

Fatty Liver Disease and HIV

The Lawson Unit

What is Fatty Liver Disease?

Fatty Liver Disease (often called Hepatic Steatosis) occurs when triglycerides and other fats build up in your liver. This can cause inflammation and prevent your liver from working as efficiently as it should.

What causes Fatty Liver Disease?

There are many causes of Fatty Liver Disease, including weight gain, excess alcohol, and prescribed and non-prescribed drugs. It is also caused by some genetic conditions and can run in families. The condition often develops in people who are overweight and is one of the leading causes of serious liver disease worldwide.

What are the effects of Fatty Liver Disease?

Your liver is located on the right side of the abdomen behind the ribcage, and carries out many vital functions, including filtration of the blood, converting food into energy, processing medications and producing proteins that help the blood clot after an injury. Over time, fat accumulation in liver cells can lead to inflammation and progressive liver damage. This can include:

- **Fibrosis** – build-up of collagen and other fibrous scar tissue, leading to a 'stiff' liver.
- **Cirrhosis** – serious scarring that blocks blood flow through the liver and interferes with liver function.
- **Hepatocellular carcinoma (HCC)** – a type of cancer that starts in the liver.
- **End-stage liver disease** – severe loss of liver function that can result in death without a liver transplant.

What changes can I make to lower my risk of developing Fatty Liver Disease?

Liver fat build-up is linked to being overweight and having a cluster of metabolic problems like high blood fat levels and type 2 diabetes (known as metabolic syndrome).

Changes to your lifestyle can lower your risk of developing Fatty Liver Disease, and even reverse the effects if you've recently been diagnosed with fatty liver disease, lifestyle changes may include:

- **Losing weight.** Maintaining a healthy weight can keep you from getting Fatty Liver Disease. You should aim to keep your weight within the ideal range for your height, age and sex. The Lawson Unit team can tell you what this range is. Weight loss is best achieved by both reducing calories and increasing physical activity.
- **Exercising regularly.** You should aim to do at least 150 minutes of moderate aerobic activity every week (for example, 30 minutes - five days a week). Moderate activity includes brisk walking, dancing, gardening and cycling. In addition to exercising at home or at the gym, try to increase the amount of physical activity in your daily routine. For example, increase the amount you walk by parking your car further away from shops or getting off the bus a couple of stops early.
- **Eat a healthy, balanced diet.** A balanced diet includes a lot of vegetables, fruit and whole grains. Replace red meat with other protein sources such as chicken, fish and beans. Limit foods and drinks that are high in fat and refined sugar. This may be easier if you plan your meals around vegetables rather than meat, rice or pasta.

- **Drink less alcohol.** Alcohol can cause severe liver damage including fat build-up and scarring. This usually happens after years of heavy drinking, but binge drinking (drinking a lot on a single occasion) can also harm your liver.

Who is at risk?

Fatty Liver Disease is becoming more common as the number of people who are overweight rises. As many as one in five people in the UK may have fatty liver disease. There is some evidence to suggest people living with HIV are more likely to be diagnosed with Fatty Liver Disease.

The more overweight you are – especially if you have excess fat around the waistline – the greater your risk of developing fatty liver disease. Some studies suggest that up to 90% of obese people have Fatty Liver Disease. Additionally, if you have conditions that make up metabolic syndrome, including high cholesterol and triglyceride levels, high blood pressure and insulin resistance or type 2 diabetes, you are more likely to develop Fatty Liver Disease.

Because Fatty Liver Disease develops slowly, it is most often seen in people aged over 40. People with hepatitis B or hepatitis C are more likely to develop Fatty Liver Disease. Some medications can cause fatty liver as a side-effect. It is also caused by some genetic conditions and can run in families.

Fatty Liver Disease in people with HIV

Some research shows that people living with HIV are more likely to develop Fatty Liver Disease than HIV-negative people. For example, one recent large study found that a third of people with HIV were diagnosed with Fatty Liver Disease. The main risk factors were being overweight and having conditions related to metabolic syndrome. Fatty Liver Disease is even more common in HIV-positive people who have hepatitis C co-infection.

Some older HIV medications, including zidovudine and stavudine, could cause serious steatosis and liver enlargement as a side-effect related to mitochondrial toxicity. This is generally not a concern with modern anti-HIV drugs. However, some studies suggest that fatty liver disease may be more associated with some newer drug combinations than others. Your clinician can explore this with you in more detail.

What are the symptoms of Fatty Liver Disease?

Most people do not have symptoms during the early stages of Fatty Liver Disease. The condition progresses over time as working liver cells become filled with fat. Fatty Liver Disease usually does not cause serious problems, but disease progression can lead to inflammation and scarring as the liver tries to repair itself. Many people never develop serious liver complications, but in some cases the liver can stop working properly. People with advanced liver damage are at greater risk for developing liver cancer.

Early symptoms of impaired liver function can include fatigue (unusual tiredness), flu-like symptoms, loss of appetite, pain or swelling in the upper abdomen and jaundice (yellowing of the

skin and eyes). As liver damage worsens, people can develop more severe symptoms including ascites (fluid build-up in the abdomen), bleeding in the throat or stomach and mental confusion (hepatic encephalopathy).

How is Fatty Liver Disease diagnosed and monitored?

Fatty Liver Disease may be detected through routine blood tests which are carried out in Lawson Unit. These blood tests, including ALT, measure proteins associated with liver inflammation.

Imaging tests such as ultrasound, CT scans and MRI scans can reveal fat in the liver. Another imaging test called FibroScan is sometimes used to assess how much liver damage you have. The most accurate way to diagnose Fatty Liver Disease is a liver biopsy, in which a small sample of liver tissue is removed for lab testing.

How can it be treated and managed?

There is no approved drug treatment for Fatty Liver Disease.

Weight loss is the mainstay of fatty liver management, along with treatment of related conditions such as diabetes and elevated blood fat levels. This also reduces the risk of cardiovascular disease, which is a leading cause of death for people with Fatty Liver Disease. It may be necessary to lose a substantial amount of weight before liver damage improves, but any weight loss is beneficial. Alcohol-related fatty liver disease usually improves when people stop drinking.

People with Fatty Liver Disease should receive hepatitis A and hepatitis B vaccines, because these viruses can cause more liver serious damage in people with existing liver disease.

**This leaflet is intended for patients receiving care
in Brighton & Hove or Haywards Heath**

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