

3. Key trends in alcohol-related harm

3.1 Health impacts

It is important to consider both the short-term and long-term health impacts of the harmful consumption of alcohol, as both result in significant morbidity and mortality. The typical effects of moderate alcohol consumption are those on the brain, such as feelings of relaxation, wellbeing and loss of inhibitions. However, as intake increases, pleasant effects are lessened by adverse effects such as drowsiness, loss of balance, nausea and vomiting, and other more serious harmful effects such as aggressive behaviours, unconsciousness, kidney failure and increased risk of accidents and injury (18). Overall, more people die from the acute effects of alcohol than the long-term or chronic effects.(18)

Alcohol consumption accounts for 3.2% of the total burden of disease and injury in Australia: 4.9% in males and 1.6% in females.(19)

It should be noted that although this percentage is lower than the contribution from tobacco smoking (7.8%) and high body mass (7.5%), there remains some debate over the method to calculate the disease burden attributable to alcohol. That the Australian figure may be an underestimate is suggested by the higher reported burden of disease from alcohol for New Zealand (10% for men and 4% for women).(20)

Alcohol has been causally linked to more than 60 different medical conditions.(13) In Australia, alcohol was linked to 3430 deaths per year and 85,435 disability-adjusted life years (DALYs) per year.(3)

In the 10 years between 1992 and 2001, more than 31,000 Australians died from alcohol-attributable injury and disease – a greater number died from acute (usually in the context of acute intoxication) rather than chronic conditions (often related to longer term dependence on alcohol).

Table 3: Deaths and burden (DALYs) attributable to alcohol by specific cause, Australia, 2003

SPECIFIC CAUSE	DEATHS		DALYS	
	NUMBER	PROPORTION OF TOTAL (%)	NUMBER	PROPORTION OF TOTAL (%)
Alcohol abuse	918	0.7%	34,116	1.3%
Suicides & self-inflicted injuries	553	0.4%	12,245	0.5%
Road traffic accidents	396	0.3%	11,121	0.4%
Oesophagus cancer	368	0.3%	4,594	0.2%
Breast cancer	184	0.1%	4,152	0.2%
Other	1,012	0.8%	19,207	0.7%
Total harm	3,430	2.6%	85,435	3.2%

Source: Begg *et al.* 2005

The most common cause of death due to intoxication was road crash injury, and among the chronic conditions alcohol-related liver cirrhosis accounted for the majority of deaths.(21)

Deaths from acute causes are most common among young people, particularly those aged 15–29 years, while deaths from alcohol-attributable chronic diseases are more common among people aged over 45 years.



More males than females died from both acute and chronic alcohol-attributable conditions (21.)

Over half a million hospitalisations were caused by risky and high-risk drinking in Australia in the eight years between 1993/94 and 2000/01.(21) The most numerous conditions among these hospitalisations were for alcohol dependence (87,186), injuries caused by assault (76,115), road crash injuries (47,167) and attempted suicide (20,374). As many as 10,094 hospitalisations were attributed to some form of ‘alcoholic overdose’ from very high blood alcohol levels, including alcohol poisoning and aspiration vomitus. Overall, the majority of hospitalisations were for acute conditions (67.8%).(21)

Future projections of the leading causes of disease burden predict that the proportion due to alcohol will remain stable and within the top 14 leading causes among Australian males by 2023 (see Fig. 7). The proportion of disease burden caused by anxiety and depression is also expected to remain stable by 2023, while ischaemic heart disease and lung cancer are expected to decline. Type 2 diabetes is predicted to be the leading cause of disease burden among Australian males by 2023.

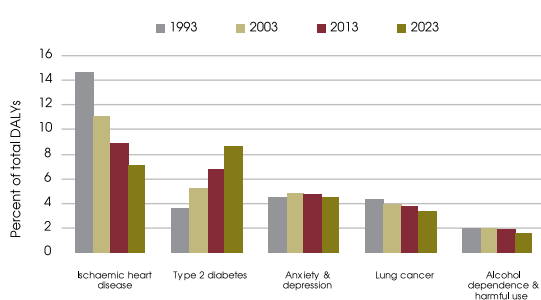


Figure 7: Leading causes of burden (DALYs) in males, Australia, 1993 to 2023

Source: Begg *et al.* 2007(19)

At low levels of consumption, alcohol may also have some benefits – various studies have found reductions in some forms of heart disease (particularly in middle-aged and older males) and ischaemic stroke (in older females), diabetes, gallstones and dementia.

The extent and even the existence of such benefits remain controversial.(22, 23) In terms of population, health, heart disease and stroke are the most important of these potential benefits. Nearly all the potential benefits are confined to males over the age of 45 and women past menopause, and can be gained with a drinking pattern of as little as one drink every second day. Since alternative means of preventing heart and vascular disease are available, the clinical consensus is that people need not take up or maintain drinking for health benefits.

DRINKING DURING PREGNANCY

Recent data show that 59% of Australian women drank alcohol at some time during their pregnancy and that 14% reported drinking five or more drinks in a sitting in the three months prior to pregnancy – 58% during the first and second trimester and 54% in the third trimester.(18) Maternal alcohol consumption can result in a spectrum of harms to the fetus. Although the risk of birth defects is greatest with high, frequent maternal alcohol intake during the first trimester, alcohol exposure throughout pregnancy (including before a pregnancy is confirmed) can have consequences for the development of the fetal brain. It is not clear whether the effects of alcohol are related to the dose of alcohol and whether there is a threshold above which adverse effects occur.(24) This uncertainty is reflected in policy regarding alcohol use in pregnancy within Australia and overseas.(25) Although the risks from low-level drinking (such as one or two drinks per week) during pregnancy are likely to be low, a ‘no-effect’ level has not been established, and limitations in the available evidence make it impossible to set a ‘safe’ or ‘no-risk’ drinking level for women to follow in order to avoid causing harm to their unborn baby.



In 2005–2006 there were a total of 145,000 drug treatment episodes recorded in Australia, of which 56,000 (or 39%) were for alcohol problems.⁽¹⁵⁾ While this figure is high, it is perhaps relatively low given the estimated 585,000 Australians who drink at levels considered to be high risk to health in the long term, many whom might be considered the potential target group for treatment.⁽¹⁵⁾ Females accounted for 31% of alcohol treatment episodes in 2005–2006. Persons aged 20–29 years received 22% of treatment episodes. For persons aged 10–19 years receiving treatment, the proportion treated for alcohol problems has increased from 15% to 23% between 2001–2002 and 2005–2006.

The interactions between other drugs (tobacco, illicit and prescription) and alcohol are complex. Australian studies reveal a close association between heroin overdose and alcohol consumption at harmful levels at the time of overdose. Australian research has also found that among cannabis users, alcohol was almost universally used on a regular basis, with most users consuming alcohol at harmful levels. There are also parallels in aetiological research regarding the uptake of one psycho-active substance increasing the likelihood of use of others. There has also been some work done regarding parents' attitudes and behaviour as a factor in influencing tobacco, alcohol and other drug use. For all of these substances, it is important that prevention efforts focus on delaying the uptake of regular use. This paper does not attempt to deal with the obvious crossover between mental health issues and the harmful consumption of alcohol, and the increasing problem of poly-drug use, but any preventative action needs to bear these factors in mind.

3.2 Social impacts

The effects of alcohol consumption go beyond diseases, accidents and injuries to a range of adverse social consequences, both for the drinker and for others in the community. These consequences include harm to family members (including children) and to friends and workmates, as well as to bystanders and strangers. Alcohol-related disturbance and assault ranges from acts of vandalism, offensive behaviour and disruption to far more serious antisocial behaviour, which can result in violence or injury to others.^(18,23) While it is not a perfect description of the wider social impacts of the harmful consumption of alcohol, some commentators have coined the term 'passive drinking', akin to passive smoking, to refer to the impact of drunken behaviour on third parties.



FAMILIES AND CHILDREN

It is a reality that the most visible effects of drinking on others, including children, result from accidents and injury (including violence) during or after drinking occasions.(18, 23) When families have to deal with a relative's alcoholism, violence, injury or even death, these serious consequences can cause great suffering.(18, 30) Drinking within families is an important consideration because, depending upon the circumstances, it can be either a positive or negative influence on the drinking behaviour of young people. It is estimated that 13% of Australian children aged twelve years or less are exposed to an adult who is a regular binge drinker.(26) It has been estimated that 31% of parents involved in substantiated cases of child abuse or neglect experience significant problems with alcohol use.(27)

In Australia, it is estimated that 47% of all perpetrators of assault and 43% of all victims of assault were intoxicated prior to the event.(28) It has also been reported that 34% of homicide perpetrators and 31% of homicide victims were alcohol affected at the time of the homicide. In addition, it has been estimated that alcohol is an important factor in 50% of cases of domestic physical and sexual violence.(29) In a single year (1998–1999), there were 8661 people admitted to Australian hospitals with injuries from alcohol-related assaults; 62,534 alcohol-related assaults were reported to police in the same year, and it is estimated that many more went unreported. Of the hospitalisations with injuries from alcohol-related assaults, 74% were male and two-thirds were aged 15–34 years.(30)

An important factor in alcohol-related violence is the setting where drinking occurs. Australian studies have generally confirmed that alcohol-related violence most commonly occurs in and around inner-city hotels, in the early hours of Saturday and Sunday mornings, and usually among young adult males.(31)

Furthermore, it has been shown that the majority of alcohol-related incidents occur in a minority of high-risk licensed venues.(32)

It is not surprising that much of the time and resources of policing in Australia is related to incidents involving alcohol. One study reported that alcohol is involved in 62% of all police attendances, 73% of assaults, 77% of street offences, 40% of domestic violence incidents and 90% of late-night calls, from 10.00pm to 2.00am.(31)

The total social cost of the harmful consumption of alcohol is estimated to be more than \$15 billion each year.(4) The majority of these costs are for tangible social costs such as crime (\$1.6 billion), health (\$1.9 billion), productivity in the workplace (\$3.5 billion), productivity in the home (\$1.5 billion) and road accidents (\$2.2 billion) (see Table 4).

Table 4: Estimated social costs of alcohol abuse, Australia, 2004–2005

TYPE OF COST	\$M
Reduction in workforce and absenteeism	3,579
Labour in the household	1,571
Medical	541
Hospital	662
Nursing homes	401
Pharmaceuticals	298
Ambulances	75
Road accidents	2,202
Police	747
Criminal courts	86
Prisons	142
Property	67
Insurance administration	14
Productivity of prisoners	368
Resources used in abusive consumption	1,689
Loss of life	4,135
Pain and suffering (road accidents)	354

Source: Collins & Lapsley 2008(4)



3.3 Health inequalities

GEOGRAPHIC

There are variations in alcohol consumption across Australia and different impacts on specific high-risk population groups. Per capita alcohol consumption varies significantly between urban and rural areas, and between Australian states and territories. For instance, while the prevalence of drinking at short-term risky/high-risk levels at least monthly is 18.7% in New South Wales and 19.4% in Victoria, it is 28.4% in the Northern Territory.⁽¹⁾ Alcohol consumption levels (and alcohol-attributable mortality and morbidity) are consistently found to be lower for people living within major cities when compared to outer regions. In 2004 it was estimated that the proportion of Australians who drank at risky/high-risk levels for short-term harm, residing in outer regional (24%) and remote/very remote (28%) locations was between 20% and 40% greater than for residents of major cities. The proportion of the population residing in outer regional and remote/very remote locations who drank at risky/high-risk levels for long-term harm were 11% and 16% respectively, compared to 9.5% in major cities. Not surprisingly, there are also geographic differences in the rates of alcohol-related harm in Australia. The Northern Territory has the highest rate of alcohol-attributable deaths and hospitalisations in the country.

INDIGENOUS AUSTRALIANS

Indigenous Australians are about twice as likely to abstain from alcohol as non-Indigenous Australians, but those who do drink may be up to six times more likely to drink at high-risk levels than non-Indigenous people.⁽³⁴⁾ A survey estimated that 38% of Indigenous people aged 14 and over drank at risky/high-risk levels for acute harm, compared to 20% among non-Indigenous people; and that 23% drank at risky/high-risk levels for chronic harm, compared to about 10% of non-Indigenous people.⁽³⁵⁾ However, a less recent, but better designed, Indigenous-specific survey of substance misuse found that about 58% of all Indigenous respondents drank at risky/high-risk levels.⁽³⁶⁾ Among Indigenous people who live in remote parts of Australia, levels of alcohol consumption are particularly high.

In 2002–2003 the rate of hospital admission among Indigenous males for conditions related to high levels of alcohol use was between two and seven times greater than for non-Indigenous males. Such conditions include acute alcohol intoxication, alcoholic liver disease, harmful use and alcohol dependence. In addition, between 1999 and 2003 about 71% of Indigenous homicides occurred in situations where both the perpetrator and victim were drinking (as opposed to 19% of non-Indigenous homicides).⁽²⁹⁾ Other studies have shown that the rates of death from wholly alcohol-caused conditions among residents of Western Australia, South Australia and the Northern Territory are almost eight times greater for Indigenous males than for non-Indigenous males and 16 times greater for Indigenous females than for other females.⁽³⁷⁾ The level of alcohol-attributable death among young Indigenous Australians (15–24 years) has also been shown to be almost three times greater than for their non-Indigenous counterparts – with the divergence between the two populations apparently increasing in recent years.⁽³⁸⁾



YOUNG AUSTRALIANS

Rates of risky drinking in Australia peak amongst young people,(2) and alcohol-related harm is substantial for both adolescents and young adults. Drinking contributes to the three leading causes of death among adolescents – unintentional injuries, homicide and suicide – along with risk-taking behaviour, unsafe sex choices, sexual coercion and alcohol overdose.(18) A recent study of self-reported harm found that drinkers under the age of 15 years are much more likely than older drinkers to experience risky or antisocial behaviour connected with their drinking, and the rates are also somewhat elevated among drinkers aged 15–17 years.(39) Furthermore, initiation of alcohol use at a young age may increase the likelihood of negative physical and mental health conditions, social problems and alcohol dependence. Regular drinking in adolescence is an important risk factor for the development of dependent and risky patterns of use in young adulthood. Childhood and adolescence are critical times for brain development and the brain is more sensitive to alcohol-induced damage during these times, while being less sensitive to cues that could moderate alcohol intake.

Like adolescents, young adults continue to be greater risk takers than older adults, but their decision-making skills remain undeveloped – factors that are reflected in the high levels of injuries sustained by this age group. Alcohol affects brain development in young people; thus, drinking, particularly ‘binge drinking’, at any time before brain development is complete (which is not until around 25 years of age) may adversely affect later brain function. In addition, young adults are also the adult age group most likely to take mood-altering drugs.(2)

Trends in youth drinking are unclear, with neither school survey data (ASSADS) nor the National Drug Strategy Household Survey (NDSHS) demonstrating clear trends in drinking amongst adolescents or young adults in the last decade. While a recent examination of Victorian data relating to young people aged between 12 and 24 found no clear trend in rates of risky drinking, it revealed that rates of hospitalisation and presentation at emergency departments have increased dramatically over recent years. The study suggests that the relationship between survey-derived estimates of alcohol consumption and rates of alcohol-related harms is not as clear-cut as expected, and raises concerns about the sensitivity of population surveys in detecting changes in harmful drinking patterns.(40)

Drinking can also lead to poorer outcomes for people who have a mental health condition, whether it is a high-prevalence condition such as depression or a low-prevalence condition such as schizophrenia.

There has been little analysis of the patterns of consumption and trends in alcohol-related dysfunction or harm in older people in Australia. Older people are more vulnerable to the effects of alcohol due to changes in their body composition, decreased metabolic capacity, the presence of co-morbid conditions and the medications that regulate these conditions. Older people express concern about reduced perceptions of safety associated with public place drinking. Women in the baby boomer age group, now aged in their 50s to 70s, are more likely than their parents to be alcohol consumers and it might be anticipated that this will produce an increase in alcohol-related morbidity in their older years, but this is yet to be documented.

Certain occupational groups are also known to regularly drink at risky/high-risk levels, especially tradespeople and unskilled workers, and those working in the hospitality, agricultural and mining industries.