

## Medicine for Managers

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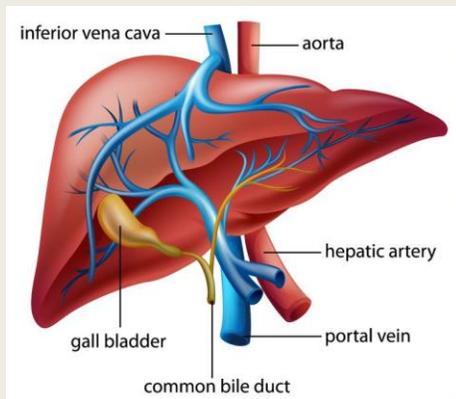


# The doctor says I've got a fatty liver!

**It is interesting to note that, in a profession where improvements have been made in every area of healthcare, liver disease is probably the one area where improvement in health and life expectancy has not occurred. Indeed mortality from liver disease has increased four-fold since 1970. It is the third most common cause of premature death and the UK is a Western European black spot!**

A fatty liver occurs when, as the name suggests, there is a build-up of fat in the liver.

It may occur in people who drink large amounts of alcohol but is also quite common in patients who do not drink significant quantities of alcohol. It is the largest internal organ and is



said to have over five hundred functions. Key functions include storage of glycogen (glucose) for energy, the manufacture of proteins, detoxifying a range of chemicals and toxins, including alcohol, manufacturing cholesterol and other fats and producing bile which is stored in the gall bladder and passed into the gut to digest fat.

This article will concentrate principally on non-alcoholic fatty liver.

Normally the liver actually stores only small amounts of fat. However in a simple fatty liver there is accumulation of fat in the liver cells. It usually occurs in those people who are overweight or obese.

The condition, also called **steatosis**, usually causes no problems in terms of health and the liver functions normally. It is common and about a quarter of adults in the UK have some degree of fatty liver.

The significance of a simple fatty liver (sometimes known as **Stage 1** simple steatosis) is that it can progress to cause more serious liver changes which can ultimately be life-threatening.

The fatter the patient the more fat accumulates in the liver. Tests such as liver function blood tests may remain normal or they may start to show minor disturbances. The condition may

progress to the **second stage** (*non-alcoholic steatohepatitis- NASH*) where, as the name suggests, the liver becomes inflamed (steato = fat, hepar = liver, itis = inflammation of). Only a minority of patients with a fatty liver go on to develop the inflammatory changes.

The third stage, **fibrosis**, is a longer term consequence of the fatty changes and the inflammation which eventually leads to scarring (fibrosis). The liver manages to continue to function essentially normally unless fibrosis becomes very widespread.

Stage 4 is **cirrhosis** and really is distinguished from fibrosis only by degree. The worsening scarring disrupts the liver structure and its functions. The liver's ability to meet its requirements are compromised and the worse the cirrhosis the more likely is liver failure and death.

**Non-alcoholic fatty liver is NOT caused by alcohol, but consuming significant quantities may make it worse. Anyone who is obese and in whom the diagnosis is made should stop drinking alcohol altogether.**

People who are vulnerable to fatty liver are obviously the overweight and the obese but the risk is greater over age fifty and being male.

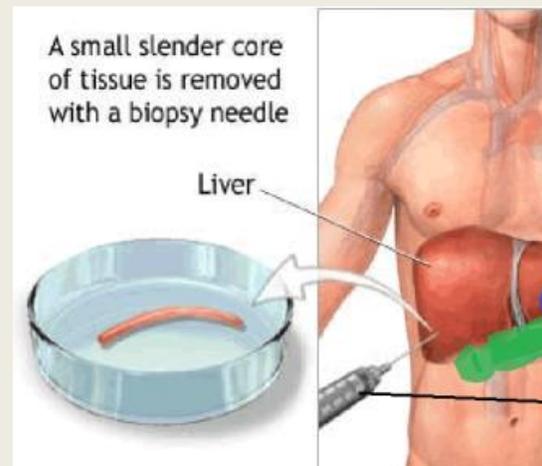
High blood pressure and high cholesterol add to the risk and some medicines, for example tamoxifen and methotrexate may also cause it. People with type 2 diabetes are at greater risk of fatty liver and people with fatty liver are at greater risk of type 2 diabetes.

If the fatty liver changes are suspected the GP may carry out liver function tests.

However they are not a reliable guide and someone with quite advanced fatty liver might retain normal blood tests.

A more useful method of diagnosis might be a scan and it may be seen on ultrasound, CT or MRI scans. However none is infallible. In circumstances where it might be important to make a diagnosis, a liver biopsy may be the best way.

A slender needle-like device is inserted



into the liver below the ribs and a thin core of liver tissue is removed and examined under the microscope.

Given the causes of fatty liver, prevention and treatment are unsurprising. There is not much that can be done about being over fifty and male (at least not easily!) but the key to controlling or improving the condition is the steady loss of weight combined with regular exercise.

A good diet with, if necessary, treatment for raised blood pressure and raised cholesterol will also help prevent or control the condition. For those patients with type 2 diabetes, management of fatty liver is an additional reason for having good diabetic control.

For most people who have a fatty liver the prognosis is good and the disorder does not progress.

The incidence continues to increase with increasing sufferers of excessive weight. It is estimated that about 2% of patients with simple (stage 1) fatty liver will develop cirrhosis over 15-25 years and about 10% of people with stage 2 NASH will develop cirrhosis in about 10 years.

Alcohol related liver disease includes as a component the same fatty changes. Of course, alcohol is toxic and progressively damages the substance of the liver causing a range of symptoms including sickness, weight loss, and more serious symptoms such as jaundice, fluid retention, confusion and drowsiness.

Fatty infiltration occurs and leads to alcoholic steato-hepatitis, fibrosis and ultimately cirrhosis. The prognosis for patients with alcoholic liver disease is poor with a large percentage of the untreated developing cirrhosis.

Fibrosis and cirrhosis cannot be reversed but the progression of the disease can be slowed by withdrawal of alcohol and improved care of the liver by managing associated complications, avoiding toxic drugs and chemicals and regular monitoring.

So, for the over-50, overweight male with a predilection for chocolate like me, this is a pretty depressing subject!

I'm off to find a time machine, a sex-change surgeon and chocolate with no fat or calories in it!

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