



Supporting Information

Supplementary methods and results

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Collie A, Sheehan L. The burden of working time lost to compensable occupational injury and disease in Australia, 2012–17: a retrospective population-based study. *Med J Aust* 2024; doi: 10.5694/mja2.52309.

Table 1. Mapping of Type of Occurrence Classification System (TOOCS) injury codes¹ to injury groups reported in this study

Injury group	TOOCS nature of injury major group
Fractures	Fractures
Wounds and lacerations	Wounds, lacerations, amputations and internal organ damage
Traumatic joint and muscle injuries	Traumatic joint/ligament and muscle/tendon injury
Other injuries	Intracranial injuries Burns Injury to nerves and spinal cord Other injuries
Musculoskeletal disorders	Musculoskeletal and connective tissue diseases
Mental health conditions	Mental diseases
Other diseases	Digestive system diseases Skin and subcutaneous tissue diseases Nervous system and sense organ diseases Respiratory system diseases Circulatory system diseases Infectious and parasitic diseases Neoplasms (cancer) Other diseases
Other claims	Other claims

Table 2. Descriptions of injury and disease types that differed from the Type of Occurrence Classification System (TOOCS) definitions

Injury Type Name	TOOCS Nature of Injury Name
Soft tissue injuries due to trauma	Soft tissue injuries due to trauma or unknown mechanisms with insufficient information to code elsewhere
Fractures (excluding those to skull, facial bones, or vertebral column)	Other fractures, not elsewhere classified
Trauma to joints and ligaments (excluding dislocation)	Trauma to joints and ligaments, not elsewhere classified
Reaction to stressors	Reaction to stressors - other, multiple or not specified
Laceration or open wound (excluding traumatic amputation)	Laceration or open wound not involving traumatic amputation

Table 3. Detailed injury or disease types: ten leading causes of working years lost (WYL) per annum (with 95% confidence intervals), overall and by sex, and proportion of all WYL in group

Overall	Men	Women
Soft tissue injury due to trauma* 6,847 WYL (6,776-6,917) 16.6% of WYL	Soft tissue injury due to trauma* 4,344 WYL (4,288-4,400) 17.1% of WYL	Soft tissue injury due to trauma* 2,503 WYL (2,461-2,545) 15.8% of WYL
Fractures (excl skull)* 3,824 WYL (3,776-3,871) 9.3% of WYL	Fractures (excl skull)* 2,631 WYL (2,591-2,671) 10.4% of WYL	Fractures (excl skull)* 1,193 WYL (1,167-1,219) 7.5% of WYL
Trauma to muscles and tendons, unspecified 2,649 WYL (2,611-2,688) 6.4% of WYL	Trauma to muscles and tendons, unspecified 1,669 WYL (1,638-1,699) 6.6% of WYL	Reaction to stressors* 1,155 WYL (1,128-1,182) 7.3% of WYL
Back pain, lumbago, and sciatica 2,170 WYL (2,128-2,212) 5.3% of WYL	Back pain, lumbago, and sciatica 1,392 WYL (1,357-1,426) 5.5% of WYL	Trauma to muscles and tendons, unspecified 981 WYL (958-1,004) 6.2% of WYL
Reaction to stressors* 1,915 WYL (1,880-1,951) 4.6% of WYL	Laceration or open wound* 1,180 WYL (1,155-1,205) 4.7% of WYL	Anxiety/stress disorder 852 WYL (828-875) 5.4% of WYL
Trauma to joints and ligaments (excl dislocation)* 1,838 WYL (1,802-1,874) 4.5% of WYL	Trauma to joints and ligaments (excl dislocation)* 1,138 WYL (1,109-1,166) 4.5% of WYL	Back pain, lumbago, and sciatica 778 WYL (754-803) 4.9% of WYL
Contusion, bruising and superficial crushing 1,693 WYL (1,658-1,729) 4.1% of WYL	Contusion, bruising and superficial crushing 1,050 WYL (1,022-1,078) 4.1% of WYL	Trauma to joints and ligaments (excl dislocation)* 701 WYL (678-723) 4.4% of WYL
Disc displacement, prolapse, degeneration or hernia 1,452 WYL (1,421-1,483) 3.5% of WYL	Disc displacement, prolapse, degeneration or hernia 995 WYL (969-1,021) 3.9% of WYL	Contusion, bruising and superficial crushing 644 WYL (621-666) 4.1% of WYL
Trauma to muscles 1,435 WYL (1,403-1,467) 3.5% of WYL	Trauma to muscles 827 WYL (803-851) 3.3% of WYL	Trauma to muscles 608 WYL (587-629) 3.8% of WYL
Laceration or open wound* 1,432 WYL (1,404-1,460) 3.5% of WYL	Reaction to stressors* 761 WYL (738-783) 3.0% of WYL	Tendinitis 540 WYL (521-559) 3.4% of WYL

* Category names abbreviated from Type of Occurrence Classification System standard naming convention.¹

Table 4. Number and proportion of working years lost, by sex and injury or disease group.

Injury or Disease Group	Working Years Lost per annum		
	Number (95% CI)	Proportion	Rate per 10,000 FTE (95% CI)
Males			
Traumatic joint and muscle	10,432 (10,348-10,516)	41.1%	17.5 (17.2-17.9)
Musculoskeletal disorders	5,065 (5,002-5,127)	20.0%	8.5 (8.3-8.7)
Mental health conditions	2,317 (2,277-2,356)	9.1%	3.9 (3.7-4.0)
Fractures	2,978 (2,935-3,021)	11.7%	5.0 (4.8-5.2)
Wounds and lacerations	2,487 (2,446-2,527)	9.8%	4.2 (4.0-4.3)
Other injuries	1,094 (1,064-1,125)	4.3%	1.8 (1.7-1.9)
Other diseases	942 (919-966)	3.7%	1.6 (1.5-1.7)
Other claims	52 (46-58)	0.2%	0.09 (0.06-0.11)
Total	25,367 (25,230-25,503)	100.0%	42.6 (42.1-43.1)
Females			
Traumatic joint and muscle	6,062 (5,998-6,126)	38.3%	14.8 (14.5-15.2)
Musculoskeletal disorders	3,483 (3,433-3,532)	22.0%	8.5 (8.2-8.8)
Mental health conditions	3,045 (3,000-3,089)	19.2%	7.5 (7.2-7.7)
Fractures	1,298 (1,271-1,325)	8.2%	3.2 (3.0-3.4)
Wounds and lacerations	963 (936-989)	6.1%	2.4 (2.2-2.5)
Other injuries	525 (505-546)	3.3%	1.3 (1.2-1.4)
Other diseases	425 (408-442)	2.7%	1.0 (0.9-1.1)
Other claims	27 (22-31)	0.2%	0.07 (0.04-0.09)
Total	15,827 (15,720-15,935)	100.0%	38.8 (38.2-39.4)

WYL = Working Years Lost. CI = Confidence Interval. FTE = Full-Time Equivalent years worked by workers covered by workers' compensation.

Table 5. Number and percentage of working years lost by age group and injury or disease group

Injury or Disease Group	Working Years Lost Per annum		
	Number (95% CI)	Proportion	Rate per 10,000 FTE (95% CI)
15-24 years			
Traumatic joint and muscle injuries	1,097 (1,073-1,121)	38.3%	8.4 (7.9-8.9)
Musculoskeletal disorders	430 (412-447)	15.0%	3.3 (3.0-3.6)
Mental health conditions	169 (159-179)	5.9%	1.3 (1.1-1.5)
Fractures	434 (420-448)	15.2%	3.3 (3.0-3.6)
Wounds and lacerations	499 (484-514)	17.4%	3.8 (3.5-4.1)
Other injuries	169 (159-180)	5.9%	1.3 (1.1-1.5)
Other diseases	57 (52-62)	2.0%	0.4 (0.3-0.5)
Other claims	6 (4-8)	0.2%	0.05 (0.01-0.08)
25-34 years			
Traumatic joint and muscle injuries	2,707 (2,666-2,749)	39.7%	10.6 (10.2-11.0)
Musculoskeletal disorders	1,373 (1,341-1,405)	20.1%	5.4 (5.1-5.7)
Mental health conditions	754 (731-776)	11.1%	2.9 (2.7-3.2)
Fractures	769 (748-790)	11.3%	3.0 (2.8-3.2)
Wounds and lacerations	688 (668-708)	10.1%	2.7 (2.5-2.9)
Other injuries	302 (287-317)	4.4%	1.2 (1.0-1.3)
Other diseases	207 (196-218)	3.0%	0.8 (0.7-0.9)
Other claims	14 (11-17)	0.2%	0.05 (0.03-0.08)
35-44 years			
Traumatic joint and muscle injuries	3,870 (3,818-3,921)	39.7%	16.6 (16.1-17.1)
Musculoskeletal disorders	2,109 (2,069-2,149)	21.6%	9.0 (8.6-9.4)
Mental health conditions	1,497 (1,465-1,528)	15.3%	6.4 (6.1-6.7)
Fractures	849 (826-872)	8.7%	3.6 (3.4-3.9)
Wounds and lacerations	732 (709-755)	7.5%	3.1 (2.9-3.4)
Other injuries	349 (332-366)	3.6%	1.5 (1.3-1.7)
Other diseases	329 (315-343)	3.4%	1.4 (1.3-1.6)
Other claims	20 (16-24)	0.2%	0.09 (0.05-0.12)
45-54 years			
Traumatic joint and muscle injuries	4,996 (4,937-5,055)	40.6%	22.3 (21.7-22.9)
Musculoskeletal disorders	2,702 (2,657-2,746)	21.9%	12.1 (11.6-12.5)
Mental health conditions	1,817 (1,783-1,852)	14.8%	8.1 (7.7-8.5)
Fractures	1,072 (1,046-1,098)	8.7%	4.8 (4.5-5.1)
Wounds and lacerations	831 (806-856)	6.7%	3.7 (3.5-4.0)
Other injuries	439 (419-458)	3.6%	2.0 (1.8-2.1)
Other diseases	438 (422-455)	3.6%	2.0 (1.8-2.1)
Other claims	24 (20-28)	0.2%	0.11 (0.06-0.15)
54-100 years			
Traumatic joint and muscle injuries	3,825 (3,774-3,875)	40.5%	24.0 (23.2-24.8)
Musculoskeletal disorders	1,933 (1,896-1,971)	20.5%	12.1 (11.6-12.7)
Mental health conditions	1,125 (1,098-1,152)	11.9%	7.1 (6.6-7.5)
Fractures	1,152 (1,126-1,179)	12.2%	7.2 (6.8-7.6)
Wounds and lacerations	700 (677-722)	7.4%	4.4 (4.1-4.7)
Other injuries	360 (343-378)	3.8%	2.3 (2.0-2.5)
Other diseases	336 (321-350)	3.6%	2.1 (1.9-2.3)
Other claims	14 (11-17)	0.1%	0.09 (0.04-0.13)

WYL = Working Years Lost. CI = Confidence Interval. FTE = Full-Time Equivalent years worked by workers covered by workers' compensation.

Table 6. Detailed injury or disease types: ten leading causes of working years lost (WYL) per annum (with 95% confidence intervals), overall and by age group, and proportion of all WYL in group

15 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	54 to 100 years
Soft tissue injury due to trauma* 445 WYL (430-461) 15.5% of WYL	Soft tissue injury due to trauma* 1,127 WYL (1,099-1,155) 16.5% of WYL	Soft tissue injury due to trauma* 1,632 WYL (1,598-1,667) 16.7% of WYL	Soft tissue injury due to trauma* 2,070 WYL (2,031-2,109) 16.8% of WYL	Soft tissue injury due to trauma* 1,572 WYL (1,539-1,605) 16.6% of WYL
Fractures (excl skull)* 383 WYL (370-396) 13.4% of WYL	Fractures (excl skull)* 684 WYL (665-704) 10.0% of WYL	Fractures (excl skull)* 756 WYL (734-777) 7.7% of WYL	Fractures (excl skull)* 962 WYL (938-987) 7.8% of WYL	Fractures (excl skull)* 1,038 WYL (1,013-1,063) 11.0% of WYL
Laceration or open wound (excl traumatic amputation)* 308 WYL (297-318) 10.8% of WYL	Trauma to muscles and tendons, unspecified 448 WYL (433-463) 6.6% of WYL	Trauma to muscles and tendons, unspecified 654 WYL (634-673) 6.7% of WYL	Trauma to muscles and tendons, unspecified 811 WYL (789-833) 6.6% of WYL	Trauma to muscles and tendons, unspecified 562 WYL (544-579) 6.0% of WYL
Trauma to muscles and tendons, unspecified 175 WYL (166-183) 6.1% of WYL	Back pain, lumbago, and sciatica 415 WYL (397-433) 6.1% of WYL	Back pain, lumbago, and sciatica 559 WYL (538-580) 5.7% of WYL	Reaction to stressors* 651 WYL (630-671) 5.3% of WYL	Trauma to joints and ligaments (excl dislocation)* 462 WYL (443-480) 4.9% of WYL
Contusion, bruising and superficial crushing 148 WYL (139-157) 5.2% of WYL	Laceration or open wound (excl traumatic amputation)* 351 WYL (338-364) 5.2% of WYL	Reaction to stressors* 518 WYL (500-537) 5.3% of WYL	Back pain, lumbago, and sciatica 626 WYL (603-648) 5.1% of WYL	Back pain, lumbago, and sciatica 436 WYL (417-455) 4.6% of WYL
Back pain, lumbago, and sciatica 134 WYL (124-145) 4.7% of WYL	Disc displacement, prolapse, degeneration or hernia 333 WYL (319-348) 4.9% of WYL	Disc displacement, prolapse, degeneration or hernia 419 WYL (402-436) 4.3% of WYL	Trauma to joints and ligaments (excl dislocation)* 561 WYL (540-581) 4.6% of WYL	Reaction to stressors* 433 WYL (417-450) 4.6% of WYL
Trauma to joints and ligaments (excl dislocation)* 117 WYL (109-125) 4.1% of WYL	Trauma to joints and ligaments (excl dislocation)* 283 WYL (269-296) 4.2% of WYL	Trauma to joints and ligaments (excl dislocation)* 416 WYL (399-433) 4.3% of WYL	Contusion, bruising and superficial crushing 489 WYL (469-509) 4.0% of WYL	Contusion, bruising and superficial crushing 395 WYL (378-413) 4.2% of WYL
Dislocation 112 WYL (105-119) 3.9% of WYL	Contusion, bruising and superficial crushing 272 WYL (258-285) 4.0% of WYL	Anxiety/stress disorder 398 WYL (382-415) 4.1% of WYL	Anxiety/stress disorder 460 WYL (443-477) 3.7% of WYL	Tendinitis 370 WYL (355-386) 3.9% of WYL
Trauma to joints and ligaments, unspecified 98 WYL (92-105) 3.4% of WYL	Reaction to stressors* 261 WYL (247-274) 3.8% of WYL	Contusion, bruising and superficial crushing 390 WYL (372-407) 4.0% of WYL	Trauma to muscles 436 WYL (419-454) 3.5% of WYL	Trauma to muscles 329 WYL (314-344) 3.5% of WYL
Disc displacement, prolapse, degeneration or hernia 95 WYL (87-103) 3.3% of WYL	Trauma to muscles 240 WYL (227-253) 3.5% of WYL	Trauma to muscles 357 WYL (341-373) 3.7% of WYL	Tendinitis 401 WYL (385-417) 3.3% of WYL	Anxiety/stress disorder 294 WYL (281-308) 3.1% of WYL

* Category names abbreviated from Type of Occurrence Classification System standard naming convention.¹

References

- 1 Australian Safety and Compensation Council. Type of occurrence classification system. Third edition, revision 1. May 2008. <https://www.safeworkaustralia.gov.au/system/files/documents/1702/typeofoccurrenceclassificationsystemtoocs3rdeditionrevision1.pdf> (viewed June 2023).