

# What is alcohol?

The active drug found in drinks that contain alcohol is a chemical called ethanol. When yeast acts together with sugars in grain, fruits and vegetables, it causes them to ferment or break down. This results in two by-products – ethanol, and carbon dioxide, which is released into the air as bubbles. The level of alcohol in a drink depends on how long it has fermented – the longer it has fermented, the higher the alcohol content. Stronger alcohol, such as spirits, is made when it is distilled, which removes some of the water.

## Effects

Alcohol is absorbed into a person's body primarily through the small intestine and also the stomach.

Alcohol has almost immediate effects on the body because the molecules are small and are easily absorbed through the small intestine and the stomach. Alcohol can then pass directly into the blood stream where it is distributed to all organs of the body, including the brain. The small size and simple structure of alcohol molecules also allows them to pass easily through the membrane of every cell in the body.

In high concentrations, alcohol affects many cells in the body including the liver, heart and nervous system. In the liver, alcohol is processed into a chemical called acetaldehyde, which can cause cancer throughout the body. Acetaldehyde concentration increases with blood alcohol concentration (BAC).

## Duration

Alcohol starts to affect the brain within five minutes of being consumed. The BAC peaks about 30 to 45 minutes after one standard drink (containing about 10 grams of alcohol) is consumed. Rapid consumption of multiple drinks results in higher BAC because the average body can only break down one standard drink per hour.

## Short-term

The first effects of drinking alcohol can include feelings of relaxation and loss of inhibitions. However the more alcohol a person drinks, the more their feelings and behaviour change.

## Intoxication

Intoxication is when your normal abilities are affected by alcohol. It is the most common cause of alcohol-related problems, leading to injuries and premature death.

If someone you know is experiencing difficulties with excessive alcohol intoxication, **phone 000** immediately for medical attention. Police will not attend unless the ambulance officers call for help or a death occurs.

## Long-term

Long-term excessive alcohol consumption is associated with health conditions including:

- > heart disease
- > high blood pressure and stroke
- > liver disease
- > cancers of the digestive system
- > other digestive system disorders (eg stomach ulcers)
- > sexual impotence and reduced fertility
- > sleeping difficulties
- > brain damage with mood and personality changes
- > problems with concentration and memory
- > nutrition-related conditions.

Both short and long-term effects of alcohol can have an impact on health, work productivity, finances and relationships, and may result in legal problems.

For further information on these effects and for tips to reduce the likelihood of alcohol-related harms, go to [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au) and visit the 'Healthy Living' section.

## Tolerance and dependence

Tolerance means a regular drinker feels less effect than they used to after drinking the same amount of alcohol. Dependence means that alcohol becomes central in their life and they continue to drink despite being aware of the harms caused through that consumption. A lot of time is spent thinking about alcohol, obtaining it, consuming it and recovering from it. The person will find it difficult to stop drinking or to control the amount consumed.

## Withdrawal

Someone who is physically dependent on alcohol will experience withdrawal symptoms when they stop drinking or substantially reduce their intake. Symptoms usually appear 6 to 24 hours after the last drink, last for about five days and include:

- > tremor
- > nausea/vomiting
- > anxiety/agitation
- > depression (inactivity, fatigue, altered mood)
- > sweating
- > headache
- > difficulty sleeping
- > seizures.

Alcohol withdrawal can be very dangerous. People drinking more than eight standard drinks a day are advised to discuss a decision to stop drinking with a doctor as medical treatment may be required to prevent complications.

## Drinking guidelines

The Australian Guidelines to Reduce Health Risks from Drinking Alcohol aim to reduce the risk of harm from alcohol consumption.

### Guideline 1: Reducing the risk of alcohol-related harm for adults

To reduce the risk of harm from alcohol-related disease or injury, healthy men and women should drink no more than ten standard drinks a week and no more than four standard drinks on any one day. The less you drink, the lower your risk of harm from alcohol.

### Guideline 2: Children and people under 18 years of age

To reduce the risk of injury and other harms to health, children and people under 18 years of age should not drink alcohol.

### Guideline 3: Women who are pregnant or breastfeeding

To prevent harm from alcohol to their unborn child, women who are pregnant or planning a pregnancy should not drink alcohol.

For women who are breastfeeding, not drinking alcohol is safest for their babies.

## Alcohol and the law

In Australia, laws restrict the manufacture, supply, promotion and consumption of alcohol. It is an offence to drive or attempt to drive a vehicle while under the influence of alcohol over the prescribed limit set by the State. For more information about alcohol-related laws, including drink driving, visit [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au) > Conditions > Legal matters > Alcohol laws.

In December 2017 new penalties were introduced for people who illegally supply alcohol to anyone under 18 years of age. For more information refer to the Consumer and Business Services website. [www.cbs.sa.gov.au/liquor-reform](http://www.cbs.sa.gov.au/liquor-reform)

## For more information

**Alcohol and Drug Information Service (ADIS)**  
**Phone: 1300 13 1340**  
**Confidential telephone counselling and information available between 8.30am and 10pm every day.**  
[www.sahealth.sa.gov.au/dassa](http://www.sahealth.sa.gov.au/dassa)

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