

Blood alcohol concentration

Blood alcohol concentration (BAC) is a measure of the amount of alcohol in the body in grams of alcohol per 100 millilitres of blood (g%). BACs may vary widely. Any one person drinking the same amount of alcohol can reach a different BAC on different occasions. In some instances, BAC will not peak for up to two hours after stopping drinking.

Standard drinks

In order to estimate your BAC, you need to know about standard drinks. A standard drink contains about 10 grams of alcohol. Hotels and restaurants will not always serve alcohol in standard drink-size glasses. Wine is normally sold in 140mL or 200mL glasses. One 200mL glass of wine contains approximately two standard drinks. Glasses used at home are also unlikely to be standard drink size.

The labels on bottles and cans show the number of standard drinks they contain.

One standard drink per hour will raise your BAC by approximately 0.01–0.03g%. Your BAC is more likely to rise at a greater rate if:

- > you are a female
- > you are a fast drinker
- > you have a low body weight
- > you have not eaten recently
- > you are drinking highly carbonated drinks (eg champagne).

The liver breaks down alcohol at a rate of approximately one standard drink per hour (the average rate is 7.5 grams per hour but this can vary between 4 and 12 grams per hour for different individuals). A liver damaged, for example, by hepatitis, will break down alcohol more slowly.

To prevent your BAC rising further, don't drink more than one standard drink per hour.

The only reliable method of reducing your BAC is to wait out the time for the alcohol to go through your system.

Cold showers, black coffee, fresh air, exercise, vomiting and other home remedies may help you feel more alert, but will not reduce your BAC.

For more information about standard drink sizes, visit www.alcohol.gov.au and click on the Australian Alcohol Guidelines tab.

How alcohol affects driving and similar skills

Slowed reaction time

Even small quantities of alcohol will affect your driving ability to some degree. You may react more slowly than usual when something unexpected happens (eg a car approaching from a side street, traffic lights changing colour, people crossing the road).

Poor judgement

You could have trouble judging both your speed and that of other vehicles. You may also have problems judging distances.

Impaired vision and hearing

After drinking alcohol, drivers tend to focus on the road straight ahead and avoid seeing what is happening in their side vision. You may not see cars approaching from side streets or people crossing the road, or may not hear the warning bells of a train crossing or car horn.

Poor coordination

You may have trouble doing more than one thing at a time, especially in an emergency.

False sense of confidence

After drinking alcohol, you may feel more confident. But in fact, you will be less able to cope with unexpected events. You may take risks you would not normally take.

The driving skills of alcohol-tolerant heavy drinkers are just as affected by alcohol as those of other people who have consumed alcohol.

The effects of alcohol can be especially dangerous when combined with other drugs, magnifying the effects of sleeping pills (eg Serepax, Valium, Xanax, Mogadon), cannabis, prescribed medicines including antipsychotics and strong painkillers, and cold remedies. Effects can be unpredictable when combined with stimulants such as caffeine, appetite suppressants and amphetamines.

Effects on behaviour

BAC	Likely effects
Up to 0.05g%	<ul style="list-style-type: none">> Talkative> Relaxed> More confident
0.05–0.08g%	<ul style="list-style-type: none">> Talkative> Acts and feels self-confident> Judgment and movement impaired> Inhibitions reduced
0.08–0.15g%	<ul style="list-style-type: none">> Speech slurred> Balance and coordination impaired> Reflexes slowed> Visual attention impaired> Unstable emotions> Nausea, vomiting
0.15–0.30g%	<ul style="list-style-type: none">> Unable to walk without help> Apathetic, sleepy> Laboured breathing> Unable to remember events> Loss of bladder control> Possible loss of consciousness
Over 0.30g%	<ul style="list-style-type: none">> Coma> Death

Tolerance

Not everyone will feel the effects as outlined in the table. If you do not feel these effects after drinking, this may be an indication that you have developed tolerance to alcohol (ie because you drink regularly, you will be able to drink larger quantities before feeling or appearing intoxicated).

If you have developed tolerance, despite feeling unaffected by alcohol, you may be over the 0.05g% limit and will have slowed reactions and be less able to deal with emergency situations. If you feel you have developed tolerance, this may also be a sign that your drinking is adversely affecting your life.

You cannot reliably predict your BAC based on how you feel, so it is important to keep track of the number of drinks and the number of hours you have been drinking.

Helpful tips

- > Use standard drinks to monitor your drinking.
- > Eat before you drink – food in the stomach causes alcohol to be absorbed more slowly.
- > Drink slowly, keep track of how much you have drunk, and don't top up drinks (it's more difficult to track what you have had).
- > Choose alcohol-free or low-alcohol drinks and have alcohol-free spacers between drinks.

If you think you might end up drinking too much to drive, plan ahead:

- > Choose a designated driver.
- > Take a taxi, bus or train.
- > Share a ride with others.

Remember, the only way to be certain of your BAC is to have a breath or blood test.

Laws

In South Australia it is an offence to drive (or try to drive) with a BAC equal to or over the following legal levels:

- > Full licence holders = 0.05g%.
- > Learner/Probationary licence holders = 0.00g%.
- > Drivers of buses, taxis, heavy goods vehicles and vehicles carrying dangerous goods = 0.00g%.

In addition, it is an offence to operate a boat with a BAC 0.05g% or above.

Even if your BAC is less than 0.05g%, you may still be charged with driving under the influence (DUI) if your driving ability is impaired.

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.

Drug and Alcohol Services South Australia
75 Magill Road, Stepney SA 5069
Phone: (08) 7425 5000
www.sahealth.sa.gov.au/dassa
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