CONDITION

Liver disease

Liver disease is a broad term for conditions that inflame, scar, or reduce liver function.

WHAT IT IS
Conditions that inflame, damage, or scar the liver

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Tiredness, jaundice, itching, abdominal swelling

WHAT CAUSES IT
Metabolic, alcohol-related, immune, infectious, inherited, or toxic

HOW IT IS DIAGNOSED
Blood tests, imaging, and sometimes liver biopsy

MAIN TREATMENT
Cause-specific treatment, monitoring, and complication management

CAN IT BE CURED?
Sometimes - removable causes allow recovery

IS IT AN EMERGENCY?
Sometimes - confusion, vomiting blood, or black stools

LONG-TERM OUTLOOK
Often manageable, but advanced scarring can be life-threatening

Overview

Liver disease is a broad term for conditions that damage the liver. It is not one single illness. Causes include fat building up in the liver, alcohol, viral infections, immune system problems, inherited conditions, and reactions to medicines or toxins.

Your liver sits in the upper right side of your abdomen. It processes nutrients, stores energy, removes waste products, makes bile for digestion, and produces proteins involved in blood clotting and fluid balance.

The liver can keep working despite some damage. This means early liver disease may cause no symptoms and may only be found through blood tests or a scan.

Repeated or severe damage can cause fibrosis, which means scar tissue. Advanced scarring is called cirrhosis. Cirrhosis changes the liver's structure and can interfere with blood flow and

liver function. Early damage may improve when its cause is treated, but established cirrhosis is usually permanent.

Finding the cause and the amount of scarring helps guide treatment. It also helps identify whether you need ongoing monitoring for complications.

Symptoms

Many liver conditions cause few or no symptoms at first. Symptoms that do occur may be mild or mistaken for other problems.

Possible symptoms include:

Advanced liver dysfunction can affect the brain. This is called hepatic encephalopathy. It may cause poor concentration, changes in sleep, confusion, unusual behaviour, or increasing drowsiness.

These symptoms do not always mean that you have liver disease. Jaundice, abdominal swelling, tiredness, and itching can have several other causes and need medical assessment.

- Ongoing tiredness or weakness
- Reduced appetite, nausea, or unintended weight loss
- Discomfort under the ribs on the right side
- Itchy skin
- Dark urine or unusually pale stools
- Jaundice, which is yellowing of the skin or whites of the eyes
- Swelling of the abdomen, ankles, or legs
- Bruising or bleeding more easily
- Loss of muscle strength

Causes and risk factors

Metabolic dysfunction-associated steatotic liver disease, or MASLD, involves excess fat in the liver linked to metabolic factors. These may include type 2 diabetes, excess body weight, abnormal blood fats, and high blood pressure. Some people develop liver inflammation and scarring.

Alcohol-related liver disease results from damage caused by alcohol. Risk is influenced by how

much and how often a person drinks, how long they have been drinking, and individual susceptibility. Not everyone with alcohol-related liver damage has alcohol dependence.

Hepatitis B and hepatitis C are viral infections that can become long-term. Over time, they may cause inflammation, cirrhosis, or liver cancer. Other infections can also affect the liver, although they may be short-lived.

Autoimmune liver conditions occur when the immune system mistakenly attacks the liver or bile ducts. Examples include autoimmune hepatitis, primary biliary cholangitis, and primary sclerosing cholangitis.

Inherited conditions include haemochromatosis, which causes excess iron to collect in the body, and Wilson disease, which causes copper to build up. Alpha-1 antitrypsin deficiency can also damage the liver.

Some medicines, herbal products, recreational drugs, chemicals, and poisonous mushrooms can cause sudden or gradual liver injury. Paracetamol overdose is a particularly important cause of acute liver failure.

Blocked or damaged bile ducts, reduced blood flow to the liver, and some cancers may also cause liver damage. Sometimes several factors are present at the same time.

Diagnosis

There is no single test for every type of liver disease. Diagnosis usually combines your medical history, an examination, blood tests, and imaging.

You may be asked about alcohol, medicines, supplements, other health conditions, family history, travel, and possible exposure to viral hepatitis. Give an accurate account where possible. This information is used to choose appropriate tests, not to judge you.

Blood tests can look for signs of liver-cell injury or problems with bile flow. Tests may also measure albumin and blood clotting, which can show how well the liver is performing some of its jobs. Results sometimes called "liver function tests" can be abnormal for reasons other than liver disease, and normal results do not rule out significant scarring.

Further blood tests may check for hepatitis viruses, immune system activity, iron or copper disorders, and other possible causes.

An ultrasound can show liver fat, changes in shape, bile duct problems, or fluid in the abdomen. Elastography is a type of scan that estimates liver stiffness. Increased stiffness can suggest fibrosis, although inflammation and other factors can affect the result.

CT or MRI scans may be needed for more detailed images. In some cases, a liver biopsy is

recommended. During a biopsy, a small tissue sample is removed with a needle and examined under a microscope. It can help identify the cause and degree of damage, but not everyone needs one.

Treatment and management

Treatment is based on the cause, how much liver damage is present, and whether complications have developed.

Addressing the cause can stop further injury and may allow some healing. Treatment may include managing metabolic conditions, stopping alcohol, treating viral hepatitis, controlling an overactive immune response, or removing excess iron or copper. A blocked bile duct may need a procedure to restore bile flow.

If alcohol is contributing, stopping it can improve the outlook at any stage. People who may be physically dependent should seek medical help before stopping suddenly because alcohol withdrawal can be dangerous.

Do not stop a prescribed medicine without advice unless emergency services tell you to do so. A clinician can review whether a medicine or supplement could be harming your liver and suggest a safer plan. "Natural" products are not automatically safe, and some contain undeclared or liver-toxic ingredients.

Management may also involve physical activity, nutrition support, and treatment for diabetes, cholesterol problems, or high blood pressure. Rapid weight-loss plans and very restrictive diets are not suitable for everyone, particularly if advanced disease has caused muscle loss.

People with cirrhosis need regular monitoring. This may include blood tests, scans for liver cancer, and checks for enlarged veins called varices. Medicines or procedures can manage fluid build-up, internal bleeding risk, itching, infection, or hepatic encephalopathy.

A liver transplant may be considered when the liver can no longer perform essential functions, when complications cannot be controlled, or for some liver cancers. Assessment considers overall health and whether transplantation is likely to help.

Complications

Complications are more likely when there is advanced fibrosis, cirrhosis, or sudden severe liver injury.

Portal hypertension means increased pressure in the vein carrying blood through the liver. It

can lead to an enlarged spleen, low blood cell counts, or swollen veins in the gullet or stomach. These veins, called varices, can bleed heavily.

Fluid may collect in the abdomen, known as ascites, or in the legs. Abdominal fluid can sometimes become infected. Liver dysfunction may also affect the kidneys, nutrition, blood clotting, and the body's ability to fight infection.

Hepatic encephalopathy occurs when substances normally processed by the liver affect the brain. Symptoms can range from mild concentration problems to severe confusion or unconsciousness.

Cirrhosis increases the risk of primary liver cancer. Monitoring aims to find cancer at an earlier stage, when more treatment options may be available.

Acute liver failure is a rapid loss of liver function. It is uncommon but is a medical emergency, particularly when jaundice is accompanied by confusion, abnormal bleeding, or marked drowsiness.

Prevention

Not every liver condition can be prevented. Inherited and autoimmune liver conditions are not caused by lifestyle choices. Early diagnosis and treatment may still limit damage.

You can reduce some avoidable risks by:

Hepatitis B and C can be passed through blood. Hepatitis B can also spread through sex and from parent to baby during birth. Testing is important if you may have been exposed because treatment and steps to prevent transmission are available.

There is no cleanse that removes liver scarring. The liver already processes waste products; detox teas, fasting plans, and supplements do not replace medical care.

- Keeping alcohol intake within national guidance or avoiding it when advised
- Working toward a sustainable weight if excess liver fat is a concern
- Managing diabetes, blood pressure, and abnormal blood fats
- Having hepatitis vaccinations when eligible
- Not sharing needles, syringes, razors, or other blood-contaminated equipment
- Using medicines only as directed and checking before combining products
- Avoiding unregulated supplements marketed as liver cleanses or detoxes

Living with it and what to expect

What happens over months and years is mainly shaped by the cause and stage of liver damage. Some short-term liver injuries resolve completely. Fat and inflammation may decrease when their cause is addressed, and early fibrosis can sometimes improve.

Cirrhosis is usually permanent, but it does not always progress at the same rate. Treating the cause can lower the risk of liver failure and other complications. Some people remain stable for years, while others need increasingly intensive care.

Follow-up may include blood tests, liver stiffness measurements, ultrasound scans, and appointments with a liver specialist. Keeping these appointments matters even when you feel well because important changes may not cause early symptoms.

Ask for clear advice about alcohol and over-the-counter medicines. People with advanced liver disease may need to avoid alcohol completely and may require adjustments to some medicines. Check before taking herbal remedies or bodybuilding supplements.

Eating enough protein and calories helps protect muscle strength. Advanced liver disease can cause malnutrition even in people who have excess body weight. A dietitian can provide advice if you have poor appetite, fluid build-up, muscle loss, or other nutritional needs.

Liver disease can affect work, sleep, relationships, and mental health. Tiredness and itching can be especially persistent. Practical support, treatment of specific symptoms, and help with alcohol use or emotional health can make daily life more manageable.

When to get medical help

Arrange a routine appointment if you have persistent tiredness, itching, upper abdominal discomfort, or other symptoms that concern you. Assessment is also reasonable if blood tests have been abnormal or you have risk factors such as heavy alcohol use, viral hepatitis exposure, diabetes, or a family history of inherited liver disease.

Seek urgent same-day medical advice for:

Call emergency services for:

Do not wait for symptoms after a possible paracetamol overdose. Serious liver injury may develop before you feel unwell.

- New jaundice
- A rapidly swelling abdomen
- Fever with abdominal pain or jaundice

- New confusion, unusual behaviour, or increasing sleepiness
- Much less urine than usual alongside swelling or jaundice
- Vomiting blood or material resembling coffee grounds
- Black, tar-like stools with weakness, dizziness, or fainting
- Severe confusion, collapse, a seizure, or difficulty waking
- A known or suspected paracetamol overdose
- Suspected ingestion of a poisonous mushroom or toxic chemical

Common questions

Can the liver heal itself?

The liver has a strong ability to repair itself. Fat, inflammation, and some early fibrosis may improve when the cause is removed or treated. Advanced cirrhosis is generally not reversible, although treatment can slow or stop further damage.

Is fatty liver the same as liver disease?

Fatty liver is one type of liver condition. Some people have liver fat without major inflammation or scarring. Others develop inflammation, fibrosis, or cirrhosis. Blood tests and scans help assess the stage.

Can I have liver disease with normal blood tests?

Yes. Blood tests may be normal even when fibrosis is present. They also cannot always show the cause or stage. Your history, examination, imaging, and sometimes other tests are considered together.

Can I drink alcohol if I have liver disease?

This depends on the cause and stage. Complete avoidance is generally important for alcohol-related liver disease and may be advised for cirrhosis or other conditions. Ask the clinician who knows your results for advice that fits your situation.

Does jaundice always mean liver disease?

No. Jaundice can result from liver inflammation, blocked bile ducts, gallstones, pancreatic conditions, or increased breakdown of red blood cells. New jaundice needs prompt assessment.

Do liver detox supplements work?

There is no good evidence that detox products remove liver fat or scarring. Some supplements

can cause liver injury or interfere with medicines. Check any supplement with a pharmacist or clinician before taking it.

Sources

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