

# Hepatitis B

*The facts you  
need to know*

*Patient information booklet*

*Know it. Test it. Treat it.*

# Table of contents

About this booklet	3
What is hepatitis?	3
What is chronic hepatitis B?	3
Can someone be a 'healthy carrier' of hepatitis B?	4
Why is the liver important?	5
How can hepatitis B affect my liver?	6
Stages of liver damage	7
Where in the world is hepatitis B infection common?	8
How is the hepatitis B virus spread?	9
How is chronic hepatitis B diagnosed?	12
What are the symptoms of chronic hepatitis B?	12
What should I do if I have chronic hepatitis B?	13
How can I protect others from becoming infected?	14
What tests will I need to have?	16
Is there a cure for chronic hepatitis B?	19
Important points about chronic hepatitis B	20
Questions you may want to discuss with the Hepatitis Foundation or your doctor	21
Notes	22

## **About this booklet**

This booklet will help answer questions you may have about chronic hepatitis B. It also contains some basic information about the hepatitis B virus (HBV), how it is spread, how to protect others, common tests and other helpful information. For more information speak to your doctor or The Hepatitis Foundation of New Zealand.

## **What is hepatitis?**

'Hepatitis' means 'inflammation of the liver' and is most commonly caused by infection with one of five viruses – hepatitis A, B, C, D or E. Hepatitis B is the world's most common, serious liver infection and is highly infectious.

## **What is chronic hepatitis B?**

Chronic hepatitis B occurs when the body is unable to get rid of the virus and it remains in the blood for more than six months. People with chronic hepatitis B will generally have lifelong infection and will require active follow-up.

Approximately 15–40% of people with chronic hepatitis B will develop serious liver disease during their lifetime, so it is very important that you have regular six-monthly blood tests to monitor your virus status and your liver.

## **Can someone be a 'healthy carrier' of hepatitis B?**

No person with chronic hepatitis B should be considered to be a 'healthy carrier'.

Chronic hepatitis B passes through a number of different phases and some are not associated with liver damage. However, people may not always stay in these phases and if they move from one phase to another they can be at risk of liver damage.

Therefore, it is very important that you receive six-monthly blood tests to monitor your hepatitis B. These blood tests are provided free-of-charge if you are enrolled with The Hepatitis Foundation of New Zealand.



## Why is the liver important?

The liver is the largest organ inside the body and carries out many functions, including:

- Storing vitamins, minerals and iron.
- Breaking down hormones and old blood cells.
- Clearing blood of waste products, drugs and poisons.
- Making clotting factors to stop excessive bleeding.
- Making, storing and releasing sugars, fats and proteins.
- Releasing bile to help digest food.



The liver can make new tissue, which means it can function even when sections of it have been removed or are diseased. However, the more damaged it is, the harder it becomes for the liver to repair itself. We can survive only a few days if it stops working completely.

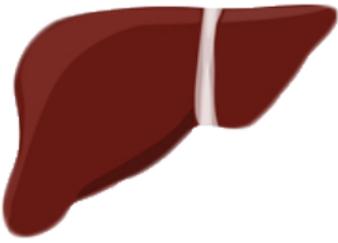
## How can hepatitis B affect my liver?

A healthy liver is flexible and soft but it can become hardened in people with chronic hepatitis B, as the liver is constantly attacked by the virus.

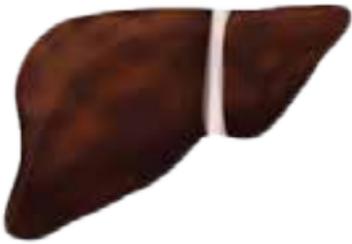
The following changes may occur in the liver of people with chronic hepatitis B infection:

- **Fibrosis:** small scar tissue is formed within the liver.
- **Cirrhosis:** as the damage from fibrosis progresses, large sections of the liver can become scarred and nodules may form. As a result, blood cannot easily flow through the liver causing the liver to shrink and harden. About 30% of people with hepatitis B develop cirrhosis.
- **Liver failure:** may occur in cases of severe cirrhosis. Liver failure means that the liver is unable to carry out its normal functions, which can lead to death.
- **Liver cancer:** a serious complication of chronic hepatitis B infection that mainly occurs in the presence of cirrhosis. About 5–10% of people with hepatitis B may develop liver cancer.

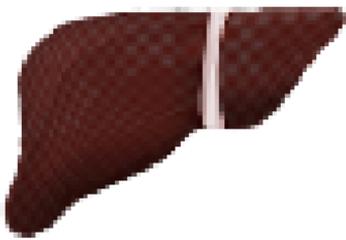
## Stages of liver damage



Healthy liver



Fibrosis:  
Scar tissue forms.



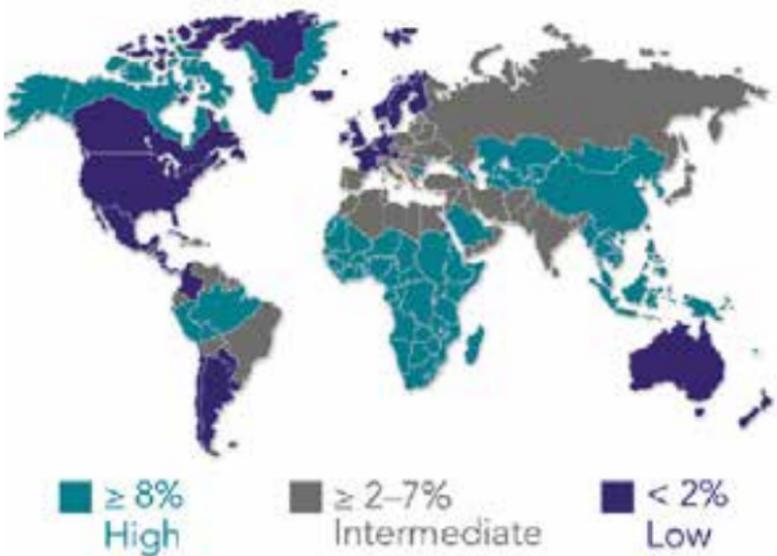
Cirrhosis:  
Large sections of  
the liver become  
scarred.

## Where in the world is hepatitis B infection common?

Approximately 350–400 million people worldwide have chronic hepatitis B. The number of people with chronic hepatitis B in each country varies significantly.

As you can see from the map below, medium to high infection rates can be found in South-East Asia, the Middle and Far East, Southern Europe and Africa. In New Zealand, about 100,000 people have chronic hepatitis B.

### Worldwide distribution of chronic hepatitis B

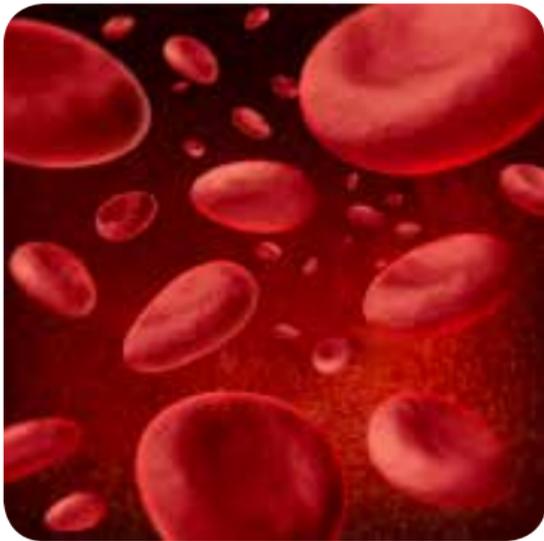


## How is the hepatitis B virus spread?

The hepatitis B virus can be spread through contact with blood and bodily fluids of an infected person – all infected people can pass it on.

The virus is highly infectious and can survive outside the body for at least seven days, so blood spillages and dried blood could contain active virus.

Most adults with chronic hepatitis B were infected at birth or in early childhood.



## Hepatitis B may be spread in the following ways:

- Mother-to-child transmission, usually at or around the time of birth (called 'vertical transmission'). If you have hepatitis B and are pregnant, talk to your doctor about injections for your baby to reduce the chance of the baby becoming infected.
- Contact with blood (e.g. from cuts and injuries, nose bleeds or menstrual blood) or bodily fluids (e.g. weeping wounds). This may occur in the following ways: sexual contact (e.g. semen or vaginal fluid), pre-chewing food for babies, direct contact between children or adults with open cuts and wounds, children biting one another and needle stick injuries.



- Sharing household objects such as toothbrushes, razors, pierced earrings and nail clippers.



- The use of unsterile medical tools and equipment used in tattooing, body piercing, injecting drug use and acupuncture.



## **How is chronic hepatitis B diagnosed?**

Chronic infection can be diagnosed by a simple blood test which looks for virus protein present in the bloodstream for more than six months (this protein is called hepatitis B surface antigen or HBsAg).

Other tests that your doctor may order to assess your chronic hepatitis B are discussed in the section 'What tests will I need to have?'

## **What are the symptoms of chronic hepatitis B?**

Hepatitis B is often called a 'silent infection' and many people with chronic infection don't have any symptoms. They may feel healthy and strong, and they can be infected for a long time without realising it. If symptoms are present, they are usually mild and non-specific.

### **Some people with chronic hepatitis B may have these symptoms:**

- Tiredness, depression or irritability
- Nausea and vomiting
- Loss of appetite
- Pain in the liver (upper right side of abdomen)
- Joint aches and pain.

For people with more advanced disease, there may be other symptoms related to the underlying liver damage.

## What should I do if I have chronic hepatitis B?

Enrol with The Hepatitis Foundation of New Zealand for free follow-up of your hepatitis B. It is important to have regular tests to check the health of your liver and detect any problems as early as possible.

- The Hepatitis Foundation of New Zealand will order blood tests and other tests to evaluate your hepatitis B status and the health of your liver.
- Discuss any medicines you are taking with your doctor or the Hepatitis Foundation, including:
  - herbal/alternative therapies
  - prescription and over-the-counter medications
  - allergies to any medications.
- Avoid alcoholic beverages as they can be extremely harmful to a liver infected with hepatitis B. Alcohol may increase the risk of scarring in the liver.
- Avoid smoking.
- Ask your doctor for a hepatitis A vaccination (as being infected with hepatitis A can also affect your liver).

## How can I protect others from becoming infected?

### Do's:

- Make sure all close family and household members are tested for hepatitis B and vaccinated if required.
- Sexual contacts should be vaccinated.
- Use condoms during sexual intercourse if your partner is not vaccinated or naturally immune.
- Cover all cuts, scratches and open sores with a bandage.
- Wash your hands well after touching blood or bodily fluids.
- Clean up blood/bodily fluid spills with household bleach (do not put bleach on your skin).
- Throw away personal items such as tissues, menstrual pads and tampons in a sealed plastic bag.
- Learn more about hepatitis B so you can make the best decision for yourself and provide the best protection for others.
- If a friend or family member is exposed to the hepatitis B virus, tell them to call their doctor or The Hepatitis Foundation of New Zealand straightaway. Immediate treatment may prevent infection.

- If you are pregnant and have chronic hepatitis B, speak to your doctor or The Hepatitis Foundation of New Zealand about ways to prevent your baby becoming infected.

### Do not's:

- Do not share toothbrushes, razors, nail files, earrings, clippers or anything that may have come into contact with blood or bodily fluids.
- Do not share food that has been in your mouth (e.g. chewing gum) and do not pre-chew food for babies.
- Do not donate blood, sperm, body organs or any other tissues.

### Important note

Hepatitis B **cannot** be spread through kissing, sneezing, hugging, eating food prepared by someone who is infected with hepatitis B, or sharing toilets or showers.

### Children and adults with hepatitis B:

- Can participate in all activities including contact sports.
- Should not be excluded from daycare or school participation, and should not be isolated from other children.
- Can share food and utensils, and kiss others.

## What tests will I need to have?

The Hepatitis Foundation of New Zealand and/or your doctor will monitor the status of your hepatitis B infection and the health of your liver. There are a number of tests that may be ordered, including:

- Blood tests to assess liver function, the amount of virus in your blood and serology (which looks for antigens and antibodies).
- Liver biopsy to check the liver.
- Liver imaging (tests used to create 'images' of the liver, e.g. ultrasound or FibroScan).

There are two medical terms you should be familiar with:

- **Antigen:** a foreign substance in the body, such as the hepatitis B virus.
- **Antibody:** a protein that your immune system makes in response to a foreign substance.



Additional information on the tests your doctor or the Hepatitis Foundation may order:

### **HBsAg\***

All chronic hepatitis B patients will be positive for hepatitis B surface antigen (HBsAg) for more than six months.

### **HBsAb\***

HBsAb reveals whether or not your body has developed a protective antibody against hepatitis B.

This usually provides long-term protection against future hepatitis B infection.

### **HBeAg\***

This stands for hepatitis B e antigen which is a protein that is secreted by the hepatitis B virus. In collaboration with other blood tests, testing for HBeAg helps assess the stage of your disease.

### **HBeAb\***

HBeAb reveals whether or not you have developed antibodies to the HBeAg. In collaboration with other tests it helps to assess the stage of disease.

\* Indicates blood test

### **HBV DNA or 'viral load'**\*

This test measures the amount of hepatitis B virus DNA (viral load) present in your bloodstream. It is also important in determining when to start treatment and how well a current treatment is working.

### **ALT (alanine aminotransferase)**\*

ALT is a substance that is released from the liver cell into the bloodstream when liver cells are damaged. Increases in ALT above normal levels are often associated with damage to liver cells.

### **Liver biopsy**

In this procedure a small piece of tissue is taken from the liver and examined under a microscope. This can assess the amount of liver damage caused by hepatitis B infection.

\* Indicates blood test



Having chronic hepatitis B increases the risk of developing liver cancer. You should be regularly screened for liver cancer, particularly if you have a family history of hepatocellular carcinoma.

The Hepatitis Foundation of New Zealand and/or your doctor may use tests, including alphafetoprotein (AFP, a blood test) and abdominal ultrasound to screen for liver cancer.

This is not a complete set of tests available to assess your disease and additional testing may be required.

### **Is there a cure for chronic hepatitis B?**

Currently, there is no cure but there are effective treatments that control hepatitis B. Some are taken by mouth, others are given by injection. As not all patients require treatment, a specialist will decide whether you need treatment or not.

If treatment is required, your doctor will discuss the best options for you. Whether or not you need treatment, you should be regularly monitored.

**For more information about chronic hepatitis B, please speak with The Hepatitis Foundation of New Zealand, or your doctor.**

Call 0800 33 20 10 or visit  
[www.hepatitisfoundation.org.nz](http://www.hepatitisfoundation.org.nz)

### **Important points about chronic hepatitis B**

- All family and household contacts should visit their doctor for testing/vaccination.
- It is important to have six-monthly blood tests to detect active liver disease. Enrol with The Hepatitis Foundation of New Zealand to receive free follow-up.
- Hepatitis B can be managed and treated.

**Remember, if you have any questions about hepatitis B call the Hepatitis Foundation or speak to your doctor.**

## Questions you may want to discuss with the Hepatitis Foundation or your doctor:

1. What are the symptoms of hepatitis B and how will it affect my liver?  
\_\_\_\_\_

2. How is hepatitis B transmitted?  
\_\_\_\_\_

3. Do I have to tell anyone I have hepatitis B?  
\_\_\_\_\_

4. What tests will I need in order to know how hepatitis B is affecting me?  
\_\_\_\_\_

5. Is there a treatment for hepatitis B?  
\_\_\_\_\_

6. How do I know that I need treatment? When should I start it?  
\_\_\_\_\_

7. When do I need to see a liver specialist; will I have to pay for tests and treatment?  
\_\_\_\_\_

8. Should I be tested for, and vaccinated against, other forms of hepatitis?  
\_\_\_\_\_

9. What can I do to look after my health?  
\_\_\_\_\_

10. Are there any side effects to treatment?  
\_\_\_\_\_

11. How often should I come back and see you?  
\_\_\_\_\_

12. Where can I go for more information and support?  
\_\_\_\_\_

**Notes:**

The form consists of ten horizontal bands. The bands alternate in color: light orange, dark orange, light orange, dark orange, light orange, dark orange, light orange, dark orange, light orange, and dark orange. Each band contains a single horizontal line for writing, positioned near the top of the band.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## The Hepatitis Foundation of New Zealand

61 Alexander Ave, Whakatane, New Zealand

**Phone** 07 307 1259 **Fax** 07 307 1266

**Hepatitis Helpline** 0800 33 20 10

hepteam@hefnz.nz

[www.hepatitisfoundation.org.nz](http://www.hepatitisfoundation.org.nz)



This booklet has been edited and reprinted for use in New Zealand with permission of Bristol-Myers Squibb Australia.

© Hepatitis Foundation of New Zealand 2015

Printed with vegetable oil-based inks on 100% recycled paper