

Alcohol

What is alcohol?

Alcohol is an intoxicating substance made from fermented starches. It is the most widely used psychoactive, or mood-changing, recreational drug in Australia.

Alcohol is often mistakenly believed to be a stimulant. This is because drinking a small amount of alcohol may initially reduce tension or inhibitions, making a person feel more relaxed or excited. For this reason, people often drink alcohol at social occasions.

However, alcohol is actually a central nervous system depressant that affects almost all of a person's cells and systems. Increasing alcohol concentrations in the body inhibits many of the brain's functions, dampening the motor and sensory centres, and rapidly making judgment, coordination and balance more difficult, and slowing one's reflexes.

Alcohol can contribute to depression by affecting a person's brain chemistry, in particular by having an inhibiting effect on serotonin levels. Serotonin is a neurotransmitter that is linked to depression and many antidepressant drugs work by increasing serotonin levels in the brain, whereas alcohol reduces serotonin levels. Research also has shown that alcohol can affect the brain in areas that promote depression, such as interfering with sleep and appetite.

The active drug in all alcoholic drinks is ethanol. This drug is produced as a result of the fermentation of grains (beer), vegetables (vodka), and fruits (wine), changing sugars into ethyl alcohol. Pure alcohol has no taste and is a colourless liquid. Alcoholic drinks vary in appearance and taste due to the other ingredients contained within them and as a result of the method by which they are manufactured.

Alcohol only takes a few minutes to reach the brain. It is absorbed directly into the bloodstream through the walls of the stomach and small intestine, and is then quickly distributed to all parts of the body, including the brain. Food in the stomach slows down the rate at which alcohol is absorbed, but does not prevent intoxication or drunkenness, as all alcohol consumed reaches the bloodstream.

Sobering up takes time. The liver is the main organ of the body responsible for removing alcohol from the bloodstream. The liver can only work at a fixed rate, taking about an hour to break down the alcohol in a standard drink. Cold showers, exercise, black coffee, fresh air or vomiting will not speed up the process.

How many people use alcohol?

Australian general population

According to the 2010 National Drug Strategy Household Survey more than 80% of the Australian population aged over 14 years consumed alcohol in the 12 months prior to the survey. The number of people drinking daily was down to 1.3 million in 2010 (7.2%) from 1.4 million in 2007 – the date of the last Household Survey. Men were twice as likely as women to drink daily.

The 2010 Survey also showed that:

- Nearly 60% of 12-17 year olds had never consumed alcohol. However this was the only age group where more females than males drank alcohol (39.1% of females compared with 37.6% of males)
- The number of 12-15 year olds abstaining from alcohol increased (from 69.9% in 2007 to 77.7% in 2010) as did the number of 16-17 year olds (from 24.4% to 31.6%)
- Around one in five people drink alcohol at a level that puts them at risk of harm or injury over their lifetime. This has remained relatively stable. However the number of people drinking in risky quantities has increased from 3.5 million to 3.7 million in 2010 (as defined by National Health and Medical Research Council (NHMRC) guidelines). The NHMRC guidelines were updated in 2009 and as a result this has impacted on the number of Australians defined as drinking at risky levels
- Males were far more likely than females to drink alcohol in risky quantities and those aged between 18-29 years were more likely than any other age group to consume alcohol in quantities that place them at risk of injury or other harm over their lifetime
- Alcohol was nominated in the 2010 survey as the drug of most concern to the general community (nominated by 42.1%), followed by tobacco smoking (15.4%) and use of heroin (11.4%). However 45.1% of people nominated alcohol as the drug most approved of for general use.

NHMRC guidelines on safe drinking level?

A moderate amount of alcohol does not harm most people. However, a substantial proportion of people drink at levels that increase their risk of alcohol-related harm. The 2009 NHMRC guidelines aim to establish the evidence base for future policies and community materials on reducing the health risks that arise from drinking alcohol. The guidelines communicate evidence concerning these risks to the Australian community to allow individuals to make informed decisions regarding the amount of alcohol they choose to drink.

The guidelines suggest:

- For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury
- For healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion
- For children and young people under 18 years of age, not drinking alcohol is the safest option. 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. For young people aged 15–17 years, the safest option is to delay the initiation of drinking for as long as possible
- The guidelines also suggest that there is no safe drinking level for women who are pregnant or planning a pregnancy or for women who are breastfeeding. Pregnant and breastfeeding women are therefore recommended to abstain completely from alcohol.

Alcohol-related harms

- The 2010 Household Survey found that recent drinkers who drank at least once a week at levels that put them at risk of harm were 1.7 times more likely to experience very high levels of psychological distress and a higher proportion had been diagnosed with a mental illness
- About one in six people aged 14 or older put themselves at risk of an alcohol-related injury from a single occasion of drinking at least once a week
- Around two thirds of males aged 18-19 years and more than half aged 20-29 put themselves at risk of an alcohol related injury at least once a month
- The proportion of people being physically abused by a person under the influence of alcohol increased significantly between 2007 and 2010 (from 4.5% to 8.1%), while the proportion of people driving a vehicle while under the influence of alcohol decreased (from 14.3% to 13.1%) as did the proportion of people verbally abusing someone.

<http://www.aihw.gov.au/publication-detail/?id=32212254712>

<http://www.nhmrc.gov.au/your-health/alcohol-guidelines>

<http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/school08>