	1.70	1.70	0.00	0.00	97%	3%	0%
Shoulder	7.86	7.24	0.62	0.00	92%	6%	2%
Elbow, Wrist and Hand	4.59	4.59	0.00	0.00	69%	30%	1%
Trunk and Back	5.97	5.26	0.71	0.00	56%	40%	3%
Groin and Hip	11.27	10.04	0.90	0.33	58%	41%	0%
Hamstring	28.03	22.02	6.01	0.00	73%	27%	1%
Quadriceps	4.92	4.64	0.28	0.00	69%	31%	0%
ACL (Knee)	15.96	13.59	0.00	2.37	64%	36%	0%
MCL, PCL, LCL (Knee)	7.43	6.87	0.33	0.24	99%	1%	0%
Other Knee	11.98	11.51	0.47	0.00	52%	38%	10%
Ankle	15.63	14.30	1.33	0.00	76%	10%	14%
Calf	6.77	6.25	0.52	0.00	57%	31%	12%
Achilles	4.12	3.98	0.14	0.00	54%	46%	0%
Other Leg and Foot	26.42	23.01	3.03	0.38	77%	17%	6%
Medical Illnesses	5.21	5.11	0.09	0.00	-	-	-
General Soreness / Management	0.00	0.00	0.00	0.00	-	-	-
Non-Football Injuries	0.14	0.14	0.00	0.00	-	-	-
TOTAL	163.46	142.63	14.92	3.31	71%	25%	5%

7 2018 Injury Severity Breakdown

Injury Category	New Injuries			Recurrent Injuries		
	Incidence	Prevalence	Severity	Incidence	Prevalence	Severity
Concussion	2.37	4.97	2.10	0.09	0.47	5.00
Other Head and Neck	0.66	1.70	2.57	-	-	-
Shoulder	2.23	7.24	3.26	0.09	0.62	6.50
Elbow, Wrist and Hand	1.52	4.59	3.03	-	-	-
Trunk and Back	2.04	5.26	2.58	0.14	0.71	5.00
Groin and Hip	3.31	10.04	3.03	0.43	0.90	2.11
Hamstring	7.34	22.02	3.00	1.28	6.01	4.70
Quadriceps	1.66	4.64	2.80	0.14	0.28	2.00
ACL (Knee)	0.90	13.59	15.11	-	-	-
MCL, PCL, LCL (Knee)	1.33	6.87	5.18	0.05	0.33	7.00
Other Knee	2.51	11.51	4.58	0.14	0.47	3.33
Ankle	3.55	14.30	4.03	0.47	1.33	2.80
Calf	2.46	6.25	2.54	0.28	0.52	1.83
Achilles	0.90	3.98	4.42	0.14	0.14	1.00
Other Leg and Foot	3.79	23.01	6.08	0.47	3.03	6.40
Medical Illnesses	2.37	5.11	2.16	0.09	0.09	1.00
General Soreness / Management	-	-	-	-	-	-
Non-Football Injuries	0.14	0.14	1.00	-	-	-
TOTAL	39.07	145.23	3.67	3.84	14.92	3.89

8 AFL Concussion Audit – Diagnosed Concussions From AFL Matches (Regardless of Matches Missed)

Summary of AFL Concussion Audit (2011-2018):

Year	Number of Concussions	Number of Clubs	Matches	Player Hours	Incidence (Per 1000 Player Hours)	Average AFL Concussions Per Club	Incidence (Per Club Per Season) ^
2011	75	17/17	392	9408	7.97 (95% CI 6.17-9.78)	4.41	8.42
2012	68	13/18	300	7200	9.44 (95% CI 7.20-11.69)	5.23	9.97
2013	61	17/18	389	9336	6.53 (95% CI 4.89-8.17)	3.59	6.90
2014	58	18/18	414	9936	5.84 (95% CI 4.34-7.34)	3.22	6.16
2015	52	16/18	360	8640	6.02 (95% CI 4.38-7.65)	3.25	6.36
2016	63	17/18	391	9384	6.71 (95% CI 5.06-8.37)	3.71	7.09
2017	63	17/18	392	9408	6.70 (95% CI 5.04-8.35)	3.71	7.07
2018	74	18/18	414	9936	7.45 (95% CI 5.75-9.14)	4.11	7.86
TOTAL	514	133	3052	73246	7.08 (95% CI 6.48-7.69)	3.86	7.41

^ Calculated as number of concussions per club per season (assuming 40 players and 22 rounds per season).

9 Appendix 1: Injury Incidence - Previous Categories

Body Area	Injury Type	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Head/neck	Concussion	0.5	0.5	1.1	1.0	1.0	1.3	1.5	2.3	1.5	2.4
	Facial fractures	0.5	0.5	0.5	0.6	0.9	0.4	0.5	0.4	0.5	0.5
	Neck sprains	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1
	Other head and neck injuries	0.1	0.2	0.2	0.2	0.1	0.1	0.3	0.1	0.0	0.0
	TOTAL	1.1	1.3	1.9	1.9	2.1	1.9	2.5	2.8	2.2	3.0
Shoulder/arm/elbow	Shoulder sprains and dislocations	1.3	1.6	1.8	1.3	1.2	1.2	1.6	0.8	1.1	0.9
	A/C joint injuries	0.5	0.8	0.7	0.5	0.9	0.9	0.4	0.6	0.7	0.8
	Fractured clavicles	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.2	0.3	0.2
	Elbow sprains or joint injuries	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.0
	Other shoulder/arm/elbow injuries	0.1	0.3	0.4	0.6	0.3	0.4	0.7	0.7	0.4	0.4
	TOTAL	2.3	3.0	3.3	3.0	2.8	2.8	2.9	2.4	2.7	2.3
Forearm/wrist/hand	Forearm/wrist/hand fractures	1.1	1.2	1.6	0.8	0.8	1.1	1.2	1.2	0.9	0.9
	Other forearm/wrist/hand injuries	0.4	0.3	0.4	0.5	0.6	0.5	0.4	0.4	0.5	0.6
	TOTAL	1.4	1.5	2.0	1.4	1.4	1.6	1.5	1.6	1.4	1.5
Trunk/back	Rib and chest wall injuries	0.3	0.6	0.4	0.4	0.8	0.5	0.7	0.7	0.3	0.4
	Lumbar and thoracic spine injuries	1.4	1.7	1.4	1.5	2.0	1.7	1.4	0.8	0.9	1.1
	Other buttock/back/trunk injuries	0.5	0.4	0.6	0.9	0.1	0.5	0.7	0.8	1.0	0.7
	TOTAL	2.2	2.7	2.4	2.7	2.9	2.6	2.8	2.3	2.2	2.2
Hip/groin/thigh	Groin strains and osteitis pubis	3.3	4.1	2.8	2.6	2.7	2.5	2.2	1.6	1.5	1.8
	Hamstring strains	7.1	6.0	4.8	5.7	5.2	5.2	5.2	5.2	5.4	6.3
	Quadriceps strains	2.1	1.7	1.4	1.6	1.7	1.1	1.0	0.9	1.0	1.2
	Thigh and hip haematomas	1.0	1.1	0.5	0.4	1.3	0.8	0.5	0.4	0.5	0.5
	Hip joint/impingement injuries	0.7	0.6	1.0	1.2	1.1	0.3	0.0	0.1	0.6	0.2
	Other hip/groin/thigh injuries	0.3	0.1	0.0	0.0	0.0	0.0	1.6	2.2	1.6	2.0
	TOTAL	14.4	13.6	10.6	11.6	12.0	10.0	10.4	10.4	10.7	12.2
Knee	Knee ACL	0.7	0.6	0.9	0.8	1.0	0.7	0.7	0.8	0.6	0.9
	Knee MCL	0.7	0.8	1.0	0.9	0.7	0.7	0.9	0.9	0.6	0.9
	Knee PCL	0.3	0.4	0.6	0.3	0.5	0.2	0.5	0.4	0.5	0.3
	Knee cartilage injuries	2.0	1.7	1.5	1.0	1.5	1.0	1.1	0.8	0.7	1.0
	Knee and patella tendon injuries	0.5	0.4	0.6	1.0	0.7	0.4	0.5	0.3	0.4	0.4
	Other knee injuries	1.2	0.9	1.2	1.0	1.4	1.3	1.7	2.0	1.5	1.2
	TOTAL	5.3	4.7	5.8	4.9	5.8	4.3	5.3	5.2	4.1	4.7
Shin/ankle/foot	Ankle sprains or joint injuries	2.6	3.4	2.9	2.6	3.7	3.1	2.4	2.6	2.6	2.7
	Calf strains	1.3	1.7	2.1	3.0	3.7	2.6	2.9	2.3	2.1	2.0
	Achilles tendon injuries	0.6	0.4	0.9	0.7	0.5	0.9	0.6	0.4	0.5	0.9
	Leg and foot fractures	1.0	0.9	0.7	0.3	0.7	0.7	0.5	0.6	0.7	1.0
	Leg and foot stress fractures	0.9	1.2	1.4	1.4	1.3	1.7	0.7	0.3	0.9	1.2
	Other leg/foot/ankle injuries	1.5	1.7	2.5	2.0	2.3	1.3	2.8	3.0	2.3	2.9
	TOTAL	8.0	9.3	10.4	10.0	12.2	10.2	9.8	9.2	9.2	10.7
Medical	Medical illnesses	2.9	2.1	1.8	2.2	2.2	2.4	1.9	2.7	2.3	2.4
Non-Football Injuries		0.2	0.5	0.1	0.5	0.2	0.3	0.1	0.2	0.2	0.1
General Soreness		-	-	-	-	-	-	0.3	0.2	0.3	0.0
NEW INJURIES/CLUB/SEASON		37.8	38.7	38.4	38.1	41.5	36.1	37.7	37.0	35.1	39.1

10 Appendix 2: Injury Prevalence - Previous Categories

Body Area	Injury Type	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Head/neck	Concussion	0.7	0.8	2.2	1.6	1.3	1.6	4.2	5.6	4.2	5.4
	Facial fractures	1.1	1.4	1.6	1.5	2.6	0.9	0.9	0.8	1.3	1.3
	Neck sprains	0.1	0.1	1.5	0.1	0.3	0.0	0.1	0.0	0.5	0.1
	Other head and neck injuries	0.3	1.3	0.2	0.3	0.2	0.2	1.7	0.1	0.6	0.3
	TOTAL	2.2	3.5	5.6	3.5	4.4	2.8	7.0	6.5	6.5	7.2
Shoulder/arm/elbow	Shoulder sprains and dislocations	7.7	10.9	12.1	9.0	7.1	9.8	11.5	3.3	6.2	4.0
	A/C joint injuries	1.2	1.5	2.3	1.0	2.0	3.2	1.4	1.3	2.0	1.4
	Fractured clavicles	0.6	0.7	0.6	0.6	1.4	0.8	0.5	1.1	1.5	0.7
	Elbow sprains or joint injuries	1.5	0.2	1.3	0.7	0.4	0.8	0.8	0.1	0.7	0.0
	Other shoulder/arm/elbow injuries	1.0	0.3	1.3	2.1	1.2	3.1	2.7	2.7	1.5	1.8
	TOTAL	12.1	13.5	17.7	13.4	12.0	17.7	16.8	8.5	12.0	8.0
Forearm/wrist/hand	Forearm/wrist/hand fractures	4.8	3.4	5.4	3.3	2.9	3.5	4.0	4.2	3.0	2.4
	Other forearm/wrist/hand injuries	0.8	1.1	1.8	1.6	1.7	1.5	1.6	1.6	1.0	2.1
	TOTAL	5.7	4.5	7.2	5.0	4.6	5.0	5.6	5.8	4.0	4.5
Trunk/back	Rib and chest wall injuries	0.6	1.3	0.7	0.9	1.7	1.0	2.3	2.9	1.0	0.8
	Lumbar and thoracic spine injuries	4.6	6.9	5.9	5.9	4.7	5.9	3.6	3.0	2.6	3.2
	Other buttock/back/trunk injuries	1.2	1.0	1.7	1.7	0.1	1.4	2.3	2.4	2.4	2.1
	TOTAL	6.4	9.2	8.3	8.5	6.5	8.4	8.2	8.3	6.1	6.1
Hip/groin/thigh	Groin strains and osteitis pubis	11.7	15.3	7.9	7.1	7.0	6.7	7.1	4.2	5.6	8.0
	Hamstring strains	21.8	20.6	16.5	21.5	20.8	20.7	19.1	19.7	18.9	25.2
	Quadriceps strains	8.4	6.3	5.7	4.0	5.1	3.5	2.2	2.4	2.7	4.1
	Thigh and hip haematomas	1.2	1.9	0.7	0.5	2.0	1.1	0.6	0.5	0.8	0.9
	Hip joint/impingement injuries	5.4	4.5	5.7	5.6	4.6	0.8	0.0	0.7	2.3	1.2
	Other hip/groin/thigh injuries	1.3	0.2	0.2	0.0	0.0	0.0	5.9	6.0	4.4	4.6
	TOTAL	49.7	48.8	36.8	38.6	39.6	32.8	34.9	33.5	34.8	44.1
Knee	Knee ACL	11.1	7.8	13.6	13.5	17.8	11.1	16.7	12.9	14.2	16.0
	Knee MCL	2.3	2.5	3.2	3.5	2.0	2.6	2.3	2.8	1.5	4.1
	Knee PCL	1.2	3.2	4.8	2.0	3.3	1.1	3.2	3.7	5.1	3.1
	Knee cartilage injuries	10.7	13.0	7.6	4.8	9.7	4.5	6.5	4.4	2.0	6.9
	Knee and patella tendon injuries	0.8	0.8	2.3	2.8	3.1	2.4	2.7	1.7	0.8	0.8
	Other knee injuries	4.4	3.3	3.7	3.2	3.7	5.9	5.9	8.2	4.9	4.6
	TOTAL	30.6	30.5	35.1	29.8	39.5	27.6	37.4	33.7	28.5	35.4
Shin/ankle/foot	Ankle sprains or joint injuries	8.9	9.2	8.7	10.5	12.1	10.0	7.2	9.9	11.9	11.3
	Calf strains	3.0	3.7	5.5	7.1	10.6	8.1	5.9	7.6	6.0	5.4
	Achilles tendon injuries	2.2	3.4	4.0	5.0	2.2	4.0	2.5	1.6	2.3	4.1
	Leg and foot fractures	7.5	7.6	4.6	4.5	4.3	6.9	4.1	5.4	5.8	8.9
	Leg and foot stress fractures	11.2	8.5	10.6	9.1	10.9	14.2	8.6	1.7	7.4	8.7
	Other leg/foot/ankle injuries	6.8	5.7	9.3	6.6	6.9	4.5	14.0	9.6	9.7	14.4
	TOTAL	39.6	38.1	42.7	42.6	47.1	47.6	42.4	35.8	43.0	52.9
Medical	Medical illnesses	3.7	3.2	3.2	4.2	4.2	3.7	3.2	6.8	4.6	5.2
Non-Football Injuries		1.3	2.4	0.5	2.1	0.3	0.5	0.1	0.5	1.4	0.1
General Soreness		-	-	-	-	-	-	0.4	0.4	0.3	0.0
MISSED MATCHES/CLUB/SEASON		151.2	153.8	157.1	147.7	158.1	146.0	156.2	139.8	141.3	163.5



11 Appendix 3: Injury Recurrence - Previous Categories

Body Area	Injury Type	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Shoulder/arm/elbow	Shoulder sprains and dislocations	12%	26%	11%	14%	4%	52%	9%	6%	4%	7%
Hip/groin/thigh	Groin strains/osteitis pubis	19%	20%	15%	19%	11%	11%	20%	12%	0%	21%
	Hamstring strains	18%	14%	12%	14%	24%	16%	16%	15%	14%	20%
	Quadriceps strains	15%	18%	7%	3%	19%	0%	5%	5%	0%	12%
Shin/ankle/foot	Ankle sprains or joint injuries	10%	5%	13%	5%	20%	18%	4%	11%	14%	16%
	Calf strains	0%	12%	5%	6%	16%	16%	8%	4%	4%	14%
AVERAGE INJURY RECURRENCE RATE		10%	12%	9%	9%	12%	12%	11%	10%	8%	10%

12 Observations

- The incidence (39.1 new injuries per club) and prevalence (163.5 matches missed per club) is higher than that observed in previous years. It is not immediately clear why this should be the case. Rather than being one specific injury category, there seems to be an increase in a number of different injury categories. The recurrence rate (10%) is slightly up, but remains relatively stable when compared to recent years.
- Hamstring strains remain the most common injury, with an incidence of 6.3 new injuries per club and are the most common cause of matches missed (25.2 matches missed per club), with a recurrence rate of 20%. These are the highest rates we have seen for a number of years.
- Other lower limb soft tissue injuries remain relatively stable (Calf strain: incidence 2.0, prevalence 5.4; Quadriceps strain: incidence 1.2, prevalence 4.1).
- Concussions causing missed matches has also increased (2.4 new injuries and 5.4 matches missed per club) reflecting an ongoing conservative management approach. Incidence of all concussions (whether a match was missed or not) appears to be slightly increased compared to previous years, although this is not statistically significant (7.45 injuries per 1000 player hours, 95% confidence interval 5.75-9.14).