



# FIRSWAY HEALTH CENTRE

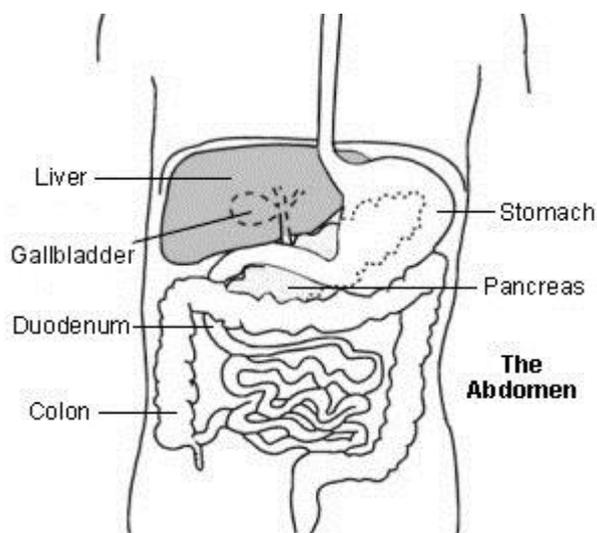
---

## Non-alcoholic Fatty Liver Disease (modified from patient.co.uk)

Non-alcoholic fatty liver disease (NAFLD) describes a range of conditions caused by a build-up of fat within liver cells. It is very common and in many cases is linked to being obese or overweight. Most people with NAFLD do not develop serious liver problems. In some people, the build-up of fat in the liver can lead to serious liver disease. However, all people with non-alcoholic fatty liver disease have an increased risk of developing cardiovascular problems such as heart attacks and stroke.

If you are obese or overweight, a main treatment advised for NAFLD is usually gradual weight loss and regular exercise. This not only helps with NAFLD but will help reduce your risk of developing cardiovascular problems. Other treatment methods are discussed below.

### What does the liver do?



### What is non-alcoholic fatty liver disease?

Normally, very little fat is stored in liver cells. Simple fatty liver means that excess fat builds up (accumulates) in liver cells. For most people, simple fatty liver does not cause any harm or problems to the liver. However, in some people it can progress to more severe forms of NAFLD.

NAFLD occurs in people who do not drink excessive amounts of alcohol and so alcohol is not the cause. Most people with NAFLD have simple fatty liver. Only a minority progress to develop NASH. And, only a minority of people with NASH progress to cirrhosis. It is not clear why some people with simple fatty liver progress to the more severe forms of NAFLD, and most do not.

### Who gets non-alcoholic fatty liver disease?

NAFLD is the most common persistent (chronic) liver disorder in western countries such as the UK. It is thought to occur in about 1 in 5 adults in the UK, and in up to 4 in 5 adults who are obese. (However, most of these people have 'simple fatty liver' and not the more serious types of NAFLD.)

The risk factors for developing NAFLD include:

- Obesity. Most people with NAFLD are [obese or overweight](#). However, the relationship between body fat and NAFLD, and factors that determine which people with obesity will develop NAFLD, are not clear. So, for example, some people who are only mildly overweight develop NAFLD. On the other hand, some people who are very obese do not develop NAFLD.
- Diabetes. People with [type 2 diabetes](#) have an increased risk of developing NAFLD. However, there is **no** increased risk for those with type 1 diabetes.
- Age. NAFLD is more common in people aged over 50 years. It is also more common in men.
- [High blood pressure \(hypertension\)](#). People with hypertension are at a greater risk of developing NAFLD.
- [High level of blood fats \(hyperlipidaemia\)](#). If you have high level of [cholesterol](#) and/or triglycerides in your blood then you have a higher risk of developing NAFLD.
- Very rapid weight loss. For example, NAFLD develops in some people following surgery to reduce obesity. This may be due to rapid changes of fats and fatty acids in the blood that occur when weight loss is rapid.
- Medicines. For example, methotrexate and tamoxifen can, rarely, cause NAFLD.

People with NAFLD have a higher chance of developing type 2 diabetes and cardiovascular disease (this includes [heart attacks](#) and [strokes](#)). Also, as NAFLD is common, some people with NAFLD also have another liver disorder, and NAFLD can make the other liver disorder worse.

### **What are the symptoms of non-alcoholic fatty liver disease?**

Most people with simple fatty liver or NASH have no symptoms. However, some people with simple fatty liver or NASH have a nagging persistent pain in the upper right part of the tummy (abdomen), over an enlarged liver. You may feel generally tired if you have NASH. As most people do not have symptoms, the diagnosis is often first suspected when an abnormal blood test result occurs.

A small proportion of people with NAFLD develop cirrhosis. Cirrhosis is a condition where normal liver tissue is replaced by a lot of scar tissue (fibrosis).

### **How is non-alcoholic fatty liver disease diagnosed?**

There is no simple test that can confirm NAFLD. Blood tests called [liver function tests \(LFTs\)](#) measure the blood levels of certain chemicals (enzymes) made by the liver cells. An abnormal pattern of LFTs may suggest that you have NAFLD. However, many other liver conditions can cause abnormal LFTs. Therefore, if you have abnormal LFTs, a doctor will usually then do various other blood tests to rule out other causes of liver problems. For example, blood tests to detect various germs (viruses) and other liver-related chemicals.

LFTs are tests that are done for various reasons. Therefore, NAFLD is often first suspected when an abnormal result occurs when the tests are done for an unrelated reason.

A scan of the liver can be helpful. For example, an [ultrasound scan](#), [CT scan](#) or [MRI scan](#). The scan can show an enlarged liver compatible with the diagnosis of NAFLD. However, a scan cannot definitely diagnose NAFLD.

The diagnosis of NAFLD is usually based on the abnormal LFTs and scan being compatible with NAFLD, and ruling out other causes of liver problems. If there is doubt about the diagnosis, a specialist may arrange a small sample (biopsy) to be taken from your liver. This can be looked at under the microscope and can show the extent of any fatty accumulation, inflammation, scarring, etc, in the liver. See separate leaflet called [Liver Biopsy](#).

However, a liver biopsy is not routinely done when simple fatty liver or NASH is the likely diagnosis, as there is some risk involved when doing a liver biopsy. A liver biopsy is mainly done if the diagnosis is in doubt, or if there is concern that cirrhosis has developed.

## **WHAT IS THE TREATMENT FOR NON-ALCOHOLIC FATTY LIVER DISEASE?**

### **Weight reduction**

Most cases of NAFLD are linked to being obese or overweight. There is good evidence that a programme of [gradual weight loss](#) and [regular exercise](#) can reduce the amount of fat in your liver. So, if you have simple fatty liver or mild NASH, this may prevent or delay the progression of NAFLD. It may reduce your chance of developing cirrhosis - a condition where normal liver tissue is replaced by a lot of scar tissue (fibrosis).

In some people who are very obese, obesity surgery may be considered, as studies have shown that this may help to improve NASH.

### **Treatment of linked conditions and risk factors**

As mentioned, having NAFLD increases your risk of developing cardiovascular disease. In fact, people with NAFLD are actually more likely to become ill and die from cardiovascular diseases such as heart attacks than from a liver problem. Therefore, your doctor is likely to stress the importance of reducing any 'lifestyle' risk factors that increase the risk of developing cardiovascular disease. For example, not smoking, keeping your weight in check, taking regular exercise, and eating a healthy balanced diet. See separate leaflet called [Preventing Cardiovascular Diseases](#) for more details. Also, to treat high blood pressure (hypertension) and a high cholesterol level (hyperlipidaemia), if appropriate.

If you have diabetes, then good control of your blood sugar (glucose) level is thought to help reduce the risk of NAFLD getting worse.

It is also advised that you do not drink any alcohol. NAFLD (by definition) is not caused by alcohol. However, even modest amounts of alcohol may make NAFLD worse.

## **Medication that affects the liver itself**

Various medicines have been suggested as possible treatments for NAFLD. However, there is little research evidence to say that any medicine works very well. For example, for NASH, no treatment has been proved to stop or reverse the inflammation. Various medicines are currently being trialled in different studies. One or more medicines may emerge as treatments in the future.

## **What is the outlook (prognosis)?**

For most people with NAFLD, the condition does not progress beyond simple fatty liver or NASH. Cirrhosis - a condition where normal liver tissue is replaced by a lot of scar tissue (fibrosis) - and serious liver problems do not develop in most cases. The condition may reverse and even go away by weight loss (if you are overweight or obese) or with good control of diabetes (if diabetes is the cause).

**The most important 'take home message' if you are diagnosed with NAFLD is not to focus too much on your liver. But, to concentrate on reducing any risk factors for developing cardiovascular problems. This is mainly lifestyle changes; in particular, diet, weight loss and exercise for most people, and [giving up smoking if you smoke](#).**

September 2018