Hepatitis B

Hepatitis B is a viral infection of the liver transmitted by contact with the blood or body fluids of an infected person

Hepatitis B is a viral infection of the liver spread through contact with blood or body fluids contaminated with hepatitis B virus (HBV). It occurs worldwide with highest rates of infection reported in the Western Pacific and African regions.

Risk for most travellers is usually low. However, there is an increased risk associated with certain activities, including:

- Unprotected sex with new partners.
- Occupational risk, such as healthcare work or humanitarian aid work.
- Injecting drug use.
- Travelling for medical reasons or with medical conditions requiring medical treatment whilst overseas.
- Participation in contact sports.
- Adoption of children from intermediate/high risk countries.
- Long-stay travel.

The risk is typically greater in areas where there is an intermediate to high risk of HBV.

Most people infected with HBV will have no symptoms or a mild flu-like illness. Symptoms are more common in adults than children and may include jaundice (yellowing of the skin and eyes), loss of appetite, fever and abdominal pain. Chronic (long-term) HBV develops in up to 90 percent of children infected in the first year of life and in only five percent of those infected as adults. Chronic infection may lead to liver failure or liver cancer.

Prevention

All travellers should avoid contact with blood and bodily fluids by:

- Avoiding unprotected sex.
- Following universal precautions if working in healthcare or other higher risk settings.
- Avoiding tattooing, piercing and acupuncture (unless sterile equipment is used).
- Not sharing needles or other injection equipment.
- Not sharing shaving equipment.

Any traveller can be at risk of an accident or require emergency treatment; infection control may be inadequate. A sterile medical equipment kit may be helpful when travelling to resource poor areas.

Hepatitis B vaccine

Vaccines

Hepatitis B vaccine can be given as a single or combined vaccine.

A 6-in-1 vaccine, which contains hepatitis B is offered to infants as part of the UK routine childhood immunisation schedule (not listed below). See the 'Green Book' for further details.

Fendrix® and HBVAXPRO 40mcg® vaccines have been developed to prevent HBV infection in patients with renal insufficiency (kidney failure) (not listed below). See the 'Green Book' for further details.

Vaccine schedules for travellers

(Note: details for the infant routine vaccination schedule and those with renal failure are detailed above)

Vaccine	Brand	Schedule(s)	Age range
Monovalent hepatitis B (adult)	Engerix B® Monovalent hepatitis B (20mcg/1ml)	Accelerated schedule of 4 doses: 0, 1, 2 and 12 months	16 years and older
		3 doses: 0, 1 and 6 months	
		Very rapid schedule of 4 doses: 0, 7 and 21 days; 4th dose at 12 months	Very rapid schedule: licensed for adults 18 years and above (can consider 'off license' for 16-17-year-olds)
		2 doses of the adult dose: 0 and 6 months	11 to 15 years
	HBVAXPRO Adult® Monovalent hepatitis B (10mcg/1ml)	Acceleratedschedule: 0, 1, 2 and 12 months	16 years and over
		3 doses: 0, 1 and 6 months	
	PreHevbri® Monovalent hepatitis B (10mcg/1ml): **[discontinued 30 October 2024]**	3 doses: 0, 1 and 6 months	18 years and over
	HEPLISAV B® Monovalent hepatitis B (20mcg/0.5ml)	2 doses: 0,1 months	18 years and over
Monovalent hepatitis B (paediatric)	Engerix B® Monovalent hepatitis B (10mcg/0.5ml) HBvaxPro	3 doses: 0, 1 and 6 months	From birth to 15 years
		Acceleratedschedule: 0, 1, 2 and 12 months	
	HBVAXPRO Paediatric® Monovalent hepatitis B (5mcg/0.5ml)	3 doses: 0, 1 and 6 months	From birth to 15 years
		Acceleratedschedule: 0, 1, 2 and 12 months	
Combined hepatitis A and B (adult)	Twinrix Adult® Combined hepatitis A (720ELISA units) and B (20mcg)	3 doses: 0, 1 and 6 months	16 years and over
		Very rapid schedule of 4 doses: days 0, 7 and 21; 4th dose at 12 months	Licensed for adults 18 years and above (can consider 'off license' for 16-17-year-olds)*
Combined hepatitis A	Ambirix® Combined	2 dose schedule given	1 to 15 years

and B (paediatric)	hepatitis A (720 ELISA units) and B (20mcg)	6-12 months apart	
	Twinrix Paediatric® Combined hepatitis A (360 ELISA units) and B (10mcg)	3 doses: 0, 1 and 6 months	1 to 15 years

*Off-license use listed on the UK Health Security Agency HepA/B PGD Oct 2023.

Note that PreHevbri vaccine is no longer available in the UK. If a vaccine course has been initiated with PreHevbri, it should be completed with another adult vaccine.

Length of protection

Immunocompetent adults and children who have received a primary course of immunisation, including children vaccinated according to the routine childhood schedule and individuals at high risk of exposure who have received a 0, 1, 6 month or 0, 1, 2, 12-month schedule, do not require a reinforcing dose of hepatitis B-containing vaccine. The need for a booster dose following PreHevbri® or HEPLISAV B® has not been established.

Booster doses should be considered for:

- Healthcare and laboratory workers who have not responded to a primary course.
- At the time of a significant exposure.
- Patients with kidney failure.

A booster dose should be offered to travellers receiving haemodialysis who intend to visit high risk countries and who have previously responded to the vaccine. This is particularly important if they are going to receive haemodialysis while away and they have not had a booster in the last 12 months.

A blood test to check immunity (hepatitis B surface antibody levels) is only recommended for people with kidney failure or those at risk of occupational exposure particularly healthcare and laboratory workers.

Resources

- More detailed information can be found in our hepatitis B factsheet
- UKHSA: Immunisation against infectious disease. Hepatitis B
- UKHSA: Hepatitis B: guidance, data and analysis
- Further details on the vaccines can be found on the Summary of Product Characteristics (SPC) on the electronic medicines compendium