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## Diseases and Conditions

# Liver disease

By Mayo Clinic Staff

The liver is an organ about the size of a football that sits just under your rib cage on the right side of your abdomen. The liver is essential for digesting food and ridding your body of toxic substances.

Liver disease can be inherited (genetic) or caused by a variety of factors that damage the liver, such as viruses and alcohol use. Obesity is also associated with liver damage. Over time, damage to the liver results in scarring (cirrhosis), which can lead to liver failure, a life-threatening condition.

Signs and symptoms of liver disease include:

- Skin and eyes that appear yellowish (jaundice)
- Abdominal pain and swelling
- Swelling in the legs and ankles
- Itchy skin
- Dark urine color
- Pale stool color, or bloody or tar-colored stool
- Chronic fatigue
- Nausea or vomiting
- Loss of appetite
- Tendency to bruise easily

## When to see a doctor

Make an appointment with your doctor if you have any persistent signs or symptoms that worry you. Seek immediate medical attention if you have abdominal pain that is so severe that you can't stay still.

Liver disease has many causes.

## Infection

Parasites and viruses can infect the liver, causing inflammation and that reduces liver function. The viruses that cause liver damage can be spread through blood or semen, contaminated food or water, or close contact with a person who is infected. The most common types of liver infection are hepatitis viruses, including:

- Hepatitis A
- Hepatitis B
- Hepatitis C

## Immune system abnormality

Diseases in which your immune system attacks certain parts of your body (autoimmune) can affect your liver. Examples of autoimmune liver diseases include:

- Autoimmune hepatitis
- Primary biliary cirrhosis
- Primary sclerosing cholangitis

## Genetics

An abnormal gene inherited from one or both of your parents can cause various substances to build up in your liver, resulting in liver damage. Genetic liver diseases include:

- Hemochromatosis
- Hyperoxaluria and oxalosis
- Wilson's disease

## Cancer and other growths

Examples include:

- Liver cancer
- Bile duct cancer
- Liver adenoma

## Other

Additional, common causes of liver disease include:

- Chronic alcohol abuse
- Fat accumulating in the liver (nonalcoholic fatty liver disease)

Factors that may increase your risk of liver disease include:

- Heavy alcohol use
- Injecting drugs using shared needles
- Tattoos or body piercings
- Blood transfusion before 1992
- Exposure to other people's blood and body fluids
- Unprotected sex
- Exposure to certain chemicals or toxins
- Diabetes
- Obesity
- High levels of triglycerides in your blood

Complications of liver disease vary, depending on the cause of your liver problems. Untreated liver disease may progress to liver failure, a life-threatening condition.

You may be referred to a doctor who specializes in the liver (hepatologist).

## What you can do

- **Be aware of any pre-appointment restrictions**, such as not eating solid food on the day before your appointment.
- **Write down your symptoms**, including any that may seem unrelated to the reason why you scheduled the appointment.
- **Make a list of all your medications**, vitamins and supplements.
- **Write down your key medical information**, including other conditions.
- **Write down key personal information**, including any recent changes or stressors in your life.
- **Ask a relative or friend to accompany you**, to help you remember what the doctor says.
- **Write down questions to ask** your doctor.

## Questions to ask your doctor

- What's the most likely cause of my symptoms?
- What kinds of tests do I need? Do these tests require any special preparation?
- Are my liver problems likely temporary or chronic?
- What treatments are available?
- Should I stop taking certain medications or supplements?
- Should I avoid alcohol?
- I have other health conditions. How can I best manage these conditions together?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask

other questions during your appointment.

## What to expect from your doctor

Your doctor is likely to ask you a number of questions. Being ready to answer them may make time to go over points you want to spend more time on. You may be asked:

- When did you first begin experiencing symptoms, and how severe are they? Have your symptoms been continuous or occasional?
- What, if anything, seems to improve or worsen your symptoms?
- Have you had a fever?
- Have you ever had your skin or eyes turn yellow?
- What medications and supplements do you take?
- How many days of the week do you drink alcohol? Do you have any tattoos?
- Does your job involve exposure to chemicals, blood or body fluids?
- Have you ever had a blood transfusion?
- Have you been told that you have had liver problems before?
- Has anyone in your family ever been diagnosed with liver disease?

Finding the cause and extent of liver damage is important in guiding treatment.

Your doctor is likely to start with a health history and thorough physical examination. Your doctor may then recommend:

- **Blood tests.** A group of blood tests called liver function tests can be used to diagnose liver disease. Other blood tests can be done to look for specific liver problems or genetic conditions.
- **Imaging tests.** CT scan, MRI and ultrasound can show liver damage.
- **Tissue analysis.** Removing a tissue sample (biopsy) from your liver may help diagnose liver disease. Liver biopsy is most often done using a long needle inserted through the skin to extract a tissue sample. It is then analyzed in a laboratory.

Treatment for liver disease depends on your diagnosis. Some liver problems can be treated with lifestyle modifications, such as stopping alcohol use or losing weight, typically as part of a medical program that includes careful monitoring of liver function. Other liver problems may be treated with medications or may require surgery.

Treatment for liver disease that causes liver failure may ultimately require a liver transplant.

No alternative medicine therapies have been proved to treat liver disease. Some studies — notably of Chinese herbal medicine treatments for clearance of hepatitis B virus — have indicated benefits. But the quality of these research studies has been questioned.

On the other hand, some herbal supplements used as alternative medicine treatments

can harm your liver. More than a thousand medications and herbal products have been associated with liver damage, including:

- Jin bu huan
- Ma-huang
- Germander
- Valerian
- Mistletoe
- Skullcap
- Chaparral
- Comfrey
- Kava
- Pennyroyal oil

To protect your liver, it's important to talk to your doctor about the potential risks before you take any complementary or alternative medicines.

To prevent liver disease:

- **Drink alcohol in moderation.** For healthy adults, that means up to one drink a day for women of all ages and men older than age 65, and up to two drinks a day for men age 65 and younger. Heavy or high-risk drinking is defined as more than three drinks on any day or more than seven drinks a week for women and for men older than age 65, and more than four drinks on any day or more than 14 drinks a week for men age 65 and younger.
- **Avoid risky behavior.** Get help if you use illicit intravenous drugs, and don't share needles used to inject drugs. Use a condom during sex. If you choose to have tattoos or body piercings, be picky about cleanliness and safety when selecting a shop.
- **Get vaccinated.** If you're at increased risk of contracting hepatitis or if you've already been infected with any form of the hepatitis virus, talk to your doctor about getting the hepatitis A and hepatitis B vaccines.
- **Use medications wisely.** Take prescription and nonprescription drugs only when needed and only in recommended doses. Don't mix medications and alcohol. Talk to your doctor before mixing herbal supplements or prescription or nonprescription drugs.
- **Avoid contact with other people's blood and body fluids.** Hepatitis viruses can be spread by accidental needle sticks or improper cleanup of blood or body fluids.
- **Take care with aerosol sprays.** Make sure the room is ventilated, and wear a mask when spraying insecticides, fungicides, paint and other toxic chemicals. Always follow the manufacturer's instructions.
- **Protect your skin.** When using insecticides and other toxic chemicals, wear gloves, long sleeves, a hat and a mask.

- **Maintain a healthy weight.** Obesity can cause nonalcoholic fatty liver disease.

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