

Alcohol and Drug Use in Australia

In Australia it is estimated that alcohol and drug use is the cause of around 7,500 deaths a year. Social costs are far more. For every person that dies, there are many more that are suffering and the human cost is very profound. It costs the community \$7.5 billion per year. The human toll is as follows:

75% criminal assaults	50% of serious crime
33% of road deaths	20% of drowning
50% of domestic violence	25% of industrial accidents
30% of child abuse	30% of industrial deaths
40% of divorces	44% of burglaries

QUICK FACTS

- Alcohol is a central nervous system depressant.
- It is the most abused drug in our society.
- It can cause intoxication, unconsciousness, or even death.
- It is as potent as many illegal drugs.
- It can be dangerous when mixed with other drugs.
- Drinking and driving are a particularly dangerous mix.
- Alcohol can cause severe damage to the unborn foetus.
- People often don't realize they are becoming dependent on alcohol.
- Alcoholism is a treatable illness.

Alcohol (known as ethanol or ethyl alcohol) is a central nervous system depressant. It slows down bodily functions, such as heart rate, pulse and respiration. Small quantities of alcohol can induce feelings of well being and relaxation. It is mainly for these effects that people drink in moderation.

Larger doses, however, progressively cause intoxication, sedation and sometimes unconsciousness. In very large doses, alcohol can be fatal. These effects are similar to those produced by sedative-hypnotic drugs (such as barbiturates) and narcotics.

People can become psychologically and physically addicted to alcohol. Dependence on alcohol – an illness known as alcoholism – leads to severe physical, emotional and psychological problems.

SHORT-TERM EFFECTS

Drinking is so accepted in our society that we usually don't think of alcohol as a drug. Yet it is as potent and dangerous as many prescription and illegal drugs. It has a high potential for abuse if not used with caution.

Alcohol is a central nervous system depressant. It affects the areas of the brain that control speech and intellectual function, mood and emotion, as well as muscular co-ordination to carry out these functions. How fast alcohol acts on the brain depends on how quickly the stomach and small intestines absorb it into the bloodstream. This may depend on:

- the amount of food in the person's stomach (food slows the rate),
- how much and how fast the person drinks, and
- the amount of carbonation (which speeds absorption).

People's weight, body chemistry, general health and tolerance for alcohol also influence their response to the drug. Heavier people have more body water. This dilutes the alcohol and lessens its effects. Gender is an important factor. Females have more body fat and less muscle tissue than males. Because of this, girls and women are more susceptible to the effects of alcohol. Age also plays a role. Youth are more susceptible to alcohol's effects. Their bodies are smaller than adults and they are still developing physically, mentally and emotionally. Chronic, heavy drinkers tend to become tolerant to the effects of alcohol; that is, they are less sensitive to the drug's psychoactive effects.

In addition to physical factors, psychological ones affect the response to alcohol. These include the reasons people drink, their mood while drinking and their experiences with and expectations of the drug. Many people learn behavioural reactions to alcohol from others.

Alcohol affects more than just mood and emotions. Even in low doses, it can:

- reduce sensitivity to pain, taste and odour.
- affect vision. Alcohol can narrow the visual field, reduce resistance to glare, interfere with the ability to tell the difference between lights of varying intensities and lessen sensitivity to colours, especially red
- impede attention and memory

- interfere with REM (rapid eye movement) and delta (deep) sleep, both important for restful sleep and emotional health
- affect sexual performance. While a few drinks might temporarily dull inhibitions and anxiety about sexual activity, larger doses will lead to temporary impotence and loss of sensation.

The first consistent mood and behavioural changes occur when the blood alcohol concentration (Blood Alcohol Reading) reaches 0.05%. This level is reached by a 70 kilo person taking two drinks in an hour. The person might feel relaxed and have a sense of wellbeing. However, the alcohol has already begun to affect reflexes, vision, co-ordination, ability to concentrate, judgement and restraint. This interferes with the ability to operate a car or other machinery safely.

At a Blood Alcohol Reading of 0.10% – 0.20%, the alcohol further hampers motor functions. Walking and hand and arm co-ordination are clearly affected. People are likely to be clumsy at this level. Reaction times increase greatly; that is, people do not respond to stimuli as quickly. The drug seriously hampers reasoning and judgement. Most states consider people legally intoxicated when they have a BAC between 0.05% and 0.10%.

At a Blood Alcohol Reading of 0.20% - 0.30% BAC, the drug significantly impairs sites of the brain that control motor and emotional function. People may stagger, slur their speech, become angry or sad easily, or appear boisterous.

At a Blood Alcohol Reading of 0.30% - 0.40%, alcohol further affects the centres of the brain, which control response to stimuli and understanding. People at this level are probably in a stupor. Though possibly aware, they will not understand what they hear or see.

At a Blood Alcohol Reading above 0.40% is very dangerous. Alcohol blocks the brain's ability to control breathing and heartbeat. This can result in unconsciousness and possibly death. A person with a BAC of 0.40% should receive immediate medical care.

Safe drinking guidelines are:

A standard drink contains 10 grams of alcohol. For light beer this is equal to 1 schooner; for full strength beer, this is equal to 1 middie; for wine, this is equal to one small glass which is 100 mls; for fortified wines, such as port or sherry, this is equal to one 50 ml glass; for spirits, this is one nip, which is 30 mls.

As a general guide, one can of ordinary beer contains about one and half standard drinks. One bottle of wine contains seven standard drinks. One 750 ml bottle of port or sherry contains 11 standard drinks. One 750ml bottle of spirits contains 24 standard drinks.

Home measures of alcohol tend to be larger and make counting standard drinks difficult.

Safe drinking guidelines are based on standard drinks. The National Health and Medical Research Council recommend the following guidelines for low risk drinking: Women should have no more than 2 standard drinks per day, which is 20 grams of alcohol. Men should have no more than 4 standard drinks per day, which is 40 grams of alcohol. A harmful level of drinking for women is more than 4 standard drinks per day; for men, it is more than 6 standard drinks per day.

Taking coffee, amphetamines or other stimulants, cold showers or pure oxygen will not help sober up a person who is drunk.

Similarly, there is no easy cure for a hangover (the toxic effects resulting from the misuse of alcohol). A hangover may be marked by symptoms of fatigue, headache, nausea, thirst, upset stomach and shakiness. The only "cure" for a hangover is time, although rest, solid food and fruit juices may help. Those who drink can best prevent hangovers by drinking alcohol slowly, in moderation, with food in the stomach.

Alcohol withdrawal occurs when someone who is physically dependent on the drug stops drinking it. Withdrawal can produce trembling, anxiety, loss of appetite, insomnia, convulsions, confusion and hallucinations. Delirium tremens (DT's) occur in the most severe withdrawal state. In addition to the other symptoms, delirium can produce paranoia and disorientation. Withdrawal is occasionally fatal and should be medically supervised.

Special Note: Other alcohols such as methyl alcohol, rubbing alcohol u.s.p. (which is 70% ethanol) and isopropyl rubbing alcohol is very toxic and can be deadly. They should never be consumed.

LONG TERM EFFECTS

The abuse of alcohol can lead to long-term physical, emotional and social problems. Alcohol affects nearly every organ system in the body. Chronic, heavy use can cause:

- damage to vital organs. This may result in disorders such as cirrhosis of the liver, heart disease and pancreatitis. Drinking can damage the brain and central nervous system
- several different types of cancer. These include tumours of the oral cavity, tongue, pharynx, larynx, oesophagus, stomach, liver, lung, pancreas, colon and rectum
- gastrointestinal irritations, such as nausea, diarrhoea, gastritis and ulcers
- malnutrition and nutritional deficiencies
- sexual dysfunctions
- high blood pressure
- lowered resistance to disease

Alcohol contributes to accidents at home, in the workplace and in recreational settings. A high number of drowning, boating and aviation accidents and fatalities from fires involve the use of alcohol. Because alcohol impairs motor control, it can increase the risk of falls resulting in injury and death.

Suicide is one of the ten leading causes of death in Australia. For young people between 15 and 24 years old, it is one of the three leading causes of death. Alcohol contributes strongly to the occurrence of suicide. Between 20% and 35% of suicide victims have a history of alcohol abuse or are drinking shortly before committing the act. Nearly 24% have a BAC of 0.10% or higher at the time of death.

Alcohol plays an important role in much violent behaviour both in and out of the home. A large proportion of domestic violence and child abuse is linked to the use and abuse of alcohol. However, the nature of the relationship between domestic violence and alcohol is not clear. **Many violent crimes, such as sexual assaults, physical assaults, murders, robberies and manslaughters, are committed by offenders using alcohol at the time.**

The association between alcohol and crime is not limited to violent acts. There is a high correlation between alcohol use and property and drug related offences and offences against public order, such as carrying weapons, obstructing justice and traffic offences. Many people use alcohol immediately prior to committing these offences.

Children of Alcoholics

About 18% of all adult Australians have lived with an alcoholic while growing up. . More research on alcohol and other drug use by children of alcoholics is needed, however, research has found that this population is at greater risk for the development of alcoholism. Alcoholics are more likely to have an alcoholic parent, sibling or other relative. About one third of the samples of alcoholics in many studies have at least one current or recovering alcoholic parent. A wide body of literature has identified several characteristics commonly seen in adult children of alcoholics. Based more on anecdotal evidence rather than research, some of these characteristics may include:

- fear of losing control;
- extreme, "all or nothing" behaviours and thinking; feelings of isolation;
- inability to relax or play;
- fear of feelings;
- overdeveloped sense of responsibility or irresponsibility;
- difficulty with intimacy and with asking for what is wanted or needed;
- inability to remember large portions of childhood years;
- difficulty in handling stress;
- unreasonable loyalty;
- addiction to excitement;
- feelings of guilt or abandonment;
- depression;
- tendency to confuse love with pity;
- a backlog of shock and grief;
- compulsive behaviour like alcohol or other drug abuse, workaholism, gambling or overeating;
- tendency to minimise or deny problems;
- uncertainty about what normal relationships among people are; and
- stress-related or psychosomatic health problems such as ulcers, headaches or sleeplessness.

Alcohol and pregnancy

Drinking while pregnant can cause severe damage to the unborn foetus. Alcohol passes through the placenta to the foetus. This causes the foetal blood alcohol level to rise quickly. It remains high because the foetus' underdeveloped liver cannot break it down.

Alcohol can permanently damage developing foetal organs, possibly resulting in a cluster of symptoms called foetal alcohol syndrome, or FAS. Children with FAS may have mental retardation, facial and limb abnormalities, heart defects, learning disabilities, behavioural problems, postnatal growth retardation and lower birth weight, length and head size. Children with fewer and sometimes more subtle symptoms are said to have foetal alcohol effects, or FAE. Alcohol has also been linked with adverse pregnancy outcomes, including stillbirth, premature birth and miscarriage.

SPECIAL HAZARDS

Alcohol and driving

Each year alcohol is involved in about 33% of the fatal motor accidents in this country. Even at a BAC as low as 0.02%, alcohol can impair one's ability to drive cars, boats and bikes or operate machinery safely. Most states consider a person with a BAC of .15% as legally intoxicated. Driving while under the influence can result in arrest, fines, revocation of one's driver licence and court-ordered alcoholism treatment. Probationary drivers must use "P Plates" and must maintain a zero BAC

Alcohol and AIDS

Both human and animal studies suggest that the chronic abuse of alcohol undermines the ability of the immune system to fight infections. Alcohol may be one of many factors that influence the day-to-day capability of the immune system in people living with Human Immunodeficiency Virus disease or AIDS (HIV/AIDS). Many physicians advise people with HIV/AIDS to restrict their consumption of alcohol. However, there is no direct evidence that the use of alcohol affects the progression of disease among people with HIV/AIDS, and there is little reason to think that moderate alcohol consumption is dangerous to them.

Alcohol can have a significant effect on the prevention of HIV/AIDS. By loosening inhibitions, preventing good judgement and impairing clear communication, alcohol can make it harder for people to protect themselves from HIV or other sexually transmitted diseases. Negotiating with a partner about safer sex, making decisions about sexual behaviour and using condoms are all more difficult under the influence of alcohol.

Alcohol with other drugs

It can be dangerous to mix alcohol with other prescription or non-prescription drugs. Alcohol and other drugs can have three effects:

- addictive
- synergistic
- antagonistic

Addictive effects occur when alcohol and another drug combine to produce an effect that is like simple addition. Addictive effects can be expressed by the equation $1+1=2$.

Synergistic effects occur when alcohol and another drug combine to produce an effect that is greater than the sum of the effects of the two drugs alone. Synergistic effects can be expressed by the equation $1+1=3$.

Antagonistic effects occur when alcohol and another drug combine to produce an effect that is less than the sum of the effects of the drugs acting alone. Antagonistic effects can be expressed by the equation $1+1=1$ or even $1+1=0$.

Categories of Drug Interactions:

- When alcohol is combined with drugs such as sedatives, hypnotics, barbiturates, narcotics and muscle relaxers, it causes synergistic effects, including increased sedation. Alcohol also multiplies the effects of drugs such as antihistamines, antipsychotics or solvents, causing reactions similar to overdose.
- When taken with aspirin and/or non-steroidal anti-inflammatory drugs (NSAIDs), alcohol may cause an increase in blood loss.

- If alcohol is taken with drugs such as metronidazole, reactions can be similar to those of mixing alcohol and **disulfiram (antabuse)** – which is a drug prescribed to persons who are having problems with excessive use of alcohol – including nausea and vomiting.
- When alcohol is mixed with antidepressants, it causes increased impairment of mental and motor skills.
- The use of acetaminophen or methotrexate with alcohol can cause increased liver toxicity.
- Persons who use insulin or other antidiabetic drugs and drink alcohol may alter their blood sugar metabolism.
- Alcohol mixed with cocaine or **monoamine oxidase (MOA)** inhibitors may increase a person's heart rate and blood pressure, which can be dangerous.

Alcohol should not be combined with other drugs without medical supervision. People taking prescription or over-the-counter drugs should consult a doctor or pharmacist before using alcohol.

ALCOHOL USE IN AUSTRALIA Source Alcohol and Drug Foundation (ADF) Melbourne

- Alcohol is the most widely used psychoactive or mood-changing recreational drug in Australia.
- People drink to relax, celebrate and have fun. Alcohol is part of most social occasions.
- One in two Australians (aged 20 to 59 years) drink alcohol at least once per week. In 1997 Australia had the second highest per capita consumption of absolute alcohol of the English speaking nations (the United Kingdom was the highest).
- In 1997, over 3,600 Australians died due to the effects of alcohol. This represents 16% of all drug-related deaths and per cent of all deaths in Australia.
- In 1998, 48.6% of the population regularly drank at least one day per week.
- Males (59%) were more likely to drink regularly than females (39%).
- Over two-thirds of teenagers were recent drinkers (consumed in last 12 months), with 3 in every 10 being regular drinkers (at least one day per week and 4 in every 10 being occasional drinkers (less than one day per week). Male teenagers (33%) were more likely than female teenagers (27%) to be regular drinkers.
- In 1998, from age 20 onwards, most drinkers were regular drinkers (consumed alcohol at least one day per week).

Older Adults

Research shows that the majority of people decrease how much alcohol they consume as they age. As a general rule, older people drink less, abuse alcohol less and have fewer alcohol-related problems than younger people. However, not all older adults cut down on or drop drinking alcohol. Some older people do not begin to drink heavily until after middle age (this is known as late-onset disorder), while others continue their old habits of chronic or sporadic heavy use (this is referred to as early-onset disorder).

The use of alcohol may carry more risks for older adults. As the body ages, the heart, liver, kidneys and other organ systems become less efficient, taking longer to process alcohol. Thus, even a single drink can have a more potent effect.

Alcohol dependence can develop more rapidly and take hold more quickly in the older body.

Since many older adults take some sort of prescription drug and more than half of these contain some sedative, the risks associated with alcohol use increase for older adults. It is difficult to assess the number of older people struggling with alcoholism. As yet, there are no reliable, accurate ways to determine the number of older adults at risk for alcohol problems. Some reasons for this difficulty include:

- Self-reports of consumption may be challenging for people of any age, but they may be especially formidable for older adults due to problems with memory and mental averaging of drinks consumed. Since survey research commonly uses such self-reporting methods, this may not be an accurate way to gather data from older people.
- Scales used to assess the abuse of alcohol measure social, legal and job-related problems. Such scales, while appropriate for younger people, are less applicable for older adults.
- Many indicators of alcohol abuse – include falls, bruises and burns, decreased appetite, depression, anxiety and sleep and memory problems – may be attributed to the normal aging process.

People with disabilities

Research on the use of alcohol by people with disabilities is sparse, although there are estimates that people with physical or mental disabilities have at least the same rates of alcohol problems as the general population. Available research suggests that people with developmental disabilities, particularly milder forms, use and abuse alcohol at about the same or a slightly lower rate as people in the general population.

Lesbians and gay men

Studies differ over the prevalence of alcohol abuse by lesbians and gay men, but many researchers concur that alcohol problems among this population because of stressors and discrimination they face and the prominence of bars in the gay social culture. Studies comparing statistics of lesbians and gay people have found reports of alcohol use by lesbians and gay men higher than the national survey. However, there were few differences in reports of heavy alcohol consumption.

The homeless

Studies on homelessness, alcoholism and other substance abuse are controversial. Surveys conducted have found high rates of abuse and addiction, especially for single men. However, it is now thought that these studies over-represented single men and long-term shelter dwellers. Furthermore, they focussed on lifetime use rather than current use to determine rates of addiction. Some sources suggest that about 65% of all homeless people are addicted to alcohol or other drugs.

Whatever the statistics, alcohol abuse poses serious risks for the homeless, including a higher risk of thermoregulatory disorders. This can result in frostbite and gangrenous infections. Heavy drinkers who are homeless are also more susceptible TB.

WHY PEOPLE USE ALCOHOL

People drink alcohol for many reasons. Some people drink for the feeling of well being it induces at low levels. They may drink to relieve emotional pressure, to be sociable or just to satisfy their curiosity. Some people drink only on special occasions or as part of a religious ceremony. Others drink because they can't stop. They are dependent on the drug and have an illness known as alcoholism. Some important factors that contribute to the decision of whether a person drinks and how much include: the environment (at a bar, home, party, etc.); their mood; their attitudes about alcohol; and the values of those close to them. Many people choose not to drink. Some don't like the way alcohol makes them feel. Some can't drink because they have health conditions, which might become worse if they use alcohol. Some have personal or religious beliefs against drinking. Many people don't want to risk hurting their family, friends, or work and choose not to use alcohol.

PROBLEM DRINKING

Alcohol is the most abused drug in our society. Anyone can develop a problem with drinking. The abuse of alcohol occurs when someone uses alcohol irresponsibly. Alcohol abuse occurs when;

- someone's drinking creates problems for them or for others. These problems can occur in the person's family, work and social lives
- someone drinks frequently to the point of intoxication
- someone drinks in inappropriate situations, such as at work or while driving or operating other machinery
- someone who uses alcohol to cope with problems and unpleasant feelings
- someone under the influence of alcohol performs acts he or she never would while sober

Other signs of alcohol abuse include loss of memory, preoccupation with drinking, increased tolerance and denial of drinking-related problems.

ALCOHOLISM

Alcoholism is the addiction of alcohol. Alcoholics are unable to control their use of the drug. They may not feel good or normal unless they are using alcohol. Alcoholics may be able to consume large quantities of alcohol without appearing to be drunk or uncontrolled. This occurs because of their increased tolerance. Nevertheless, alcoholism causes severe physical and psychological damage. Alcoholism usually causes the same problems in one's emotional, family, work and social lives as it does for problem drinkers. However, the problems are much worse. Some people may become physically and psychologically dependent on alcohol so gradually that they are not aware of it. Others lose control over their drinking almost from the start. Even those who drink only under certain conditions – at social gatherings, for example – may become

dependent on alcohol. Dependence on alcohol may occur faster in some people, such as young people and women.

Research has not found a single cause of alcoholism. Physiological, psychological and sociological influences likely converge for a given person to become alcoholic. Recent research has shown greater evidence that some people are genetically predisposed to becoming alcoholic. Other research is examining how alcohol alters some people's physiology so they become more tolerant to the drug. This alteration may create a "feedback loop" that promotes excessive consumption. Another body of research has found that certain attitudes and values about alcohol are associated with the incidence of alcoholism:

- whether alcohol is used as a food, a sign of adulthood, or a primary part of group activities
- whether abstinence is acceptable
- whether there is wide agreement on the rules for drinking
- whether excessive drinking is socially acceptable
- what types of role models parents and peers set

There is a relatively high incidence of alcoholism among people from cultures or families that do not teach children how to use alcohol responsibly.

Alcoholism is a treatable illness. Many of its side effects can be reversed. Help is available from local medical professionals and treatment centres. Talking to a family doctor may be a good place to start. **The yellow pages of your local phone directory also list treatment agencies under "Alcohol Abuse and Addiction."**

LEGAL ASPECTS

In all states, adults may purchase alcohol at a local licensed business. The legal age for purchase and/or drinking is 18 in all states. Possession by, or distribution of alcohol to minors is illegal. An individual is still responsible for criminal behaviour while drinking, however. The person is subject to penalties for drinking and driving, creating a public disturbance, or committing other illegal acts while intoxicated.

RESEARCH QUESTIONS

A major interest of current research is the study of inherited links in the development of alcoholism. Research has already shown the tendency of alcoholism to run in families, to continue through generations. Research has also found that other types of disorders, such as schizophrenia, affective disorders and some types of antisocial behaviours tend to run in families. As with these other disorders, research has turned to examining possible genetic susceptibilities for alcoholism. Studies of adopted children have shown that to some extent a susceptibility to alcoholism is inherited. Animal studies also suggest that genetics play a part in the tendency to crave alcohol, the ability to break it down in the blood and the tolerance for its effects.

Several biological mechanisms may affect the familiar transmission of alcoholism:

- the inheritance of personality characteristics or psychiatric disorders that affect susceptibility to the disease
- the inheritance of protective factors that lessen the susceptibility to developing alcoholism
- genetic control of alcohol metabolism
- genetic control of the addictive process itself
- the inheritance of complications of alcoholism, such as Korsakoff's syndrome
- chromosomal and intrauterine effects that may predispose someone to alcoholism

What these links are and how they operate are currently major unanswered questions and further research may help identify those at risk.

Other resources available from RecoverOz include

[Addictionary](#) A Primer of Recovery Terms & Concepts from Abstinence to Withdrawal
By Jan R. Wilson and Judith A. Wilson

[Alcohol - The Substance, the Addiction, and the Solution](#)

DVD 46 mins. Part of the Hazelden Drugs of Addiction Series of DVDs.

[Alcohol & Its Effects](#)

DVD 60 mins. Online preview available when you 'click to see more.' Using graphics, animation, and brain scans, along with the voices of recovering users, top alcohol researchers, and treatment professionals, this comprehensive and current DVD describes the effects based on blood alcohol levels and length of use

[Alcohol, Street Drugs and Emotional Problems What You Need to Know](#)

Booklet. Part of the Hazelden Co-occurring Disorders Series.

We have many other books and videos. Go to <http://www.recoveroz.com.au/default.asp>

PUBLIC COUNSELLING SERVICES

NSW

Alcohol and Drug Information Services (ADIS) – 24 hour hotline
Ph: (02) 9361 2111 Toll Free Number: 1800 422 599

Victoria

Direct Line
Ph: (03) 9416 1818 Toll Free Number: 1800 136 385

Western Australia

Alcohol and Drug Information Services (ADIS) – 24 hour hotline
Ph: (08) 9442 5000 Toll Free Number: 1800 198 024

Queensland

Alcohol and Drug Information Services (ADIS) – 24 hour hotline
Ph: (07) 3236 2414 Toll Free Number: 1800 177 833

South Australia

Alcohol and Drug Information Services (ADIS) – 24 hour hotline
Toll Free Number: 1300 131 340

Northern Territory

Amity Community Services
Ph: (08) 8981 8030 Toll Free Number: 1800 629 683

ACT

24 Hour Alcohol and Drug Help-line
Ph: (02) 6205 4545