

# Alcohol and the liver

The liver is a robust organ that can usually process small amounts of alcohol, but heavy drinking can cause damage, ranging from fatty liver to cirrhosis. Sticking to the recommended weekly drinking guidelines can lower the risk of developing alcohol-related liver problems.

The liver is an organ with over 500 different functions, including processing digested food, combating infections and dealing with toxins like alcohol.

In 2016, 4,843 people died of alcoholic liver disease in the UK, and most of the people who died were between 35 and 55.<sup>1</sup> It's one of the only preventable conditions that is continuing to increase in the UK, while it falls across most of Europe. Although alcoholic liver disease can be treated if caught early, often symptoms do not appear for a long time.

Liver disease causes approximately 2% of all deaths in the UK.

## How alcohol affects the liver

When we drink alcohol, it is absorbed into the bloodstream from the stomach and intestines. This blood first passes through the liver before circulating to the rest of the body. Liver cells process the alcohol at a rate of about one unit per hour, breaking it down into other chemicals which are then in turn broken down into water and carbon dioxide, before being passed out in the urine and from the lungs.

However, if the liver has to break down too much alcohol, its other functions are negatively affected. Drinking too much alcohol can lead to three stages of damage: fatty liver, alcoholic hepatitis and alcoholic cirrhosis, which can lead to liver failure and increases the risk of liver cancer.

### Fatty liver

A build-up of fat occurs within the liver cells of most heavy drinkers, but it may also be found in those drinking just above the weekly low-risk drinking guidelines. Fatty liver may not progress to more severe damage and can be reversed by stopping or reducing drinking. However, it is an indicator that more permanent damage may occur in the future.

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### Alcoholic hepatitis (inflammation)

About a third of people with fatty liver will develop alcoholic hepatitis. Mild hepatitis may not cause any symptoms; more severe cases tend to cause symptoms such as loss of appetite, vomiting, abdominal pain and jaundice (yellowing of the skin). At its most severe, alcoholic hepatitis can quickly lead to liver failure and death.

### Alcoholic cirrhosis

Cirrhosis is the result of continuous liver damage. Normally when the liver is damaged it can regenerate itself. In cirrhosis, the process of healing fails and scar tissue develops, preventing the liver from being able to carry out its normal functions.



### Alcoholic cirrhosis (cont.)

Cirrhosis is found in about 20% of heavy drinkers. In some instances, cirrhosis has no obvious symptoms, but where symptoms are visible, they usually include general ill health, flatulence, lack of appetite, sallow skin, jaundice, itching, anaemia, vomiting of blood, lower back pain and abdominal swelling.

There is no cure for cirrhosis, but sufferers who stop drinking completely have a much stronger chance of survival. Those who continue to drink will go on to develop complete liver failure and a further 10 per cent of sufferers develop liver cancer, which is fatal in about six months.

### Liver cancer

People suffering with cirrhosis of the liver are at a higher risk of developing liver cancer (hepatocellular carcinoma). It is not well understood how cirrhosis increases cancer risk. It could be that as the scar tissue grows, the liver attempts to heal itself by creating new cells. However, the more cells the liver creates, the higher the chances that a change, or mutation, will take place – resulting in cancerous tumours. It could also be related to the extent of the damage the liver has already endured in reaching alcoholic cirrhosis.

## Managing the risk

Liver disease causes approximately 2% of all deaths in the UK, and over a third of these are thought to be related to alcohol. Whilst the liver is a very resilient organ that can regenerate itself, prolonged heavy drinking over many years reduces this ability to regenerate, which can result in long-term damage and, in the severest cases, premature death.

Anyone drinking heavily should seek advice from their GP. It is possible that you may be damaging your liver without being aware of it. Your GP should be able to refer you for tests to check, and to support you to cut down your intake.

The most effective way to reverse or prevent alcohol-related liver problems is to cut back our consumption, or stop drinking altogether. The UK's Chief Medical Officers recommend limiting your weekly alcohol intake to 14 units, which means about six pints of lager or one and a half bottles of wine, and spreading your intake over three days or more. Try to have a few alcohol-free days too.

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[www.alcoholchange.org.uk](http://www.alcoholchange.org.uk)

1 Office for National Statistics (2017). Number of deaths caused by alcoholic liver disease and other causes associated with the misuse of alcohol, deaths registered in England and Wales, 2016.