

HEPATITIS B AND C • 1/3 2022-24

HEPATITIS B

- Check mother's hepatitis B status **before delivery**

Antenatal

- Midwife to inform obstetrician, neonatologist, Public Health team and GP of plan to immunise
- Inform Antenatal Screening Midwives on wah-tr.AntenatalScreeningResults@nhs.net
- Hepatitis B immunoglobulin (HBIG) issued by Public Health England (PHE) via **local consultant microbiologist**
- order well in advance of birth
- if twins order 2 doses

Labour

- When an HBsAg positive mother arrives in labour or for caesarean section, labour ward must inform **on-call neonatal team**

Postnatal

- For all newborns, check screening results of mother's antenatal tests
- If antenatal testing not done, request urgent maternal HBsAg test
- Mother may breastfeed

IMMEDIATE POSTNATAL TREATMENT OF BABY

Table 1: To which babies

Maternal status	Vaccine required by baby	Immunoglobulin (HBIG) required by baby
HBsAg positive, HBeAg positive	Y	Y
HBsAg positive, HBeAg negative, HBe antibody (anti-HBe) negative	Y	Y
HBsAg positive where e markers have not been determined	Y	Y
Acute hepatitis B during pregnancy	Y	Y
HBsAg positive and baby <1.5 kg	Y	Y
HBsAg positive, anti-HBe positive	Y	N
HBsAg positive and $>10^6$ iu/mL Hepatitis B DNA in antenatal sample	Y	Y
Other high-risk group	Y	N

- Give low-birth-weight and premature babies full neonatal dose hepatitis B vaccine
- Give HBIG and hepatitis B vaccine to babies with birth weight <1.5 kg born to mother with hepatitis B, regardless of mother's HBeAg status

When

Every baby given Hep B give within 24 hr of birth, ideally as soon as possible after delivery

For babies born to high infectivity mother, requiring Hepatitis immunoglobulin (HBIG):

HBIG **must** be given with hepatitis B vaccine within 24 hr of birth. Baby requires blood spot (DBS) test – this card is kept with the named IVIG on NNU in the fridge. Please email antenatal screening midwives out of hours on: wah-tr.AntenatalScreeningResults@nhs.net or phone 39937 within daytime hours to give the card safely to them.

What

- Give hepatitis B vaccine 0.5 mL IM. **Caution:** brands have different doses [e.g. Engerix-B® 10 microgram (recommended), HBVaxPro Paediatric® 5 microgram 0.5ml]
- HBIG 250 units additionally given to babies of highly infectious mothers (see **Table 1**)
- A stock of Hepatitis B vaccine is kept on the fridge on NNU. If baby requires HBIG this will be named and also kept in the fridge on NNU. If baby delivers before HBIG delivered **OR** If HBIG has not been ordered for the baby, then this can be requested from PHE Immunisation Division, Colindale:

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During working hours: By contacting the Hepatitis B Infant Coordinator at Colindale on 0330 1281 020 and select option 2 and send an accompanying email with the completed Hepatitis B Immunoglobulin issue form to phe.hepatitisbabies@nhs.net (from @nhs.net email addresses only as the request will contain patient identifiable information)

Out of hours: HBIG may be requested via the PHE National Infection Service Colindale Duty Doctor on 020 8200 4400

- Monitor infants born <28 weeks' gestation for 72 hr after HBIG

How

- Use 2 separate injection sites for hepatitis B vaccine and HBIG, in anterolateral thighs (not buttocks)
- Low-birth-weight babies can be given the injection in divided doses, within 7 days of birth, but should still receive a full 250 units
- Give hepatitis B vaccine IM, except in bleeding disorder where it may be given deep subcutaneously
- Relationship to other immunisations**
- No need to delay BCG following HBIG
- Hepatitis B vaccine may be given with other vaccines, but use separate site. If same limb used, give vaccines >2.5 cm apart

Documentation

- Record immunisation in Red Book
- If baby requires HBIG, please fill in the paperwork in the HBIG pack
- Please inform the antenatal screening midwives via email and include baby's name, NHS Number, mother's name and NHS number, as well as when the Hep B vaccine (and HBIG) were given including batch numbers. Email: wah-tr.AntenatalScreeningResults@nhs.net

SUBSEQUENT MANAGEMENT

Further doses – given by local PHE vaccination team (NOT GP) – Antenatal screening team will arrange – please email wah-tr.AntenatalScreeningResults@nhs.net

- 2nd dose at 1 month by Vaccination UK (VUK). Contact details if required:
 - worcestershire@vaccinationuk.co.uk or 01527 390030

1 yr follow-up

- Vaccination UK will deliver the 12 month Hep B vaccination AND at the same time, do the 12 month DBS test to check HBsAg status
- if HBsAg positive they will refer to infectious disease or liver team for further management

Table 2: Hepatitis B vaccine schedule for routine and at risk infant immunisation programmes

Age	Routine childhood programme		Babies born to hepatitis B infected mothers	
Birth	X*		✓	Monovalent HepB (Energix B® or HBvaxPRO Paediatric® 5microgram) (with HBIG if indicated)
4 weeks	X		✓	Monovalent HepB (Energix B® or HBvaxPRO Paediatric® 5 microgram)
8 weeks	✓	DTaP/IPV/Hib/HepB (Infanrix hexa®)	✓	DTaP/IPV/Hib/HepB (Infanrix hexa®)
12 weeks	✓	DTaP/IPV/Hib/HepB (Infanrix hexa®)	✓	DTaP/IPV/Hib/HepB (Infanrix hexa®)
16 weeks	✓	DTaP/IPV/Hib/HepB (Infanrix hexa®)	✓	DTaP/IPV/Hib/HepB (Infanrix hexa®)
1 yr	X		✓	Monovalent HepB (Energix B® or HBvaxPRO Paediatric® 5 microgram) Test for HBsAg

* Babies born to hepatitis B negative mothers but going home to a household with another hepatitis B infected person may be at immediate risk of infection – give a monovalent dose of hepatitis B vaccine before discharge

For additional information please see <https://www.gov.uk/government/publications/hepatitis-b-antenatal-screening-and-selective-neonatal-immunisation-pathway/guidance-on-the-hepatitis-b-antenatal-screening-and-selective-neonatal-immunisation-pathway--2#the-antenatal-screening-pathway>

HEPATITIS C

Antenatal

- High-risk groups:
 - intravenous drug users (IVDU) or women with partners who are IVDU
 - from a country of intermediate or high prevalence ($\geq 2\%$) of chronic hepatitis C, including Africa, Asia, the Caribbean, Central and South America, Eastern and Southern Europe, Middle East and Pacific Islands
 - living in homeless hostel/rough sleeping
 - **If mother is an IV drug user, she is at risk of contracting HIV infection and may seroconvert during pregnancy. She should ideally have HIV PCR at delivery. If negative, baby will not require HIV bloods however if HIV PCR positive, baby will require treatment.**

Procedure

- Pregnant women at risk for Hepatitis C infection should be screened at antenatal visits
- If the initial results are negative in women with ongoing risk factors this should be repeated in the third trimester
- In the third trimester, if maternal HCV Ab is positive (indicating past or current infection), request Hep C RNA NAAT (viral load)
- If maternal bloods show infection, discuss with mother/family regarding testing of baby at aged 18 months and inform neonatal team

Follow-up

- Discuss with neonatal unit consultant and consider follow-up in clinic at aged 18 months
- Discharge baby summary to GP to include containing information on further investigations and follow-up plan
- Inform mother and family of arranged follow-up appointments
- **If mother is Hep B negative, baby can have routine immunisations (inc Hep B) at 2,3,4 months of age.**
- **Babies do not need for routine paediatric follow up**

Documentation

- Document hepatitis C follow-up visits in Red Book to ensure health visitor aware and baby followed up

Breastfeeding

- Mother may breastfeed

Adoption and fostering

- If high risk factor (see Antenatal) for HCV and/or maternal status not known
- Aged < 18 months
 - check Hep C antibody status at screening or first contact at Looked After Clinic
 - if serology positive, repeat serology at 18 months and refer to paediatric infectious diseases if this is positive
- Aged ≥ 18 months
 - check Hep C antibody status at screening or first contact at Looked After Clinic
 - if positive, refer to paediatric infectious disease consultant