

Hepatitis B

Understanding the virus, infection, and prevention

WHAT IS HEPATITIS B?

Hepatitis B is a liver disease caused by the hepatitis B virus. It is one of the most common forms of viral hepatitis. Many adults who are infected recover completely. However:^[1,3]

- Fewer than 5% of adults develop chronic (long-term) hepatitis B infection.
- About 1% of adults develop acute liver failure.
- Up to 90% of babies born to a mother infected with hepatitis B are at risk of contracting the virus, making vaccination at birth critical.

Chronic hepatitis B can lead to cirrhosis (severe liver scarring) and liver cancer years after infection.^[3,4]

HOW IS IT SPREAD?

- Blood-to-blood contact (e.g. sharing needles, contact with infected blood)
- Sexual contact with an infected person
- From mother to baby during or around birth

IMPORTANT

Hepatitis B is NOT spread through water, food, or casual everyday contact such as hugging, handshaking, or sharing dishes.

WHO IS AT RISK?

Without immunisation, the following groups are at higher risk:^[1,5]

- Sexual partners of someone with hepatitis B
- Babies born to mothers who have hepatitis B
- Close household members of someone with hepatitis B
- People who use injection drugs
- Health care workers, police, and firefighters who are exposed to blood or body fluids
- People living in or travelling to regions where hepatitis B is common: Asia, sub-Saharan Africa, southern and eastern Europe, Pacific Islands

DIAGNOSIS

Diagnosis is made through blood tests. The results may show: ^[1,5]

- **Positive surface antibody (anti-HBs):** you are immune (from past infection or vaccination). You cannot be infected or infect others.
- **Positive surface antigen (HBsAg):** you are still carrying the virus (acute or chronic infection). If still positive after 6 months, it is chronic infection.
- **Positive core antibody (anti-HBc) only:** indicates a past resolved infection.
- **All negative:** you have never been exposed and are not vaccinated. You would benefit from vaccination.

TREATMENT

The goal of treatment for chronic hepatitis B is to prevent cirrhosis, liver failure, and liver cancer. Not everyone needs treatment; the challenge is identifying who is at risk of progression.^[3,4]

Interferon injections

Interferon-alpha boosts the immune response against the virus. Injected 3 times a week (standard) or once a week (pegylated form) for up to 48 weeks.^[4]

Oral antiviral medications

Medications such as entecavir and tenofovir directly suppress the virus. Taken once daily and generally well tolerated. Some people need indefinite treatment. The main risk is development of drug resistance over time, which may require combination therapy.^[3,4]

PREVENTING TRANSMISSION TO OTHERS

- Use condoms during sexual activity. Encourage household members to be tested and vaccinated.
- If pregnant, discuss this with your doctor. Your baby can be protected at birth with hepatitis B immune globulin (HBIG) and the first vaccine dose, giving a 95% chance of avoiding infection.^[1]
- Tell your doctor, dentist, and health care providers so they can take appropriate precautions.
- Never share toothbrushes, razors, nail files, or other personal items that may carry blood.
- Do not donate blood or semen.
- Cover all cuts and sores with dressings.
- Clean blood spills with freshly diluted bleach (1 part bleach, 9 parts water) and leave for 10 minutes before wiping.

IS HEPATITIS B PREVENTABLE?

Yes. The hepatitis B vaccine is highly effective and provides long-lasting protection for most people. In Australia, hepatitis B vaccination is included on the National Immunisation Program for all newborns.^[1]

- Safe sex practices
- HBIG and vaccination for newborns of infected mothers
- HBIG for anyone exposed to infected blood or body fluids within 7-14 days

DIET

There is no special diet required for hepatitis B. Follow a healthy, balanced diet and avoid alcohol if you have active liver disease, as alcohol causes further liver damage.

RESOURCES AND SUPPORT

- **Hepatitis Australia:** 1800 437 222 | www.hepatitisaustralia.com - National peak body for hepatitis organisations in Australia
- **Hepatitis NSW:** 1800 803 990 | www.hep.org.au - Information, support, and peer education for people with hepatitis B or C
- **Hepatitis Victoria:** 1800 703 003 | www.hepvic.org.au - Support and information for Victorians living with hepatitis
- **ASHM (Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine):** www.ashm.org.au - Clinical guidelines and specialist referral for hepatitis B management
- **Immunise Australia Program:** www.health.gov.au/health-topics/immunisation - Information on hepatitis B vaccination in Australia

REFERENCES

1. Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine (ASHM). (2024). Hepatitis B management guidelines. <https://www.ashm.org.au>
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3. Sarin SK, et al. (2016). Asian-Pacific clinical practice guidelines on the management of hepatitis B. *Hepatology International*, 10(1), 1-98.
4. Terrault NA, et al. (2018). AASLD guidelines for treatment of chronic hepatitis B. *Hepatology*, 67(4), 1560-1599.
5. National Hepatitis B Testing Policy Expert Reference Committee. (2020). National Hepatitis B Testing Policy 2020. <https://www.ashm.org.au>