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Guidance

## **Hepatitis B: migrant health guide**

Advice and guidance on the health needs of migrant patients for healthcare practitioners.

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From:

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## **Main messages**

Some migrants to the UK are at higher risk of hepatitis B infection than the UK-born population. Refer to the [Migrant Health Guide's country-specific pages](https://www.gov.uk/government/collections/migrant-health-guide-countries-a-to-z) (<https://www.gov.uk/government/collections/migrant-health-guide-countries-a-to-z>) when considering whether to test an asymptomatic patient for chronic hepatitis B infection.

Consider acute hepatitis B infection in patients who present with a compatible clinical picture and risk factors, and test appropriately.

Acute hepatitis B infection is a [statutorily notifiable disease](https://www.gov.uk/notifiable-diseases-and-causative-organisms-how-to-report) (<https://www.gov.uk/notifiable-diseases-and-causative-organisms-how-to-report>).

Contact your local [health protection team \(HPT\)](https://www.gov.uk/health-protection-team) (<https://www.gov.uk/health-protection-team>) about appropriate post-exposure prophylaxis and immunisation for close contacts of cases of hepatitis B infection.

Ensure that those at risk of infection are immunised against hepatitis B.

Immunise babies born to hepatitis B positive mothers and follow up appropriately.

## Background

The hepatitis B virus (HBV) causes hepatitis (inflammation of the liver), and can also cause [long term liver damage](https://www.who.int/en/news-room/fact-sheets/detail/hepatitis-b) (<https://www.who.int/en/news-room/fact-sheets/detail/hepatitis-b>).

Mortality is rare during the acute phase of infection (< 1%), [but can occur](https://www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management) (<https://www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management>).

[Global prevalence of HBV infection is estimated to be 3.9%](https://pubmed.ncbi.nlm.nih.gov/29599078/) (<https://pubmed.ncbi.nlm.nih.gov/29599078/>). [The World Health Organization estimates](https://www.who.int/en/news-room/fact-sheets/detail/hepatitis-b) (<https://www.who.int/en/news-room/fact-sheets/detail/hepatitis-b>) that globally:

- over 296 million people have chronic liver infections
- over 820,000 people die each year due to acute or chronic consequences, mostly from cirrhosis and liver cancer

Areas with [high and intermediate prevalence rates](https://www.sciencedirect.com/science/article/pii/S2468125318300566?via%3Dihub) (<https://www.sciencedirect.com/science/article/pii/S2468125318300566?via%3Dihub>) (5%-10% of adult prevalence) of chronic hepatitis B include:

- sub-Saharan Africa
- East Asia
- the Amazon
- southern parts of central and eastern Europe
- the Middle East

- the Indian subcontinent

In the UK, the prevalence of chronic hepatitis B infection is estimated to be 0.3%, or approximately 180,000 people (<http://www.nice.org.uk/guidance/ph43>).

In any given year, the majority (over 95%) of people with new chronic hepatitis B infections in the UK are migrants who acquired their infection in their country of birth (<http://www.nice.org.uk/guidance/ph43>) during early childhood.

## Symptoms

### Acute infection

Many people have no symptoms (<https://www.who.int/en/news-room/fact-sheets/detail/hepatitis-b>) during acute infection, while others can experience (<https://www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management>):

- a prodromal illness that includes fever, arthralgia, or a rash (that may appear about 2 weeks before the onset of jaundice, then resolves in acute hepatitis B)
- non-specific malaise, fatigue, fever, nausea, and poor appetite (may be mild, especially in chronic hepatitis B)
- right upper quadrant abdominal pain
- jaundice (with dark urine and/or pale stools if cholestasis)
- extrahepatic manifestations such as glomerulonephritis, vasculitis and polyarteritis
- signs of chronic liver disease (in advanced chronic hepatitis B)

The average incubation period (<https://www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management>) is around 12 weeks (range 40 to 160 days).

Most adults infected with HBV fully recover and develop life-long immunity (<https://www.nhs.uk/conditions/hepatitis-b/>).

### Chronic infection

The likelihood that an HBV infection will become chronic depends upon the age at which a person becomes infected.

Around 90% of infants infected during the first year of life develop chronic infections (<https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18>), compared to 20% to 50% in children infected between 1 to 5 years (<https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18>) of age, and up to 5% of adults (<https://www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management>).

There is an increased risk of chronic infection where immunity is impaired (<https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18>).

Chronic infection leads to persistent infectivity, and in about 20% of adults can also lead to liver cirrhosis and malignant change in the liver (<https://www.nhs.uk/conditions/hepatitis-b/complications/>).

## Transmission

HBV is transmitted through contact with infected blood or body fluids by the following routes (<https://www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management>):

- sharing or use of contaminated equipment during injecting drug use
- vertical transmission (mother to baby)
- sexual transmission
- horizontal transmission (non-sexual contact, such as household contact with a person with HBV)
- receipt of infectious blood (via transfusion) or infectious blood products (for example, clotting factors)
- needlestick or other sharps injuries
- tattooing and body piercing

## Testing

Testing should be offered for hepatitis B to migrants from countries with an intermediate or high prevalence of chronic infections (2% or greater).

Testing is one part of a care pathway, covering diagnosis, treatment and immunisation, as outlined in the NICE guidelines (<http://www.nice.org.uk/guidance/ph43>).

Always include recent travel history in the information provided on the test request form.

### A guide to the interpretation of serological markers

Consult NICE guidance (<https://cks.nice.org.uk/topics/hepatitis-b/diagnosis/how-to-test-for-hepatitis-b/>) or contact your local laboratory if you are uncertain about interpreting results.

Status	anti-	anti-HBc	HBsAg	anti-	HBeAg	anti-
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	HBc	IgM		HBs		HBe
Acute	+	+	+	-	+/-	+/-
Carrier (low infectivity)	+	-	+	-	-	+
Carrier (high infectivity)	+	-	+	-	+	-
Recovery (immunity)	+	-	-	+	-	+/-
Immunity (after vaccination)	-	-	-	+	-	-

### **Viral antigens that denote infectiousness**

Hepatitis B surface antigen (HBsAg) is:

- detected first
- produced in high concentrations during viral replication
- cleared if the acute infection resolves

The infection is defined as chronic if it persists for more than 6 months.

The presence of HBsAg indicates that:

- the patient is infectious
- viral replication is occurring

Hepatitis B e antigen (HBeAg) is:

- detected soon after HBsAg
- a marker of infectiousness and viral replication
- also normally cleared if the acute infection resolves

HBeAg may persist in chronic infections.

Note that among those who are HBsAg positive, those who are also HBeAg positive are the most infectious to others.

### **Antibodies which denote exposure**

Antibody to the hepatitis B core antigen (anti-HBc): antibody response is divided into 2 antibody subclasses IgM and IgG:

- anti-HBc IgM subclass indicates acute infection

- anti-HBc IgG subclass occurs during acute, chronic and resolved hepatitis B infection and is indicates exposure to the virus

One antibody test can detect both antibodies, and is reported as total anti-HBc.

Antibody to the hepatitis B e antigen (anti-HBe): antibody is found in individuals who have cleared HBeAg. However, it may fall to undetectable levels over time.

### **Antibody associated with recovery**

Antibody to the hepatitis B surface antigen (anti-HBs): development of anti-HBs is generally associated with disappearance of HBsAg in those recovering from natural infection. It is also produced in response to hepatitis B immunisation. It is a marker of immunity against the virus.

## **Treatment**

### **Acute infection**

There is no specific treatment available for acute hepatitis B. Symptomatic treatment of nausea, anorexia, vomiting and other symptoms may be indicated (<https://www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management>). Liver failure is a rare complication that requires specialist treatment. Antiviral drugs are not needed to treat acute infection.

Following acute infection, follow up the patient to ensure that HBsAg and HBeAg are cleared and that anti-HBs develops denoting naturally acquired immunity.

### **Chronic infection**

If HBsAg persists for more than 6 months then the patient is considered chronically infected. Refer them to a liver specialist for further assessment and consideration of antiviral treatment and general management (<https://www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management>) to reduce the risk of infectivity and complications.

Although not all patients are suitable, specific treatment with anti-virals may reduce viral replication, clear HBsAg and HBeAg and stimulate production of anti-HBe and anti-HBs. Such treatments are initiated by the secondary care specialist, through shared care arrangements may allow the primary care practitioner to continue to prescribe in liaison with the specialist.

Counsel the patient on moderation in alcohol consumption and self-management of their symptoms (<https://cks.nice.org.uk/topics/hepatitis-b/management/managing-hepatitis-b-infection/>), and take care in the prescription of potentially hepatotoxic drugs.

## Prevention and control

Offer hepatitis B vaccine to all individuals at risk from hepatitis B infection, including infants born to hepatitis B surface antigen positive mothers.

See [Hepatitis B: the green book, chapter 18](https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18) (<https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18>).

For country-specific travel advice, see the [National Travel Health Network and Centre \(NaTHNaC\)](https://travelhealthpro.org.uk/countries) (<https://travelhealthpro.org.uk/countries>).

Ask opportunistically about travel plans as patients who [travel to visit friends and relatives](https://www.gov.uk/guidance/travel-to-visit-friends-and-relatives-migrant-health-guide) (<https://www.gov.uk/guidance/travel-to-visit-friends-and-relatives-migrant-health-guide>) in countries where the infection is endemic are at increased risk of acquiring infection.

Patients within this group may choose or require medical treatment during their trip, such as dialysis, and some instances have been recorded of acquisition of blood borne viruses in this way. Advise patients about this potential risk.

Patients who will receive dialysis abroad need immunising before starting dialysis.

Acute hepatitis B is a notifiable disease in the UK. If a case is diagnosed, you need to notify your [local health protection team \(HPT\)](https://www.gov.uk/health-protection-team) (<https://www.gov.uk/health-protection-team>). The team will provide information to prevent onward transmission and to immunise any contacts who are at risk of infection.

## Post-exposure prophylaxis

Hepatitis B vaccine is highly effective at preventing infection if given shortly after exposure and ideally, within 48 hours of exposure – however, it should still be considered up to a week after exposure. See [Hepatitis B: the green book, chapter 18](https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18) (<https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18>).

Specific hepatitis B immunoglobulin (HBIG) will be used to confer passive immunity. It may give immediate albeit temporary protection after exposure by any source. Hepatitis B immunoglobulin is available via the UK Health Security Agency (UKHSA).

The [Immunoglobulin handbook](https://www.gov.uk/government/publications/immunoglobulin-when-to-use) (<https://www.gov.uk/government/publications/immunoglobulin-when-to-use>) contains information, indications and guidance on the use of immunoglobulin preparations for specific diseases, including hepatitis B.

If in doubt about post-exposure prophylaxis, please discuss with your [local health protection team \(HPT\)](https://www.gov.uk/health-protection-team) (<https://www.gov.uk/health-protection-team>).

## Co-infection with HIV

Globally the [prevalence of hepatitis B infection in HIV-infected people is 7.4%](https://www.who.int/news-room/fact-sheets/detail/hepatitis-b) (<https://www.who.int/news-room/fact-sheets/detail/hepatitis-b>). Some treatments for HIV are also active against hepatitis B. HIV-positive individuals are more likely to develop chronic hepatitis B infection.

Hepatitis B vaccine (<https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18>) should be offered to HIV-infected individuals and those at risk of HIV.

## Resources

UKHSA provides [guidance, data and analysis on hepatitis B](https://www.gov.uk/government/collections/hepatitis-b-guidance-data-and-analysis) (<https://www.gov.uk/government/collections/hepatitis-b-guidance-data-and-analysis>), including information on:

- diagnosis and management
- infants born to hepatitis B infected mothers
- vaccination

NHS Choices has [pages on hepatitis B](https://www.nhs.uk/conditions/hepatitis-b/) (<https://www.nhs.uk/conditions/hepatitis-b/>) including detailed [information about hepatitis B vaccination](https://www.nhs.uk/conditions/vaccinations/hepatitis-b-vaccine/) (<https://www.nhs.uk/conditions/vaccinations/hepatitis-b-vaccine/>).

Patient.co.uk has produced a [leaflet on 'hepatitis B immunisation'](http://www.patient.co.uk/health/hepatitis-b-immunisation) (<http://www.patient.co.uk/health/hepatitis-b-immunisation>).

The [British Liver Trust](https://britishlivertrust.org.uk/) (<https://britishlivertrust.org.uk/>) is a charity which provides resources for people with liver disease, including a helpline and publications.

The [National Travel Health Network and Centre \(NaTHNaC\)](https://travelhealthpro.org.uk/countries) (<https://travelhealthpro.org.uk/countries>) provides country specific travel advice and has produced [information on hepatitis B](https://travelhealthpro.org.uk/factsheet/50/hepatitis-b) (<https://travelhealthpro.org.uk/factsheet/50/hepatitis-b>).

TAMPEP (European Network for HIV/STI Prevention and Health Promotion among Migrant Sex Workers) publish a [leaflet on viral hepatitis \(including hepatitis B\)](https://tampep.eu/resources/) (<https://tampep.eu/resources/>) for female sex workers in a range of languages.

The CDA Foundation and Polaris Observatory has a [dashboard](https://cdafound.org/dashboard/polaris/dashboard.html) (<https://cdafound.org/dashboard/polaris/dashboard.html>) of country-specific data and global data about hepatitis B and C.

Patient.info has [information for patients about hepatitis B](https://patient.info/digestive-health/hepatitis/hepatitis-b) (<https://patient.info/digestive-health/hepatitis/hepatitis-b>).

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