A QUICK GUIDE TO
Drugs & Alcohol

THIRD EDITION

by the National Drug and Alcohol Research Centre (NDARC)

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ALCOHOL

grog, booze, hooch, moonshine, goon, vino, piss

Alcohol is a **depressant** (see definition on page 3).

While there are many kinds of alcohol, the alcohol that people drink is **ethyl alcohol**. It is made from a mixture of yeast and water, fermented with grains, vegetables or fruits. The fermentation process changes the natural sugars into alcohol. Beer and whisky are made from grains, wine and brandy from grapes, vodka from potatoes, cider from apples, and rum from sugar, to name just a few of the most popular alcoholic drinks.

Alcohol concentration varies considerably with the type of drink. In Australia, beer contains 0.9-6% alcohol, wine 12-14%, fortified wines such as sherry and port around 18-20%, and spirits such as scotch, rum, bourbon and vodka 40-50%.

People have been drinking alcohol for thousands of years, as part of various religious ceremonies, as a painkiller, and for socialisation and fun. It is the most commonly used and socially acceptable recreational drug in Australia.

Alcohol and the law

It is legal to drink and sell alcohol in Australia, provided certain conditions are met. More detail on alcohol and the law can be found in Chapter 18, Drug laws in NSW on page 103.

Consuming alcohol

- Consumption of alcohol in designated alcohol-free zones is illegal.
- Police can detain a person who is drunk in a public place and behaving in a disorderly way.
- It is illegal for a fully licensed driver to drive with a blood alcohol concentration of .05 or over. Learner and provisional drivers must have a blood alcohol concentration of zero. See page 17 for more about alcohol and driving.

Selling alcohol

- It is illegal to sell alcohol to a person who is already drunk.
- It is illegal to sell alcohol to anyone under 18.
- Premises where alcohol is sold must have an appropriate licence. It is also necessary to obtain a licence to serve alcohol at certain events and functions.

People under 18

- People under 18 are not permitted to drink in pubs, clubs or licensed restaurants.
- People under 18 can drink in their own home, or a public place where drinking is legal such as a BYO restaurant, as long as they are supervised by:
  - their parent or guardian, or
  - another responsible adult with the permission of their parent or guardian.

How alcohol is used

Alcohol is commonly drunk in social situations for its relaxing effects, which tend to reduce people's inhibitions.

How common is alcohol use?

The Australian Institute of Health and Welfare (AIHW) conducts a National Drug Strategy Household Survey every three years. The data collected by the survey provides detailed information on alcohol, tobacco and other drug use within Australia, as well as community attitudes to drug use. The survey covers both legal and illegal drugs.

For the latest survey results, visit the AIHW website and go to the National Drug Strategy Household Survey page: http://www.aihw.gov.au/alcohol-and-other-drugs/data-sources

Previous surveys have found that alcohol is the most widely used recreational drug in Australia. However, 2016 results show that young people's drinking continued to decline, with young people more likely to delay starting drinking and abstaining from alcohol use than in previous years. While risky drinking on a single occasion was more common among younger drinkers, daily drinking was more common among those aged 40 years and older.

Effects

Short-term effects

Alcohol is absorbed rapidly into the bloodstream and affects the brain within about five minutes (absorption may be slower if the person has recently eaten).

Alcohol depresses the central nervous system, slowing down heart rate, breathing and other body functions. Other short-term effects may include:

- reduced inhibitions
- a sense of relaxation
- loss of alertness and coordination, and slower reaction times
- impaired memory and judgement
- nausea, shakiness and vomiting
- blurred or double vision
- disturbed sleep patterns
- disturbed sexual functioning (such as difficulty in maintaining an erection).

As consumption continues these effects are increased, which increases the risks involved in driving, using machinery or making decisions affecting safety.

The effects gradually wear off as the alcohol is broken down by the gut and liver. It takes about an hour for the body to break down the alcohol in one standard drink (see page 21), although there is considerable variation between individuals. It takes longer if there is damage to the liver.

Variation in effects

Because of the way alcohol is stored and processed by the body, people with a lower proportion of body fat and a higher proportion of body fluids, and larger people, are generally less affected than others by the same amount of alcohol. This means that some members of the following groups may be more vulnerable to the effects of alcohol:

- women, who are generally smaller than men and usually have a higher proportion of body fat
- older people, who tend to have lower levels of body fluids and have a slower metabolism
- young people.

A person's general state of health, and whether they have recently eaten, also has an effect.

Alcohol and young people

Alcohol use is the world's third largest risk factor for disease and disability. Early alcohol use is linked to later alcohol abuse, liver cirrhosis and pancreatitis, cancer, prematurity and low birth weight, and 4% of deaths worldwide are attributable to alcohol.

Early alcohol use may interrupt cell growth in the frontal lobe of the brain, an area which does not reach full maturity until a person reaches their mid-twenties, and which controls higher mental processes such as planning. Alcohol use interferes with brain development and harms include poor attention, poor decision-making and forward planning — impacting on mental health and educational attainment.

In Australia the most recent National Drug Strategy Household Survey Data (2016) suggests that the decline in drinking among young people since 2007 has continued.

Very little is known about the consequences of less common, but more excessive, patterns of teen drinking, or whether changes to the brain are permanent.

Hangovers

On the day following a drinking session a person may experience nausea, headache, fatigue and general unwellness with varying degrees of severity. Hangovers may be produced by the immune system. Alcohol is a diuretic; that is, it causes increased fluid loss. The fluids must be replaced by non-alcoholic drinks if dehydration is to be avoided.

Some alcoholic drinks, including brandy, bourbon and red wine, contain substances called congeners, which can also cause symptoms associated with hangover.

Smoking, drinking on an empty stomach, drinking quickly, and poor quality sleep may add to the severity of a hangover.

Long-term effects

Heavy use of alcohol over a lifetime increases the risks of:

- some oral, throat and breast cancers
- liver cirrhosis
- brain damage and dementia
- some forms of heart disease and stroke.

There is increasing evidence that drinking at low risk levels does not reduce the risk of heart disease; heavy drinking is always risky.

In terms of death and disability, alcohol is a major cause of preventable harm in Australia. For example, in 2010 almost 5% of deaths in men and 3% of deaths in women were attributable to alcohol, primarily through injuries, cancers and cardiovascular disease. In 2013-14, 40% of Australians attending drug and alcohol treatment services said that alcohol was their main problem — more than for any other substance. [2]

Alcohol and driving

The effects of alcohol on both physical and mental functioning make driving hazardous — alcohol is involved in around one-third of all road deaths. The risk increases with the amount of alcohol in the bloodstream. For this reason it is against the law to drive with a blood alcohol concentration over a prescribed limit. For more information on the legal aspects of alcohol and driving see Chapter 18, Drug laws in NSW, page 103.

Alcohol and pregnancy

Drinking alcohol during pregnancy increases the risk of miscarriage, lower birth weight, stillbirth, and premature birth. Alcohol can also harm the development of the baby's brain and physical growth and some babies may be born with a condition known as Fetal Alcohol Spectrum Disorder (FASD). A baby born with FASD may have birth defects and facial abnormalities. More often a child with FASD can have lifelong problems with learning, growth, behaviour, memory, language, communication and everyday living.

After birth, the babies of alcohol dependent mothers can suffer withdrawal symptoms, including tremors, irritability and fits.

There is no known safe level of drinking during pregnancy, and a pregnant woman or a woman planning a pregnancy, is advised not to drink alcohol.

Fetal Alcohol Spectrum Disorders (FASD)

Alcohol is a known teratogen – a toxic substance that interferes with the development of the unborn child. Fetal Alcohol Spectrum Disorder (FASD) is an umbrella term used for a range of conditions resulting from alcohol exposure in-utero including: Fetal Alcohol Syndrome (FAS), Alcohol Related Birth Defects, and Alcohol Related Neurodevelopmental Disorders. Features of FASD include: poor growth, facial abnormalities, structural damage to the central nervous system, neurological damage, reduced cognitive function, impaired ability to plan and organise, developmental delay, learning or intellectual disability.

Many of the adverse effects from alcohol consumption in pregnancy persist over time and result in significant challenges in adulthood. Studies that follow similarly-affected individuals throughout their lives have reported a range of adverse life outcomes including disrupted education and persistent behavioural and mental health problems. Individuals with FASD are at increased risk of problems in adulthood classified as 'secondary disabilities' including anxiety and depression, substance use disorders, criminal justice involvement, and education and employment difficulties.

Alcohol and breastfeeding

Alcohol in the mother's bloodstream passes into breast milk. It can reduce the milk supply, and can cause irritability, poor feeding, sleep disturbance, and poor psychomotor development in the baby. As breastfeeding has many advantages for a young baby, it is recommended that a mother who does choose to drink should continue to breastfeed her baby, but keep her alcohol consumption to a low level, not drink before feeding the baby, and not drink at all until the baby is one month old. Expressing milk before drinking may be an option. [3]

Alcohol and mental health

Many people who have alcohol-related problems also have mental health problems. For example, people with post-traumatic stress disorder (such as war veterans and people who have experienced violence) are more likely to develop problems with alcohol.

There are also strong associations between alcohol problems and affective disorders such as major depression, bipolar disorder and anxiety disorders. The use of alcohol can make the symptoms and prognosis of mental illnesses worse.

Using alcohol with other drugs

Because alcohol depresses brain activity it should not be used with other drugs or medications that have similar effects on the brain, particularly benzodiazepines and heroin. Drinking alcohol while using these drugs can cause bodily functions to slow to the point where death occurs. Many heroin overdoses are associated with heavy alcohol use.

A person taking a prescription medication should always find out about the possible effects of drinking alcohol at the same time by reading the information that comes with it, and discussing the matter with their doctor or pharmacist.

Dependence

Heavy or regular alcohol use can lead to dependence (also described as an alcohol use disorder) (see definition on page 4).

When a heavy drinker suddenly stops or reduces their drinking they are likely to experience withdrawal symptoms—which makes stopping more difficult. Withdrawal symptoms can be quite mild or quite severe, ranging from insomnia and shakiness to severe seizures and **delirium tremens**—often called the DTs—where the person is not in touch with reality (delirium) and needs urgent medical treatment.

Most people do not suffer delirium tremens, but there can be significant risks in withdrawing from alcohol, and people undergoing withdrawal should be medically monitored.

Most people who are going through withdrawal are treated in an outpatient setting. Sometimes medications such as benzodiazepines are prescribed to help reduce the severity of symptoms.

Overdose

If drinking continues for an extended period, bodily functions can decrease to such an extent that the person loses consciousness (blacks out), which can lead to death by suffocation if the person vomits while unconscious.

In rare cases, a person's physical functioning may decrease to the point where they stop breathing. This is called **alcohol poisoning**.

Australian Alcohol Guidelines

The National Health and Medical Research Council (NHMRC) publishes guidelines for reducing the health risks of drinking alcohol.

The four basic recommendations can be summarised as follows:

- **To reduce the risk of alcohol-related harm over a lifetime** (such as chronic disease or injury), a healthy adult should drink no more than two standard drinks a day (see opposite).
- **To reduce the risks of injury on a single occasion of drinking**, a healthy adult should drink no more than four standard drinks on any one occasion. (No distinction is made between men and women in this recommendation. Although women may become intoxicated more easily, men are at greater risk because they are more likely to engage in risky behaviour.)
- **For children and young people under 18**, not drinking is the safest option. For young people aged 15-17 years, delaying the start of alcohol consumption for as long as possible is the safest option. Parents and carers are advised that children under 15 years of age are at the greatest risk of harm from drinking and for this age group, not drinking alcohol is especially important.
- **Women who are pregnant, planning a pregnancy or breast feeding** should not drink at all. The greatest harm to the fetus or breastfeeding infant occurs when drinking is at high and frequent levels, but no level of drinking is considered safe.

The guidelines do not mean that any drinking is recommended. In fact they suggest that there is no universally safe level of drinking.

Treatment

Advice from a doctor or other health professional can be effective, especially with people who have milder alcohol problems, while there are several online or internet-based treatment options now available.

For those with more serious problems, other forms of treatment may be required. This may involve withdrawal under medical supervision, followed by psychological or medical treatments to help prevent the person going back to their risky behaviour.

Psychological treatments such as motivational interviewing, cognitive behavioural therapy and contingency management (see pages 7-8) have been found to be effective in treating alcohol disorders. More recent research has found that naltrexone, acamprosate and/or disulfiram in conjunction with psychological treatment can improve recovery.

Standard drinks

A standard drink in Australia contains 10 g of alcohol. This is always the same, no matter what type of alcoholic beverage it is or how it is served. As some drinks are stronger than others (eg, low-strength beer is around 2.7% where spirits are typically 40%), the higher the alcohol concentration of a drink, the less liquid it contains. A serving of alcohol in a pub or club can often be larger than a 'standard' drink, for example a standard glass of wine is 100 mL but a typical serve may be 150 mL.