

Patient Information Leaflet

**Non-Alcoholic Fatty Liver
Disease (NAFLD)**

‘fatty-liver’

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What is fatty liver?

'Fatty liver' describes the buildup of fat in your liver. This is often detected by an ultrasound scan demonstrating that the liver looks bright, and may have been coincidentally detected because your doctor has found that you have abnormal liver function blood tests (LFTs), or you have had a scan for some other reason.

What causes fatty liver?

There are two common causes of fatty liver:

- 1) excess alcohol consumption
- 2) non-alcoholic fatty liver disease (NAFLD)

Therefore, if you have been found to have a fatty liver, it is important to know how much alcohol you regularly consume. If you drink moderate amounts of alcohol, above the recommended limits of 14 units per week (2 units per day), the first intervention is to decrease your alcohol consumption, over a 3 month period to less than 14 units per week with several drink free days and ask your doctor to reassess. The chart at the end of this information sheet provides some indication of units in typical alcoholic drinks.

Non-alcoholic fatty liver disease (NAFLD) describes the situation when there is detectable fat in your liver, but you drink within the recommended limits of alcohol. NAFLD is often associated with being overweight, and having other health issues such as high cholesterol, diabetes and high blood pressure.



What symptoms does fatty liver cause?

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

How is non-alcoholic fatty liver disease (NAFLD) diagnosed?

Non-alcoholic fatty liver disease (NAFLD) is diagnosed when you have evidence of a fatty liver, and are not drinking excessively (less than 14 units per week for a woman, and 21 units per week for a man).

Often people with fatty liver have abnormal blood tests called liver function tests (LFTs). However, many other liver conditions can cause abnormal LFTs, and normal LFTs do not rule out significant liver disease. Therefore, if you have abnormal LFTs, a doctor will usually do various other blood tests to rule out other causes of liver problems, such as viral infections and immune disorders.

Scans of the liver can be helpful. For example, an ultrasound scan, CT scan or MRI scan can often show signs of an enlarged or fatty liver.



Who gets a fatty liver?

Anyone can get a fatty liver. However, non-alcoholic fatty liver disease (NAFLD) is becoming very common with up to one-third of all adults having evidence of liver fat build up. In many cases fatty liver is linked to being overweight or obese. Rarer causes of fatty liver can be related to medications or genetic diseases.

What is NASH?

There are two types of non-alcoholic fatty liver:

- 1) simple fatty liver (steatosis)
- 2) non-alcoholic steatohepatitis (NASH)

8 out of 10 people with NAFLD have simple fatty liver and do not develop serious liver problems. However in some people (approximately 2 out of 10), the build-up of fat in the liver can lead to serious liver disease called NASH. NASH is different from simple fatty liver because the liver is damaged, inflamed and scarred, and can be at risk of progressing to cirrhosis. People with NASH can be at risk of developing cirrhosis and liver cancer, and therefore further assessment and treatment may be needed.

People with non-alcoholic fatty liver disease also have an increased risk of developing cardiovascular problems such as heart attacks and stroke.



How do I know if I have got NASH?

There is no single blood test or scan that reliably distinguishes NASH from simple fatty liver. However there are factors that increase the risk of having NASH. These include having type 2 diabetes, being older in age, and having other features of 'metabolic syndrome' including high blood pressure, high cholesterol and obesity.

NASH may progress to liver cirrhosis by causing the liver to become scarred. It is possible to detect liver scarring by blood tests and performing a simple bedside scan called a Fibroscan.

If these tests indicate possible liver scarring, your doctor may recommend performing a liver biopsy to find out for certain if you have NASH.

Why is it important to know if I have got NASH?

People with NASH are at higher risk of developing serious liver disease including cirrhosis and liver cancer, and should be treated and monitored for these reasons. It is estimated that on average about 2 in 100 people with simple fatty liver progress to cirrhosis over 15-20 years. About 12 in 100 people with NASH progress to cirrhosis over about eight years.



What is the treatment for non-alcoholic fatty liver disease (NAFLD)?

If you are obese or overweight, the main treatment advised for non-alcoholic fatty liver disease, including NASH is weight loss and regular exercise. This not only helps with non-alcoholic fatty liver disease but will help reduce your risk of developing cardiovascular problems.

Since 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 liver disease and may reduce your chance of developing cirrhosis - a condition where normal liver tissue is replaced by a lot of scar tissue (fibrosis). Sustained 5-10% weight loss can be an effective treatment for fatty liver.

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

Treatment of linked conditions and risk factors is also important, such as type 2 diabetes, high cholesterol and high blood pressure. These will reduce the risk of heart attack and stroke as well as help the liver. For example, not smoking, keeping your weight in check, taking regular exercise and eating a healthy balanced diet.



At the moment, there are no specific licensed drugs to treat NASH. However, several new medications are under evaluation in clinical trials. If you have NASH or are at high risk of having NASH, you may be eligible to take part in a clinical trial. Please ask your doctor about this.

What should I eat and change with my lifestyle?

In general terms, lifestyle changes to improve fatty liver need to reduce the amount of calories being consumed in food and drink, and become more physically active. There are no specific diets that are proven to be more effective than others, but some general guidance is given in the table at the end of this information sheet.

How much alcohol can I drink?

It is advised that you do not drink any alcohol if you have NAFLD, although very occasional alcohol is unlikely to be harmful. NAFLD (by definition) is not caused by alcohol. However, regular amounts of alcohol may make NAFLD worse. The maximum limit should be less than 14 units per week for both men and women.

What monitoring do I need?

If you have simple fatty liver, and are at low risk of scarring, then you should make positive changes to lifestyle by diet and exercise, and be reassessed by your GP every 3 years.



If you have been identified as having NASH with liver scarring you may be seen yearly, and be offered follow-up fibroscans to see if your liver is deteriorating. If you had advanced fibrosis or cirrhosis you will be seen every 6 months to monitor for potential serious complications of advanced liver disease.

What is my outlook (prognosis)?

For most people with non-alcoholic fatty liver disease (NAFLD), the condition does not progress beyond simple fatty liver or non-alcoholic steatohepatitis (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. Fatty liver 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). However, fatty liver does progress to NASH in some people and NASH progresses to cirrhosis in some people. It is not clear why some people with NASH (and not others) progress to cirrhosis. Cirrhosis is very serious, because it can lead to liver failure and / or liver cancer which can be fatal, therefore needs to be monitored.

Summary

Your doctor or nurse should be able to assess your risk of having NASH and significant liver disease. Treatment and follow up can be tailored according to your needs. In general lifestyle changes to your diet (reducing calories, reducing alcohol and increasing physical activity) is the best treatment for fatty liver.



1.5 units



Small glass red/white/rosé wine
(125ml, ABV 12%)

2.1 units



Standard glass red/white/rosé wine
(175ml, ABV 12%)

3 units



Large glass red/white/rosé wine
(250ml, ABV 12%)

2 units



Pint of lower-strength lager/beer/cider
(ABV 3.6%)

3 units



Pint of higher-strength lager/beer/cider
(ABV 5.2%)

1.7 units



Bottle of lager/beer/cider
(330ml, ABV 5%)

2 units



Can of lager/beer/cider
(440ml, ABV 4.5%)

1.5 units



Alcopop
(275ml, ABV 5.5%)

1 unit



Single small shot of spirits*
(25ml, ABV 40%)

This chart may help you calculate the number of units of alcohol consumed in different alcoholic drinks.

No more than 14 units per week is recommended for most people.

Further information can be found here:

<https://www.nhs.uk/LiveWell/Alcohol/Pages/Alcoholhome.aspx>



Lifestyle recommendations for people with fatty liver disease

Lifestyle recommendations	Specifically incorporate	Specifically avoid
Sustained weight loss 5-10%	water	Avoid sugary drinks
Calorie restriction	Portion control; 1200-1500 kcal daily for weight <115 kg 1500-1800 kcal daily for weight >115 kg	avoid 'going large' avoid late night eating
Limit alcohol	<14 units per week	Too much alcohol > 14 units / week
Get sufficient sleep		Avoid caffeine at night to get a good nights sleep
Increase physical activity	Wear / download on your smartphone a pedometer, aiming for 10,000 steps / day	Sedentary lifestyle
Avoid saturated and trans fats	Olive oil, nuts, avocado, oily fish (tuna, mackerel, sardines)	Fast food, fried food
Low carbohydrate diet	3-5 portions of vegetables and fruit 2-4 serving / day	Simple carbohydrates with fructose corn syrup

