
Liver - fatty liver disease

Summary

- Fatty liver disease is a build-up of fats in the liver that can damage the organ and lead to serious complications.
 - Risk factors include obesity, a high-fat diet, high alcohol intake and diabetes mellitus.
 - In most cases, people with fatty liver disease are encouraged to modify their diets, take regular exercise and lose weight.
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The liver, located on the upper-right side of the abdomen, is the largest internal organ of the human body. The main functions of the liver are to remove toxins and process food nutrients. Blood from the digestive system filters through the liver before travelling anywhere else in the body.

Fatty liver disease (steatosis) is the build-up of excess fat in the liver cells, and is a common liver complaint in Western countries. It affects about one in every 10 people. It is normal for the liver to contain some fat, but if fat accounts for more than 10 per cent of the liver's weight, then you have fatty liver and you may develop more serious complications.

Fatty liver may cause no damage, but sometimes the excess fat leads to inflammation of the liver. This condition, called steatohepatitis, does cause liver damage. Sometimes, inflammation from a fatty liver is linked to alcohol abuse. This is known as alcoholic steatohepatitis. Otherwise, the condition is called non-alcoholic steatohepatitis, or NASH.

An inflamed liver may become scarred and hardened over time. This condition, called cirrhosis, is serious and often leads to liver failure. NASH is one of the top three leading causes of cirrhosis.

Causes of fatty liver disease

Eating excess calories causes fat to build up in the liver. When the liver does not process and break down fats as it normally should, too much fat will accumulate. People tend to develop fatty liver if they have certain other conditions, such as obesity, diabetes or high triglycerides.

Alcohol abuse, rapid weight loss and malnutrition may also lead to fatty liver. However, some people develop fatty liver even if they have none of these conditions.

Risk factors for fatty liver disease

Most, but not all fatty liver patients are middle-aged and overweight. The risk factors most commonly linked to fatty liver disease are:

- overweight (body mass index of 25-30)
- obesity (body mass index above 30)
- diabetes
- elevated triglyceride levels.

Metabolic syndrome and fatty liver disease

Many researchers now believe that metabolic syndrome – a cluster of disorders that increase the risk of diabetes, heart disease and stroke – plays an important role in the development of fatty liver.

Signs and symptoms of metabolic syndrome include:

- obesity, particularly around the waist (abdominal obesity)
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- high blood pressure (hypertension)
- one or more abnormal cholesterol levels — high levels of triglycerides, a type of blood fat, or low levels of high-density lipoprotein (HDL) cholesterol, the 'good' cholesterol
- resistance to insulin, a hormone that helps to regulate the amount of sugar in the blood.

Of these, insulin resistance may be the most important trigger of NASH. Because the condition can remain stable for many years, causing little harm, researchers have proposed that a 'second hit' to the liver, such as a bacterial infection or hormonal abnormality, may lead to cirrhosis.

How a liver becomes fatty

It is unclear how a liver becomes fatty. The fat may come from other parts of your body, or your liver may absorb an increased amount of fat from your intestine. Another possible explanation is that the liver loses its ability to change fat into a form that can be eliminated. However, the eating of fatty foods, by itself, doesn't produce a fatty liver.

Symptoms of fatty liver disease

A fatty liver produces no symptoms on its own, so people often learn about their fatty liver when they have medical tests for other reasons. NASH can damage your liver for years or even decades without causing any symptoms. If the disease gets worse, you may experience fatigue, weight loss, abdominal discomfort, weakness and confusion.

Diagnosis of fatty liver disease

Your doctor may see something unusual in a blood test or notice that your liver is slightly enlarged during a routine check-up. These could be signs of a fatty liver. To make sure you don't have another liver disease, your doctor may ask for more blood tests (including liver function tests), an ultrasound, a computed tomography (CT) scan or medical resonance imaging (an MRI).

If other diseases are ruled out, you may be diagnosed with NASH. The only way to know for sure is to get a liver biopsy. Your doctor will remove a sample of liver tissue with a needle and check it under a microscope.

Some questions to ask your doctor after diagnosis include:

- What is the likely cause of my fatty liver?
- Do I have NASH? If not, how likely am I to develop NASH?
- Do I have cirrhosis? If not, how likely am I to develop cirrhosis?
- Do I need to lose weight? How can I do so safely?
- Should I be taking any medication to control my cholesterol and triglyceride levels?
- What medications or other substances should I avoid to protect my liver?

Prevention and reversal of fatty liver disease

There are no medical or surgical treatments for fatty liver, but some steps may help prevent or reverse some of the damage.

In general, if you have fatty liver, and in particular if you have NASH, you should:

- lose weight – safely. This usually means losing no more than half to one kilogram (one to two pounds) a week
- lower your triglycerides through diet, medication or both
- avoid alcohol
- control your diabetes, if you have it
- eat a balanced, healthy diet
- increase your physical activity
- get regular check-ups from a doctor who specialises in liver care.

Treatment for fatty liver disease

Fatty liver is currently the focus of intense research. Scientists are studying whether various medications can help reduce liver inflammation, including new diabetes medications that may help you even if you don't have diabetes.

These include metformin, pioglitazone, rosiglitazone and betaine. Another drug being investigated is orlistat (Xenical), a medication that blocks the absorption of some of the fat from your food. Early results indicate that orlistat may reduce the amount of fat in the liver.

Where to get help

- Your GP
- A gastroenterologist
- **NURSE-ON-CALL** Tel. **1300 60 60 24** – for expert health information and advice (24 hours, 7 days)

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