

Patient information

Hepatitis B

Digestive Diseases Care Group

What is hepatitis B?

Hepatitis B is a virus which is carried in the bloodstream to the liver. It can then affect and damage your liver by causing scarring. It is sometimes called hep B or HBV.

What is hepatitis?

Any inflammation of the liver is known as hepatitis. Hepatitis can be caused by a number of things including:

- drinking too much alcohol (the most common cause of liver damage)
- a virus, such as hepatitis B or C
- body's own immune system – a liver disease called autoimmune hepatitis
- fat within the liver
- side effects of some drugs and chemicals.

How common is hepatitis B?

The exact number of people infected is not known. In the UK around 1 person in 350 is thought to have persistent (chronic) hepatitis B infection.

How can you get hepatitis B?

Hepatitis B is a very infectious disease.

1. From mother to baby (sometimes called vertical transmission)

Worldwide, the most common way the virus is passed on is from an infected mother to her baby. This usually occurs during childbirth and can remain undetected for many years. This is very common in some parts of the world where many people are infected with this virus (but is rare in the UK). All women in the UK are now tested for hepatitis B when they are pregnant.

2. From person to person (sometimes called horizontal transmission)

Blood and other bodily fluids, such as semen and vaginal secretions, contain the virus in infected people.

The most common ways in which people in the UK become infected include the following:

- Having unprotected sex with an infected person. Even having oral sex can transmit hepatitis B. Many people with hepatitis B do not realise that they are infected and can pass on the virus during sex.
- From infected blood. You only need a tiny amount of infected blood to come into contact with a cut or wound on your body which may allow the virus to enter your bloodstream, multiply and cause infection.
- Sharing needles and/or any injecting equipment (for example, spoons, filters, water for injection) to inject drugs. Even a tiny amount of blood left on a needle from an infected person is enough to spread the virus to others. Anyone who has had a needlestick injury is at risk and should be tested.
- In the past people who had a blood transfusion or another blood product several years ago were infected with hepatitis B. Now, all blood donated in the UK is checked for the hepatitis B virus (and for certain other infections). So, the risk of getting hepatitis B from a blood transfusion in the UK is now very small.
- There is a small risk of contracting the virus from sharing toothbrushes, razors and other such items which may be contaminated with blood. The virus can live outside the body for up to three weeks.
- From using sharp instruments / equipment which is not sterile for dental work, medical procedures, tattooing, body piercing.
- A bite from an infected person, or if their blood spills on to a wound on your skin, or on to your eyes or into your mouth.

The hepatitis B virus is only transmitted via blood to blood contact and is **not** passed on during normal social contact such as holding hands, hugging, kissing or sharing cups or crockery.

What are the symptoms?

Acute infection

Symptoms of acute hepatitis may develop within 1-6 months after you first become infected with the virus. However, in about half of cases, no symptoms, or only mild flu-like symptoms, develop in the acute phase. You may not even be aware that you have been infected with hepatitis B. In particular, babies who are infected from their mothers during childbirth usually have no symptoms at first.

Symptoms of acute hepatitis B infection usually go after a few weeks, as the immune system either clears the virus or brings it under control. Rarely, an acute severe (fulminant) hepatitis develops which is life-threatening.

Following the initial acute phase there is a good chance of full recovery and clearing the virus for adults who become infected with hepatitis B. However, this is not so for newborn babies who become infected.:

- Nine out of ten adults will clear the virus within three to six months. In this situation you are no longer infectious and you are immune to further infection.

- In up to one in ten cases in adults, the virus remains long-term (chronic hepatitis B infection). This may occur whether or not you have symptoms in the acute phase.
- In more than nine in ten babies infected from their mothers, the virus remains long-term.

Chronic infection

Of those people who develop chronic hepatitis B infection:

- Up to two in three people remain well. You can have the virus in your body but develop no damage or problems to the liver or other organs. This is called being a carrier and is sometimes called chronic inactive hepatitis B. You may not know that you are infected and are a carrier. However, even if you have no symptoms, you can still pass on the virus to others. About one in five carriers eventually clear the virus from their body naturally, but this may be after several years.
- Some people develop cirrhosis which is irreversible scarring of the liver. Cirrhosis usually takes many years to develop after a person has been infected with hepatitis B. For further information regarding cirrhosis please ask for a copy of patient information leaflet PIF 2068 Cirrhosis

How is hepatitis B diagnosed and assessed?

A simple blood test can detect if you are infected with the hepatitis B virus. This test detects a protein on the surface of the virus called hepatitis B surface antigen (HBsAg). If you are found to be infected (if you are HBsAg-positive) then other tests may be advised to check on the severity of infection, liver inflammation and damage to the liver.

For example:

- A blood test can detect various parts of the virus. This can assess how active the virus is (if it is multiplying rapidly which indicates that it is more likely to cause liver damage).
- Blood tests called liver function tests. These measure the activity of chemicals (enzymes) and other substances made in the liver. This gives a general guide as to whether the liver is inflamed, and how well it is working.
- An ultrasound scan of the liver.
- Transient elastography (fibroscan) to assess for cirrhosis.
- Some people may require a liver biopsy which can show the extent of any inflammation and scarring of the liver (cirrhosis).
- A blood test can also be performed to show if you have immunity to hepatitis B.
- Other tests may be done if cirrhosis or other complications develop.

Can hepatitis B be prevented?

Immunisation

A vaccine is available to protect against hepatitis B. This should be offered to anyone who is at risk of being infected with the hepatitis B virus.

Post-exposure prevention

If you are not immunised and have been exposed to the virus, you should see a doctor immediately. (For example, if you are a healthcare worker and you have a 'needlestick' injury.) You can be given an injection of antibodies called immunoglobulin as well as starting a course of immunisation. This may prevent infection from developing.

Preventing infection in newborn babies at risk

All pregnant women in the UK are offered a hepatitis B blood test at routine antenatal appointments. The blood test needs to be done as early as possible in pregnancy so the treatment can be started to help reduce the risk of passing on the virus to the baby. If the mother is infected, her baby is given injections of antibodies and also immunised straight after birth. (The transmission of the virus to the baby is thought to occur mainly during childbirth and not during the pregnancy.) With this treatment there is a good chance of preventing infection developing in the baby.

If I am infected, how can I prevent passing on the virus to others?

If you have a current hepatitis B infection you should:

- Avoid having sex with anyone (especially any sex without using a condom) until they have been fully immunised and checked with a blood test to see that the immunisation has worked.
- Not share any injecting equipment such as needles, syringes, etc.
- Not donate blood or semen or carry a donor card.
- Not share razors, toothbrushes, etc, that may be contaminated with blood.
- Cover any cuts or wounds with a dressing.
- Make sure that, if any of your blood spills on to the floor or other surfaces following an accident, it is cleaned away with bleach.

Treatment for chronic infection

Treatment for hepatitis B does not cure hepatitis B but works to delay or even to prevent complications from developing, like liver damage and 'scarring' of the liver (cirrhosis). People with chronic hepatitis B usually need treatment to stop or to reduce the activity of the virus, so limiting liver damage. A liver specialist will usually advise on when treatment may be beneficial. There are two types of treatment currently given:

1. Interferon.

- This medicine is similar to a substance produced in your body, which is also called interferon. It works to fight infections by boosting your immune system. Interferon is usually given as an injection each week for 6-12 months.
- Side-effects with these medicines can occur. You will be monitored regularly while you are taking treatment, which includes blood tests. Some people need to change their medicines, or take a lower strength, if they have troublesome side-effects

2. Antiviral medicines.

- These work by stopping the hepatitis B virus from multiplying in the body. They include tenofovir, and entecavir. Your doctor will discuss these in more detail with you, as the medicine used can vary between people. A combination of antiviral medicines is sometimes used. Treatment with medicines is usually continued for many years.
- In some people, resistance can develop to their treatment medicine, which means that it does not work so well. If this happens then it is likely you will have to change the medicine you take.

The treatment of hepatitis B is a developing area of medicine. New medicines continue to be developed and the information above is very general. There are some newer medicines that have been introduced in the last few years that show promise to improve the outlook. The specialist who knows your case can give more accurate information about the outlook for your particular situation.

Liver transplant

For some people with advanced 'scarring' of the liver (cirrhosis), liver transplantation may be an option. Although this is a major operation, the outlook following a liver transplant can be very good. However, the new liver may also eventually become damaged by the persisting (chronic) hepatitis B infection.

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Further information for patients / family / carers

**British Liver Trust 0800 652 7330 or email
helpline@britishlivertrust.org.uk**

**Hepatology Specialist Nurses
Tel: 0151 706 2805
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