

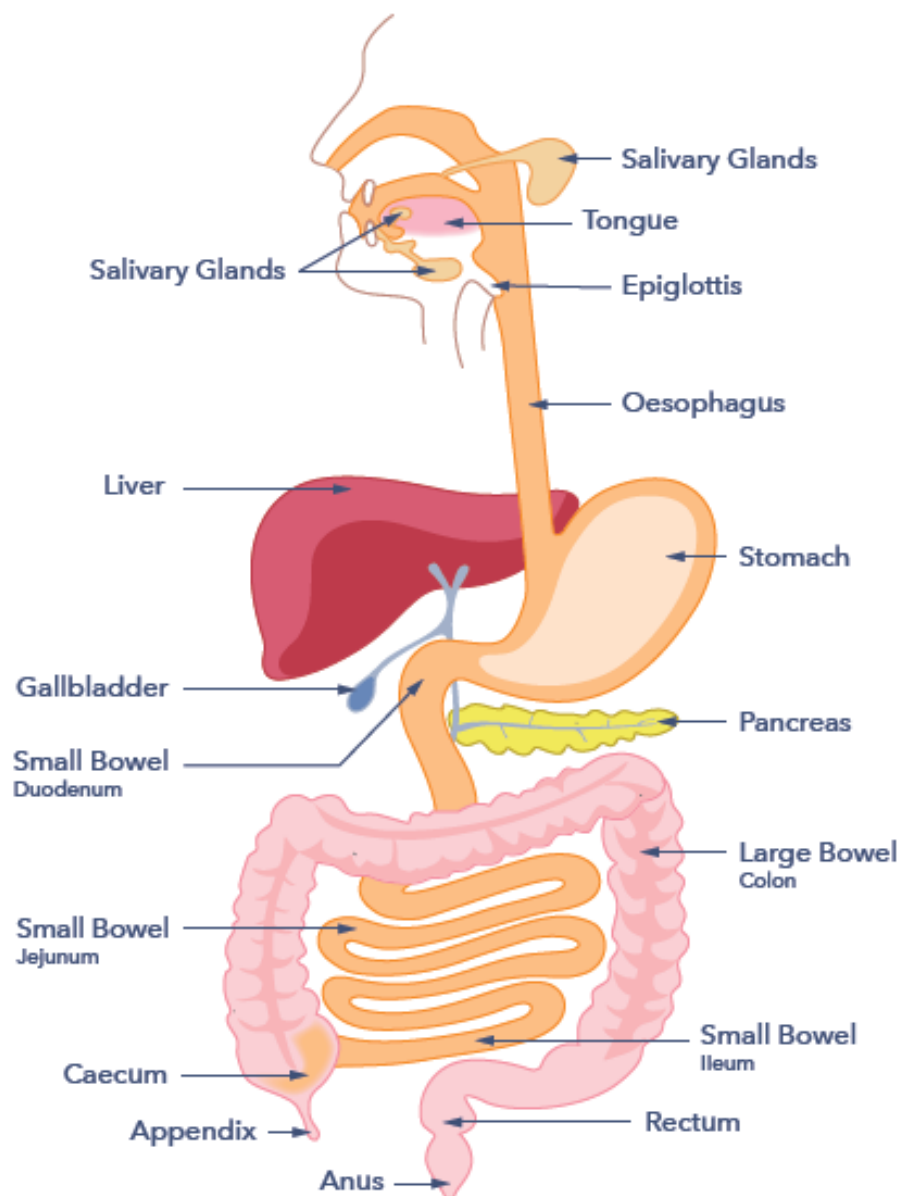
Alcohol



Guts UK is the charity for the digestive system. Funding research to fight diseases of the gut, liver and pancreas.



THE DIGESTIVE SYSTEM



THIS FACTSHEET IS ABOUT ALCOHOL

CONTENTS	PAGE
Overview	1
How is alcohol content measured?	1
What does the chief medical officer advise regarding low-risk drinking?	2
Calories	3
What happens in your body when you drink alcohol?	3
Alcohol and the digestive tract	6
Alcohol and the body	10
What are the benefits of reducing or stopping drinking alcohol?	12
Frequently asked questions	14
Support	16

Alcohol is part of UK culture. Drinking moderately, as the UK chief medical officer suggests, usually leads to few issues. Over half of men and about 2 in 5 women drink alcohol at least once a week. This number has gone down since 1998, particularly among younger people. While fewer people are drinking, alcohol use disorder is rising. 1 in 3 men and 3 in 20 women drink harmful levels of alcohol. This information helps you make better choices about your alcohol intake.

HOW IS ALCOHOL CONTENT MEASURED?

Alcohol content is often expressed as 'units' in the UK, which refers to 10ml or 8g of pure alcohol. But alcoholic drinks have a range of units in one serving, even within the same type of alcohol. Alcoholic drinks can be labelled as 'alcohol by volume' (ABV). ABV is the percentage of the drink that is pure alcohol. It can be tricky to estimate the units in a drink. This is especially true if you're ordering it when out, where drinks are often served in an unlabelled glass. Also, different places may mix cocktails in different ways. So, they may have different alcohol contents.

- The average alcohol content of beer: 4.5 - 5.3 per cent.
- The average alcohol content of red or white wine including sparkling wine: 12 - 14 per cent.
- The average alcohol content of spirits (e.g. gin, whisky or vodka): 35 - 40 per cent.
- The average alcohol content of alcopops: 4 per cent.

				
Pint of strong BEER/LAGER/CIDER 5.2% ABV 3 UNITS	Pint of STRONG LAGER 8% ABV 4.5 UNITS	500ml bottle of STRONGER CIDER 7.5% ABV 3.8 UNITS	250ml glass of RED OR WHITE WINE 13% ABV 3.3 UNITS	25ml single SPIRIT AND MIXER 40% ABV 1 UNIT
				
50ml double SPIRIT AND MIXER 40% ABV 2 UNITS	275ml bottle of ALCO-POP 5% ABV 1.4 UNITS	Pint of LAGER 4% ABV 2.3 UNITS	750ml bottle of WINE 13.5% ABV 10 UNITS	Pint of BITTER 5% ABV 2.8 UNITS
				
175ml glass of RED OR WHITE WINE 13% ABV 2.3 UNITS	500ml can of LAGER 3.8% ABV 1.9 UNITS	50ml glass of FORTIFIED WINE (e.g. SHERRY) 20% ABV 1 UNIT	50ml double IRISH CREAM LIQUEUR 20% ABV 1 UNIT	

WHAT DOES THE CHIEF MEDICAL OFFICER ADVISE REGARDING LOW-RISK DRINKING?

Limit alcohol to no more than 14 units a week, spread over 3 or more days. Have several drink free days every week. So, what does 14 units look like? It is approximately 6 pints of beer, or seven glasses of wine. You can calculate how many units you are drinking [here](#). There is also another useful checklist [here](#).

The advice is in respect to reducing the risk of alcohol harm to a low level. This means that the harm from alcohol is less likely. But evidence suggests that there is no level of drinking without risk. This level of consumption means a 1 in 100 chance of dying from an alcohol-related

problem after drinking 14 units per week. Also, these guidelines are for the population. Each person's risk may differ. For most people, if you drink within these limits, alcohol won't shorten your life. By "risks of alcohol," we mean its short-term (immediate) and long-term (later) effects.

CALORIES

Another fact we often forget is that alcohol has calories. Calories are used to measure the energy the body gets from food and drink. It can affect our daily energy intake and weight. Alcohol calories are often called 'empty calories'. This is because they have no nutritional value. Alcohol has 7 calories per gram. But it's easier to think about it in terms of drinks and foods you know. A 250ml glass of wine has about 190 calories. That's the same as a plain glazed doughnut. A pint of beer has about 240 calories. That's almost as much as a slice of pizza. Even spirits, which have less sugar and fewer calories than other alcohol, still have calories. 24ml (one ounce) of alcohol has about 80 calories, depending on the type.

WHAT HAPPENS IN YOUR BODY WHEN YOU DRINK ALCOHOL?

When you drink alcohol, you swallow it and it ends up in your stomach. From there, it moves to your small bowel. Your small bowel absorbs it into your blood. Your liver then processes the alcohol. It can handle up to 24 ml (one ounce) of alcohol each hour. That's about one standard drink per hour. Any extra alcohol will circulate in your blood until your liver can process it. This is why you can still feel the effects of alcohol even after you have stopped drinking it. The liver processes alcohol at different speeds for each person. Factors like weight, food intake, age, gender, medications, and genetics all play a role in this process.

Short-term effects

Excessive alcohol consumption has immediate short-term effects. They include:

- Falling
- Nausea and vomiting
- Slurred speech
- Slower reflexes and reactions

High alcohol levels greatly increase the chance of injuries. These include:

- Head injuries
- Fractures and facial injuries caused by falls
- Traffic accidents
- Poisonings
- Drownings

This affects both you and others. Alcohol is connected to domestic abuse and poor mental health. This includes suicide. It's also tied to losing control when judging risky situations, like unprotected sex. Alcohol is the biggest risk for death and illness in 15-49-year-olds in the UK.

Binge drinking

This is the consumption of 6 or more units in one session for women and 8 or more units for men². For women, binge drinking is the equivalent of two large (250ml) glasses of wine in one sitting. This level of drinking can increase the risk of short-term effects. It can also increase long-term effects if drinking is continued at these levels over time.

Long-term effects

Too much alcohol is the third biggest cause of preventable illness and disability. Alcohol use disorder can harm nearly every major organ in the body. Harmful drinking is over 35 units a week in women and over 50 in men. Women who drink 14 to 35 units, and men 14 to 50 units, are drinking hazardous levels of alcohol. Some effects of this level of alcohol

depend on the individual. People react in their own ways to alcohol. There is no level of drinking without risk. The more you drink on a regular basis, the greater the risk.

Alcohol use disorder

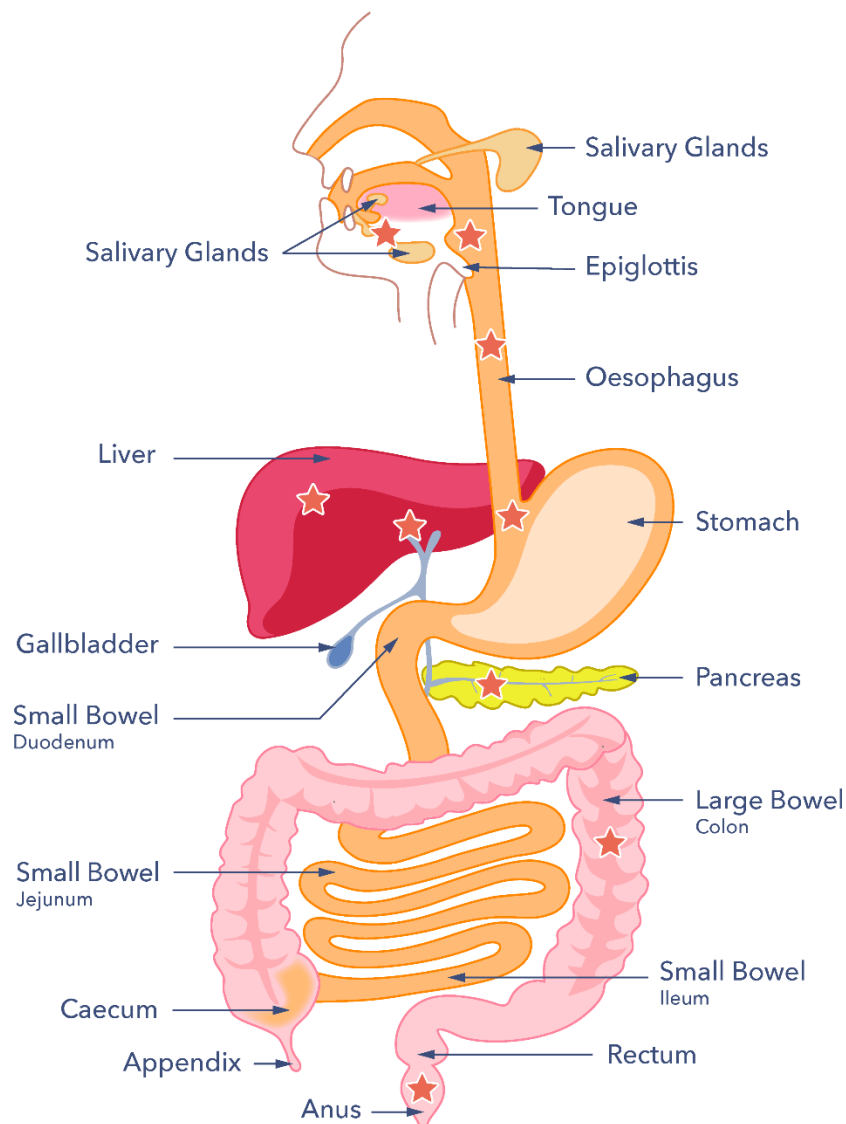
This describes a harmful drinking pattern. It affects daily activities and harms the body. To get a diagnosis, you must meet at least two of these criteria:

- Alcohol is often taken in larger amounts or over a longer period than was intended.
- There is a strong wish or failed attempts to reduce or manage alcohol use.
- A lot of time goes into getting alcohol, using it, or recovering from its effects.
- Craving, or a strong desire or urge to use alcohol.
- Using alcohol repeatedly and then failing to meet key responsibilities at work, school, or home.
- Ongoing alcohol use, even when it leads to repeated social or relationship issues that are made worse by alcohol.
- People cut back or stop important social, work, or leisure activities due to alcohol use.
- Drinking alcohol in unsafe situations. For example, whilst driving.
- Alcohol use continues even when a person knows it causes ongoing physical or mental health issues.
- Tolerance, as defined by either of the following:
 - A need for much larger amounts of alcohol to feel drunk or get the desired effect.
 - A clear drop in effect with regular use of the same alcohol amount.

- Withdrawal can show in one of these ways:
 - The characteristic withdrawal syndrome for alcohol. Symptoms include tremors, seizures, sweating, confusion and hallucinations.
 - Alcohol, or a similar substance like a benzodiazepine, is used to ease or prevent withdrawal symptoms.

ALCOHOL AND THE DIGESTIVE TRACT

This section describes the effects of high-risk drinking on the digestive system. This includes an increase of the risk of cancer in several areas of the digestive tract. See the image below, the areas with the red stars show the areas of the digestive tract at risk.



The throat

Long-term alcohol use can increase cancer risk in the larynx, a part of the throat. This is especially true for cigarette smokers who drink alcohol. Statistics suggest that 1 in 4 laryngeal cancer cases are due to alcohol. Laryngeal cancer, a type of head and neck cancer, has risen by a fifth over 10 years. More males than females are diagnosed with this cancer. But rates in females are rising faster. Alcohol can be a factor in other types of head and neck cancers, including mouth cancer.

The gullet

Alcohol can cause episodes of **heartburn and reflux**. This is because it relaxes the muscle at the bottom of the gullet (oesophagus). This causes acid to reflux into the gullet. Alcohol can irritate the gullet's lining. This can cause swelling and inflammation (oesophagitis). In the most severe cases, ulcers can develop. They can cause pain when swallowing, vomiting, and sometimes bleeding. Long term damage to the oesophagus from alcohol can cause **oesophageal cancer**.

The stomach

Alcohol can harm the stomach lining. It causes inflammation (**gastritis**) and reduces the ability to repair the damage. It also affects how the stomach empties and alters the amount of acid that is produced. Alcohol can raise the risk of **stomach cancer**.

The bowels

In the first part of the small bowel, alcohol can cause inflammation (duodenitis) and ulcers. Alcohol is taken into the body in the small bowel, but it can increase cancer risk in the large bowel. This is because all alcohol goes into the blood, and this is one way it reaches the large bowel, increasing the risk of cancer. The bacteria in the bowel also change the alcohol into substances that raise the risk of **bowel cancer**.

The liver

The liver has about 500 functions. One of the functions is processing alcohol to reduce its toxicity. It is therefore not too surprising that

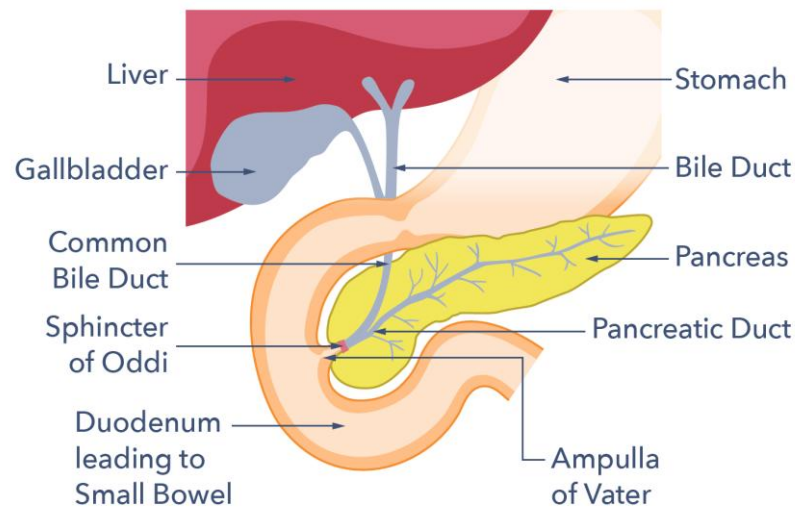
excessive alcohol can cause damage. Alcohol is the second most common cause of liver disease. It is also the leading cause of death from liver disease in the UK. Alcohol use disorder can lead to liver inflammation known as alcoholic hepatitis. Alcoholic hepatitis can show up suddenly with signs that the liver is failing, needing hospital care.

Signs of liver failure include:

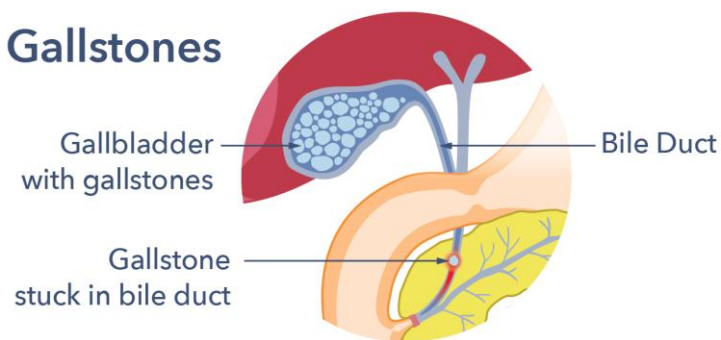
- Severe yellowing of the skin and eyes (jaundice). Yellow skin might be more difficult to see on darker skin tones.
- Trouble with blood clotting.
- Swelling of the belly from fluid (**ascites**).
- Bleeding in the digestive tract.
- Confusion (encephalopathy).

Chronic inflammation from alcohol can eventually scar the liver in some people. This condition is called cirrhosis. Cirrhosis can prevent the liver from working correctly. Liver inflammation and early scarring are reversible if a person stops drinking, but cirrhosis is not. Early liver scarring and cirrhosis cause no symptoms at first. So, a person may not know they have it. A person may eventually develop 'liver decompensation.' This shows the liver is failing, especially if they continue to drink. This can cause debilitating symptoms. They include abdominal swelling from fluid (ascites), bleeding in the digestive tract, and confusion (encephalopathy). Often, doctors need to manage these symptoms in hospital. Drinking too much alcohol can raise the chance of getting **liver cancer**.

The pancreas



Gallstones



Drinking too much is the second most common cause of **acute pancreatitis** and the most common cause of **chronic pancreatitis**. However, other causes, like genetics and **gallstones**, are beyond your control. About 1 in 4 cases of acute pancreatitis in the UK are caused by alcohol. It is not yet fully understood how alcohol causes the disease. We know that the more alcohol you drink, the greater your risk of acute pancreatitis. Excessive alcohol intake can also increase the risk of pancreatic cancer.

ALCOHOL AND THE BODY

Long-term exposure to high levels of alcohol can greatly increase the likelihood of sustaining injuries linked to the short-term effects. Excessive alcohol intake can also affect other body areas, including:

The heart

Alcohol raises the risk of irregular heart rhythms (atrial fibrillation) and heart muscle disease (cardiomyopathy). It is a significant risk factor for high blood pressure. Harmful levels of alcohol can increase a person's risk of heart attack and peripheral vascular disease, especially in men and post-menopausal women.

The brain

Alcohol may help us forget our problems for a bit, but too much can cause depression and anxiety. It can make dealing with stress more difficult. Some people use alcohol to self-medicate for mental illness. This can create a cycle of depression and increased alcohol use. This situation can mask the original illness, so it is not a successful strategy to use. Long-term excessive alcohol use can increase the risk of dementia or Wernicke's encephalopathy, an alcohol-related brain injury that causes unsteadiness on the feet, confusion and problems with eye movements. Excessive alcohol intake can also lead to a stroke.

The bones

Brittle bones (osteoporosis) are more likely in people who have alcohol use disorder. Osteoporosis means the bone structure contains more spaces like a honeycomb. The bones become brittle and weak and break more easily. Osteoporosis can lead to bone fractures.

Body weight

Alcohol can cause an unhealthy high or low body weight. A low body weight can be caused by not getting enough nutrients and the liver being unable to process them. This can lead to muscle wasting. Alcohol is high in calories. For some people this can lead to weight gain because of extra fat storage. This is not the same as weight gain from ascites, which is fluid in the belly, see page 8.

Gender differences

Men

Increased alcohol use in men can lower libido and reduce inhibitions. Alcohol consumption can reduce the quality of sperm and disrupt the normal balance of hormones such as testosterone.

Women

Increased alcohol use in women can lower libido and reduce inhibitions. The current safe alcohol intake recommendations are the same for women and men. But alcohol's effects on the body depend on gender. Women's bodies are different in composition. This means that, for the same amount of alcohol, women can have more alcohol in their bloodstream than men. This is because women's bodies normally have more fat than men's. This means that there is less ability to dilute the alcohol, which is diluted in water.

Breast cancer

Each extra unit of alcohol per day increases the risk of breast cancer. Even drinking within the UK low risk guidelines slightly increases breast cancer risk. The risk rises with higher alcohol consumption.

Pregnancy

Foetal alcohol spectrum disorder (FASD) causes physical and brain damage to the baby. Currently, pregnant women are advised not to drink alcohol. The safe level of alcohol during pregnancy is unknown. It may harm the foetus. If you are concerned about alcohol consumption before knowledge of a pregnancy, discuss this with your midwife.

Reduced fertility

Some studies show that alcohol consumption may affect a person's ability to become pregnant. This may be due to the disrupting effect of alcohol on the normal balance of hormones.

There is no evidence on the gender effects of excessive alcohol use on those who have had gender reassignment surgery.

WHAT ARE THE BENEFITS OF REDUCING OR STOPPING DRINKING ALCOHOL?

Some effects of alcohol are reversible. They include:

- Inflammation in the digestive tract.
- Alcoholic hepatitis.
- Early liver scarring.

It is always a very positive step to consider reducing or stopping. It can also prevent further damage, where it is not reversible. If you have liver cirrhosis, stopping drinking can reduce the risk of decompensation events.

Whilst it can be difficult making lifestyle changes, planning for them can be helpful. Think about what changes might help you. List both the benefits and what might make the change harder for you for each change you might make. For example, some of the benefits might include:

- Saving money.
- Sleeping better and feeling more energetic.
- No hangovers.
- Better relationships with friends and family.
- Improved symptoms of heartburn and reflux.
- Improved symptoms of **indigestion**.
- Improved symptoms of **diarrhoea**.
- A healthier digestive tract (including your liver and pancreas.)
- Reduced risk of cancer.
- Reduced risk of having accidents.
- Reduced risk of high blood pressure.
- Stronger bones.
- A healthier brain and better memory.
- Improved mood and libido.

Choose the easier options to change first. This will help you to succeed. It might also help you to plan for the more difficult options – what steps can you put in place to reduce that challenge?

Make sure you measure your success. It might help to consider non-alcoholic rewards when they have been achieved. For example:

- A trip to the cinema.
- A day trip out.
- Investing in a subscription for streaming services with your savings.
- Meeting others at a local park or in a coffee shop.
- Arranging a games night with friends.

These options will be individual to you, so it doesn't need to be one from the list.

- Some alcohol-free days each week can help reduce intake.
- You can lower your intake by not having a drink every time 'a round' is suggested.
- You could also have a non-alcoholic drink between your alcoholic ones.
- Some non-alcoholic alternatives look and taste very similar to their alcoholic versions. Choosing these may help you feel more included, while reducing alcoholic drinks.
- Choose lower alcohol versions – low alcohol lager instead of spirits.
- Avoid drinking with people who encourage high alcohol intake.
- Take part in events like Dry January.
- Avoid going to the pub after work.
- Join online support groups or those that meet in person for encouragement.

Keep going. It can sometimes take more than one attempt to change. It can also help to see what you have achieved so far, if your good habits slip.

If you have alcohol use disorder or regularly drink at high-risk levels, don't stop at once (commonly known as going 'cold turkey'). You may have symptoms of tremors, seizures, sweating, and hallucinations. You may have changes to your mental health with alcohol use disorder too. Suddenly stopping high level alcohol use can be dangerous. Talk to your doctor about reducing your intake. They can help you with any withdrawal effects that might occur. They can also help if you have trouble cutting down your drinking. Cutting back or quitting alcohol can be tough and scary. But many charities and resources can help you to succeed. Within the NHS this usually includes local services called 'alcohol liaison services' or 'drug and alcohol co-ordination teams'.

There are also medications available, that can be prescribed by alcohol liaison services, which help to reduce the cravings for alcohol to help you keep abstinent.

FREQUENTLY ASKED QUESTIONS

How do I know if I am drinking too much?

You can use a self-assessment tool [here](#) to check your risk.

Is red wine good for you?

Some studies suggest that polyphenols in red wine are good for health. However, there is no safe level of alcohol intake. Less alcohol reduces the risk of long-term damage. This includes drinking within the guidelines. So, it is better to avoid drinking for this reason alone. Some evidence shows that non-alcoholic grape juice has similar benefits. Some evidence suggests that low levels of red wine can prevent heart disease. But this is offset by an increased cancer risk at these levels. Drinking too much red wine is harmful.

Is there a cure for hangovers?

There are lots of old remedies that people often quote as cures for hangovers. A hangover is a mix of unpleasant symptoms. They occur about 10 hours after consuming a lot of alcohol. The reasons for feeling so unwell with a hangover are unknown. Cures are likely a myth. This includes the 'hair of the dog' advice to have another drink. This is likely to

prolong a hangover rather than cure it. Wait 48 hours (2 days) before drinking alcohol again. It allows your body to recover. To reduce symptoms, drink fluids like water or isotonic drinks. Hangovers often cause low blood sugar. So, eat some bland carbs, like toast or cereal. If you experience reflux, you may need to take an antacid to settle your stomach.

The best option is to drink fluids just before going to bed. Another option is to stay well-hydrated whilst drinking. You can drink fluids like wine spritzers. Or alternate with a non-alcoholic drink. This tip will also lower your alcohol intake and hydrate you.

Alcohol with substances called congeners can worsen hangover headaches. Congeners are usually in coloured alcohol, like red wine or dark spirits.

When should I see my doctor?

If you are drinking harmful levels of alcohol and can't stop, consider seeing your GP. Try and be accurate about how much you are drinking and let them know of any problems that it is causing. Principles of care of people with alcohol use disorder in the NHS include building a trusting relationship and supporting the person in a non-judgemental manner.

If you notice any of the following symptoms, please tell your doctor as soon as possible:

- Yellowing of the whites of your eyes
- Abdominal swelling

Contact emergency services if you have any of these symptoms:

- Vomiting blood
- Bleeding from the bottom
- Black, tarry poo
- Hallucinations
- New onset confusion
- Tremors or seizures

Call NHS 111 or 999. If you do not live in England visit **NHS Inform for Scotland**, **NHS 111 for Wales** or **HSCNI Online for Northern Ireland**.

SUPPORT

Charities/ Further information

- **Drinkaware** <https://www.drinkaware.co.uk/>
- **Alcohol Change UK** <https://alcoholchange.org.uk/>
- **Alcoholics Anonymous** or call 0800 9177650.
- Drinkline is a free, confidential helpline for people who are concerned about their drinking, or someone else's. In England and Northern Ireland call 0300 123 1110 (weekdays 9am to 8pm, weekends 11am to 4pm). If you live in Scotland, call [0800 7314 314](tel:08007314314).
- If you live in Wales, you can contact the **DAN Alcohol and Drug Helpline** any time of the day or night. Freephone: 0808 808 2234, or text DAN to: 81066.
- **Liver UK** works to improve liver health for all and supports those affected by liver disease or liver cancer. You can also call the nurse-led helpline on 0800 652 7330 between 9am and 4:00pm Monday to Friday (not bank holidays).
- **Forward Trust**. This organisation provides a range of services across communities in England to support people with alcohol issues and those supporting them.
- **National Organisation for Foetal Alcohol Spectrum Disorder** .
- **NHS Better Health Drink Less**

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References available on request