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Selective neonatal Hepatitis B Immunisation General practice admin responsibilities

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Session to cover:

- Hepatitis B selective infant immunisation – why we need to bother
- Extent of the problem – number of cases
- Hepatitis B vaccination – schedule for selective programme
- Local pathway
- Child health failsafe
- General practice role/responsibilities

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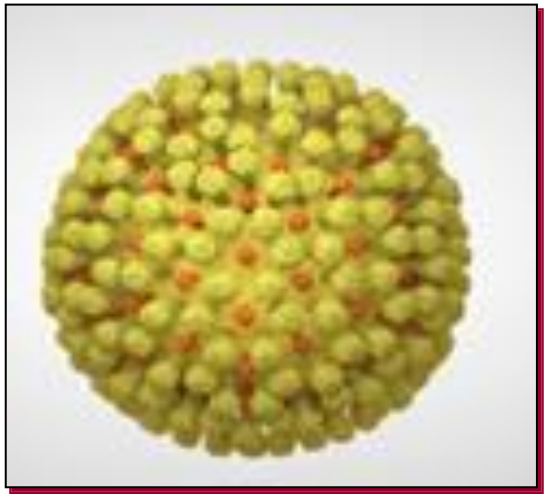
Why should we bother?

Hepatitis B is a potentially life-threatening liver infection caused by the hepatitis B virus (HBV).

It is a major global health problem.



Global public health problem

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Estimated global number of deaths due to viral hepatitis, HIV, malaria and TB, 2001-2015

Source: Global Burden of Diseases and WHO/UNAIDS estimates http://ihmeuw.org/3pmt

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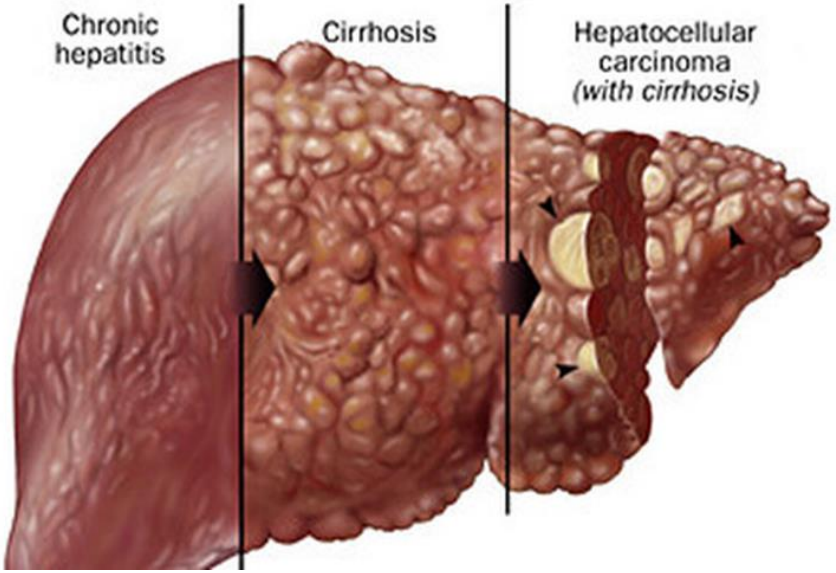
Chronic hepatitis B infection is not a benign disease

There is no such thing as a "healthy carrier"



1 million annual deaths from cirrhosis and primary liver cancer

1/3 of the world's population infected at one point in their lives

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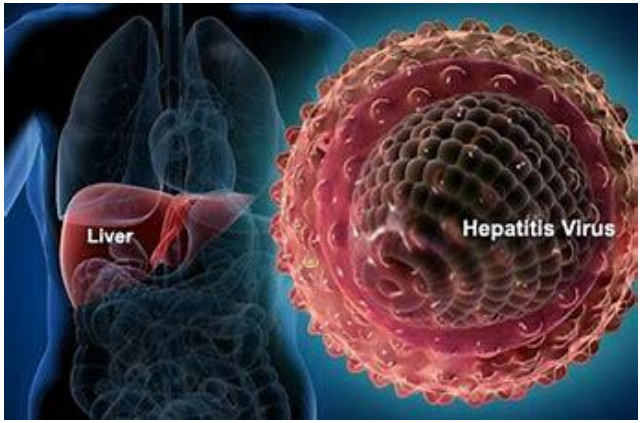
- It can cause chronic infection and puts people at high risk of death from cirrhosis and liver cancer.



- The likelihood that the infection becomes chronic depends upon the age at which a person becomes infected.

- *Children less than 6 years of age who become infected with the hepatitis B virus are the most likely to develop chronic infections.

- 80–90% of infants infected during the first year of life develop chronic infections **but…..**

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A simple solution

A vaccine against hepatitis B has been available since 1982. The vaccine is 95% effective in preventing infection and the development of chronic disease and liver cancer due to hepatitis B.

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Selective neonatal Hepatitis B immunisation programme

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- Babies born to mothers who have tested positive for hepatitis B during pregnancy are at risk of becoming infected with HBV.

- The development of chronic infection in infants born to infected mothers after perinatal transmission can be prevented in over 90% of cases by appropriate post-exposure prophylactic vaccination starting at birth. **Timely vaccination at birth and at four weeks of age is critical to preventing infection in the infant**

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Hepatitis B Schedules

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Table one: Hepatitis B doses in the immunisation schedule for routine childhood and selective neonatal hepatitis B programmes

Age	Routine childhood programme		Babies born to hepatitis B infected mothers	
Birth	X*		✓	Monovalent HepB (Engerix B® or HBvaxPRO Paediatric®) (with HBIG if indicated)
4 weeks	X		✓	Monovalent HepB (Engerix B® or HBvaxPRO Paediatric®)
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 year	X		✓	Monovalent HepB (Engerix B® or HBvaxPRO Paediatric®) Test for HBsAg

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PHE SW Screening and Immunisation Team Good Practice Guidance for the management of the NHS Hepatitis B Neonatal and Infant Immunisation in NHS E SW

https://www.england.nhs.uk/south/info-professional/public-health/immunisations/hepatitis-b/

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Midwifery and primary care partnership

- Prior to discharge from hospital, the first dose of monovalent hepatitis B vaccine (±HBIG) should be recorded in the Personal Child Health Record book (Red Book)
- Notification of the first dose is sent to CHIS and GP
- Parent(s) should be made aware of the importance of registering the new baby as soon as possible with a GP and the need for a dose of monovalent hepatitis B vaccine at age 4 weeks, plus timely completion of the three doses of hexavalent vaccine (DTaP/IPV/Hib/HepB)

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Audit of delayed/missed 4 week Hepatitis B vaccination incidents (10 practices)

- Whilst all practices had the mother registered as Hep B positive on their systems, only 60% were aware of her pregnancy or expected date of delivery.

- 30% of practices stated they were not notified by maternity of vaccinations given at birth and/or of the needed ongoing schedule of vaccinations.

- 80% of practices stated that the infant was registered at their practice prior to the due 4 week appointment. However only 40% could confirm the patient was offered an appointment at 4 weeks.

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CHIS and SIT failsafe role

- CHIS alert the practice (telephone) when eligible infant 2 weeks of age re. the urgency of the scheduled 4 week vaccination
- CHIS schedule subsequent vaccinations
- CHIS send monthly reports of delayed vaccinations to Screening and Immunisation Team who follow up with practice

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Key role for General Practice where mother known to be Hepatitis B positive

Possible failsafe procedures to ensure infant receives timely Hep B vaccinations:

1. **Weekly searches for pregnant women** who are diagnosed with Hepatitis B linking to their delivery date.

2. **All newborn baby hospital discharge documents** to be thoroughly reviewed (regardless of registration) and, where Hepatitis B vaccination indicated, **link with mother and call for vaccination at 4 weeks**

3. **When infant registered**, check if 4 week dose has been given/is scheduled

4. **6 – 8 week infant check** – has infant received 4 week vaccination?

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Information for GPs and practice nurses

Hepatitis B vaccine for at risk infants

Each year, around 3000 babies are at risk of developing hepatitis B infection following exposure to the hepatitis B virus from their mother's blood during childbirth.

Hepatitis B vaccine is prioritised for these infants and can prevent infection in around 90% of them if it is given at the right times.

The first dose should be given within 24 hours of birth and is usually administered in the delivery suite.

The second dose of vaccine should be ordered when mum registers the baby at your surgery. It needs to be given to the infant at 4 weeks of age.

Ensure that mum is aware that the next three doses of hepatitis B containing vaccine are given to all babies at 8, 12 and 16 weeks of age at their routine immunisation appointments. This 6 in 1 vaccine will also protect against other serious infections including diphtheria, tetanus, polio, whooping cough and haemophilus influenzae type B.

The final dose of hepatitis B vaccine should be given when baby reaches one year of age. This dose can be given at the same time as their other routine vaccines.

Testing for infection (hepatitis B surface antigen, HBsAg) is vital and can be done at the same appointment as their 12 month dose of hepatitis B vaccine.

Either take a Dried Blood Spot (DBS) (preferred method to prevent loss to follow up) or refer to phlebotomy services.

PHE Colindale provides DBS kits to local coordinators and does the testing for free. Request DBS kits from your local Screening and Immunisation Team.

Protect the baby by vaccination

When pregnant women attend for vaccination during pregnancy

- Ask mum if they have screened positive for hepatitis B
- Tell her to register their baby at the surgery as soon as possible when born

When baby is registered

- Check if baby has had their birth dose
- Request monovalent hepatitis B vaccine
- Immunise baby at the right age and with the right interval between doses
- Take a dried blood spot test or venous blood sample to check for infection when the infant is one year old
- Keep a record of all hepatitis B vaccine doses given
- Refer child to specialist liver services if they are infected

https://www.gov.uk/government/publications/hepatitis-b-vaccine-for-at-risk-infants-aide-memoire

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Links to further resources

NHS England

- https://www.gov.uk/government/publications/hepatitis-b-vaccine-for-at-risk-infants-aide-memoire

- https://www.england.nhs.uk/south/info-professional/public-health/immunisations/hepatitis-b/