



**OBSTETRICS AND GYNAECOLOGY
CLINICAL PRACTICE GUIDELINE**

Hepatitis B in pregnancy

Scope (Staff): WNHS Obstetrics and Gynaecology Directorate staff

Scope (Area): Obstetrics and Gynaecology Directorate clinical areas

This document should be read in conjunction with this [Disclaimer](#)

Background information

Transmission of Hepatitis B Virus (HBV) occurs through contact with infected blood or body fluids, including perinatal transmission at birth. HBV may cause acute or chronic hepatitis. Chronic hepatitis B is the term for infection lasting more than 6 months. Prolonged infection with hepatitis B infection can lead to cirrhosis of the liver and hepatocellular carcinoma. The risk of chronic infection is much higher when hepatitis B is contracted by infants than adults (90% vs 5%), emphasising the importance of preventing infection of neonates.

Women with hepatitis B infection and high viral replicative rates, as demonstrated by the presence of hepatitis B e Ag, are at particularly high risk of transmitting hepatitis B to infants. If a mother is hepatitis B e antigen (HBeAg) positive the risk of transmission to the neonate without postnatal vaccination and immunoprophylaxis can be as high as 70-90% at 6 months of age. Without hepatitis e Ag carriage the risk of transmission in the absence of vaccination and Immunoglobulin is 10-40%. The combination of active (HBV vaccination) and passive (HBV immunoglobulin) reduces the transmission of HBV to infants by 95%. However in a subset of highly viraemic mothers transmission of HBV can occur in 8-30% despite active and passive neonatal immunoprophylaxis. Pregnant women with a high HBV viral load should therefore be referred to a hepatology clinic urgently for consideration of antiviral therapy. Current recommendations are for consideration of antiviral therapy when the HBV viral load is $\geq 10^6$ IU/ml or 200,000 IU/ml. Tenofovir is currently the most frequently prescribed antiviral for hepatitis B in pregnancy.

Chronic hepatitis B is estimated to affect 0.97% of the Australian population. Chronic hepatitis B is more common in persons who have lived in areas of high prevalence e.g. Asia- Pacific and those at risk of exposure from sexual transmission or intravenous drug use (IVDU).



For more information:

General information regarding HBV, see the [Silver book](#) (external website)

Interpretation of HBV screening results

Test	Abbreviation	Detection interpretation
Hepatitis B surface antigen	HBsAg	Detects a protein on the surface of HBV. A positive result indicates a person is infectious –acute or chronic.
Hepatitis B e-antigen	HBeAg	Indicates high level replication of HBV and is associated with significant infectivity. Some patients may not have detectable HBeAg but have high viral loads (Pre core mutant)
Hepatitis B surface antibody	Anti-HBs	Indicates immunity either through resolution of natural infection, or through vaccination.
Hepatitis B e antibody	Anti-HBe	Shows a person's immune system has responded to the virus with it not actively replicating at high levels. Low level viral loads and/or HBsAg detection may still occur
Hepatitis B core antibody	Anti-HBc. indicating exposure to Hepatitis B or as Anti-HBc IgM indicating acute infection.	Presence of IgG and/or IgM antibody to the Hepatitis B antigen. IgM antibody to the core antigen disappears early in the course of a primary infection. Anti-HBc (total) Ab detected may indicate acute, chronic or past infection
Hepatitis B virus DNA load	HBV DNA	Measures the amount of virus in the bloodstream and is an indicator of how actively the virus is replicating.

Antenatal management

Screening for HBV

- All women should have their HBV status (HBsAg detected or not detected) reviewed at the booking visit. If the woman has not been tested information should be provided, and screening for HBV performed with her consent even if she has been previously vaccinated or tested.
- HBV serology is also indicated if a woman presents with clinical hepatitis or a sexually transmitted infection (STI), or if a sexual or household contact has active hepatitis B. All women who exhibit 'high risk' behaviours for contracting blood-borne viruses should be rescreened for HBV and HCV and HIV in the third trimester.

Women with active HBV infection in pregnancy

1. Provide verbal and written information about HBV mode of transmission, prevention of transmission, disease course, outcome of test results, pregnancy, intrapartum and postnatal management. Written information may be obtained from:
 - <http://www.hepatitiswa.com.au/> (external webpage)
 - Department Health Western Australia - HealthyWA consumer information - [Hepatitis B](#) (external webpage)
 - Department Health New South Wales – [Hepatitis B](#) (external webpage)
2. Women who are newly diagnosed with HBV attending a low risk midwives clinic should have their next antenatal appointment with their obstetric team to discuss ongoing management.
3. A Health Department of Western Australia notification form should be completed by the doctor for a new diagnosis of HBV and explain to the patient that Hepatitis B is a notifiable disease.
4. Provide the woman's GP with serology results to enable current and future medical management. Even if a woman with active hepatitis B does not meet criteria for treatment during pregnancy, Hepatology Clinic referral is advised to ensure appropriate long term follow up.
5. Inform a woman with active hepatitis B that it is recommended that all household contacts, other children, and sexual partners be screened for HBV by their GP, and vaccinated if non-infected.
6. Determine if the woman has been referred to a Hepatology Clinic by her GP. Refer to a Hepatology Clinic if she had no previous contact. Women who are already known to a Hepatology Clinic and are already receiving treatment for

hepatitis B should receive a management plan from their supervising practitioner.

7. Arrange blood tests for:

- HBeAg and anti-HBe
- HBV DNA levels
- Hepatitis C virus (anti-HCV)
- HIV serology
- Hepatitis A virus immunity (HAV IgG)
 - There is evidence that patients with any acute/chronic HBV or HCV are at increased risk for adverse outcomes if they acquire HAV. It is recommended that if they are not immune to HAV, to be vaccinated. This would be discussed by the hepatology team.
 - HAV vaccination is safe in pregnancy.
- Liver function tests (LFT), full blood count (FBC), INR each trimester

8. All HBsAg and/or HBeAg positive women should have HBV viral loads checked prior to 30 weeks, ideally at 28 weeks gestation. If at 30-32 weeks gestation a high viral load ($>10^6$ copies/ml or some experts use a lower threshold of 2×10^5 IU/ml; $> 200,000$ IU/ml) is found the woman may be considered suitable for anti-viral therapy after consultation with the Hepatology Clinic doctors.

Referrals to the Hepatology Clinic for these women should be requested urgently.

- a. At Royal Perth Hospital Contact the Hepatology Nurse Practitioner (phone 9224 2186 or page through switch; FAX 9224 3388) to expedite an appointment.
- b. At SCGH, the Hepatology Clinic numbers are 6457 3228, fax 6457 3098, urgent requests are made directly by paging the Registrar via the hospital switchboard (08) 6457 3333 or the CNC Hepatology 6457 3767.
- c. At FSH, Hepatology Clinic referrals are managed by e-referral or by contacting the hepatology nurses (phone 6152 3787 or page 61521569; Fax 6152 4088).

9. RANZCOG (2019) guidelines recommend avoiding transplacental amniocentesis and CVS if possible. Refer to [RANZCOG: Management of Hepatitis B in Pregnancy \(C-Obs 50\)](#).

Intrapartum management

- Invasive procedures such as fetal scalp electrodes and fetal scalp blood monitoring should be avoided.
- Mode of birth: RANZCOG recommends that hepatitis B status should not alter mode of delivery, and decisions regarding caesarean section should be made for the usual obstetric indications as evidence is not conclusive to indicate that preferred mode of delivery is influenced by the likelihood of HBV transmission regardless of viraemia.
- Standard precautions should be utilised when handling the baby.

Postpartum management

- Instruct the woman on management of standard precautions for blood and body secretions.
- Inform the GP if a woman has been diagnosed with HBV infection during pregnancy. Provide copies of any relevant blood tests performed at KEMH. Advise the GP if the woman has been referred to a hepatology clinic.
- Women receiving treatment for hepatitis B during pregnancy are usually advised to remain on treatment for 3 months post-partum to reduce the risk of peripartum hepatitis flare. This management is at the direction of the practitioner responsible for supervising the hepatitis B treatment.

Breastfeeding

- Advise women who are Hepatitis B surface antigen positive there is no evidence that breastfeeding increases the risk of HBV transmission provided the neonate receives HBV vaccination and Hepatitis B immunoglobulin (HBIG) at birth.
- Advise HBV carrier women not to participate in breast milk donation.
- Seek microbiology or pharmacy advice for information regarding specific antiviral agents and safety in pregnancy. Breastfeeding is not contraindicated in women with HBV receiving tenofovir.

Neonatal management

All newborn infants are recommended to receive hepatitis B vaccination at birth.

In addition to routine vaccination, neonates born to hepatitis B infected mothers should receive immunoglobulin and have follow up.

See Clinical guidelines:

- WNHS Obstetrics and Gynaecology: [Vaccinations](#)
- CAHS Neonatal Postnatal Clinical Guideline:
 - [Hepatitis B Virus \(HBV\): Care of the Infant Born to a HBV Positive Woman](#)

These guidelines contain information on care of the neonate exposed to the HBV including vaccination and immunoglobulin administration, follow-up testing of the neonate, breastfeeding and prevention of transmission of the virus after birth. Neonatal HBV vaccination and HBIG has the greatest benefit if given within 24 hours of birth, and must be given within 7 days. The recommendation of the Australian Perinatal Guidelines is for administration within 12 hours.

Infection prevention and HBV positive women

- Health care workers are advised to be vaccinated against HBV. See IPM policy: [Healthcare Worker Health and Immunisation Policy \(Including Pregnant Healthcare Workers\)](#).
- For management of HBV uninfected women who have a potentially significant exposure to HBV refer to KEMH Infection Prevention manual. Hepatitis B surface antibody levels can be measured and a decision made regarding the requirement for hepatitis B immunoglobulin and vaccination.
- Precautions should be taken to avoid exposure to blood and bodily fluids. See Infection Prevention and Management policy for [Standard and Transmission Precautions](#) and [Exposures to Blood and Body Fluids](#) (available to WA Health employees through HealthPoint).

Patient information

Healthy WA: [Hepatitis B](#) (external webpage)

References

Bibliography

- Australian Immunisation Handbook. Hepatitis B. Available from <https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/hepatitis-b>
- Department of Health WA. Silverbook: Hepatitis B. Available from <https://ww2.health.wa.gov.au/Silver-book/Notifiable-infections/Hepatitis-B>
- Hepatitis WA: Hepatitis B. Available from <http://www.hepatitiswa.com.au>
- RANZCOG. Management of Hepatitis B in pregnancy (C-Obs 50). 2019. [https://ranzocg.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Management-of-Hepatitis-B-in-pregnancy-\(C-Obs-50\).pdf?ext=.pdf](https://ranzocg.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Management-of-Hepatitis-B-in-pregnancy-(C-Obs-50).pdf?ext=.pdf)
- Tran TT. Hepatitis B in pregnancy. 2016;62 (S4):S14-17.

Related external policies, legislation and standards

Department of Health WA: [Silver book](#) : Hepatitis B (external website)

Related WNHS and CAHS policies, guidelines and procedures

WNHS Clinical Guidelines:

Infection Prevention and Management (available to WA Health employees through HealthPoint)

- [Exposures to Blood and Body Fluids](#)
- [Healthcare Worker Health and Immunisation Policy \(Including Pregnant Healthcare Workers\)](#) (staff vaccination for HBV)
- [Standard and Transmission Based Precautions](#)

Obstetrics and Gynaecology:

- [Antenatal Care: Presentation \(Intrapartum or Late Third Trimester\) with No or Minimal Antenatal Care](#)
- [Sexually Transmitted Infections \(STI\)](#)
- [Vaccinations](#)

Transfusion Medicine guideline: [Immunoglobulin Products](#): 'Hepatitis B Immunoglobulin VF'

CAHS [Neonatal Postnatal Clinical Guidelines](#):

- [Hepatitis B Virus: Care of the Infant Born to HBV Positive Women](#)
- [Newborn Care of the Infant Born to a Mother Receiving Minimal or No Antenatal Care](#)

Useful resources and related forms

- Department of Health WA –
 - [Hepatitis B](#) (external webpage)
 - HealthyWA consumer information - [Hepatitis B](#) (external webpage)
- Hepatitis WA <http://www.hepatitiswa.com.au/> (external webpage)

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Version history

See also OGD [Guideline Updates](#) by month/ year of review date for a list of changes.

Date	Summary
Prior to 2015	Archived. Contact OGD Guideline Coordinator for previous versions. Originally titled 'Section B 1.4.3 Infections in Pregnancy: Hepatitis B Protocol' DPMS Ref 5260. In Oct 2008 titled as 'Hepatitis B in Pregnancy'.
Nov 2021	<ul style="list-style-type: none"> • Content updated and condensed, removed repetitive information • FSH details added, RPH and SCGH Hepatology Clinic details updated • New 'Infection prevention and HBV positive women' section including links to IPM policies for exposure to blood and body fluids and HCW vaccination • HBV serology is also indicated if a woman presents with clinical hepatitis or a STI, or if a sexual or household contact has active hepatitis B • Blood tests- also test for HIV • Avoid transplacental amniocentesis and CVS if possible • Postpartum: Women receiving treatment for HBV during pregnancy are usually advised to remain on treatment for 3 months post-partum to reduce the risk of peripartum hepatitis flare. This management is at the direction of the practitioner responsible for supervising the HBV treatment.

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