

# Hepatitis

Inflammation of the Liver



Hepatitis A	Hepatitis B	Hepatitis C	Hepatitis D	Hepatitis E
<b>Hepatitis A Virus</b> <b>Fecal-Oral Route</b>	<b>Hepatitis B Virus</b> Sexual Contact Contaminated Needles (Also spread via infected tears/saliva)	<b>Hepatitis C Virus</b> Blood-to-Blood Transmission	<b>Hepatitis D Virus</b> Can only be infected with Hepatitis B If you have Hepatitis B already Hepatitis D resides INSIDE Hepatitis B	<b>Hepatitis E Virus</b> Fecal-Oral Route 2-8 WEEKS DURATION
<b>Symptoms:</b> Loss of appetite Diarrhea Fever Nausea (Sickness) Malaise (General discomfort) Jaundice (yellow skin)	<b>Cirrhosis of Liver?</b> <b>Liver Cancer?</b> Vaccine available for prevention	<b>Liver Cirrhosis?</b> <b>Liver Cancer?</b> Asymptomatic Flu-like symptoms	<b>Greater RISK of Liver Failure</b> INCREASED RISK + PROGRESSION TO LIVER CIRRHOSIS	<b>Symptoms:</b> Jaundice Nausea Fatigue
<b>6 WEEKS RECOVERY TIME</b> No permanent damage to liver			<b>TRANSMISSION:</b> Contaminated Needles Sexual contact	<b>CHRONIC STAGE:</b> WEAK IMMUNE SYSTEM PREGNANCY <b>GREATER RISK:</b> FULMINANT LIVER FAILURE CIRRHOSIS

## HEPATITIS: TYPE, CAUSE, SYMPTOMS AND TREATMENT

### WHAT IS HEPATITIS?

Hepatitis refers to an inflammatory condition of the liver. It's commonly caused by a viral infection, but there are other possible causes of hepatitis. These include autoimmune hepatitis and hepatitis that occurs as a secondary result of medications, drugs, toxins, and alcohol. Autoimmune hepatitis is a disease that occurs when your body makes antibodies against your liver tissue.

Your liver is located in the right upper area of your abdomen. It performs many critical functions that affect metabolism throughout your body, including:

- bile production, which is essential to digestion
- filtering of toxins from your body
- excretion of bilirubin (a product of broken-down red blood cells), cholesterol, hormones, and drugs
- breakdown of carbohydrates, fats, and proteins
- activation of enzymes, which are specialized proteins essential to body functions
- storage of glycogen (a form of sugar), minerals, and vitamins (A, D, E, and K)
- synthesis of blood proteins, such as albumin
- synthesis of clotting factors

Treatment options vary depending on which type of hepatitis you have. You can prevent some forms of hepatitis through immunizations and lifestyle precautions.

### The 5 types of viral hepatitis

Viral infections of the liver that are classified as hepatitis include hepatitis A, B, C, D, and E. A different virus is responsible for each type of virally transmitted hepatitis.

Hepatitis A is always an acute, short-term disease, while hepatitis B, C, and D are most likely to become ongoing and chronic. Hepatitis E is usually acute but can be particularly dangerous in pregnant women.

#### Hepatitis A

Hepatitis A is caused by an infection with the hepatitis A virus (HAV). This type of hepatitis is most commonly transmitted by consuming food or water contaminated by feces from a person infected with hepatitis A.

#### Hepatitis B

Hepatitis B is transmitted through contact with infectious body fluids, such as blood, vaginal secretions, or semen, containing the hepatitis B virus (HBV). Injection drug use, having

sex with an infected partner, or sharing razors with an infected person increase your risk of getting hepatitis B.

#### Hepatitis C

Hepatitis C comes from the hepatitis C virus (HCV). Hepatitis C is transmitted through direct contact with infected body fluids, typically through injection drug use and sexual contact.

#### Hepatitis D

Also called delta hepatitis, hepatitis D is a serious liver disease caused by the hepatitis D virus (HDV). HDV is contracted through direct contact with infected blood. Hepatitis D is a rare form of hepatitis that only occurs in conjunction with hepatitis B infection. The hepatitis D virus can't multiply without the presence of hepatitis B.

#### Hepatitis E

Hepatitis E is a waterborne disease caused by the hepatitis E virus (HEV). Hepatitis E is mainly found in areas with poor sanitation and typically results from ingesting fecal matter that contaminates the water supply.

### CAUSES OF NONINFECTIOUS HEPATITIS

**Alcohol and other toxins**

Excessive alcohol consumption can cause liver damage and inflammation. This is sometimes referred to as alcoholic hepatitis. The alcohol directly injures the cells of your liver. Over time, it can cause permanent damage and lead to liver failure and cirrhosis, a thickening and scarring of the liver.

Other toxic causes of hepatitis include overuse or overdose of medications and exposure to poisons.

### Autoimmune system response

In some cases, the immune system mistakes the liver as a harmful object and begins to attack it. It causes ongoing inflammation that can range from mild to severe, often hindering liver function. It's three times more common in women than in men.

### Common symptoms of hepatitis

If you have infectious forms of hepatitis that are chronic, like hepatitis B and C, you may not have symptoms in the beginning. Symptoms may not occur until the damage affects liver function.

Signs and symptoms of acute hepatitis appear quickly. They

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include:

- fatigue
- flu-like symptoms
- dark urine
- pale stool
- abdominal pain
- loss of appetite
- unexplained weight loss
- yellow skin and eyes, which may be signs of jaundice

Chronic hepatitis develops slowly, so these signs and symptoms may be too subtle to notice.

## HOW HEPATITIS IS DIAGNOSED

### History and physical exam

To diagnose hepatitis, first your doctor will take your history to determine any risk factors you may have for infectious or noninfectious hepatitis.

During a physical examination, your doctor may press down gently on your abdomen to see if there's pain or tenderness. Your doctor may also feel to see if your liver is enlarged. If your skin or eyes are yellow, your doctor will note this during the exam.

### Liver function tests

Liver function tests use blood samples to determine how efficiently your liver works. Abnormal results of these tests may be the first indication that there is a problem, especially if you don't show any signs on a physical exam of liver disease. High liver enzyme levels may indicate that your liver is stressed, damaged, or not functioning properly.

### Other blood tests

If your liver function tests are abnormal, your doctor will likely order other bloodtests to detect the source of the problem. These tests can check for the viruses that cause hepatitis. They can also be used to check for antibodies that are common in conditions like autoimmune hepatitis.

### Ultrasound

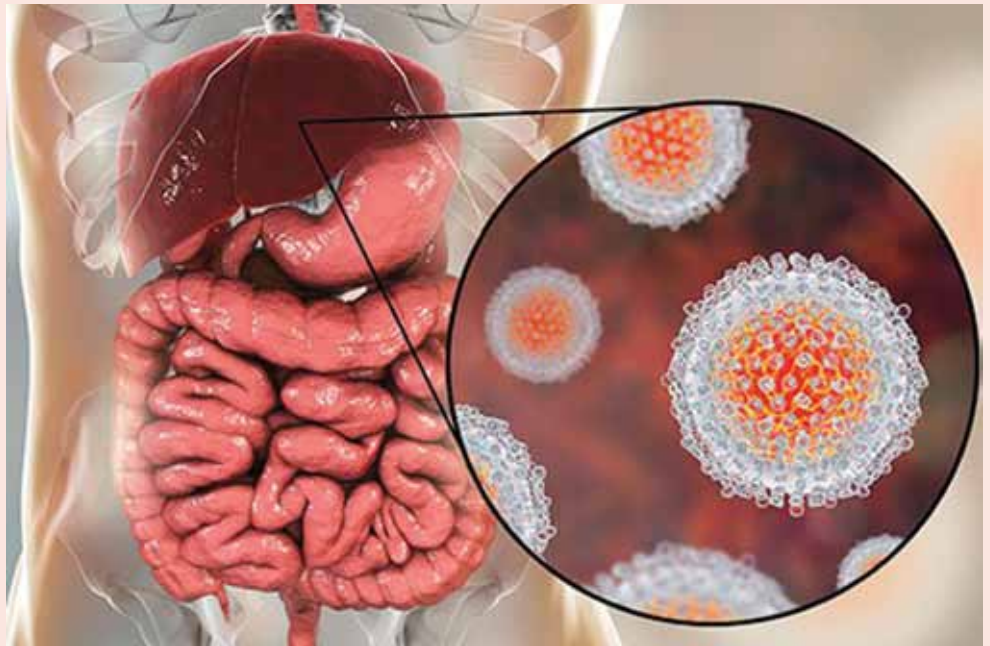
An abdominal ultrasound uses ultrasound waves to create an image of the organs within your abdomen. This test allows your doctor to take a close at your liver and nearby organs. It can reveal:

- fluid in your abdomen
- liver damage or enlargement
- liver tumors
- abnormalities of your gallbladder

Sometimes the pancreas shows up on ultrasound images as well. This can be a useful test in determining the cause of your abnormal liver function.

### Liver biopsy

A liver biopsy is an invasive procedure that



involves your doctor taking a sample of tissue from your liver. It can be done through your skin with a needle and doesn't require surgery. Typically, an ultrasound is used to guide your doctor when taking the biopsy sample.

This test allows your doctor to determine how infection or inflammation has affected your liver. It can also be used to sample any areas in your liver that appear abnormal.

## HOW HEPATITIS IS TREATED

Treatment options are determined by which type of hepatitis you have and whether the infection is acute or chronic.

### Hepatitis A

Hepatitis A usually doesn't require treatment because it's a short-term illness. Bed rest may be recommended if symptoms cause a great deal of discomfort. If you experience vomiting or diarrhea, follow your doctor's orders for hydration and nutrition.

The hepatitis A vaccine is available to prevent this infection. Most children begin vaccination between ages 12 and 18 months. It's a series of two vaccines. Vaccination for hepatitis A is also available for adults and can be combined with the hepatitis B vaccine.

### Hepatitis B

Acute hepatitis B doesn't require specific treatment.

Chronic hepatitis B is treated with antiviral medications. This form of treatment can be costly because it must be continued for several months or years. Treatment for chronic hepatitis B also requires regular medical evaluations and monitoring to determine if the virus is responding to treatment.

Hepatitis B can be prevented with vaccination. The CDC Trusted Source recommends hepatitis B vaccinations for all newborns. The series of three vaccines is typically completed over the first six months of childhood. The vaccine is also recommended for all healthcare and medical personnel.

### Hepatitis C

Antiviral medications are used to treat both acute and chronic forms of hepatitis C. People who develop chronic hepatitis C are typically treated with a combination of antiviral drug therapies. They may also need further testing to determine the best form of treatment.

People who develop cirrhosis (scarring of the liver) or liver disease as a result of chronic hepatitis C may be candidates for a liver transplant. Currently, there is no vaccination for hepatitis C.

### Hepatitis D

No antiviral medications exist for the treatment of hepatitis D at this time. According to a 2013 study Trusted Source, a drug called alpha interferon can be used to treat hepatitis D, but it only shows improvement in about 25 to 30 percent of people.

Hepatitis D can be prevented by getting the vaccination for hepatitis B, as infection with hepatitis B is necessary for hepatitis D to develop.

### Hepatitis E

Currently, no specific medical therapies are available to treat hepatitis E. Because the infection is often acute, it typically resolves on its own. People with this type

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of infection are often advised to get adequate rest, drink plenty of fluids, get enough nutrients, and avoid alcohol. However, pregnant women who develop this infection require close monitoring and care.

## Autoimmune hepatitis

Corticosteroids, like prednisone or budesonide, are extremely important in the early treatment of autoimmune hepatitis. They're effective in about 80 percent of people with this condition.

Azathioprine (Imuran), a drug that suppresses the immune system, is often included in treatment. It can be used with or without steroids.

Other immune suppressing drugs like mycophenolate (CellCept), tacrolimus (Prograf) and cyclosporine (Neoral) can also be used as alternatives to azathioprine for treatment.

## TIPS TO PREVENT HEPATITIS

### Hygiene

Practicing good hygiene is one key way to avoid contracting hepatitis A and E. If you're traveling to a developing country, you should avoid:

- local water
- ice
- raw or undercooked shellfish and oysters

- raw fruit and vegetables

Hepatitis B, C, and D contracted through contaminated blood can be prevented by:

- not sharing drug needles
- not sharing razors
- not using someone else's toothbrush
- not touching spilled blood

Hepatitis B and C can also be contracted through sexual intercourse and intimate sexual contact. Practicing safe sex by using condoms and dental dams can help decrease the risk of infection. You can find many options available for purchase online.

### Vaccines

The use of vaccines is an important key to preventing hepatitis. Vaccinations are available to prevent the development of hepatitis A and B. Experts are currently developing vaccines against hepatitis C.

### Complications of hepatitis

Chronic hepatitis B or C can often lead to more serious health problems. Because the virus affects the liver, people with chronic hepatitis B or C are at risk for:

- chronic liver disease
- cirrhosis
- liver cancer

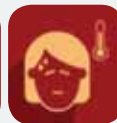
Symptoms of Hepatitis A, B and C can include:



Fatigue



Nausea



Mild fever



Yellow skin or eyes



Stomach pain



Dark urine

When your liver stops functioning normally, liver failure can occur. Complications of liver failure include:

- bleeding disorders
- a buildup of fluid in your abdomen, known as ascites
- increased blood pressure in portal veins that enter your liver, known as portal hypertension
- kidney failure
- hepatic encephalopathy, which can involve fatigue, memory loss, and diminished mental abilities due to the buildup of toxins, like ammonia, that affect brain

function

- hepatocellular carcinoma, which is a form of liver cancer
- death

People with chronic hepatitis B and C are encouraged to avoid alcohol because it can accelerate liver disease and failure. Certain supplements and medications can also affect liver function. If you have chronic hepatitis B or C, check with your doctor before taking any new medications

Source: [www.healthline.com](http://www.healthline.com)