

The facts about...

Alcohol and **the Liver**

for the facts
drinkaware.co.uk

**Five key
things you
need to
know**

This is a part of your body that regularly works overtime.

The liver is our largest organ and it has 500 different roles. One of the liver's most important functions is to break down food and convert it into energy when you need it. Your liver also helps the body to get rid of waste products and plays a vital role in fighting infections, particularly in the bowel.

And yet, when your liver is damaged, you generally won't know about it - until things get serious. Regularly drinking over the government's lower-risk guidelines can increase your risk of developing liver disease and cause irreparable damage to this very important part of your body.¹

In fact, this level of drinking is a major cause of the 20% increase in deaths from liver disease in England over the last decade (from 9,231 in 2001 to 11,575 in 2009)². Overall, alcohol-related liver disease accounts for well over a third (37%) of liver disease deaths. And figures show victims of liver disease are getting younger - more than 1 in 10 deaths of people in their 40s are from liver disease, most of them from alcohol-related liver disease.³

1

Drinking too much alcohol can damage the liver in two main ways

Liver disease is the term used to describe damage to the liver and there are two types. Acute is when liver problems develop over a few months and chronic liver disease is damage over a number of years.

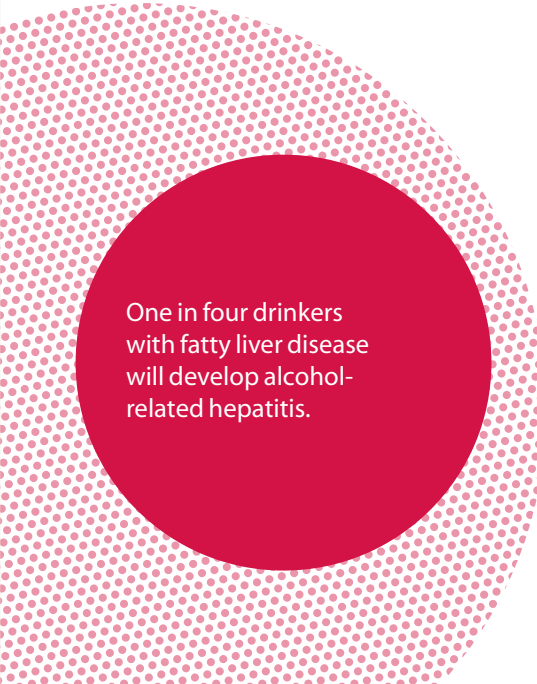
There are lots of different causes of liver disease, including drinking alcohol to excess which causes 'alcohol-related liver disease'. Scientists are not sure exactly why drinking too much alcohol can damage your liver but the reasons include:

1. Oxidative stress

When our liver tries to break down alcohol, the resulting chemical reaction can damage its cells. This damage can lead to inflammation and scarring as the liver tries to repair itself.

2. Toxins in gut bacteria

Alcohol can damage our intestine which lets toxins from our gut bacteria get into the liver. These toxins can also lead to inflammation and scarring.



One in four drinkers with fatty liver disease will develop alcohol-related hepatitis.

¹ British Liver Trust website, A brief summary of the liver's functions. Available at <http://www.britishlivertrust.org.uk/home/the-liver/summary-of-the-livers-functions.aspx>

² National End of Life Care Intelligence Network website, Deaths from Liver Disease: Implications for end of life care in England. Available at http://www.endoflifecare-intelligence.org.uk/resources/publications/deaths_from_liver_disease.aspx

³ *ibid.*

2

If you drink most days of the week, you will increase your risk of developing liver disease

Evidence about how much and how often you need to drink to increase your chances of developing liver disease is unclear. But all the research shows that the more alcohol you drink, the more likely you are to develop liver disease.

The NHS identifies the following two groups as having a high risk of developing alcohol-related liver disease:

- **Men who drink more than 35 units of alcohol a week for 10 years or more**
- **Women who drink more than 28 units of alcohol a week for 10 years or more**⁴

Evidence suggests other factors that increase your risk of developing liver disease include:

- **being dependent on alcohol – around seven in 10 people with alcohol-related liver disease have an alcohol dependency problem**
- **being female – this could be because women can have higher levels of alcohol in the blood than men even if they've drunk the same amount of alcohol**⁵
- **being overweight – excess weight can exacerbate many of the mechanisms of liver damage caused by excessive drinking**⁶
- **genetics – certain genetic factors, including those affecting the liver's ability to handle fat, influence the risk of a heavy drinker developing liver disease**

⁴ NHS Choices website, Alcoholic liver disease – causes. Available at [http://www.nhs.uk/Conditions/Liver_disease_\(alcoholic\)/Pages/Causes.aspx](http://www.nhs.uk/Conditions/Liver_disease_(alcoholic)/Pages/Causes.aspx)

⁵ Risk Factors for Alcoholic Liver Disease, Liver Newsletter, Liver Transplant Program and Centre for Liver Disease, University of Southern California Department of Surgery, accessed July 2012. Available at <http://www.surgery.usc.edu/divisions/hep/livernewsletter-riskfactorsforalcoholicliverdisease.html>

⁶ Marchesini G, Moscatiello S, Di Domizio S, Forlani G, "Obesity-associated liver disease", *J Clin Endocrinol Metab*, 2008 Nov;93(11 Suppl 1):S74-80, accessed July 2012. Available at <http://www.ncbi.nlm.nih.gov/pubmed/18987273>

3

Excessive drinking can make your liver get fat - reducing your consumption can help it return to its normal size

Drink more than eight units a day (four pints of 4% lager) if you're a man and over five units a day (three 175ml glasses of 13% wine) if you're a woman, for two or three weeks and you're likely to develop something called "fatty liver".⁷

The liver turns glucose into fat which it sends round the body to store for use when we need it. Alcohol affects the way the liver handles fat so your liver cells get stuffed full of it.

If this happens, you may feel a vague discomfort in your abdomen because your liver is swollen. You might also feel sick and lose your appetite. A blood test may be able to show if you have fatty liver.

The good news: your liver will start shedding the excess fat if you stop drinking for two weeks and don't exceed the unit guidelines after that. If you don't change your drinking pattern, the bad news is that fatty liver is the first stage of liver disease.

The four stages of liver disease:

1. Fatty liver

Your liver contains excessive fat. (Reversible).

2. Hepatitis

The liver becomes inflamed. (Usually reversible).

3. Fibrosis

Scar tissue starts replacing healthy liver tissue. (Possibly reversible).

4. Cirrhosis

Scarring of the liver. (Rarely reversible).

90–100% of people who regularly drink above the lower-risk guidelines have alcoholic fatty liver disease.

⁷ Drinkaware interview with Professor Chris Day. Available at <http://www.drinkaware.co.uk/alcohol-and-you/archive/2011/will-drinking-too-much-over-christmas-damage-my-liver>

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You can have liver disease for years and not know until it gets serious

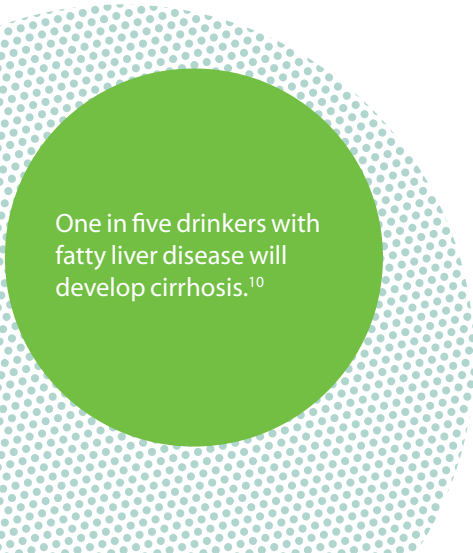
People can spend 20 years damaging their liver and not feel any of the effects this is having on them. This is because the liver has enormous reserves so that you can damage an awful lot of it and it can still do all of its jobs.

Early symptoms of liver disease can include:

- **fatigue**
- **nausea**
- **vomiting**
- **diarrhoea**
- **abdominal pains**

Later stage liver damage symptoms are more serious – and you'll know about them. They can include:

- **jaundice (yellow skin)**
- **vomiting blood**
- **fatigue**
- **weakness, loss of appetite**
- **itching**
- **easy bruising**
- **swelling of the legs, ankles, or abdomen**
- **liver cancer**
- **bleeding in the gut**
- **increased sensitivity to alcohol and drugs, both medical and recreational (because the liver cannot process them)**^{8,9}



One in five drinkers with fatty liver disease will develop cirrhosis.¹⁰

⁸ British Liver Trust website, Cirrhosis – symptoms. Available at <http://www.britishlivertrust.org.uk/home/the-liver/liver-diseases/cirrhosis-updated/symptoms.aspx>

⁹ NHS Choices website, Alcoholic liver disease – Symptoms. Available at http://www.nhs.uk/Conditions/Liver_disease_%28alcoholic%29/Pages/Symptoms.aspx

¹⁰ NHS Choices website, Alcoholic liver disease. Available at http://www.nhs.uk/conditions/Liver_disease_%28alcoholic%29/Pages/Introduction.aspx

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If you start soon enough, you can reverse problems with your liver caused by alcohol

Drinking within the lower-risk guidelines and taking a regular break from alcohol will help your liver stay healthy. Reducing the amount you drink can help reverse damage, or early stage liver disease.

For example, when you develop cirrhosis, cutting out alcohol is essential to prevent you from dying from liver failure which is when your liver stops working completely. In the most serious cases of cirrhosis, you will only be considered for a liver transplant if you do not drink alcohol for at least three months.

Once cirrhosis develops, prognosis partly depends on whether or not you continue drinking. People who have had no previous symptoms who stop drinking when they have cirrhosis, have an 80% chance of being alive after 10 years. Those who continue to drink have a much higher risk of dying. Even for those with symptoms, stopping drinking has a beneficial effect – it is never “too late” to stop drinking – even with cirrhosis.



Staying in control

The government advises that people should not regularly drink more than the daily unit guidelines of 3–4 units of alcohol for men (equivalent to a pint and a half of 4% beer) and 2–3 units of alcohol for women (equivalent to a 175 ml glass of 13% wine). 'Regularly' means drinking every day or most days of the week.



Here are three ways you can cut back and keep your drinking under control:

A Give alcohol-free days a go.

Many medical experts recommend taking regular days off from drinking to ensure you don't become addicted to alcohol.

B Eat well.

A healthy meal before you start drinking, and low-fat, low-salt snacks between drinks can help to slow down the absorption of alcohol. Good nutrition can help to support your liver to function and plays a crucial role in your health.¹¹

C Keep track of what you're drinking.

Your liver can't tell you if you're drinking too much, but the MyDrinkaware drink tracking tool can. It can even help you cut down.
drinkaware.co.uk

¹¹ British Liver Trust website, Diet and liver disease – staying nutritionally well. Available at <http://www.britishlivertrust.org.uk/home/the-liver/diet-liver-disease.aspx>

We've got the answers at **drinkaware.co.uk**

Advice

The government advises that people should not regularly drink more than the daily unit guidelines of 3–4 units of alcohol for men (equivalent to a pint and a half of 4% beer) and 2–3 units of alcohol for women (equivalent to a 175 ml glass of 13% wine). 'Regularly' means drinking every day or most days of the week.

Further information

For the facts on alcohol and to keep track of your units through our MyDrinkaware tool, visit the Drinkaware website drinkaware.co.uk

Your GP can help you figure out if you should make any changes to your drinking, and offer help and advice.

If you're concerned about someone's drinking, or your own, Drinkline runs a free, confidential helpline. Call 0800 917 8282.

The British Liver Trust provides support and information on liver disease and also funds research. Visit www.britishlivertrust.org.uk to find out more.

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