



Australian Government

Australian Institute of  
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DIY injuries



## What are DIY injuries?

'Do-it-yourself' (DIY) means making, mending or maintaining something oneself around the home, rather than employing a professional or expert to carry out such tasks.

While there are a variety of ways people can injure themselves while undertaking DIY projects, this fact sheet looks specifically at injuries that occurred as a result of falls (for example, from ladders and buildings), and while using tools and machinery (for example, hand tools and lawnmowers).

## How many people are hospitalised due to DIY injuries?

About 3,300 people aged 15 or older were hospitalised in Australia in 2013–14 as a result of a DIY injury due to a fall or contact with tools and machinery—a rate of 13 cases per 100,000 population. The rate of injury for males aged 15 or older was 22 per 100,000 males, while for females aged 15 or older, the rate was 5 per 100,000 females.

Similar rates were reported for both categories of DIY injuries included in this fact sheet. The rate for DIY fall injuries was 7 cases per 100,000 population aged 15 or older (11 per 100,000 males and 3 per 100,000 females). For DIY injuries related to tools and machinery, the rate was 6 per 100,000 population aged 15 or older (11 per 100,000 males and 2 per 100,000 females).

## Who is hospitalised as a result of DIY injuries?

In 2013–14, the majority of hospitalised DIY injuries due to falls or contact with tools and machinery occurred among males (81%).

DIY injuries were most frequent in the 65–74 age group for both men (597 cases) and women (137 cases) (Figure 1). Very similar numbers of DIY injuries were recorded for the next-youngest 10-year age group: those aged 55–64 (590 male and 130 female cases).

### Quick facts

**3,318** people **aged 15** or more were hospitalised for a DIY injury due to falls or contact with tools and machinery in Australia in 2013–14.



**4 in 5** DIY injury cases **were male** (81%).



**Falling from a ladder** was the most common cause of DIY injury in 2013–14.

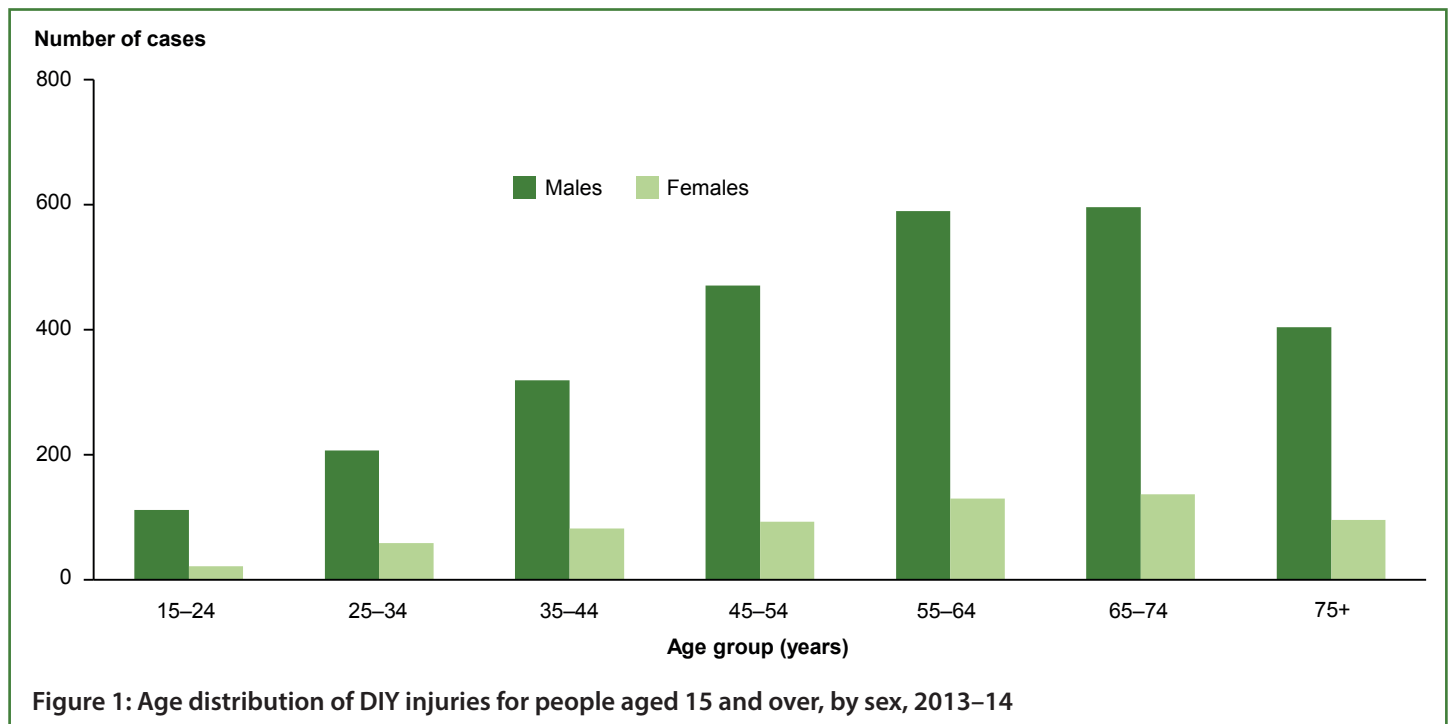


### In this fact sheet

The cases reported were admitted to an Australian hospital in the year to 30 June 2014 with a principal diagnosis of injury (ICD-10-AM S00-T75 or T79) and codes indicating that the injury occurred at home (Y92.0), while working but not for income (U73.0), and was due to an unintentional fall involving a ladder, scaffolding, a building or structure or tree (W11-W14), or unintentional contact with tools and machinery (W27-W29, W31) (NCCC, 2012). Cases were also restricted to patients aged 15 or older.

DIY injuries due to falls or contact with tools and machinery may be underestimated in this fact sheet due to incomplete reporting of the place where injury occurred and type of activity being undertaken at time of injury.

The data were sourced from the AIHW's National Hospital Morbidity Database for 2013–14, which covers all (admitted) episodes of care in Australian hospitals. Records with a mode of admission reported as a transfer from another hospital were excluded to reduce double counting.



## What are the main causes of DIY injuries?

Within the scope of DIY injuries included in this fact sheet, a *fall on or from a ladder* was the most common cause of injury for both males and females aged 15 years or older—accounting for more than one-third (38%) of injuries overall (Table 1).

*Contact with other powered hand tools and household machinery* was the second leading cause of DIY injuries for both males and females, and accounted for 27% of injuries in scope for this fact sheet.

**Table 1: Causes of DIY injury among people aged 15 and over, by sex, 2013-14**

Cause of DIY injury	Males		Females		Persons	
	Number	%	Number	%	Number	%
<b>Falls</b>						
Fall on or from ladder	980	36	282	46	1,262	38
Fall on or from scaffolding	19	1	1	0	20	1
Fall from, out of or through building or structure	338	13	79	13	417	13
Fall from tree	38	1	5	1	43	1
<b>Contact with tools and machinery</b>						
Contact with non-powered hand tool	179	7	51	8	230	7
Contact with powered lawnmower	211	8	60	10	271	8
Contact with other powered hand tools and household machinery	777	29	122	20	899	27
Contact with other and unspecified machinery	157	6	19	3	176	5
<b>Total</b>	<b>2,699</b>	<b>100</b>	<b>619</b>	<b>100</b>	<b>3,318</b>	<b>100</b>

## Types of injury

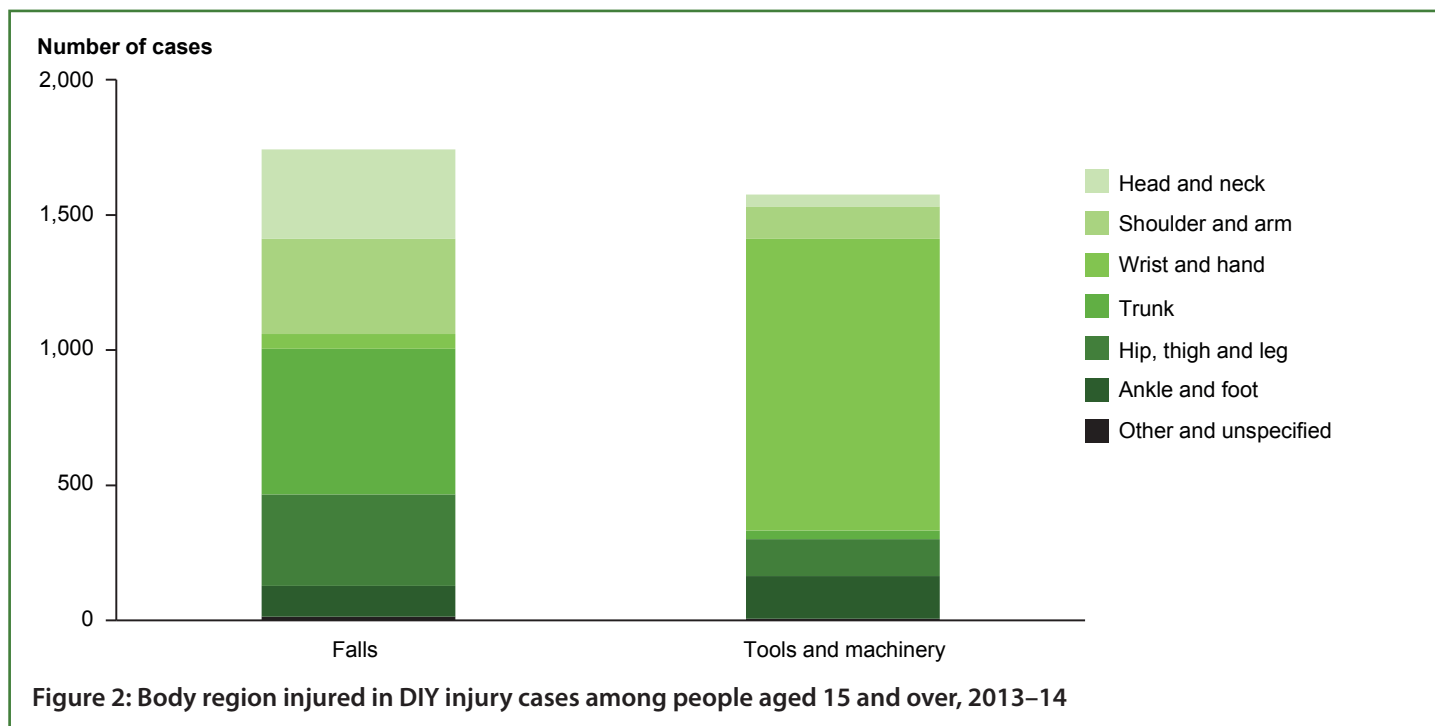
The type of injury sustained varied according to whether the person had a fall or came into contact with tools or machinery. More than half of all DIY injuries due to a fall resulted in a fracture (63%); the next most common were an open wound (8%) or an intracranial injury such as a concussion (7%).

DIY injuries due to contact with tools and machinery most often resulted in an open wound (31%) or a fracture (23%).



## Body region injured

Hospitalised DIY fall injuries most often involved the trunk (31%) but also commonly involved the limbs (shoulders and arms 20%, hip, thigh and legs 19%) and the head and neck (19%) (Figure 2). Only 3% of DIY fall injuries involved the wrist and hand. In contrast, over 2 in 3 DIY injuries due to contact with tools and machinery (69%) were to the wrist and hand.



## DIY injuries involving falls from a ladder or building or structure

### Falls from ladders

The greatest proportion of falls from a ladder were experienced by 65–74 year olds (29%). Falls from a ladder most commonly occurred in an outdoor area of the home (61%, comprising 639 males and 128 females). For males, the next most common area of the home in which falls from ladders occurred was in the garage (35 cases), while for females, the next most common area was in the kitchen (19 cases).

Approximately 3 in 5 DIY injury cases involving a ladder resulted in fractures (785 cases; 62%). Just over one-third (35%) of fractures affected the trunk, including fractures of the lumbar (73 cases) and thoracic vertebrae (48 cases). A further 75 cases sustained multiple rib fractures and 23 had a single rib fracture.

### Falls from buildings or structures

DIY injuries due to falls from a building or structure predominately involved falling from a household roof, with 180 male and 23 female cases recorded for 2013–14 (making up 49% of all falls from a building or structure). Other common falls in this category included falling through a roof (62 men and 7 women) or from a balcony or verandah (17 men and 15 women). Less frequent were falls involving windows and glass doors (7 cases) or falling from or through floors (4 cases).

Similar to the types of injuries seen in falls from ladders, 63% of falls from a building or structure resulted in 1 or more fractures. Ninety-six cases sustained a fracture at the trunk level (including vertebrae and ribs), while 64 cases sustained a fracture to the shoulder and/or upper limbs. Respectively, these accounted for 37% and 24% of all fracture injuries due to falls from a building or structure.



## DIY injuries involving tools and machinery

### Hand tools

DIY injuries associated with non-powered hand tools (such as screwdrivers, handsaws and pitchforks) most often resulted in an open wound (88 cases) followed by fractures (44 cases), most commonly of the hand (33 cases).

### Lawnmowers

A different pattern of injuries was seen for DIY injuries involving powered lawnmowers. The most common type of injury here was a fracture to the tip of a finger (41 cases), while amputation of the thumb or 1 or more fingers was reported in 57 cases. There were also 10 cases of amputation of the toe(s) or other part of the foot.

### Power tools and machinery

Overall, powered saws were involved in 9% of DIY injury cases included in this factsheet. Of the 283 DIY injury cases involving a powered saw, the most frequent injury was a partial or complete amputation of a finger (11%; see Table 2). Amputation of a finger was also the most frequent injury reported for DIY injuries involving woodworking and forming machinery.

An open wound to a finger was the most common injury for cases involving powered drills and nail guns, while sprains and strains to the extensor muscles and tendons of fingers or thumbs were most frequent for cases involving powered grinders, chainsaws and metalworking machinery.

**Table 2: Common power tools or machinery involved in DIY injuries and the nature of these injuries, 2013–14**

Type of power tool or machinery	Number of cases	Most frequent type of injury for each type of power tool or machinery	% of cases
Powered saw	283	Partial or complete amputation of a finger	11
Powered grinder	216	Sprain/strain of extensor muscle and tendon of finger (wrist & hand)	12
Chainsaw	131	Sprain/strain of extensor muscle and tendon of finger (wrist & hand)	8
Woodworking & forming machinery	62	Partial or complete amputation of a finger	21
Powered drill	46	Open wound of finger(s) without damage to the nail	22
Metalworking machinery	32	Sprain/strain of extensor muscle and tendon of thumb (wrist & hand)	9
Powered nail gun	30	Open wound of finger(s) without damage to the nail	17
		Open wound of palm	17

## Where can I find out more?

AIHW web pages and publications: <<http://www.aihw.gov.au/injury/>>.

## References

NCCC (National Casemix and Classification Centre) 2012. The international statistical classification of diseases and related health problems, 10th revision, Australian modification (ICD-10-AM), Australian Classification of Health Interventions (ACHI) and Australian Coding Standards (ACS), 8th edn. Wollongong: University of Wollongong.

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