

Information for health professionals

on the management of babies born to HBsAg positive mothers

Hepatitis B

Local arrangements may differ from the information suggested below. Check with your Medical Officer of Health or Immunisation Coordinator for your local arrangements or further information.

Screen all women early in pregnancy for hepatitis B carriage

HBsAg positive

HBsAg negative

No further action required
Discuss routine National Immunisation Schedule

Whoever ordered the test (lead maternity carer or GP) should:

- advise and discuss this result with the woman (and her partner)
- refer the woman for HBeAg and hepatitis B virus DNA testing and discuss the results with a specialist, or refer the woman to an infectious diseases specialist early in pregnancy for ongoing oversight. The specialist would normally recommend women who have a hepatitis B viral load $> 10^8$ IU/mL treatment with an antiviral medicine in the weeks before birth to reduce the especially high risk of transmitting the hepatitis B virus at or before birth
- record the results in the woman's maternity notes and advise other carers in all referral/consultation/transfer of clinical responsibility documentation
- ask other family members and/or sexual partners to get their immunisation status checked by their GP, and if necessary be immunised
- provide the woman with the information leaflet (HE1402) and consent form (HE1446), and go through this information with her.

The lead maternity carer should:

- before the birth, discuss the need for the baby to receive the hepatitis B vaccine and hepatitis B immunoglobulin and for the Medical Officer of Health to be notified following the birth
- after the birth, obtain consent from the woman for the baby to receive the hepatitis B vaccine and immunoglobulin and consent to contact the Medical Officer of Health
- provide information to the woman about the National Immunisation Register and how immunisations are recorded on the Register (HE1327).

At birth the lead maternity carer should:

- within 12 hours following the birth, ensure the baby is given the hepatitis B vaccine (10mcg) and hepatitis B immunoglobulin (HBIG) neonatal 100–110 IU.
- record information in patient notes and Maternity Information System¹
- send a copy of the completed notification form to the Medical Officer of Health, one copy to the nominated GP and one copy to the NIR Administrator
- remind the mother of the importance of follow-up hepatitis B immunisations.

At 6 weeks of age the nurse/immunisation provider should:

- administer the usual National Immunisation Schedule vaccines
- advise the Medical Officer of Health² that the vaccines have/have not been given.

At 3 months of age the nurse/immunisation provider should:

- administer the usual National Immunisation Schedule vaccines
- advise the Medical Officer of Health² that the vaccines have/have not been given.

At 5 months of age the nurse/immunisation provider should:

- administer the usual National Immunisation Schedule vaccines
- advise the Medical Officer of Health² that the vaccines have/have not been given

At 9 months of age the nurse/immunisation provider should:

- take a blood test to check for hepatitis B infection (HBsAg) and for vaccine-induced immunity (anti-HBs). Inform the mother and Medical Officer of Health² of the results.

Interpreting the results of the blood test at 9 months of age

HBsAg is negative and Anti-HBs > 10 IU/L

The baby is considered protected and has an effective immune response.
No further action is necessary.

HBsAg is negative and Anti-HBs ≤ 10 IU/L

The baby is not protected and should be given 1-3 further doses of vaccine at least 4 weeks apart. Recheck for HBsAg and anti-HBs 4 weeks after each dose as per figure 9.3³ in the Immunisation Handbook. Discuss the result with the parents and, if required, refer to an appropriate specialist.

HBsAg is positive

Discuss the results with the parents, and refer to an appropriate specialist.

¹ This information is transferred to the National Immunisation Register (NIR). If the process is electronic it is sent automatically. If the process is manual, LMC should ensure the completed enrolment is sent to the local DHB NIR Administrator.

² The Medical Officer of Health will identify whether information should be provided to the local Immunisation Coordinator. For further information see chapter 9 of the Immunisation Handbook 2020. If you need further assistance please contact your local Medical Officer of Health or Immunisation Coordinator.

³ Figure 9.3 in the Immunisation Handbook refers to children ≥ 1 year of age. This figure also applies to 9 months of age.

Hepatitis B vaccine and immunoglobulin

Storage, administration and dose

Hepatitis B

Hepatitis B immunoglobulin

Hepatitis B immunoglobulin (HBIG) neonatal 100–110 IU.
See the HBIG package insert for further information.

Hepatitis B vaccine

Hepatitis B vaccine (Engerix®-B) 10 mcg in 0.5 mL (Thiomersal free).
See the vaccine package insert for further information.

Storage

Protect from light.
This solution is freeze sensitive (do not freeze).
Storage above or below the recommended +2°C to +8°C will reduce potency.
The solution must be stored in a fridge which is monitored daily to ensure the correct temperature of +2°C to +8°C is maintained.
Failure to do so may render the solution ineffective.

This vaccine is freeze sensitive (do not freeze).
Storage above or below the recommended +2°C to +8°C will reduce potency. In particular hepatitis B vaccine is very sensitive to colder temperatures.
The vaccine must be stored in a fridge which is monitored daily to ensure the correct temperature of +2°C to +8°C is maintained.
Failure to do so may render the vaccine ineffective.

Administration and dose

Hepatitis B immunoglobulin (HBIG) neonatal 100–110 IU.
Allow the preparation to reach room temperature before administering to the infant.
Use 25 G / 16 mm needle (or use the syringe and needle provided with the product).
HBIG should be given slowly by the intramuscular route. It must not be administered intravenously because of the potential for anaphylactic reactions.
The lateral thigh is recommended for infants and young children.
The Hepatitis B immunoglobulin may be given at birth at the same time as the Hepatitis B vaccine but should be given in the opposite lateral thigh.

Hepatitis B vaccine (Engerix®-B) 10 mcg.
Shake well before withdrawal of vaccine from the vial.
Do not mix with other vaccines.
Change needle after drawing up prior to administration.
Use 25 G / 16 mm needle.
Give by intramuscular injection. Do not inject intravenously or intradermally.
The lateral thigh is the recommended site for infants and young children. It should not be given in the buttock as this will result in lower seroconversion rates. Subcutaneous administration will result in increased local reaction. The Hepatitis B vaccine may be given at birth at the same time as the Hepatitis B immunoglobulin but should be given in the opposite lateral thigh.

Immunisation Schedule for babies of hepatitis B (HBsAg) positive mothers

| Age | Vaccine |
|----------|--|
| Birth | Hep B (Engerix®-B (10 mcg/0.5mL)) |
| | Hep B immunoglobulin (HBIG (100–110 IU)) |
| 6 weeks | RV1 (Rotarix®), DTaP-IPV-Hep B/Hib (Infanrix®-hexa) and PCV10 (Synflorix®) |
| 3 months | RV1 (Rotarix®), DTaP-IPV-Hep B/Hib (Infanrix®-hexa) and PCV10 (Synflorix®) |
| 5 months | DTaP-IPV-Hep B/Hib (Infanrix®-hexa) and PCV10 (Synflorix®) |

If you have any concerns, or need information about the vaccine or HBIG, please contact your local Medical Officer of Health or Immunisation Coordinator.