

# Hepatitis B



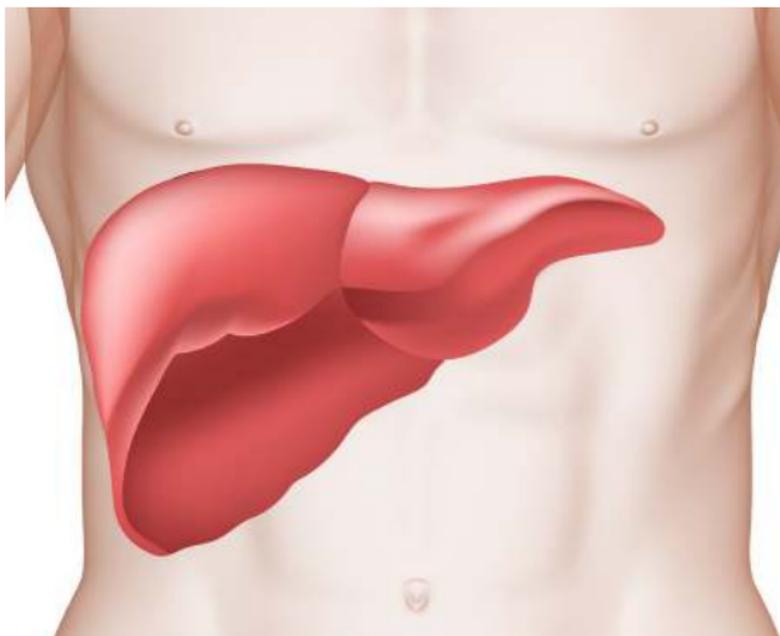
## Why is the liver important?

Your liver is a vital organ that performs many essential functions. It's the largest solid organ in the body and is located under your rib cage on the upper right side. It weighs about three pounds and is shaped like a football that is flat on one side.

The liver performs many essential functions; it processes everything you eat, drink, breathe, and absorb through your skin. It turns nutrients into energy your body can use and removes harmful substances from your blood.

## What is Hepatitis B?

Hepatitis B is a virus that infects the liver. This virus, called the Hepatitis B virus or HBV for short, is just one of the hepatitis viruses. The



other common hepatitis viruses are A and C, which differ somewhat from Hepatitis B in the way they are spread and treated.

## How does HBV affect the liver?

Hepatitis means inflammation, or swelling, of the liver. When the liver is inflamed, it has a harder time doing its job. The majority of adults who get HBV, about 95%, have it for a short time – up to six months – and get better on

their own, and clear the virus from their blood. This is called **acute HBV**. About 5% of adults will go on to develop long-term or **chronic HBV**, meaning it doesn't go away and is present on blood tests.

Anything that damages your liver over many years can lead it to form scar tissue. Fibrosis is the first stage of liver scarring. When scar tissue builds up and takes over most of the liver, this is a more serious problem called cirrhosis. Chronic HBV can eventually lead to cirrhosis, liver cancer, liver failure, death or liver transplantation.

### How likely is it that acute HBV will become chronic?

The likelihood that acute HBV will become chronic depends upon both the age at which you become infected and the ability of your immune system to fight off infections. The younger a person is when infected, the greater the chance of developing chronic HBV. About 90% of infants who are infected at birth from HBV-infected mothers will develop a chronic infection. The risk decreases as a child gets older, dropping to 6% to 10% when a child is infected over five years of age.

In addition, people who have a compromised immune system, due to medications or coexistent diseases such as HIV/AIDS, are at greater risk of developing chronic HBV.

### How is HBV spread?

HBV is spread when body fluids infected with HBV – such as blood, semen, and vaginal fluids – enter the body of a person who is not infected. Among adults in the United States, HBV is most commonly spread through sexual contact, accounting for nearly two-thirds of acute HBV cases.

HBV is not spread by kissing, hugging, holding hands, coughing, sneezing, sharing eating utensils, or breastfeeding.

## Who is at risk of having HBV?

You have a greater risk of infection with HBV if you:

- Have unprotected sex with a HBV-infected partner
- Have multiple sex partners
- Have a sexually transmitted disease
- Are a man who has sex with other men
- Share needles or syringes to inject drugs, or straws to snort them
- Work or live in a place where you can be exposed to infected blood, such as a healthcare institution or correctional facility
- Live with a person who has chronic HBV
- Were born to a HBV-infected mother
- Have your blood filtered by a machine (hemodialysis) because your kidneys aren't working
- Travel to countries or are born in countries where HBV is common, including places in Africa, Central and Southeast Asia, and Eastern Europe

## What are the signs and symptoms of HBV?

A majority of adults develop symptoms from acute HBV infection; however, young children often do not. Symptoms, when they occur, may include:

- Fever
- Dark urine
- Joint pain
- Weakness and fatigue
- Loss of appetite
- Nausea and vomiting
- Abdominal pain near the liver
- Jaundice (yellowing of the skin and whites of the eyes)

On average, symptoms appear three months after exposure to the virus, but they can appear

any time between six weeks and six months. Symptoms usually last for a few weeks, but can last up to six months. Most people infected with HBV adults recover fully, even if their signs and symptoms are severe.

Some of the people who go on to develop chronic HBV have ongoing symptoms similar to acute HBV, but most people with chronic hepatitis B remain symptom free for 20 or 30 years.

If you think you have signs of symptoms of Hepatitis B, contact your doctor.

### **How is HBV diagnosed?**

HBV is diagnosed by blood tests. There are several different blood tests available that can help your doctor determine whether you:

- Could benefit from getting vaccinated
  - Have an acute or chronic infection
  - Have recovered from an infection
  - Are immune to HBV
- If you think you have signs or symptoms of HBV, contact your doctor.

### **What kinds of HBV blood tests are there?**

Hepatitis B surface antigen (HBsAg) is the blood test that demonstrates the presence of active infection in the blood and liver of HBV. If a person tests positive for HBsAg, it means they have an HBV infection.

Anti-HBc or core antibody is the blood test that demonstrates exposure to HBV, since HBV is incurable, the presence of this antibody indicates residual virus in the liver if HBsAg is negative.

Anti-HBc(+) indicates the risk of reactivation in the setting of immune suppression or treatment for HBV.

Anti-HBs is the test that demonstrates immunity only if anti-HBc is negative.



## How is Hepatitis B treated?

If you know you've been exposed to HBV, contact your doctor immediately. If you haven't been vaccinated, receiving an injection of Hepatitis B immune globulin (HBIG) as soon as possible may help protect you from developing HBV as a prophylactic measure. HBIG and the HBV vaccinations are not the same however if you receive HBIG, you should also be vaccinated at the same time.

### Acute HBV

Medications are usually not used to treat acute HBV. Doctors often recommend drinking lots of fluids, avoiding alcohol, eating a healthy diet and getting rest to help your body fight the infection. It's important to see your doctor to make sure your body has fully recovered from the virus.

### Chronic HBV

If you have chronic HBV, you should be monitored regularly for signs of liver disease and need for possible treatment. Not every person with chronic HBV needs medication, and the drugs may cause side effects in some people. It is however important to have regular check-ups with your doctor to observe and watch your liver disease.

There are several medications approved to treat chronic HBV and many other medications are being developed. You should discuss these options with your doctor to find what is best for you.

HBV medications should not be taken by pregnant women unless recommended by their doctors. Some pregnant women with HBV should be treated to prevent transmitting HBV to their babies. It is important to closely follow up with your doctor during pregnancy to prevent transmission of Hepatitis B to their babies.

If you have chronic HBV, it's important to talk to your doctor about treatment options and liver cancer screening every 6 months with an imaging test of the liver and cancer biomarkers in the blood. If you develop cirrhosis, you should also ask your doctor about the complications of cirrhosis. Also, talk to your doctor about getting the Hepatitis A vaccine and being tested for Hepatitis C and Hepatitis D (Delta).

### **How can I prevent getting HB?**

The best way to prevent infection with HBV is by getting the HBV vaccine. It stimulates the body's natural immune system to make antibodies – a substance found in the blood that protects you from disease – against HBV.

Other ways you can reduce your risk of getting HBV include:

- Using sterile needles and equipment for tattoos or body piercings.
- Using a new latex or polyurethane condom every time you have sex if you don't know the health status of your partner.
- Asking your healthcare provider about getting vaccinated if you're traveling to a region where HBV is common.
- Getting help to stop using drugs. If you can't stop, use sterile needles and don't share your needles or other drug paraphernalia.
- Not sharing razors, toothbrushes, or other personal items with someone that has HBV.

### **Who should get vaccinated against HBV?**

The HBV vaccine is recommended for:

- Newborns
- Children and adolescents not vaccinated at birth
- People with chronic liver disease not caused by HBV
- Diabetics younger than 60 years of age
- People who have had/ or are on hemodialysis, those with end-stage renal

- disease including those on pre-dialysis care, peritoneal dialysis, and home dialysis
- Healthcare and emergency workers, military personnel, morticians and others at risk for exposure to blood or blood-contaminated body fluids on the job
  - Residents and staff of facilities for developmentally disabled people
  - People working or housed in prisons
  - People with a sexually transmitted disease
  - People with multiple sexual partners
  - Men who have sex with men
  - People with HIV
  - People who have ever injected or snorted drugs
  - Sexual partners and household members of people with HBV
  - Travelers or those born in countries where HBV is common
  - People seeking protection from HBV, particularly members of ethnic or racial groups with a high rate of HBV infection including Asian and Pacific Islander Americans, African Americans, Latino Americans, Native Americans, and Alaskan Natives
  - Immigrants from countries where HBV is common (Africa, Central and Southeast Asia, and Eastern Europe)

## Facts At-A-Glance

- Hepatitis B is a serious liver infection caused by the HBV.
- HBV is spread by direct contact with body fluids such as blood, semen, and vaginal secretions.
- Getting the HBV vaccine is the best way to prevent HBV.
- HBV is diagnosed by blood tests.
- Many people with HBV have no symptoms.
- An estimated 2.2 million people in the United States have chronic HBV, nearly two-thirds don't show symptoms so many people don't know they have it.
- Asian and Pacific Islanders – people from the Far East, Southeast Asia, Hawaii, Guam, Samoa, Marshall and other Pacific Islands – make up less than 5% of the total U.S. population, but account for more than 50% of Americans living with HBV.
- Most adults – about 95% – are able to fight off HBV and clear HBV from their blood on their own within six months. The remaining 5% develop a long-term infection known as chronic HBV.
- Approximately 90% of infants infected at birth develop chronic HBV.
- Chronic HBV can lead to cirrhosis (severe scarring) of the liver, liver cancer, and liver failure.
- For some patients, medications can help fight HBV.
- HBV is incurable but treatable.
- HBV treatment decreases the risk of cirrhosis, liver cancer, liver transplant and death.





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