

Serological markers

Previous infection with hepatitis B can be detected from serological markers in the blood. These markers can help identify whether the virus is still active or infectious to others.

Presence of

Disease status	Anti-HBc	HBsAg	Anti-HBs	HBeAg	Anti-HBe
Acute phase	+	+	-	+/- _a	-/+ _b
Carrier state (low infectivity)	+	+	-	-	+
Carrier state (high infectivity)	+	+	-	+	-
Recovery (early immunity)	+	-	+	-	+
Recovery (late immunity)	+	-	+	-	-
Immunity (after vaccination)	-	-	+	-	-

a - Indicating seroconversion from HBeAg positive to HBeAg negative

b - Indicating seroconversion from anti-HBc negative to anti-HBc positive

Vaccination can protect you from hepatitis B

- The full course is 3 or 4 single injections in the arm, over 6 or 12 months
- It is a well tolerated vaccine
- 10 million doses of hepatitis vaccine have been supplied in Europe alone

After the complete course, you will be given a blood test to check that you are completely immune to hepatitis B. More than 95% of people will be protected after the above course, but some people may need further doses to achieve full protection.

For protection to last, a booster may be required several years after the initial course. Ask the infection control department for advice about boosters. This vaccination can protect you from hepatitis B, but cannot protect from all the other diseases that are transmitted in the same way. It is therefore essential to continue to maintain good infection-control procedures and observe Universal Precautions.

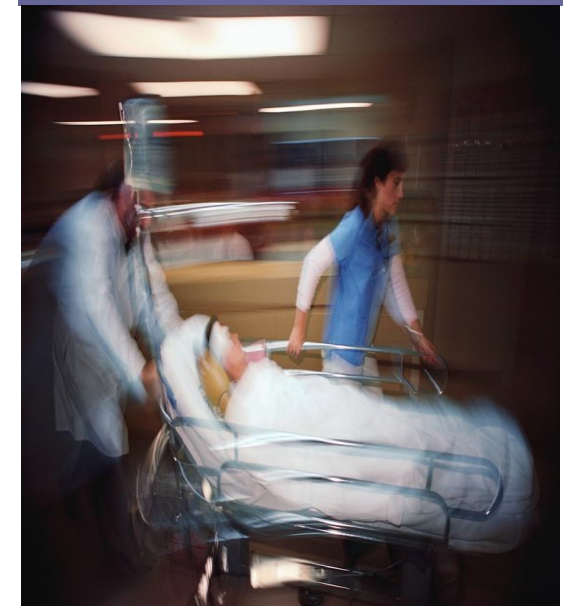
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References

1. Centre for Disease Control and Prevention: Epidemiology and Prevention of Vaccine Preventable Diseases: Hepatitis B, eds. W. Atkinson, et al, Department of Health & Human Services: 9:125-144, USA, January 1996
2. Margolis H.S., CDC, USA, 1999
3. Department of Health, Immunisation Against Infectious Disease, HMSO, London, 2006
4. CDR Weekly 1998; 8:175

Does your job
put you at risk
from
Hepatitis B?



Hepatitis B is 100 times more infectious than HIV

- Hepatitis B can be transmitted in just 0.0004ml of blood
- The virus can survive for 30 days on an environmental surface¹
- Is second only to tobacco smoking as a known human carcinogen
- Hepatitis B kills 1 million people worldwide each year²

Symptoms of Hepatitis B infection:

- Flu like illness
- Abdominal discomfort
- Fatigue
- Loss of appetite
- Mild fever
- Occasional diarrhoea
- Jaundice
- Nausea and vomiting
- Arthralgia (muscle & joint aches)
- Rash

However, two-thirds of all cases are asymptomatic, so you may not be able to tell if a patient is infected, and they may not know themselves

Up to 10% of those infected as adults can become chronic carriers of the disease³

20-25% of these chronic carriers will go on to develop liver disease, such as cirrhosis or liver cancer.³ These conditions may not become apparent for many years after initial infection²

Healthcare workers who are at risk

The hepatitis B virus is both highly infectious and resilient. It can be transmitted through injury by sharp instruments and needlestick traumas, and even through open wounds and bites from infected persons.

Risk of infection from sharps injuries can be as high as 1 in 3.

Although the incidence of hepatitis B in the UK is relatively low, anyone who may be at risk of injury with used instruments, or who may have contact with patients' bodily fluids, needs to be aware of the dangers of hepatitis B

The following groups are classified as being at risk from hepatitis B:

- Hospital doctors
- Hospital porters and cleaners
- Surgeons
- Pathologists, morticians & embalmers
- General practitioners
- Dentists
- Mortuary technicians
- Medical students
- Laboratory workers
- Nurses, midwives & nursing students
- Carers in institutions for those with severe learning difficulties (mentally handicapped)
- Paramedics, ambulance and rescue services in high risk situations

Other at risk groups

Hepatitis B can also be transmitted through behavioural risks, medical conditions and perinatally. Therefore, the following groups are also at risk:

- Family/close contacts of sufferer or carrier
- Families adopting from a high risk country
- Babies born to infected mothers
- Haemophiliacs
- Those who frequently change sexual partners
- At risk homosexual and bisexual men
- IV drug abusers
- Patients with chronic renal failure
- Staff/residents in mental handicap accommodation
- Prison inmates and staff

Viral Hepatitis

Found throughout the world, the hepatitis B virus causes one of the most serious forms of this disease. Currently there are 5 identified types of viral hepatitis. They are denoted as hepatitis A, B, C, D and E. Not all of them cause the same symptoms and some types are more serious than others. Hepatitis A and E are spread via the faeco-oral route. Hepatitis B, C and D are spread by blood contact or sexual transmission.

Vaccination against one type of viral hepatitis does not give protection against other types of hepatitis.