QAIHC

Queensland Aboriginal and Islander Health Council

Decision support tools for Hepatitis B testing

NOVEMBER 2025

STEP 1 — Yarning about Hep B

How to have a conversation

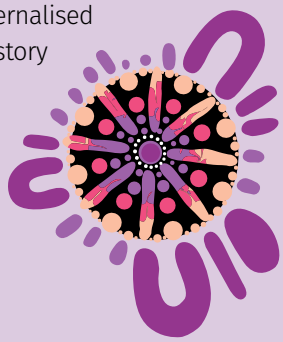
Hepatitis B (HBV or Hep B) is a blood borne virus (BBV) that can damage the liver and increase the chance of getting liver cancer. Having a Hep B infection as a young child is hard to clear. If not vaccinated, about 90% of infants that get Hep B won't clear it from the body and will end up with chronic Hep B (CHB), which is a lifelong infection.

There is no cure for Hep B, but children and adults can easily get vaccinated to prevent infection.

Indigenous Australians experience chronic Hep B at rates up to four times higher than non-Indigenous Australians. It's important to emphasise that people living with Hep B need lifelong monitoring, but many will not require treatment and can live long, healthy lives.

TIP: Yarning about Hep B judgement free

Living with Hep B can be made more challenging by experiences of discrimination and judgement — from the general public, healthcare providers, friends and family — as well as by internalised stigma, including feelings of shame and low self-worth. Some people may have a history of injecting drug use, been in prison, or be pregnant — all of which can heighten feelings of vulnerability. These experiences can make mob feel unsafe or hesitant to engage with health services due to fear of judgment or discrimination.



You could say:

"You are safe to yarn with me about your health."

"I want to meet you where you're at in your health journey and there is support available."

STEP 2 — Who to test

Risk factors, prevention and vaccinations

Check the patient's medical records to see if they have been tested for Hep B before.

Who should be offered testing?

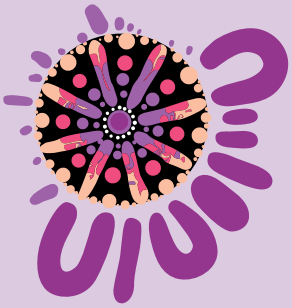
- All adults not previously screened for Hep B or those whose immune or infective status is not known.

Other circumstances to offer testing:

- Women planning pregnancy, or all pregnant women at first antenatal visit, 28 weeks gestation and at birth[1]
- Infants and children born to mothers who have Hep B
- People with clinical presentation of liver disease and/or elevated ALT/AFP of unknown cause
- Partner/household/sexual contacts of people with acute or chronic Hep B
- Patients undergoing chemo-therapy or immunosuppressive therapy (risk of reactivation)
- People who have ever injected drugs
- Men who have sex with men and people with multiple sex partners
- People in custodial settings or who have ever been in custodial settings
- People with HIV, Hep C or both
- People initiating HIV pre-exposure prophylaxis (PrEP — medicine that can prevent infection with HIV exposure)
- People undergoing haemodialysis
- People engaged in sex work
- People who request to be tested.

Who should NOT be offered testing?

- Patients who have been tested previously with documented immune status and who have a documented history of a full vaccination course, and with no additional risk exposure.
- Patients with documented Hep B immune status. This can be from natural immunity from past exposure (anti HBc positive) or vaccine induced immunity (anti HBc negative). This includes a positive anti-HBs (Hep B surface antibody) with a negative HBsAg (Hep B surface antigen).



[1] National Aboriginal Community Controlled Health Organisation, & The Royal Australian College of General Practitioners. (2024). *National guide to preventive healthcare for Aboriginal and Torres Strait Islander people: Recommendations (4th ed.).* p117.

Hep B vaccination

The Hep B vaccine is effective at preventing HBV infection. The universal infant program, with the first dose of Hep B vaccine given at birth, began in Australia in 2000.

All infants should be vaccinated against Hep B at birth, followed by additional doses at 2, 4, and 6 months of age, in line with the National Immunisation Program.[2]

Checking vaccination history

For health professionals

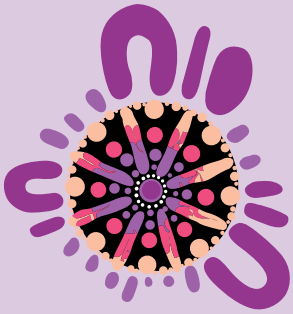
If you're an eligible health professional, you can quickly see and update an individual's immunisation history by using either:

- the Australian Immunisation Register (AIR) via Health Professional Online Services (HPOS)
- clinical software, if integrated with the AIR.

For patients

Let your patient know they can access their immunisation history, as well as their children's, via their Medicare online account through *MyGov* or the *Medicare* mobile app.

TIP: Yarning about risk factors



Yarning about drug use, time in prison, and BBVs can be tricky to navigate. When asking...

- "When was the last time you injected drugs? Some people injected drugs when they were younger, is this something you ever did?"
- "Have you ever been in prison?"
- "Have you been tested or treated for Hep B in the past?"
- "Do any of your parents have Hep B?"

Asking if parents had Hep B is important to determine if mother to child transmission of Hep B at birth was a risk.

You could say:

"If you have, that's ok, there's no shame, and it's your business — it helps me find out what tests need to done and how I can best support you in your health journey. I'll keep this private."

[2] National Aboriginal Community Controlled Health Organisation, & The Royal Australian College of General Practitioners. (2024). *National guide to preventive healthcare for Aboriginal and Torres Strait Islander people: Recommendations (4th ed.).* p278.

STEP 3 — Order tests

To determine Hep B status, 3 tests are required:

- HBsAg (Hep B surface antigen) – positive HBsAg indicates current active infection (acute or chronic)
- anti-HBc (Hep B core antibody) – positive anti-HBc indicates that there has been either past or current Hep B infection
- anti-HBs (Hep B surface antibody) – positive anti-HBs indicates immunity—either from vaccination or a resolved infection.

If acute Hep B is suspected (through recent risk, presentation, or both), anti-HBc IgM can also be ordered. Testing does not need to be repeated if the patient has previously been shown to be immune (i.e. if anti-HBs is positive).

All 3 tests are Medicare-rebatable. Write: ***"? chronic hepatitis B"*** on the request slip.

TIP: Yarning about testing

Let your patient know that the Hep B test can tell the story of their blood including:

- If they currently have the Hep B virus
- If they need to get vaccinated
- If they've had Hep B in the past, and
- If they have already had the Hep B vaccination.

Hep B Story App — Menzies

This is a visual, interactive app designed for patients living with chronic Hep B (CHB) and their families. It tells the story of the Hep B virus, how you get it, what happens over time, how you know you have it, as well as details about immunisation and treatment. It also features a separate women's business section discussing mother to child transmission and ways to prevent it. It was created and translated by community members and health workers across the NT. The app is available in English and 11 Aboriginal languages. Get the app: Hep B Story App

STEP 4 — Interpret serology

Table 1: Interpret serology[3]

HBsAg **anti-HBc** **anti-HBs**	positive positive negative	**Chronic HBV Infection** Progress to step 5
HBsAg **anti-HBc** **anti-HBc IgM*** **anti-HBs**	positive positive positive negative	**Acute HBV Infection** * (high titre) Progress to step 5
HBsAg **anti-HBc** **anti-HBs**	negative negative negative	**Susceptible or non-immune** When there is no documented history of completed vaccination, then vaccination is recommended†
HBsAg **anti-HBc** **anti-HBs**	negative positive positive	**Immune due to resolved Infection** Record result and consider family screening
HBsAg **anti-HBc** **anti-HBs**	negative negative positive	**Immune due to hepatitis B vaccination** No action required
HBsAg **anti-HBc** **anti-HBs**	negative positive negative	**Various possibilities, including: distant resolved infection, recovering from acute HBV, false positive, 'occult' HBV** Refer to hepatitisb.org.au for more details

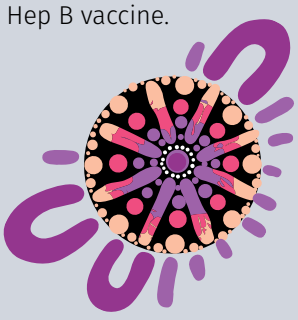
Sourced from the ASHM: *Decision making in Hepatitis B toolkit*, last updated July 2024.

Booster Hepatis B vaccine and non-responders to Hep B vaccination

- Give a single booster dose of Hep B vaccine (4th dose) and check serology again in 4-8 weeks. If the anti-HBs level is 10mIU/ml or above, the patient is then immune.
- If the person does not have Hep B virus infection and there is no immunity after booster, then the patient is likely to be a non-responder. Two more doses of Hep B vaccine 1 month apart are recommended, counting the 4th booster dose as the 1st of the 3 repeat doses. Re-test the person for anti-HBs levels at least 4 weeks after the last dose.

Check for immunity after Hep B vaccination

- Serological testing 4-8 weeks after completing the Hep B vaccine course is recommended for those at high risk. Such as:
  - people who are immunocompromised and people with pre-existing liver disease
  - people who may respond poorly to Hep B vaccination, such as haemodialysis patients
  - close contacts of people who are infected with Hep B virus, including sexual partners, household contacts and household-like contacts, or others.
- If there is no immunity (anti-HBs level <10 mIU/ml), consider giving a booster vaccine dose and/or further action as for non-responders to the Hep B vaccine.



[3] Australasian Society for HIV, Viral Hepatitis & Sexual Health Medicine. 2024. *Decision Making in Hepatitis B.* https://ashm.org.au/wp-content/uploads/2024/08/web-AUG2024-UPDATE_ASHM_Decision-Making-in-Hepatitis-B-Toolkit.pdf

† Refer to immunisationhandbook.health.gov.au/vaccine-preventable-diseases/hepatitis-b for more detail.

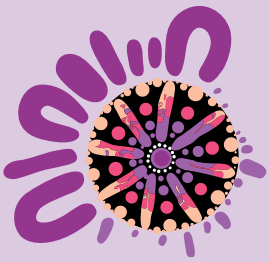
STEP 5 — Initial assessment if HBsAg positive

If a patient is diagnosed with chronic Hep B, further assessment is needed to determine the next steps in their care.

TIP: Yarning about test results

"We did that test to check on your liver health. I've had a look at your results and wanted to talk through what we found together."

"The test shows you've got something called chronic Hep B. That means the virus has been in your body for a long time – maybe even since you were little. It's not your fault. Most people with chronic Hep B don't display any symptoms because the liver is very good at hiding it's illness. It's important to get regular checks and monitor your liver as people may not feel unwell ever, until it's too late."



Do baseline screening to assess the phase of disease (see Step 6). This requires you to order the following tests:

- HBV DNA (quantitative)
- HBeAg and anti-HBe
- Full blood count including platelet count
- LFTs, INR and alpha fetoprotein (AFP)
- Kidney function tests
- HAV, HCV (ideally with reflexive PCR), HDV and HIV to check for co-infection.

Assess for liver fibrosis and/or cirrhosis by:

- Physical exam (e.g. firm nodular liver on palpation or signs of chronic liver disease)
- Liver ultrasound
- Calculate the APRI (AST to Platelet Ratio Index). An APRI ≤1.0 indicates cirrhosis is unlikely.
- Transient elastography (e.g. Fibroscan®) assessment (>12.5 kPa is consistent with cirrhosis).

Refer to or discuss urgently with a specialist if:

- Severe exacerbation (or acute HBV) —e.g. jaundice or elevated ALT >5 x the upper limit of normal
- Co-infection with HIV, Hep C or Hep D
- Pregnant
- Immunosuppressed
- Cirrhosis is present or likely — APRI ≥1 and elastography score not available; elastography >12.5kPa)
- Possible hepatocellular carcinoma (HCC) found on surveillance.

HBeAg

HBeAg — or the Hep B e-antigen — is a viral protein produced by the Hep B virus. It's a marker of active viral replication and high infectivity, meaning someone with HBeAg in their blood is more likely to transmit the virus to others. Its presence can also indicate active liver disease. As the patient develops antibodies to HBeAg the patient becomes less infectious. However, patients who are HBeAg negative can still have active viral replication and can pass the virus to others.

APRI (AST to Platelet Ratio Index)

An APRI is a score that predicts the likelihood of liver fibrosis. It can be calculated here.

Transient elastography

FibroScan® is a non-invasive device that assesses the 'hardness' (or stiffness) of the liver via the technique of transient elastography. Transient elastography helps assess the presence of fibrosis (liver scarring) or cirrhosis. Remember, patients with advanced disease may have no physical signs and normal liver function tests. FibroScan is not currently rebated by Medicare, but services like Hepatitis Queensland can offer this testing for free. Contact Hepatitis Queensland here or scan the QR code.

STEP 6 — Assess phase of infection

Table 2: Assess phase of infection[4]

HBeAg-positive chronic infection (Immune tolerance)	HBeAg-positive chronic hepatitis (Immune clearance)	HBeAg-negative chronic infection (Immune control)	HBeAg-negative chronic hepatitis (Immune escape)
• **HBV DNA: high**† >10^7 IU/mL • **ALT: normal**	• **HBV DNA: high**† >20 000 IU/mL • **ALT: elevated** Elevated is >30 IU/L men; >19 IU/L women	• **HBV DNA: low**† <2,000 IU/mL • **ALT: normal** • **anti-HBe positive**	• **HBV DNA: high**† >2,000 IU/mL • **ALT: elevated** Elevated is >30 IU/L men; >19 IU/L women
Treatment not required	**Refer to s100 community prescriber or specialist for consideration of treatment** Risk of progression to cirrhosis and HCC	**Treatment not required**	**Refer to s100 community prescriber or specialist for consideration of treatment** Risk of progression to cirrhosis and HCC

Not all patients with CHB will need treatment. Assessing the phase of the disease for those with CHB is required to determine if the infection needs treatment. Patients with chronic HBV infection must be regularly re-evaluated to determine which phase they are in and managed accordingly.

Hep B virus DNA levels reflect viral replication with high levels indicating a greater risk of liver damage and transmission.

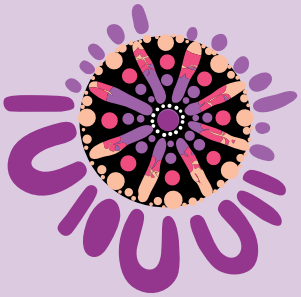
In summary:

- Patients with a normal ALT (regardless of HBV viral load or HBeAg status) do not currently need treatment. However, referral to a Hep B s100 community prescriber is appropriate for ongoing management.
- Patients with an elevated ALT (whether HBeAg positive or negative and with a high HBV DNA) require referral to an s100 community prescriber or specialist for consideration of treatment.

Hep B s100 community prescriber

A Hep B s100 community prescriber is a doctor or nurse practitioner who has completed specialised training to manage and treat chronic Hep B in a community setting. A list of accredited HBV s100 prescribers is available here.

TIP: Yarning about antiviral medicine



It's important for all patients to understand that antiviral medicine doesn't cure Hep B, but is to slow down or stop the progression of liver damage, with the ultimate goal of preventing cirrhosis, HCC and liver failure. It's important to take the medication consistently as prescribed, because stopping the medication can cause severe liver flares which can make people very sick.

You could say:

"Treatment with tablets doesn't get rid of the virus, but it can help slow it down so it doesn't damage your liver too much over time. However, the treatment doesn't do anything if your liver is healthy. That's why we keep checking your liver every 6 to 12 months. We should do another blood test in 6 months to see how you're going."

[4] Australasian Society for HIV, Viral Hepatitis & Sexual Health Medicine. 2024. *Decision Making in Hepatitis B.* https://ashm.org.au/wp-content/uploads/2024/08/web-AUG2024-UPDATE_ASHM_Decision-Making-in-Hepatitis-B-Toolkit.pdf

† Medicare covers HBV DNA testing once per year for patients not on treatment and 4 times per year for patient on treatment.

STEP 7 — Ongoing monitoring

Cancer surveillance

Patients who are HBsAg positive with a normal ALT and with no need for treatment should have the following assessed:

- LFTs (every 6 months)
- HBeAg and anti-HBe (every 6-12 months)
- HBV DNA (every 12 months)
- Liver fibrosis[5] (testing every 2 years*).

Patients on treatment require additional and more frequent assessments.[6]

Patients should be offered advice on reducing alcohol consumption, the risks of smoking and support for cessation, weight reduction, and harm minimisation advice.

Hepatocellular carcinoma (HCC) surveillance

A 6-monthly ultrasound is recommended for patients with chronic HBV infection in the following groups:

- Aboriginal and/or Torres Strait Islander people ≥50 years or from ≥40 years if confirmed or likely high risk genotype.
- People with cirrhosis
- Anyone aged ≥40 years with a family history of HCC (first-degree relative) — consider offering surveillance 10 years prior to earliest case in a family.
- Sub-Saharan African people ≥20 years
- Asian-Pacific males ≥40 years
- Asian-Pacific females ≥50 years.

Should I request genotype testing?

HBV can be classified into 10 genotypes. Some genotypes of HBV are considered higher risk, meaning that people with that particular genotype are more likely to develop cirrhosis and liver cancer.

HBV genotyping is not covered under the MBS, so your patient may incur an out-of-pocket cost if this test is ordered. This is why the decision to request genotyping is better left to a specialist.

Medicare rebate

HBV DNA testing is Medicare rebatable for one test annually for monitoring and up to four tests annually for those on treatment.

Remember to put on the request form if the person is on treatment or they might get a bill. Tell patients if they receive a bill to bring it back and you can query it.

[5] Allard, N., & Combo, T. (2024). Liver (hepatocellular) cancer. In National Aboriginal Community Controlled Health Organisation (NACCHO) & The Royal Australian College of General Practitioners (RACGP) (Eds.), *National guide to preventive healthcare for Aboriginal and Torres Strait Islander people: Recommendations (4th ed.).* pp. 277–283.

[6] Please see the ASHM *Decision-making in Hepatitis B Toolkit* for details.

*Tests used include transient elastography (TE; FibroScan®) and risk calculators such as the aspartate aminotransferase to platelet ratio index (APRI score) and Fibrosis-4 (FIB-4) score. These calculators use blood tests (LFTs and full blood examination, with or without age) and can be found online. They provide a good alternative to assess people living in rural or remote settings where access to TE is limited.

STEP 8 — Prevention and Support

It is important to ensure that counselling patients about Hep B is done in a culturally appropriate and safe manner. Everyone is different — so ask the patient whether they would like to include family or other support persons, such as an Aboriginal Health Worker/Practitioner, in the consultation.

Remember to:

- Address and optimise additional contributing factors to liver disease progression, such as type 2 diabetes (T2DM), obesity, alcohol consumption, and smoking.
- Screen household contacts and sexual partners for Hep B, then offer vaccination if non-immune.
- Discuss vaccination if susceptible to Hep A virus and discuss transmission and prevention of other blood-borne viruses (BBVs).

TIP: Yarning about contact tracing

Let your patient know that those they've had sex with and/or shared injecting equipment with during the last 6 months or sooner need to know so they can get tested. Often you won't see the symptoms of Hep B — you might not know you have the infection, but can still pass it to your partners/s.

Preventive measures

You can prevent passing on Hep B by:

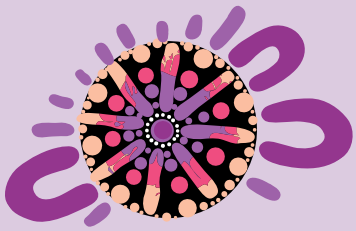
- Getting the full course of the Hep B vaccine
- Aways using condoms with a water-based lube (prevent condom breaking)
- Covering open wounds
- Not sharing personal items like toothbrushes and razors
- Not sharing needles, including tattoos and piercing equipment.

It's important to remember that sharing food, hugging and kissing is NOT a transmission risk.

TIP: Support services

There are a range of available support services including needle and syringe programs (NSPs) which dispense clean injecting equipment to help reduce the transmission of BBVs.
These programs may also provide access to drug treatment programs.
Some national and statewide services include:

- Queensland Injectors Health Network (QuIHN) —have fixed site NSPs
- Hepatitis Queensland (1800 437 753)
- Queensland Injectors for Advocacy and Action (QuIVVA)
- Queensland Health alcohol and other services (AOD)
- HepLink Australia (1800 437 222)



Find your local NSP via the link: NSP Directory — Australian Injecting and Illicit Drug Users League

You can also obtain sterile injecting equipment at emergency departments and some pharmacies.
You don't need a referral to attend an NSP.

The *QAIHC Decision Support Tools for Hepatitis B Testing: November 2025* clinical guidelines have been adapted from the *ASHM Decision making in Hepatitis B Toolkit:* Decision-Making-in-Hepatitis-B-Toolkit.pdf

The QAIHC guidelines align with the recommendations outlined in the 4th Edition of the National Guide to Preventive Healthcare for Aboriginal and Torres Strait Islander People.

Disclaimer: Guidance provided on this resource is based on guidelines and best-practice at the time of publication.

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