

NON ALCOHOLIC FATTY LIVER DISEASE (NAFLD) – USEFUL INFORMATION

This is an information sheet about fatty liver. It tells you what the condition is and how it is diagnosed, why you may have developed it, and gives you lots of helpful tips about changes you can make to your lifestyle to manage it.

What is fatty liver/NAFLD?

Fatty liver or non-alcoholic fatty liver disease (NAFLD) is the term used to describe conditions that cause **fat to build up in someone's liver**.

Normally, a **healthy liver contains little or no fat**. As the name suggests, this is not caused by alcohol.

It is a manifestation of what we call metabolic syndrome (which is the combination of some features like high blood pressure, high sugar blood levels, high cholesterol, increased weight around the tummy) that **increases the risk of someone having a heart attack or stroke**.

How is NAFLD diagnosed?

NAFLD is the most common reason for abnormal liver function blood tests (LFT) in the UK. It has been estimated that it affects up to 25% of the general population. It is usually diagnosed with an ultrasound scan that shows the increased fat on the liver.

What are the stages of NAFLD?

There are 4 stages in the progress of fatty liver. The first one is steatosis ("simple" fatty liver). The second stage is non-alcoholic steatohepatitis (NASH) where there is damage and inflammation of the liver. The third stage is that of fibrosis, where scar tissue develops in the liver, whereas cirrhosis is the fourth stage where the normal liver function is significantly affected and can lead to liver failure.

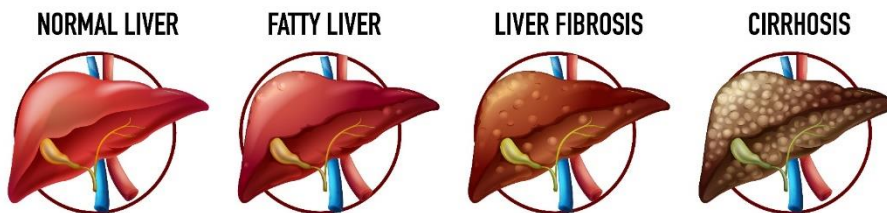


Image by brgfx

What are the symptoms of NAFLD?

Most times people with NAFLD do not develop any symptoms. Occasionally, they may experience some non-specific symptoms like tiredness or a discomfort at the upper right part of the tummy.

What causes fatty liver and who develops it?

The exact cause of NAFLD is not fully understood but is closely linked to:

- ❖ being overweight, obese, or "too heavy for your body",
- ❖ eating a "Western" diet (mainly processed foods, poor quality fats and foods with little fibre content),
- ❖ increased fat in the body,
- ❖ high cholesterol,
- ❖ type 2 diabetes



Photo by taramara78

How can I have fatty liver without being overweight or obese?

Research has shown that in developed countries, **people tend to put on weight gradually over time** by constantly eating more than their body needs. On average, people gain around 0.5 kg per year, meaning that for every decade of life, a person can put on as much as 5 kg (almost one stone). This change can happen to any of us, not just people who are obese. Each of our bodies has a different threshold for how much stored fat it can handle, and this is one of the reasons why people who seem to have a "normal" weight can have fatty liver - they don't look overweight, but they have become **"too heavy for their own body"**.

The increased fat in the liver is a result of too much fat in the whole body, but it is **not only** caused by **too much fat** in our food; **increased sugar intake** that the body can not handle also gets stored as fat in the liver and this is why people with pre-diabetes or Type 2 diabetes some times also have fatty liver.



Image by decade3d

NAFLD is the most common cause of liver disease in the western world

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Apart from the Body Mass Index (BMI) which can give you an idea as to whether you have normal weight for your height, or you are overweight or obese, another useful measurement is the waist circumference which can be helpful in assessing the distribution of the weight in the body – e.g. apple-shaped body; more weight around the tummy generally relates to more fat around and inside the tummy organs.

Should you wish to calculate your BMI, you can visit [nhs BMI calculator](#) If you want to check your waist circumference, use a measuring tape around the middle of the distance between the top of your hip bone and the bottom of your ribcage after a full exhalation.



Photo by wuestenigel

Population	Normal waist circumference
All women	80 cm (31.5 inches)
Most men	94 cm (37 inches)
South Asian men	90 cm (35 inches)

What are the risks & complications when someone has fatty liver?

Complications of NAFLD include those relating to liver function and those to increased cardiovascular risk (risk of stroke, heart attack, etc).

If NAFLD is not managed, it can progress to significant liver damage. Even if fatty liver does not progress further, but left unmanaged, can lead to developing high blood pressure, chronic kidney disease and Type 2 diabetes.

NAFLD is associated with a 2-3 fold increase in risk of Type 2 diabetes
Those that have both fatty liver and Type 2 diabetes are at even more increased risk of experiencing a heart attack or stroke.

What can I do to improve fatty liver?

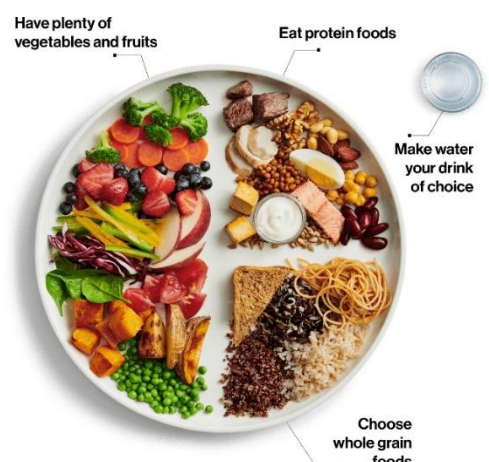
Lifestyle modifications can help a lot with managing or even reversing fatty liver effects!! These include managing your weight, eating a healthy balanced diet and being more active. Although NAFLD is not caused by alcohol, you should aim to limit the consumption of alcohol which can make it worse. Also stopping smoking can help minimizing the overall cardiovascular risk.

Managing your weight

A recommended target of 10% weight loss over a six-month period can help you get rid of the extra fat sitting on the liver. If this feels daunting to start with, you can start with a smaller 5% weight loss goal and build upon this with time. There are different ways of doing this and it's about finding the way that works best for you. The easiest one is by making small achievable changes to start with.

Eating a healthy balanced diet

There is no specific diet for fatty liver, but a general recommendation is to adjust your nutrition closer to the Mediterranean type of diet. This is based mostly on unprocessed foods with **a lot of vegetables and fruits**, the consumption of **good quality fat** (e.g. olive oil, oily fish and nuts), **limited intake of animal-based fats and sugars**. The food plate to the right gives you an idea about what your meals should look like and how to balance the different food groups in your diet (more info on next page).



The New Canada Food Guide 2019

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You can make simple changes to your diet that will have a positive impact on your fatty liver. The advice below sets out the healthy choices you can make, and the kinds of things you should avoid. You don't have to make all these changes, but the more you do, the more you can improve your health.

Replace “white stuff” (e.g. bread, past, rice) **with wholegrain alternatives**



Cut out or reduce refined sugars (e.g. biscuits, cakes, pastries, etc)



Eat plenty of non-starchy vegetables, salads & fruits

Make your plate colourful – the more colours, the more vitamins and minerals you are getting



Cut out or reduce starchy, carbohydrate-heavy foods – it is another form of sugar

Be careful with **fruit juices and smoothies** as these contain all the sugar of the fruit without any of the goodness of the fibre - Better to eat the fruit than drink it!

Avoid drinks with artificial sweeteners

Avoid alcohol. It is essentially “liquid fat”



Aim at drinking 6-8 glasses of fluid daily. Water, unsweetened tea and coffee are good choices



Eat healthier protein. This includes oily fish like salmon, tuna and mackerel, as well as eggs
Tofu and legumes (e.g. lentils and chickpeas) are great sources of non-animal protein



Avoid animal fat-based oils and manufactured fats like margarine



Eat cheese in moderation. Cheese is high in saturated fats and calories



Increase your fibre intake. Fibre helps the body to manage sugar and makes you feel full. Great sources include legumes, vegetables, fruits, nuts & seeds

Make wise choices with fats.

Some fats help your body to absorb essential vitamins and make you feel full.



Choose **olive oil** & vegetable oil-based spreads, and full-fat yoghurt. Plain **nuts** have also good oils (e.g. walnuts).



Reduce red meat consumption, avoid processed meats (e.g. bacon, ham)
Remember, **there is no fibre in meat and dairy**



Avoid snacking, especially on processed snacks (e.g. crisps, chocolate bars).

If you know you're going to need a snack during the day, **prepare some chopped vegetables.** Unsalted nuts (in moderation) are another good choice.

Be mindful of **portion sizes** and, if you're trying to lose weight, use a **smaller plate for your dinner.**

Use cooking methods like **steaming, boiling and stewing.** Avoid frying your food and cut out ready made/"fast food" meals.

Being more active

Increasing your physical activity can help **get rid of the extra fat in the body** as well as **lose weight and maintain your weight loss** in the longer term. Being more active also helps **improve your mood** and can make you **feel more energetic**. The following tips can help you identify what kind of activity would be best for you and how to get started.



Photo by tejvanphotos



Photo by Ed Yourdon

Examples of moderate activity include brisk walking, water aerobics, riding a bike, dancing, hiking, while vigorous activities might include swimming fast, jogging, football, aerobics.

If you don't currently do much or any exercise, this might seem rather daunting, and you should **start with smaller achievable goals**, e.g. "this week I will go out for a 10 min brisk walk three times a week" and then gradually build upon that each week.

Reduce your time spent sitting or lying down and break up long periods of not moving with some activity.

Keeping active at home can be done by doing physical tasks like hoovering, gardening or DIY. You can also try workout DVDs or online classes appropriate to your level of fitness.

Keeping active at work can include walking up and down the stairs, standing instead of sitting while on a phone call or working, and taking a short walk after your lunch.

Do activities you enjoy! You don't have to follow the "traditional" idea of exercise (e.g. running, swimming, going to the gym). **Any form of movement can be beneficial**, and it is better to choose **activities you actually enjoy**, as this makes it more likely you will keep doing them. The general advice is to try and do at least 30 minutes of moderate physical activity at least 5 days a week or 75 minutes of vigorous activity weekly.



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