# ALCOHOL

WHAT YOU NEED TO KNOW



Australian Government

**Department of Health** 

# WHAT IS ALCOHOL?

Alcohol is the most commonly used drug in Australia. It is a depressant drug, meaning that it slows down activity in the central nervous system, which sends signals between the brain and body.

Types of alcohol include:

- Beer
- Wine, including sparkling (fizzy) wines such as champagne, spumante
- Cider
- Spirits (e.g. vodka, gin, rum, bourbon, whisky)
- Liqueurs (e.g., coffee, hazelnut or melon flavoured alcohol)
- Pre-mixed drinks, also known as ready-to-drinks (RTDs) (e.g., cans of bourbon and cola, bottles of vodka or rum mixed with soft drink, vodka mixed with chocolate milk)
- Fortified wines (e.g. port, sherry)

The level of alcohol in the body is measured using blood alcohol concentration (BAC). This is the measure that is taken through a breathalyser (e.g. by police conducting roadside breath testing). This is because the amount of alcohol in a person's breath is almost exactly the same as the amount in their blood. BAC can also be measured by having a blood test.

Some drinks contain more alcohol than others. This alcohol content is usually described using a measure called alcohol by volume (ABV), or % ABV.

- Beer typically ranges from 2.7% ABV to around 4.9% ABV
- Wine is usually between 9.5%-13.5% ABV
- Premixed spirits or RTDs normally range from 5%-7% ABV
- Spirits usually range from around 37%-40% ABV

## WHAT IS A STANDARD DRINK?

In Australia, alcohol is measured in units called 'standard drinks'. A standard drink contains 10g of alcohol. This is equivalent to:<sup>1</sup>

- Just less than 1 middy or 1 pot of full strength beer (285ml)
- 1 can or stubby of mid-strength beer (3.5% alcohol content) (375ml)
- 100ml glass of wine
- 1 shot or nip of spirits (30ml)

This means that most servings of alcohol contain more than one standard drink. The law requires that drink labels include information about the alcohol content (%ABV) and the number of standard drinks per bottle/ can.

# THE ALCOHOL GUIDELINES FOR HEALTHY ADULTS

#### The guidelines for healthy adults are:1

- Drink no more than two standard drinks on any day, to reduce the risk of harm over a lifetime.
- Drink no more than four standard drinks on a single occasion, to reduce the immediate risk of harm from drinking, for example from accidents or injuries while under the influence of alcohol.
- For women who are pregnant or planning a pregnancy, not drinking is the safest option.
- For women who are breastfeeding, not drinking is the safest option.

### WHAT IS THE LEGAL AGE TO CONSUME ALCOHOL?

The legal age for buying alcohol in Australia is 18 years of age. People under 18 are advised to avoid drinking because, as well as being under the legal age, they are at a much greater risk of short-term and long-term harm compared to adults.

### HOW MANY YOUNG PEOPLE DRINK?

Around one in six (17%) students aged between 12 and 15 and 38% of 16 and 17-year-olds have had an alcoholic drink in the past week.<sup>2</sup> Approximately one in six (15.6%) of Australian teenagers drink at levels that put them at risk of injury and harm in the short term at least once a month. <sup>3</sup>

# WHAT ARE THE EFFECTS?

#### Alcohol can have the following effects:

- Slower breathing and heart rate
- Drowsiness
- A feeling of relaxation and wellbeing
- Loss of inhibitions
- Dehydration
- Unsteady gait, loss of coordination
- Disorientation
- Nausea, vomiting
- It can cause the user to become unconsciousness this is particularly dangerous if the person vomits because he/she may inhale it and suffocate

Alcohol starts to take effect within approximately 5 minutes after initial consumption with the strength (alcohol content) and the amount consumed determining how strong the effects will be. Everyone is different, but on average it takes about an hour for the body to clear one standard drink.<sup>1</sup> It can take several hours or days for the body to return to normal after a big drinking session.

#### Factors that influence the effects of alcohol include:1

- Gender women are more susceptible to its effects than men due to their size (often smaller) and body composition
- Age young people have a lower tolerance to the effects of alcohol (because they are usually physically smaller and less used to alcohol in their system)
- Size and metabolism for example, people of a smaller size are more affected than larger people
- Food consumption food slows down the rate at which alcohol enters the bloodstream
- Pre-existing mental health problems (e.g. anxiety, depression or schizophrenia)
- Some medical conditions (e.g. including epilepsy, liver conditions and alcoholic pancreatitis)
- Other medications, herbal supplements or illicit drugs that are being used at the same time. These can affect how a person feels after they drink alcohol and can have unexpected, unwanted and serious consequences

# WHAT ARE THE RISKS?

In Australia, alcohol is the second leading cause of drug-related death and hospital admissions after tobacco. Over one in every ten deaths (13%) of Australians aged between 14–17 is alcohol-related, and some researchers have calculated that each week, around five Australians aged 15 – 24 years die and another 200 end up in hospital due to alcohol-related causes.<sup>4</sup>

Alcohol is associated with a range of harms. Some harms are associated with drinking too much on one occasion (e.g. accidents, injuries, unsafe sex and alcohol poisoning) while other harms are associated with regular drinking (e.g. liver problems, cancer and alcohol dependence).

The major risks associated with alcohol use include immediate problems such as:<sup>1, 5</sup>

- Increased risk of experiencing an accident or injury, for example through road traffic accidents, falls, fires and drowning. This risk is especially high among young people
- Increased risk of sexually transmitted infections (STIs) or unintended pregnancy
- Increased chance of experiencing violence, for example getting into fights or being assaulted

#### Longer-term problems include:<sup>1,5</sup>

- Alcohol dependence ('alcoholism') see below for more information
- Brain damage and problems with brain development
- Malnutrition
- Cardiovascular (heart) problems
- Cancer alcohol has been linked to a range of cancers, including mouth, oesophagus, liver and breast cancers
- Liver problems
- Increased risk of mental health problems such as anxiety and depression
- Alcohol use may also increase problems with diabetes and obesity
- Alcohol use in pregnancy can also lead to serious problems such as Fetal Alcohol Syndrome in the unborn child

# WHICH GROUPS ARE MOST AT RISK?

#### Young people

Research suggests that alcohol use can damage the developing brain. Since our brains continue to develop until we are in our 20s, young people are advised to avoid drinking for as long as possible.<sup>1, 6</sup> People under 15 years of age are at the greatest risk of harm from drinking, so avoiding alcohol at this age is particularly important.

#### Pregnant women

There is no known safe level of alcohol use in pregnancy.<sup>7</sup> Alcohol use in pregnancy is known to increase a number of risks for the mother and the fetus, particularly among heavy and regular drinkers. These include miscarriage, premature birth, birth defects, developmental delays and brain damage. Alcohol use in pregnancy can also cause Foetal Alcohol Syndrome (FAS). Features of FAS include physical abnormalities and brain damage that can cause developmental delays, behaviour problems and learning difficulties.

#### Others

Other groups who can be at increased risk of alcohol-related harm include older people (60+ years), people with a family history of alcohol dependence (alcoholism) and people who use illegal drugs.<sup>1</sup>

Hangover symptoms vary, but can include:<sup>8</sup>

- Feeling thirsty
- Feeling tired
- Dizziness
- Nausea
- Feeling down or flat
- Anxiety
- Problems sleeping
- Loss of appetite

People with anxiety and depression may find that their symptoms become worse when they are hung over.

Hangover symptoms usually start about 6-8 hours after drinking when the alcohol starts to wear off (i.e. the BAC is decreasing). They reach their peak when the BAC reaches zero (once the alcohol has completely worn off) and can continue for around 24 hours.<sup>8,9</sup>

### ALCOHOL AND DRIVING: DON'T DRINK AND DRIVE!

Alcohol is a huge contributor to accidents, deaths and injuries on the roads each year. For people with a full license, the legal limit for alcohol use is 0.05% BAC. Even if your legal limit is 0.05 it is recommended that you don't drink any alcohol at all if you plan to drive. This is because alcohol affects different people in different ways and it is very difficult to judge your blood alcohol concentration. It is also important to note that you may be over the limit for much of the next day if you have had a heavy night of drinking.

There is good evidence that injuries and deaths from drink driving are much greater among young people than adults. For this reason the legal alcohol limit is zero for learner and provisional licence holders.<sup>10</sup>

#### Driving in rural areas

Research has shown that rates of serious injury and death from drink driving are much greater in regional and rural areas, so people who live in those communities should be especially careful.<sup>11-13</sup> A reason for this is the more dangerous environments (e.g. embankments, drop-offs, wildlife, livestock).<sup>11, 13, 14</sup>



# WHAT ABOUT DRINKING AND OTHER DRUGS?

Drinking while also using other drugs can have unpredictable effects. For example, there is a risk of overdose when mixing alcohol with other drugs that depress (slow down) the central nervous system, such as inhalants, GHB, heroin and some medications (e.g. Valium, morphine and OxyContin). This is because they are all central nervous system depressants which slow down the heart rate and breathing. Too much of one or more depressant(s) increases the risk of overdose and possible death.

Combining alcohol with drugs that have stimulant effects, such as methamphetamine, ecstasy or cocaine, can also lead to problems. For example, when used with cocaine, a metabolite called cocaethylene is formed. This can cause potentially fatal heart problems.<sup>15,16</sup>

#### For more information about cannabis use with alcohol, see

www.ncpic.org.au/ncpic/publications/factsheets/pdf/mixing-cannabis-and-alcohol

### IS ALCOHOL ADDICTIVE?

Yes, like many other drugs, it is possible to become addicted to alcohol, particularly if drinking is excessive or regular. People who are dependent on (addicted to) alcohol develop a tolerance to the drug.<sup>17</sup> This means that they need to drink more to get the same effect.<sup>17</sup>

As with any drug, people who are dependent on alcohol find that using the drug becomes far more important than other things in their lives, such as work, sport, socialising or study. They crave alcohol and find it very difficult to stop using it.

If you have family members with a history of alcohol problems, you are at greater risk of developing this problem yourself.<sup>1</sup>

# ALCOHOL WITHDRAWAL

People who are alcohol dependent will experience withdrawal symptoms when they stop or reduce their drinking. Alcohol withdrawals are different from a hangover. Symptoms usually start between 6-24 hours after the last drink and normally last a few days. In severe cases people can feel unwell for up to 14 days.

#### Symptoms of alcohol withdrawal can include:18

- Increased blood pressure, pulse and body temperature
- Agitation or restlessness
- Anxiety
- Sweating
- Headaches
- Confusion and disorientation
- Shakes or tremors
- Nausea and vomiting
- Stomach cramps
- Diarrhoea
- Loss of appetite/weight loss
- Problems sleeping
- Perceptual distortions (e.g., things looking/feeling weird or different)
- Paranoia (feeling extremely suspicious and frightened)
- Hallucinations (e.g., seeing or hearing things that aren't really there)
- Seizures these can be life threatening

'Delirium tremens' or the DTs is the name of a severe form of the withdrawal syndrome, and can be very dangerous.<sup>18</sup>

For some people, stopping their alcohol use abruptly can be dangerous. Heavy drinkers wishing to stop their alcohol use should talk to their drug and alcohol services (or GP) about developing a plan to gradually reduce their alcohol intake and minimise the risk of experiencing withdrawals.

# SOURCES

- 1.National Health and Medical Research Council, 2009. Australian guidelines to reduce health risks from drinking alcohol,<br/>National Health and Medical Research Council: Canberra.
- 2. White, V. and Smith, G., 2009. Australian secondary school student's use of tobacco, alcohol and over-the-counter and illicit substances in 2008, Cancel Council Victoria: Melbourne, Victoria.
- 3. Australian Institute of Health and Welfare, 2017. 2016 National Drug Strategy Household Survey report, AIHW: Canberra.
- 4. Chikritzhs T, P.R., Jones P, 2004. Under-Aged Drinking Among 14-17 Year Olds and Related Harms in Australia, in National Alcohol Indicators Bulletin No. 7, National Drug Research Institute, Curtin University of Technology: Perth.
- 5. Doran, C.M., Gascoigne, M.B., Shakeshaft, A.P. and Petrie, D., 2006. The consumption of alcohol by Australian adolescents: a comparison of revenue and expenditure. Addictive Behaviors. 31(10): p. 1919-28.
- 6. Lebel, C. and Beaulieu, C., 2011. Longitudinal development of human brain wiring continues from childhood into adulthood. Journal of Neuroscience. 31(30): p. 10937-47.
- 7. Burns, L., 2012. personal communication.
- 8. Penning, R., McKinney, A. and Verster, J.C., 2012. Alcohol hangover symptoms and their contribution to the overall hangover severity. Alcohol and Alcoholism. 47(3): p. 248-52.
- Prat, G., Adan, A. and Sanchez-Turet, M., 2009. Alcohol hangover: a critical review of explanatory factors. Hum Psychopharmacol. 24(4): p. 259-67.
- 10. NSW Government, Transport Roads & Maritime services. Accessed June2013 via www.rta.nsw.gov.au
- 11. Czech, S., Shakeshaft, A.P., Byrnes, J.M. and Doran, C.M., 2010. Comparing the cost of alcohol-related traffic crashes in rural and urban environments. Accident Analysis and Prevention. 42(4): p. 1195-1198.
- 12. Chen, H.Y., Jan, S., Boufous, S., Martiniuk, A.L., Ivers, R., Senserrick, T., Norton, R. and Muscatello, D., 2012. Variations in car crash-related hospitalization costs amongst young adults in New South Wales, Australia. Injury. 43(9): p. 1593-9.
- 13. Siskind, V., Steinhardt, D., Sheehan, M., O'Connor, T. and Hanks, H., 2011. Risk factors for fatal crashes in rural Australia. Accid Anal Prev. 43(3): p. 1082-8.
- 14. Centre for Accident Research and Road Safety Queensland, 2012. State of the Road: Rural and Remote Fact Sheet, Queensland University of Technology: Kelvin Grove.
- 15. Darke, S., Kaye, S., McKetin, R. and Duflou, J., 2008. Major physical and psychological harms of methamphetamine use. Drug and Alcohol Review. 27(3): p. 253-62.
- 16. Farooq, M.U., Bhatt, A. and Patel, M.B., 2009. Neurotoxic and Cardiotoxic Effects of Cocaine and Ethanol. Journal of Medical Toxicology. 5(3): p. 134-138.
- 17. American Psychiatric Association, 2000. Diagnostic and statistical manual of mental health disorders, fourth edition, text revision, Washington, DC: American Psychiatric Association.
- 18. NSW Health, 2008. Drug and Alcohol Withdrawal Clinical Practice Guidelines NSW, Sydney: NSW Health.

# FOR MORE INFORMATION

#### We have listed some of the national telephone helplines and websites below.

For free and confidential advice about alcohol and other drugs, call the National Alcohol and Other Drug Hotline 1800 250 015

It will automatically direct you to the Alcohol and Drug Information Service in your state or territory. These local alcohol and other drug telephone services offer support, information, counselling and referral to services.

Australian Drug Foundation

Provides information about drugs and links to services in each state and territory www.adf.org.au

DrugInfo Line

Provides information about drugs and alcohol. Open 9am-5pm, Monday to Friday 1300 85 85 84 or 03 8672 5983. Or visit www.druginfo.adf.org.au

Just Ask Us

Provides information about drugs, alcohol, health and well-being www.justaskus.org.au

Kids Helpline

Free, private and confidential telephone and online counselling service for young people aged 5-25 years Open 24 Hours 1800 55 1800

Lifeline

24 hour crisis line 131114 Also available is one-on-one chatlines for crisis support, visit www.lifeline.org.au/Find-Help/Online-Services/crisis-chat

Counselling Online

Free, confidential counselling service for people using drugs, their families and friends www.counsellingonline.org.au

National Drugs Campaign Australian Government website provides information about illicit drugs and campaign resources. www.australia.gov.au/drugs

> Family Drug Support For families and friends of people who use drugs or alcohol 1300 368 186

For the latest information about safety for young drivers, see http://www.youngdriverfactbase.com/

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