

## Hepatitis B

### Overview

Hepatitis B is an infection of the liver caused by the hepatitis B virus (HBV). The virus attacks the liver, causing acute inflammation. Symptoms can include jaundice (yellowing of the whites of the eyes and skin), fever, abdominal discomfort — especially around the liver itself in the upper right part of the abdomen, nausea and vomiting, as well as muscle and joint pain.

Hepatitis B infection that lasts longer than six months is called chronic hepatitis B. The World Health Organization estimates that around two billion people worldwide have been infected with HBV, and that about 350 million have a chronic infection. Chronic HBV infection greatly increases the infected person's risk of developing cirrhosis (scarring of the liver), liver failure and liver cancer.

Infants and children who contract hepatitis B are more likely to develop chronic hepatitis, whereas more than 95% of adults who contract hepatitis B will recover completely within six months. If you are infected with HBV, there are a number of simple precautions you can take to avoid infecting other people. Infection with hepatitis B can be prevented by immunisation.

### Cause

Hepatitis B is spread via contact with bodily fluids (usually blood or semen) of an infected person.

The most common sources of infection are:

- Transmission from an infected mother to her baby during childbirth.
- Unprotected sexual contact.
- Injecting drug use (sharing injecting equipment).
- Needlestick injuries.
- Blood to blood exposure through open cuts and sores from a hepatitis B infected person.

Hepatitis B can also be spread by sharing contaminated tattooing and acupuncture equipment, or by transfusion with contaminated blood. Strict screening procedures have ensured that donated blood used for transfusion nowadays is rarely tainted with HBV.

Certain groups of people are at higher than normal risk of contracting hepatitis B. These include:

- Healthcare workers.
- People who travel to parts of the world with high rates of hepatitis B (for example, China and other parts of Asia) and get exposed to the virus through the sources mentioned above.
- People who engage in high risk sexual activity (multiple partners, unprotected sex).
- Men who have sex with men.
- Injecting drug users.
- People who use acupuncture.
- People who receive tattoos.

### Symptoms

Most adults and 30-50% of children who are infected with acute hepatitis B virus will develop some symptoms of hepatitis B, such as:

- Mild fever

- Nausea and vomiting.
- Abdominal discomfort.
- Pale stools and dark urine.
- Diarrhoea.
- Loss of appetite.
- Muscle and joint pain.
- General malaise (feeling unwell).
- Jaundice (yellow colour in the skin, mucous membranes or eyes).
- Rash.

A person can be infected with hepatitis B but not have any obvious symptoms of the infection, especially in cases where the disease is acquired in infancy. A proportion of patients will develop chronic hepatitis B infection and these individuals are at risk of long-term complications. In the early stages, patients often have no symptoms of the disease.

Symptoms of progressive and advanced liver disease include swelling of the legs and abdomen, bruising and gastrointestinal bleeding, confusion, weight loss and lethargy. This is often accompanied by redness of the palms, nail abnormalities and spider veins. In rare cases, complete liver failure can result. In some instances, chronic hepatitis B infection can result in the development of liver cancer.

### Diagnosis

Diagnosis of hepatitis B is based on a combination of medical history, physical examination and blood tests. The doctor may also ask a series of questions to assess your risk of being infected with the hepatitis B virus.

The doctor might also ask questions about changes in the colour of urine or stools, rashes, muscle and joint pain, and abdominal symptoms such as pain, nausea and vomiting. An abdominal examination will sometimes reveal tenderness and mild enlargement of the liver or spleen.

There are several blood tests that can determine whether you have been infected with hepatitis B. These include:

- Tests for hepatitis antigens (viral proteins). A positive test means you have an active infection and can spread the virus to other people.
- Tests for antibodies that indicate your body has started to fight the infection or that you are immune. Whether you can pass the virus to other people depends on whether there are viral antigens in your blood.
- Liver function tests to determine whether your liver has been damaged.

### Treatment

Most adults with acute hepatitis B infection will recover completely without any specific treatment. Patients who develop chronic hepatitis B (infection lasting longer than six months) may need to take oral antiviral medication (for example Entecavir or Tenofovir) in order to stop the virus reproducing.

Some antiviral medications (interferon and pegylated interferon) are given as regular injections. These treatments enhance the

body's immune response to infection, as well as preventing the virus from replicating. All available antiviral treatments help to prevent the disease progressing to cirrhosis, liver failure or liver cancer. Occasionally, hepatitis B will cause liver damage so severe that the patient will need a liver transplant.

Most patients with liver disease due to hepatitis B do not have any symptoms. Thus, patients need to be monitored for many years, possibly for the rest of their lives. This monitoring will usually include regular tests for liver function and the presence of an active hepatitis B virus, and in some cases, screening for liver cancer.

### Lifestyle and diet

If you have hepatitis B, tell your doctor about all medications you are taking. Some prescription and over-the-counter medications may damage the liver and may need to be discontinued or replaced with an alternative medication.

To prevent cirrhosis of the liver, avoid drinking alcohol. If this is not possible, alcoholic beverages should be reduced to no more than 1-2 drinks a day, with at least two alcohol-free days a week.

Pregnant women who have hepatitis B should inform their doctor, as vaccination of the baby at birth can prevent the disease from passing to the baby.

If you are infected with the hepatitis B virus, there are simple precautions you can take to avoid infecting other people. You should:

- Have all intimate contacts and housemates tested for hepatitis B. Contacts who have not been exposed to the virus should be vaccinated.
- Use barrier contraceptives (condoms, dental dams) during sex.
- Avoid sharing personal items such as toothbrushes and razors, as they may contain traces of contaminated blood.

### Prevention

Immunisation against hepatitis B is now on the Australian National Immunisation Program schedule. Injections are usually given over six months. For newborn babies, injections are given at birth, 2 months, 4 months and 6-12 months. The vaccine is 95% effective in healthy adults, and 98% effective in babies and children. When given in childhood, the hepatitis B vaccine also provides protection against liver cancer. Vaccination is recommended for:

- All newborn babies.
- All children who have not been vaccinated.
- People who engage in high-risk sexual behaviour (unprotected sex, multiple partners).
- Men who have sex with men.
- IV drug users.
- People who require blood transfusions or dialysis.
- Healthcare workers.
- People who live in or travel to parts of the world where hepatitis B is common.

**Support and resources**

- Victorian Government Health Information  
[www.health.vic.gov.au](http://www.health.vic.gov.au)
- Hep B Resources for Patients  
[www.hepbhelp.org.au](http://www.hepbhelp.org.au)
- Hepatitis Australia  
[www.hepatitisaustralia.com/about-hepatitis/hepatitis-b](http://www.hepatitisaustralia.com/about-hepatitis/hepatitis-b)
- World Health Organization  
[www.who.int/en/](http://www.who.int/en/)

It'sMyHealth.com.au