Alcohol and stroke

This factsheet explains how regularly drinking more alcohol than the recommended levels can increase your risk of stroke. It includes tips on keeping track of how much you drink and reducing your intake, and lists sources of information and support.

What is alcohol and how is it measured?

Alcoholic drinks are made when grains, fruits or vegetables are put through a process called fermentation. This produces cider, beer and wine. After fermentation, a further process called distillation is used to produce spirits such as gin, whisky and vodka.

Alcohol strength is measured in percentage of alcohol by volume (per cent ABV). The higher the ABV, the stronger the drink is. Beers and ciders typically contain between 3.5 per cent and 9 per cent ABV while wine is usually between 12 per cent and 14 per cent ABV. Spirits typically contain 40 per cent ABV.

Alcohol consumption is measured in units. One unit is:
- a small glass of wine
- a single pub measure of spirits such as gin, vodka or whisky, or
- half a pint of ordinary strength beer, lager or cider.

The Department of Health recommends that women should not regularly drink more than 2-3 units a day, and men should not regularly drink more than 3-4 units a day.

Excessive drinking or ‘binge’ drinking is when more than 8 units are consumed by men or more than 6 units by women in any one hour.

Because of alcohol's toxic effects on the whole body, doctors are now recommending that regular drinkers should have three alcohol-free days every week.

What are the effects of alcohol?

Alcohol is absorbed from the stomach and small intestine directly into the bloodstream. It primarily acts as a depressant, which means that it slows down signals in the nerves and brain. Initially alcohol stimulates feelings of relaxation and happiness and activates the brain areas involved in thinking and pleasure-seeking. But when consumed to excess, alcohol can cause:

- delayed reactions and impaired judgement
- slurred speech
- poor balance and falls
- blurred vision and headaches
- exaggerated or extreme emotions
- memory loss and confusion
- long term ill-health.

As well as increasing the risk of stroke,
regular heavy drinking can lead to cancers, liver disease, osteoporosis and alcohol-related brain damage.

As we get older, we lose muscle, gain fat, and break down alcohol more slowly, and these factors make us more sensitive to the effects of alcohol.

Women’s bodies process alcohol less effectively than men’s because they have more fat and less fluid. Alcohol can therefore be more damaging to women’s health.

Osteoporosis (a condition where bone density is reduced and the risk of fractures increases) becomes more common in later years, particularly for women, and is more likely to develop in heavy drinkers.

The recommended limits are based on evidence relating to younger age groups, so as we get older we should cut down on alcohol to protect our health.

How does drinking alcohol increase the risk of stroke?

Alcohol contributes to diseases that affect the circulation of the blood, such as high blood pressure and diabetes, and these in turn raise our risk of stroke. Excessive drinking (where the recommended limits are regularly exceeded) and ‘binge’ drinking, can both raise blood pressure, which is the main risk factor for stroke.

High blood pressure develops when the pressure of the blood passing through the blood vessels is consistently high – above 140/90 mmHg. Ideally, blood pressure should be no higher than 120/80 mmHg. It is now thought that variable blood pressure, which reaches very high levels from time to time, also raises the risk of stroke. (For further information please see our factsheet F6, High blood pressure and stroke).

Type 2 diabetes can be triggered by heavy drinking as a result of changes in how the body responds to insulin. Because alcoholic drinks are so high in calories, drinking can make you more likely to become overweight, which also raises your risk of developing type 2 diabetes. Heavy drinking also causes pancreatitis (inflammation of the pancreas) which can reduce insulin production, and one in three people with this condition will develop diabetes. (For further information please see our factsheet F15, Diabetes and stroke.)

Heavy drinking is dangerous for your heart in many ways. It can raise your levels of both cholesterol and triglyceride (a type of fat in the blood), increasing your risk of getting heart disease or a stroke. Drinking alcohol in excess can also trigger atrial fibrillation, a type of irregular heartbeat which also raises the risk of stroke. (For further information please see our factsheet F26, Atrial fibrillation and stroke).

Even in moderate amounts, alcohol may lead to a rise in the blood level of a substance called homocysteine. This can increase the risk of your blood clotting and is also linked to atherosclerosis (hardening and furring of the internal walls of the arteries). This can result in a blockage forming, which could lead to a stroke.

Can alcohol be beneficial?

Alcohol may be beneficial, but only if drunk in small to moderate amounts. At higher levels, it can harm your health.
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Drinking regular, small amounts of all types of alcohol may reduce your risk of heart disease. It is generally thought that a unit or two, some days of the week, probably protects adults of all ages against heart disease.

Research shows that small amounts of alcohol may help to thin the blood and reduce the risk of clots forming in blood vessels. It may also affect the way that cholesterol is carried in the bloodstream, reducing the risk of fatty deposits building up in blood vessel walls. This can reduce the risk of ischaemic strokes, where clots or fatty build-up cause a blockage in a blood vessel.

Although drinking small amounts of alcohol a day has been found to offer some protection against heart attack and stroke, there are still more effective ways to protect your health. These include eating a healthy diet, staying active, getting enough sleep, and having regular health checks as recommended by your doctor.

Can I drink alcohol after a stroke?

The effects of alcohol may put you at further risk after a stroke, and you will need to review your drinking and consider cutting down, especially if you were a heavy drinker beforehand. There are a number of factors you need to consider – talk to your GP for more advice:

- Following a stroke you may be more vulnerable to alcohol and its negative effects such as sleep disturbance, poor balance and impaired speech. Alcohol may worsen mood swings and depression, which are common after a stroke. It may affect your memory and thinking, making you forgetful and less able to make sound judgements.
- If you are out after dark, you should remember that alcohol can reduce night vision by 25 per cent and slow down reaction times by 10-30 per cent.
- Alcohol acts on the kidneys, creating excessive amounts of urine, which may make you dehydrated. If you are suffering from headaches, the dehydrating effect of alcohol is likely to make them worse.
- Alcoholic drinks are high in calories that have no nutritional value. If you are less active than before your stroke, you will need to reduce your calorie intake (especially these ‘empty’ calories) to avoid becoming overweight. Alcohol may make it harder for your body to absorb essential nutrients such as vitamin B1 and calcium. If you are less active and not absorbing calcium properly, your bones may become weakened.
- Drinking alcohol may be harmful when taking medicines that are sometimes needed after a stroke. Ask your GP or pharmacist about whether you may drink at all and if so, what the sensible limits are for you. You may be advised to stop drinking for the first month or two after starting a new medicine so that your body can get used to its effects.
- If you are taking blood-thinning medications such as warfarin, it may be important to establish a routine of what you eat and drink. If you do drink you should ask at your anticoagulant clinic about your alcohol intake and how much you can safely drink on a regular basis.
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Drinking alcohol after a stroke due to bleeding in the brain (a haemorrhagic stroke) could put you at particular risk. You will need to avoid alcohol for at least the first three weeks, and be advised by your doctor after that.

Staying in control

If you drink, it is vital to work out how many units you are having so that you can keep within sensible limits. Try keeping a ‘drinks diary’. For a couple of weeks, at the end of each day, make a note of what you drank and count up the units. You could also keep track using a computer or a smart phone app. See the organisations listed at the end of this factsheet for more details.

If you find that you are regularly drinking more than the recommended amount and you would like to cut down, you could try some of the following suggestions. If you would like help, you could also speak to your GP or practice nurse, or contact some of the organisations listed at the end of this factsheet.

• Set yourself a daily alcohol limit and stick to it.
• Work out when you do most of your drinking and see if there are obvious times when you can cut back (such as the ‘quick drink’ after work).
• Gain support. Tell your family and friends you’re cutting down – they may be more supportive than you’d expect.
• Don’t drink on an empty stomach. Have a good meal before you go out, or limit your drinking to mealtimes only. Drinking with food slows the rate of absorption of the alcohol into your bloodstream, and should help you to get a better night’s sleep.
• Always drink a glass of water alongside your glass of wine to counteract dehydration. Top up the water before the wine glasses.
• If you’re out drinking in a group, avoid buying rounds, as this can encourage you to drink more alcohol more quickly. Go to a place that serves food, as eating will slow down the effects of alcohol.
• Try alternatives to alcohol. Experiment with flavours – use slices of fruit to add extra zing or try non-alcoholic versions of your usual drinks. There are plenty of fruit drinks and alcohol-free wines and beers on the market. Or you might wish to keep it simple with a tonic and lemon or a lime soda.
• Suggest an alcohol-free outing with your friends instead of meeting for a drink – there are plenty of alternatives, from visiting a place of interest to going to the cinema, and they will not necessarily cost any more than going to the pub.
• If you’re drinking at home, try not to pour larger drinks than you would get if you were drinking in a pub or restaurant. Precise measures, stoppers and vacuum seals are available for you to buy so that you can monitor your intake.
• Serve spritzers and other mixed drinks at home that can be made in lower alcohol versions, like cocktails or fruit punch.
• Keep a range of non-alcoholic drinks that you like at home, or try making smoothies and non-alcoholic cocktails.
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• Have regular alcohol-free days to avoid becoming dependent on drink.

• If you need to relax, try some less harmful ways to manage your stress like soaking in a warm bath or shower, having a massage or talking to a trusted friend. Find out if your local stroke group, leisure club or day centre has yoga or fitness activities, relaxation sessions or complementary therapies on offer as these will often lift your mood.

• If you feel low and think you may be depressed, seek help. Depression is often associated with alcohol use, and should improve as you start to drink less. Depression is also common after a stroke. It can be treated and there is a lot of help and support available. (For further information please see our factsheet, F10, Depression after stroke).

Useful organisations

All organisations listed are UK wide unless otherwise stated.

Stroke Association
Stroke Helpline: 0303 3033 100
Website: stroke.org.uk
Email: info@stroke.org.uk
Contact us for information about stroke, emotional support and details of local services and support groups.

NHS Choices (England and Wales)
Website: www.nhs.uk/livewell/alcohol
Information on alcohol and health and online resources, including a search facility for details of alcohol services near you and a Drinks Tracker you can download to monitor how much you are drinking.

( AA) Alcoholics Anonymous
Helpline: 0845 769 7555
Website: www.alcoholics-anonymous.org.uk
Information and support for anyone concerned about their own drinking.

Al-Anon (UK and Eire)
Helpline: 020 7403 0888
Website: www.al-anonuk.org.uk
Information and support for anybody whose life is affected by someone else’s drinking.

Other Al-Anon information services:
Al-Anon (Scotland)
Tel: 0141 339 8884
Al-Anon (Northern Ireland)
Tel: 028 9068 2368

Alcohol Concern
Drinkline: 0800 917 8282
Website: www.alcoholconcern.org.uk
Organisation that works to increase the range and quality of services available to people with alcohol related problems. There are downloadable publications and a directory of useful organisations on the website. Manages the ‘Down your Drink’ website (see below).

Alcohol Focus Scotland
Drinkline Scotland: 0800 7 314 314
Website: www.alcohol-focus-scotland.org.uk
Information and advice on sensible drinking, publications on alcohol and related issues. Promotes responsible drinking.

DAN 24/7 (Wales Drug and Alcohol Helpline/ Cyffuriau ac Alcohol Cymru)
Tel: 0800 6 33 55 88
A bilingual telephone helpline for anyone in Wales wanting further information and help relating to drugs and/or alcohol. Open 24 hours a day, 7 days a week. Services include initial assessments to establish needs and
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referrals to local and regional drug and alcohol services.

Down Your Drink
Website: www.downyourdrink.org.uk
Website managed by Alcohol Concern that helps you to work out whether you are drinking too much and if so, provides tips on what you can do to change this.

Drinkaware
Tel: 020 7766 9900
Website: www.drinkaware.co.uk
An organisation that works towards positively changing behaviour to reduce alcohol misuse and alcohol-related harm. The website provides information on alcohol and how to drink sensibly. The resources enable you to track alcohol intake, calorie consumption and drinking costs.

Disclaimer: The Stroke Association provides details of other organisations for information only. Inclusion in this factsheet does not constitute a recommendation or endorsement.

Produced by the Stroke Association’s Information Service.
For sources used, visit stroke.org.uk
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Factsheet 13, version 01 published April 2012 (next revision due March 2014).

Item code: A01F13

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