



Accidental poisoning

What is accidental poisoning?

Poison can be defined as a substance that is capable of producing harm to a living being. Poisoning can result from one of these substances coming into contact with the body or from absorption into the body. Absorption may be through ingestion, through the skin or mucous membranes, by inhalation or by injection (WHO 2015).

Accidental poisoning involves a person unintentionally poisoning themselves and includes accidental drug overdose.

Some agents from which poisoning may occur include alcohol, narcotics (for example, heroin or methadone), sedatives, psychotropic drugs (for example, antidepressants), antiepileptic and anti-inflammatory drugs.

Premature mortality refers to deaths that occur at a younger age than a selected cut-off—for this analysis, deaths among people under the age of 75 are considered premature. This is consistent with other AIHW reports on premature mortality. Although this fact sheet focuses on deaths under 75, injury and poisoning deaths at any age can be considered premature.

Who dies prematurely from accidental poisoning?

In 2012, there were 899 premature deaths due to accidental poisoning in Australia. Two-thirds (66%) of premature deaths from accidental poisoning were among males (592 deaths compared with 307 deaths among females) (Figure 1).

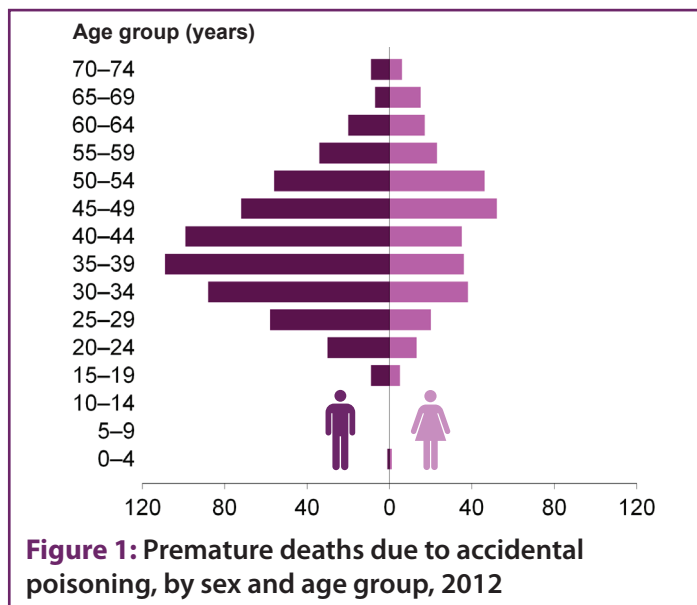


Figure 1: Premature deaths due to accidental poisoning, by sex and age group, 2012

Quick facts

Accidental poisoning was the **15th** leading cause of premature death in Australia in 2010–2012.

15

2 in 3 premature deaths due to accidental poisoning in 2012 were among males (66%).



The premature death rate due to accidental poisoning increased by **258%** over the 3 decades from 1982 to 2012.

258%

There were few premature deaths due to accidental poisoning for children, with just 1 death among those aged under 15—while poisoning is relatively common in children few cases are clinically serious and death is rare (AIHW: Pointer 2013).

The greatest number of premature deaths occurred among 35–39 year old for males (109 deaths) and among 45–49 year olds for females (52 deaths).

Accidental poisoning was ranked 2nd in the leading causes of premature mortality for 25–44 year old males, and ranked 3rd among females of the same age.

What population-level approaches target premature deaths due to accidental poisoning?

There are many sources of poisoning, which means that multiple interventions are potentially needed to reduce poisoning events.

Consumer education about the use of pharmaceutical products, such as over-the-counter and prescription medication, is important in preventing accidental poisoning—and this can be done at point of sale (such as through pharmacies) or through more widespread education campaigns relating to poisoning. Legislation around mandatory labelling of chemicals is also important in preventing poisoning.

Strategies which target particular problem areas have also been developed—for example, education relating to chemicals on farms and education relating to the use of petrol and aerosol deodorants as inhalants.



Premature deaths due to accidental poisoning are classified as 'potentially avoidable in the context of the present health system' according to nationally agreed definitions (AIHW 2015a). The definition includes deaths from conditions that are potentially preventable through individualised care and/or treatable through existing primary or hospital care.

How have premature death rates due to accidental poisoning changed over time?

Trends in injury and poisoning deaths should be interpreted with caution due to changes in data sources and coding practices, and revision status of data. For more information, see AIHW: Harrison & Henley 2015.

Despite fluctuations over time, there was an overall increase in the age-standardised rate of premature mortality due to accidental poisoning between 1979 and 2012, from 1.2 per 100,000 population (164 deaths) to 4.3 per 100,000 (899 deaths) (Figure 2).

Between 2002 and 2012, the premature mortality rate due to accidental poisoning increased by 43% for males (from 4 deaths per 100,000 population to 5.7 per 100,000 population) and similarly increased by 45% among females (from 2 per 100,000 population to 2.9).

There was a sharp increase in premature deaths from accidental poisoning between 1998 and 1999, from 619 deaths to 1,064 deaths (or from 3.5 deaths per 100,000 population in 1998 to 5.9 deaths per 100,000 population). In the following year (2000), the age-standardised premature mortality rate declined by 24% to 4.5 deaths per 100,000 population.

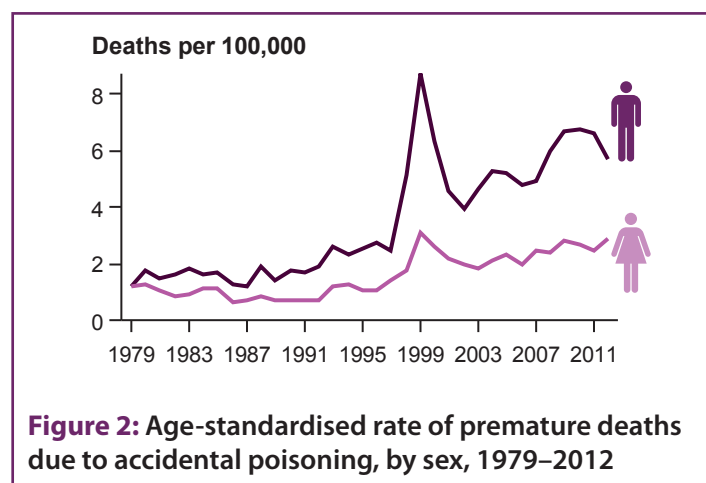


Figure 2: Age-standardised rate of premature deaths due to accidental poisoning, by sex, 1979–2012

What has influenced trends in premature deaths due to accidental poisoning?

Factors that have influenced trends in premature deaths due to accidental poisoning are difficult to generalise about because of the many substances that can be the source of poisoning.

The notable increase in premature deaths in 1999 coincides with an epidemic of drug poisoning, mainly poisoning by opiate narcotics (chiefly heroin) (AIHW 2015b).

Some changes in trends can also be explained by changes in coding practices for causes of death—for example, many deaths involving poisoning by dependence-producing psychoactive substances were once classified under 'mental and behavioural disorders' (AIHW: Harrison & Henley 2015).

There is also a potential effect of intent (whether or not an individual intended to poison themselves) on the classification of poisoning deaths as accidental or not accidental. Drug poisoning deaths can be ambiguous because, while it is clear that a person took a substance that contributed to the fatal outcome, it may be unclear whether a fatal outcome was intended (AIHW 2015b).

Where can I find out more?

Premature mortality in Australia (including references):
<<http://www.aihw.gov.au/deaths/premature-mortality/>>.

AIHW GRIM books:
<<http://www.aihw.gov.au/deaths/grim-books/>>.

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

Research Centre for Injury Studies website:
<<http://www.nisu.flinders.edu.au/>>.

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