

Hepatitis B

Infection with the hepatitis B virus (HBV) causes inflammation of the liver.



Hepatitis B is a notifiable condition¹

How hepatitis B is spread

Hepatitis B is spread when infectious body fluids (blood, saliva, semen and vaginal fluid) come into contact with body tissues beneath the skin (for example, through needle puncture or broken skin) or mucous membranes (the thin moist lining of many parts of the body such as the nose, mouth, throat and genitals). In Australia the most likely ways people will have become infected are:

- > mother-to-baby transmission at or around the time of birth, particularly for people born outside Australia in countries where hepatitis B is common, and in remote Aboriginal communities
- > child-to-child contact usually through contact between open sores or wounds, particularly for people born outside Australia in countries where hepatitis B is common, and in remote Aboriginal communities. A contact is any person who has been close enough to an infected person to be at risk of having acquired the infection from that person.

Other ways of contracting hepatitis B include:

- > sharing equipment used for injecting drugs
- > unprotected sex (anal and vaginal)
- > tattooing and body piercing with unsterilized equipment
- > household contact including sharing razors, hair clippers and toothbrushes

- > accidental needle stick or blood splash to broken skin or mucous membrane (the thin moist lining of many parts of the body such as the eyes, nose, mouth, throat and genitals).

The risk of spread is increased when there are higher levels of virus in the blood. The level of virus varies considerably between people infected with hepatitis B.

Signs and symptoms

Acute infection

(infection usually lasts less than 6 months)

About 50% of adults and 90% of children do not develop any symptoms at the time of infection.

Symptoms, if they occur, may include:

- > fever
- > loss of appetite
- > nausea and vomiting
- > abdominal pain (especially in the right upper abdomen)
- > yellow skin or eyes (jaundice) (see image)
- > dark coloured urine and pale faeces
- > muscle and joint pain
- > rash.



Image Courtesy Public Health Image Library (PHIL), Department of Health and Human Services, Centers for Disease Control and Prevention (CDC-USA) CDC, Dr. Thomas F. Sellers / Emory University

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Acute infection may be followed by chronic (long lasting) infection. People unable to eliminate the hepatitis B virus from their body following an acute infection and who remain infected for more than 6 months are said to have chronic hepatitis B infection.

Chronic infection

Risks for developing chronic infection are age and immune deficiency. With age,

- > 90% of infants will develop chronic infection following acute infection
- > only 1 to 10% of older children or adults will develop chronic infection.

Most people chronically infected with hepatitis B have no symptoms but are capable of spreading the infection to others. People chronically infected with hepatitis B have an increased risk of developing cirrhosis (scarring) of the liver and liver cancer later in life.

Diagnosis

Both acute and chronic hepatitis B infections are diagnosed by blood tests serology and PCR (polymerase chain reaction) tests in a pathology laboratory.

If liver inflammation continues, a needle may be inserted into the liver to obtain a sample of liver for further testing.

Incubation period

(time between becoming infected and developing symptoms)

Between 45 to 180 days, and rarely from as early as 2 weeks to as late as 9 months.

Infectious period

(time during which an infected person can infect others)

From up to 3 months before symptoms develop until the infected person eliminates the virus from their body. Chronically infected people remain infectious for life although the

risk of transmitting the infection to others varies considerably from person-to-person.

Treatment

Antiviral treatment is available and is of benefit to some people with chronic hepatitis B infection.

People with hepatitis B virus infection but no symptoms were once thought to be 'healthy carriers'. However, all people with chronic hepatitis B should receive regular, lifelong monitoring of disease progression by a general practitioner or liver specialist .

Routine monitoring (at least annually) even when there are no symptoms, can prevent severe liver disease including liver cancer.

Prevention

- > Exclusion from childcare, preschool, school or work is not necessary.
- > infected health care workers must comply with the requirements of their professional boards
- > any open sores, cuts or abrasions should be covered with waterproof dressings
- > all donated blood and organs are screened for evidence of hepatitis B infection
- > practice safer sex – use condoms consistently and correctly
- > injecting drug users should never share injecting equipment
- > if required to handle blood or body fluids, the routine use of standard precautions will reduce the risk of transmission of hepatitis B virus.

Immunisation and immunoglobulin

There is a safe and effective vaccine available for hepatitis B for infants and those at higher risk of acquiring hepatitis B infection and/or higher risk of severe disease. Completion of a full course will give protection against hepatitis B infection in more than 90% of people.

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See the Hepatitis B vaccine page or the High Risk Hepatitis B Immunisation Program for more information. A combination hepatitis A and B vaccine is available and should be considered for:

- > expatriates and travellers in countries where hepatitis A and hepatitis B are common
- > individuals whose occupation may put them at risk of acquiring hepatitis A and/or hepatitis B
- > individuals whose lifestyle may put them at risk of acquiring hepatitis A and hepatitis B
- > solid organ transplant recipients
- > residents and staff of facilities for people with developmental disabilities
- > patients with chronic liver disease and/or hepatitis C.

Hepatitis B vaccine and/or immunoglobulin can be given soon after exposure to make it less likely a person will develop hepatitis B. This is called post exposure prophylaxis.

Read the Get tested, get vaccinated, eliminate Hepatitis B infographic for more information.

Post exposure prophylaxis

(treatment to prevent disease)

Hepatitis B immunoglobulin is a solution made from blood products containing a high level of antibodies specific to the hepatitis B virus.

Hepatitis B immunoglobulin and vaccine are also offered to non-immune people who have had close physical contact with a person known to be infected with hepatitis B in the following situations:

- > after needle sharing or needle stick injury
- > after sexual exposure.

Immunoglobulin is offered after needle stick injuries unless the source is known to be negative for hepatitis B. Immunoglobulin should be administered as soon as possible within 72 hours after a needle stick injury and within 14 days after sexual exposure.

All women are tested for hepatitis B infection during pregnancy. If a mother is found to have hepatitis B infection, her baby is given immunoglobulin and a dose of hepatitis B vaccine within 24 hours of birth. With this treatment less than 10% of infants become infected with hepatitis B.

Useful links

- > Handling blood and other body substances
- > Hepatitis A, B, C, D and E summary
- > Avoiding sexually transmitted infections (STI)
- > Immunisation
- > When you have a notifiable condition
- > Hepatitis SA
- > Viral Hepatitis Nursing Support
- > Immunise Australia Program
- > ASHM Hepatitis B Mapping Project
- > Hepatitis Australia

1 In South Australia the law requires doctors and laboratories to report some infections or diseases to SA Health. These infections or diseases are commonly referred to as 'notifiable conditions'.

You've Got What? 5th Edition

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The SA Health Disclaimer for this resource is located at www.sahealth.sa.gov.au/youvegotwhat



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