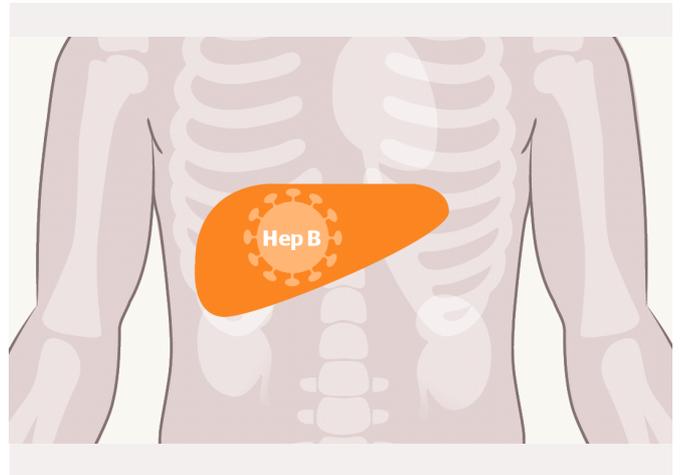


Factsheet Hepatitis B and HIV

Key points

- Hepatitis B is a blood-borne infection that is transmitted in some of the same ways as HIV.
- Hepatitis B can be prevented with a vaccine.
- Over time untreated hepatitis B can cause serious liver disease including cirrhosis and liver cancer.



Hepatitis B is a disease of the liver caused by the hepatitis B virus (HBV). The virus is mainly transmitted through blood-to-blood contact, for example when sharing needles to inject drugs. It can also be transmitted through sex and from mother to child during pregnancy. Hepatitis B can be prevented with a vaccine, which is now given to all babies and recommended for adults at risk. The disease can be treated, but it usually cannot be cured.

Hepatitis means inflammation of the [liver](#). Located on the right side of the abdomen behind the ribcage, the liver carries out many vital functions. These include filtering the blood, helping convert food into energy, processing medications and producing proteins that help the blood clot after an injury. Over years or decades untreated chronic HBV infection can cause serious liver disease, which can include:

Fibrosis – build-up of collagen and other fibrous scar tissue, leading to a 'stiff' liver.

Cirrhosis – serious scarring that blocks blood flow through the liver, kills liver cells and interferes with liver function.

Hepatocellular carcinoma (HCC) – a type of cancer that starts in the liver.

End-stage liver disease – severe loss of liver function that can result in death without a liver transplant.

Your lifestyle and hepatitis B

The best way to avoid infection is to get the hepatitis B vaccine. The British HIV Association (BHIVA) recommends that all people with HIV should be vaccinated if they are not already immune. Four vaccine doses are given over a six-month period. You may be offered a rapid

three-dose vaccination course if your doctor thinks you are at high risk of hepatitis B. It is important to receive all the shots to be fully protected against hepatitis B.

All babies should be vaccinated soon after birth. The vaccine is also recommended for adults at risk for infection including gay men and people who inject drugs.

If you have not yet been vaccinated and are exposed to HBV, getting the vaccine immediately can stop the infection from taking hold (known as post-exposure prophylaxis).

Pregnant women with hepatitis B can be given antibodies or antiviral medication to prevent HBV transmission to their babies.

The following steps can help you avoid hepatitis B infection. People who have had hepatitis B before and naturally cleared the infection usually become immune and won't get it again.

Don't share needles. Hepatitis B is transmitted through contact with blood, and sharing needles or other equipment to inject drugs is one of the biggest risk factors.

Don't share straws or notes to snort or inhale drugs.

Use condoms during sex. Hepatitis B is easily transmitted through sex. [Condoms](#) can help prevent infection. The HBV vaccine is recommended for people who change sexual partners frequently.

Don't share personal items. Avoid sharing personal items that could come in contact with blood, such as razors, toothbrushes and manicure tools.

Only get tattoos and body piercings done in a professional setting using sterile equipment.

In addition, the following suggestions will help you keep your liver in good health, whether or not you have hepatitis B:

Drink less alcohol. [Alcohol](#) can cause a different kind of hepatitis and can make liver disease worse in people with hepatitis B.

Maintain a healthy weight. Being overweight and having metabolic problems such as [diabetes](#) can lead to the build-up of fat in the liver, leading to worse liver damage.

Who is at risk?

Hepatitis B is not very common in the UK. However, many people who inject drugs now or did so in the past have HBV. Donated blood has been tested for HBV since the 1970s in the UK, but people from developing countries may have picked up hepatitis B from blood transfusions or medical equipment used on more than one person. Hepatitis B is more common in parts of Asia and Africa, and immigrants from these countries are more likely to have the virus.

Hepatitis B in people with HIV

Because HIV and HBV are transmitted in similar ways, some people have both viruses, which is known as co-infection. HIV-positive people who have HBV infection are more likely to develop chronic hepatitis B. On average, people with co-infection have faster liver disease progression.

Symptoms

Most people do not have symptoms during acute or early HBV infection. Others may have symptoms that include fatigue (unusual tiredness), flu-like symptoms, loss of appetite, nausea, pain in the upper abdomen and jaundice (yellowing of the skin and eyes).

Most adults infected with HBV are able to clear the virus naturally – less than 10% will develop chronic (long-term) infection. People with HIV are a little more likely to develop chronic infection, but in most cases the virus will go away on its own. It is harder for infants and children infected with HBV to clear the virus.

"Some antiviral medications are used to treat both HIV and HBV."

Symptoms can vary widely during the early and middle stages of hepatitis B, and many people have no symptoms. Over time, up to a quarter of people with chronic hepatitis B will develop severe liver disease, which can include advanced fibrosis or cirrhosis. Compensated cirrhosis means that the liver can still mostly do its job. Decompensated cirrhosis means the liver is failing. People with liver failure can have many symptoms including ascites (fluid build-up in the abdomen), bleeding in the throat or stomach and mental confusion (hepatic encephalopathy).

Diagnosis and monitoring

BHIVA recommends that all people living with HIV should be tested for hepatitis B. Test results can be complicated, with various combinations of markers indicating different disease states.

- People who test negative for hepatitis B antigen (HBsAg) and two types of antibodies (anti-HBs and anti-HBc) are susceptible to infection.
- People who test negative for HBsAg and positive for both types of antibodies are immune because they were previously infected and recovered.
- People who test negative for HBsAg, positive for anti-HBs and negative for anti-HBc are immune due to previous vaccination.
- People who test positive for HBsAg, negative for anti-HBs and positive for anti-HBc currently have hepatitis B.

Another antigen, known as hepatitis B 'e' antigen, generally shows whether the virus is currently

active; however, some types of HBV do not produce this antigen even when they are active. Viral load, or HBV DNA, is the amount of virus measured in the blood.

Liver function tests, including the ALT test, measure proteins associated with liver inflammation. An imaging test called *FibroScan* may be used to assess how much liver damage you have. This can also be done with a liver biopsy, in which a small sample of liver tissue is removed for lab testing.

Treatment and management

People with chronic hepatitis B may be treated with antiviral medications that directly stop HBV from reproducing. These daily pills include entecavir, telbivudine and adefovir.

Some antiviral medications are used to treat both HIV and HBV. These are tenofovir disoproxil fumarate (DF), tenofovir alafenamide and lamivudine. They are available both as single pills and as combination pills together with other anti-HIV drugs.

The British HIV Association and the European AIDS Clinical Society both recommend that all people with HIV should start anti-HIV treatment as soon as possible after diagnosis. They recommend that everyone with HIV and HBV co-infection should be treated with a combination antiretroviral regimen that includes either tenofovir DF or tenofovir alafenamide. Tenofovir DF is the older version of this drug. It can occasionally cause kidney problems and bone loss – if you have other risk factors for kidney or bone problems, you should be able to get tenofovir alafenamide.

Hepatitis B can also be treated with pegylated interferon, a medication that stimulates the immune system to fight HBV. It is taken as a weekly injection for a year and can cause side-effects including flu-like symptoms and depression.

Antiviral drugs can suppress HBV viral load to an undetectable level and lead to normal liver function tests, indicating improved liver health. But they usually do not cure the infection, and antiviral medications may be needed long term.

In rare cases (around 1 to 3%), treatment can lead to a functional cure, indicated by HBsAg clearance in the blood and sometimes development of anti-HBs antibodies (known as seroconversion). But even if the infection is not cured, studies show that treatment can improve the health of the liver and reduce the risk of developing cirrhosis and liver cancer.

Other sources of information

For more information, you may find the website of the British Liver Trust helpful: www.britishlivertrust.org.uk. You can also contact their helpline team on 0800 652 7330.

Find out more

HIV & hepatitis Information booklet

Hepatitis C and HIV Simple factsheet

How hepatitis C is passed on Basic leaflet with pictures