



## HEPATITIS B

### WHAT IS HEPATITIS B?

Hepatitis B (HBV) is a viral infection that attacks the liver after entering the bloodstream; it is the most common liver infection in the world and can lead to both acute and chronic disease, causing serious consequences such as liver cancer and cirrhosis if left untreated.

### WHAT ARE THE SYMPTOMS?

Following transmission and the average incubation period of 10 weeks (range of 2 to 6 months), some of those infected may have no symptoms – this is more common in children under 5 years of age. Between 30% and 50% of infected people older than 5 will experience gradually increasing fatigue, loss of appetite, nausea and pain in the right upper abdomen. A rash may present as one of the symptoms and also pain in the joints. These are followed by yellow discolouration of the skin (jaundice) and darkening of the urine. In a small number of cases, HBV infection results in rapid liver failure and death.

Up to 10% of adults and 30% of children who contract HBV will become chronic carriers; this means they will recover but will always remain capable of transmitting the disease. Most babies infected at birth will develop chronic Hepatitis B infections and, with it, a higher risk of liver cancer or failure later in life.

### WHERE IS IT FOUND?

Hepatitis B prevalence is highest among some sub-Saharan African, East and Southeast Asian, and Pacific island populations but can also be found in high numbers in the Mediterranean countries, parts of Eastern Europe, Africa, and Central and South America. It is important to note that although there is a higher risk in certain countries or regions, Hepatitis B occurs in all countries.

Some people may have a higher risk of contracting Hepatitis B through their occupation, i.e. healthcare workers, police and other emergency services workers, funeral company employees, staff of residential care facilities, tattooists, acupuncturists, people who perform body piercings and sex workers.

### RISK TO TRAVELLERS

While the risk of HBV infection is higher in individuals with greater exposure to bodily fluids and contaminated needles, it is also increased during adventure-style activities, where the risk of injury is higher.

Australian children are vaccinated against Hepatitis B as part of the National Immunisation Program, but for unimmunised adults, the best way to ensure protection when visiting countries at higher risk is through Hepatitis B vaccination. All travellers should consider Hepatitis B vaccination recommendations.

### HOW IS HEPATITIS B TRANSMITTED?

HBV is transmitted through contact with body fluids, such as blood, saliva, vaginal secretions and semen, as can occur when sharing needles, with needle-stick injuries, through sexual contact, but also from an infected mother to her baby at birth. The infection can also be contracted through tattooing and even via contaminated instruments used in medical or dental procedures. The virus can survive in the environment for seven days or more and remains capable of infecting a non-immune person (i.e. unvaccinated).

## HOW IS HEPATITIS B TREATED?

Immunoglobulin, a passive immunisation, can be administered within 12 hours of an at-risk exposure to help prevent HBV infection. Treatment for chronic disease is through the use of antiviral medications and medications containing naturally-occurring proteins. A liver transplant may be necessary in the event of severe liver damage.

A Hepatitis B vaccination schedule is the best way to prevent infection.

## OUR RECOMMENDATION

Travelvax urges travellers to take common-sense precautions to avoid exposure to the Hepatitis B virus. The risk of infection is increased during travel, however, as accidents and injuries may require medical treatment, and in many third-world countries, blood transfusions may not be adequately screened for Hepatitis (as well as [STIs](#) and HIV-AIDS). Also, needles may be reused.

## WHAT IS HEPATITIS B VACCINATION?

Australian children are vaccinated against Hepatitis B as part of the standard [childhood immunisation](#) schedule.

*Type: Injection*

- Recombinant vaccine with adult and paediatric formulations
- Combined vaccine with Hepatitis A with adult and paediatric formulations
- Combination vaccines used in the childhood immunisation schedule

**Contraindications:** Anyone who has had anaphylaxis after a previous dose of any Hepatitis B vaccine or any component of a Hep B vaccine or to yeast.

## SCHEDULE

There is no Hepatitis B vaccination age limit. The primary [childhood immunisation](#) series is given from birth: healthy babies receive their first Hepatitis B vaccine soon after birth (and preferably within the first 24 hours), followed by three doses of a combination Hep B-containing vaccine at 2, 4 and 6 months of age (the 2-month dose may be given at 6 weeks of age). The standard regimen for **adults** who did not receive a childhood vaccination series is one dose given at 0, 1 and 6 months.

**School-age children** may have been administered a 2-dose schedule of adult Hepatitis B vaccinations. This regimen is only appropriate for children aged between 11 and 15 years.

## SCHEDULE (ACCELERATED)

There are 2 accelerated schedules for **adults**: Months 0, 1, 2 and 12 months, and for those people at imminent risk of exposure: Days 0, 7 and 21 with a booster at 12 months.

## LEVEL OF PROTECTION

Greater than 90% immunity after three doses, and immunity is life-long. (Australian immunisation experts do not recommend testing for immunity unless in a high-risk group).

## POSSIBLE SIDE EFFECTS

- Usually infrequent and mild but any experience: Redness, swelling, a hard lump or bruising around the injection site, feeling unwell, headache, dizziness, tiredness, muscle aches and pains, coughing, sore throat, runny nose, mild fever, swollen glands, chills or sweating.

As with all vaccines, there is a small risk of allergic reaction.

## WHERE CAN I GET A HEPATITIS B VACCINATION FROM?

If you require vaccination against Hepatitis B, head to a Travelvax clinic [near you](#). Staffed by trained professionals who have access to state-of-the-art equipment, we can help keep you safe on your next trip.

At Travelvax, we urge people to be cautious and use common sense to avoid being exposed to Hepatitis B while travelling. [Contact](#) us today on [1300 360 164](tel:1300360164) or use our convenient online form to send a message.

*References:*

1. Australian Institute of Health and Welfare <https://www.aihw.gov.au/reports/immunisation/vaccine-preventable-diseases/contents>
2. Australian Immunisation Handbook <https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/Hepatitis-b>
3. Bruce MG, Bruden D, Hurlburt D, et al. Antibody levels and protection after Hepatitis B vaccine: results of a 30-year follow-up study and response to a booster dose. *J Infect Dis.* 2016;214(1):16–22.
4. Australian Government's Department of Health Handbook <https://immunisationhandbook.health.gov.au/contents/vaccine-preventable-diseases/Hepatitis-b#:~:text=Hepatitis%20B%20vaccination%20is%20recommended%20for%20infants%20and%20children%20in,%2C%20>).

## FAQS

### WHO NEEDS TO GET A HEPATITIS B VACCINATION AND AT WHAT AGE?

Hepatitis B vaccination is included in the childhood vaccination schedule of the Australian National Immunisation Program for infants in a **4-dose** schedule from birth to 6 months of age. Preventing Hep B infection in infants, which is often asymptomatic, will also remove the elevated risk of them developing chronic Hepatitis B and its associated outcomes of cirrhosis or liver cancer in later life.

For older children, adolescents and adults not vaccinated as infants, there are particular risk groups for which the Hepatitis B vaccinations are advisable; they are given as a 3 or 4-dose schedule over 2-12 months. Adolescents aged 11–15 years receive an alternative 2-dose schedule over 6 months as part of the school-based immunisation program.

The recommendations for specified risk groups apply to those:

- who are immunocompromised
- with medical risk factors
- whose occupation increases their risk of acquiring hepatitis B
- whose lifestyle or other circumstances increase their risk of acquiring hepatitis B
- travellers to hepatitis B–endemic areas

## **WHY IS HEPATITIS B GIVEN TO NEWBORNS?**

Mothers infected with Hepatitis B pass the virus to their babies through the womb or at the time of birth. If newborn babies receive one dose of the Hepatitis B vaccination at birth and promptly, along with Hepatitis B immunoglobulin (HBIG) within 24 hours of birth, they can be protected from contracting the infection. This is known as vertical transmission, and pregnant women are routinely screened for their Hep B status to determine the risk to their baby.

Infants whose mothers are not infected with Hep B receive a birth dose of the Hep B vaccine within the first 7 days after delivery in the event there may be close contact with relatives/others who may have a chronic Hepatitis B infection – horizontal transmission.

## **WHO IS AT RISK FOR HEPATITIS B?**

The Hepatitis B virus is transmitted from one infectious person to another through broken skin or contact with mucosal surfaces from blood or other body fluids, such as vaginal fluids and semen. As a result, those people considered at risk of infection would include anyone with an underlying medical condition, with background, occupational or lifestyle exposures, or for travel to medium to highly endemic Hep B countries.

**Risk groups for Hepatitis B are:**

### **MEDICAL RISKS**

- people who are immunocompromised, such as HIV
- severely impaired renal function, or on dialysis
- before solid organ transplant or after stem cell transplant
- people with Hepatitis C or with chronic liver disease
- people who receive blood products
- people with developmental disabilities
- preterm and low birth weight infants
- infants born to mothers who are Hepatitis B positive

### **OCCUPATIONAL RISK**

- police, members of the armed forces, health workers, emergency services staff and staff of correctional facilities
- staff in facilities caring for people with developmental disabilities
- funeral workers and embalmers
- tattooists and body-piercers

### **INTERNATIONAL TRAVEL**

- travellers to medium to highly endemic Hepatitis B areas

## **OTHER AT-RISK PEOPLE**

- Aboriginal and Torres Strait Islander people
- household or other close contacts of people with Hepatitis B
- sexual contacts of people with Hepatitis B
- men who have sex with men
- migrants from Hepatitis B endemic countries
- people who inject drugs and share needles
- inmates of correctional facilities
- sex industry workers

## **HOW OFTEN DO YOU NEED TO BE VACCINATED FOR HEPATITIS B?**

After completing the recommended course, protection is generally considered life-long. In infants, clinical trials have shown more than 97% protection after the course of vaccinations. In adults, trials show more than 90% protection following a course of age-appropriate vaccinations.

Testing for antibodies after completing the primary course of vaccinations is only carried out in specific groups of people considered at high risk of contracting Hepatitis B. These include people at significant occupational risk (i.e. healthcare workers who are frequently exposed to blood or body fluids), people at risk of severe or complicated Hepatitis B (i.e. immuno-compromised or with non-Hep B liver disease), those less likely to develop immunity (i.e. on dialysis) and close contacts of people infected with Hep B. Additional doses may be required if testing shows inadequate immunity.

## **CAN I CATCH HEPATITIS B FROM SALIVA?**

No. Although the Hepatitis B virus can be found in saliva, it is in much lower concentration than in blood or other bodily fluids such as semen and vaginal fluids. The concentration of Hepatitis B virus in saliva is too low to allow transmission by kissing, sharing food or eating utensils, coughing or sneezing.

## **CAN I STILL GET HEPATITIS B EVEN IF I WAS VACCINATED?**

The Hepatitis B vaccine course offers excellent long-term protection from infection, but there are other serious diseases that can be transmitted in the same or similar ways e.g., contaminated medical/dental or tattooing equipment can lead to Hepatitis C or even HIV/AIDS. As such, precautions are recommended.

## **DO YOU NEED ALL 3 HEPATITIS B SHOTS?**

The 3-dose vaccination schedule extends immunity to life-long protection. Only infants require a **4-dose** schedule from birth to 6 months of age to gain life-long immunity.

## **CAN YOU LOSE IMMUNITY TO HEPATITIS B?**

Studies show that cellular immunity maintains protection even if antibody levels have declined.

## **WHAT HAPPENS IF YOU DON'T BECOME IMMUNE AFTER HEPATITIS B VACCINATION?**

Approximately 5-15% of people do not develop antibodies after the first course of the vaccination and are known as Hep B 'non-responders'. They require further doses and antibody testing to determine if protection can be gained.

## **DO I NEED A HEPATITIS B BOOSTER LATER IN LIFE?**

After a healthy person completes the vaccine series, no booster doses are required.

## **IS HEPATITIS B A FREE VACCINE?**

The Hepatitis B vaccine is offered free of charge to all eligible infants and people up to 19 years of age who have not

received the full schedule of NIP vaccinations (also for refugees and humanitarian entrants aged 20 years or older). For other requirements (travel or occupation), please call your nearest clinic for Hepatitis B vaccine pricing.

## **~~IS HEPATITIS B CURABLE?~~**

There is currently no effective medication to treat acute Hepatitis B infection, although most people do go on to recover. Some develop chronic Hepatitis B and this condition is treated and managed long term with antiviral agents and interferon.

The aim of treatment is to lower the viral load and reduce symptoms. Some people will only have low levels of the infection, and it is considered inactive - not causing any symptoms. The disease can flare up at any time and lead to liver damage, so regular check-ups are important.

All other risk groups who were not vaccinated at birth are recommended to have a course of Hepatitis B vaccinations.

## **~~HEPATITIS B VACCINATION: HOW LONG DOES IT LAST?~~**

Studies indicate that immunity remains intact for at least 30 years in healthy people who had the Hepatitis B vaccination at age >6 months. The vaccine gives long-term protection against both illness and chronic Hepatitis B infection. Despite low degrees of antibodies or levels declining under detectable proportions, cellular immunity seems to persist.

## **~~HEPATITIS B VACCINE AND COVID-19~~**

If you are worried that a COVID vaccine will interfere with your Hep B treatment, there is no evidence to suggest that it has any impact. COVID vaccines are safe for people undergoing Hepatitis B treatments just as they are with other vaccines such as the flu jab. It is crucial to continue taking your Hep B medications and only stop if you have been given that advice by your specialist.

## **~~IS HEPATITIS B A LIVE VACCINE?~~**

Hepatitis B is not a live vaccine and it cannot cause Hepatitis B. The vaccine protects you against the Hepatitis B virus, which can cause severe diseases such as liver cancer and cirrhosis, which scars the liver and prevents it from functioning properly. The Hep B vaccine may be administered in hospital at birth, with other childhood vaccinations from 6 months of age, or with travel vaccines.

Since the disease can have such serious outcomes, the World Health Organisation recommends all babies should be vaccinated to protect them from Hepatitis B infection. In Australia, Hepatitis B immunisation is funded for infants and children in a 4-dose schedule at birth and at ages 6 weeks-2 months, 4 and 6 months. Hepatitis B vaccination is also advised for all other risk groups, normally in a 3-dose schedule (0, 1 and 6 months).

## **~~WHAT ARE THE SIDE EFFECTS OF THE HEPATITIS B VACCINE?~~**

Newborn babies tolerate their dose of the Hepatitis B vaccine very well, according to the Australian Government's Department of Health. The vaccine does not interfere with breastfeeding, either when first starting or maintaining it.

Hepatitis B vaccine is NOT linked with an increased risk of the following in vaccinated newborns compared with unvaccinated infants:

- serious outcomes
- fever (occurs in 0.6–3.7% of neonates)
- medical investigation for sepsis

Adverse events after Hepatitis B vaccination are transient and minor in adults, and they may include:

- soreness at the site of the injection (5%)
- low-grade fever (2–3%)
- dizziness
- nausea
- joint or muscle pains/aches
- myalgia

Serious effects such as anaphylaxis are rare in adults and are more likely to occur in people with a yeast allergy. Reports of Hep B vaccination causing Guillain–Barré syndrome, demyelinating diseases and arthritis are not backed by evidence.

According to the WHO Global Advisory Committee on Vaccine Safety, ‘multiple studies and review panels have concluded there is no association between multiple sclerosis and Hepatitis B vaccination’.

## **HEPATITIS B VACCINE: WHAT YOU NEED TO KNOW**

It’s recommended that Hepatitis B vaccines should not be given to people who have had any of the following:

- anaphylaxis after vaccination with any Hepatitis B vaccine
- anaphylaxis after any component of a Hepatitis B vaccine
- an anaphylactic response to yeast

## **WHERE CAN I GET THE HEPATITIS B VACCINE NEAR ME?**

Immunisation for Hepatitis B is available in every Australian state and territory from a wide range of providers, so finding one near you should not be difficult. General Practice and travel doctors usually provide the necessary vaccines to their patients, but you can also access vaccines, including Hep B, from the following:

- school-based immunisation programs
- local council or community health clinics
- Aboriginal Medical Services
- workplaces

In some situations, vaccinations may also be given at:

- pharmacies
- occupational health clinics for staff members
- public hospitals
- aged care facilities

Not all vaccination providers can offer you free vaccines under the National Immunisation Program (NIP) so contact your provider to find out which vaccines they offer and at what cost. Call your state’s health department or use HealthDirect’s free service finder to find an immunisation provider near you.

**More information on Hepatitis B is available during your pre-travel consultation with Travelvax.  
Call 1300 360 164 for the location of the clinic nearest to you.**