



Hepatitis B Infection

What is hepatitis B?

- A viral infection causing liver inflammation.
- Hepatitis B can lead to serious illness, lifelong infection, liver failure, and liver cancer.
- Hepatitis B is a blood-borne infection. (See Chapter 1 for more details.)

What are the signs or symptoms?

- Flu-like (eg, muscle aches, nausea, vomiting).
- Jaundice (ie, yellowing of skin or whites of eyes, dark urine).
- Loss of appetite.
- Joint pains.
- Tiredness.
- Young children may show few or no signs or symptoms.
- Most people recover fully, but some carry the virus in their blood for a lifetime. Age at the time of infection is a major factor in whether hepatitis B will become a chronic infection.

What are the incubation and contagious periods?

- Incubation period: 45 to 160 days, with an average of 90 days
- Contagious period: As long as the virus is present in the blood of the infected person (can be for the lifetime of an infected person who is a chronic carrier)

How is it spread?

- Most commonly through
 - Blood or blood products.
 - Sexual contact.
 - Children born to infected mothers may become infected during birth.
- Uncommonly through
 - Saliva that contains blood
 - Contact with open sores or the fluid that comes from open sores (wound exudate)
 - Direct exposure to blood after injury, bites, or scratches that caused a skin break, introducing blood or body fluids from a carrier to another person
- Hepatitis B virus can remain contagious on surfaces for 7 days or more.

How do you control it?

- Hepatitis B is a vaccine-preventable disease. Babies should receive vaccine at or soon after birth, with additional doses of the vaccine according to the routine immunization schedule.
- Adults who are expected, as a condition of their employment, to come in contact with blood are required to be offered vaccine by their employers under US Occupational Safety and Health Administration (OSHA) regulations.
- Cover open wounds or sores.
- Do not permit sharing of toothbrushes or pacifiers.
- Standard Precautions should be followed when blood or blood-containing body fluids are handled. For blood and blood-containing substances, these are the same precautions described by OSHA as Universal Precautions.
 - Wear disposable gloves or, if using utility gloves, be sure the utility gloves are sanitized after use. Use barriers and techniques that minimize potential contact of mucous membranes or openings in the skin to blood.
 - Absorb as much of the spill as possible with disposable materials; put the contaminated materials in a plastic bag with a secure tie.
 - Clean contaminated surfaces with detergent and water, and then rinse with water. Floors, rugs, and carpeting should be cleaned by blotting to remove the fluid as quickly as possible and disinfected by spot-cleaning with a US Environmental Protection Agency (EPA)-registered detergent or disinfectant. Additional cleaning by shampooing or steam cleaning the contaminated surface may be necessary.
 - Disinfect the cleaned and rinsed surface using an EPA-registered disinfectant. Follow the manufacturer's instruction for preparation and use of the disinfectant. For guidance on disinfectants, refer to Chapter 8, Selecting an Appropriate Sanitizer or Disinfectant.
 - Clean, rinse, and disinfect reusable household rubber gloves. Dry and store them away from any surface or object related to food. Discard disposable gloves.
 - Dispose of all soiled items in plastic bags with secure ties.
- Perform hand hygiene after cleaning and disinfecting are done, even though gloves were worn.

What are the roles of the educator and the family?

- Report the infection to the local health department. If the health professional who makes the diagnosis does not inform the local health department that the infected child is a participant in an early childhood education program or school, it could delay controlling the spread.
- Routinely check that children complete the hepatitis vaccine series according to the most recent immunization schedule.
- Practice Standard Precautions for handling blood and other body fluids at all times, as carriers of this infection may not be identified to staff members. Check and follow the facility's plan for handling exposure to blood-borne pathogens as required by OSHA.
- Contact the program's Child Care Health Consultant or the local health department and the infected child's health professional for a treatment and group management plan.

Exclude from educational setting?

Yes, if a child with known hepatitis B exhibits any of the following signs or symptoms:

- Weeping sores that cannot be covered.
- A bleeding problem.
- Biting or scratching behavior that would lead to bleeding by the child with hepatitis B.
- Generalized dermatitis that may produce wounds or weepy tissue fluids.
- The child is unable to participate and staff members determine they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.
- The child meets other exclusion criteria (see Conditions Requiring Temporary Exclusion in Chapter 4).

Readmit to educational setting?

Yes, when all the following criteria are met:

- When skin lesions are dry or covered
- When the child is able to participate and staff members determine they can care for the child without compromising their ability to care for the health and safety of the other children in the group

Comments

- The recommendation for universal immunization of newborns and children born and cared for in the United States has achieved high levels of immunity and protection against infection with hepatitis B, which has made the risk of infection in group care settings very small. Certain high-risk groups remain, such as injection drug users, those with more than one sex partner in the previous 6 months, and people from countries where universal immunization against hepatitis B is not practiced.
- Most children with hepatitis B infection should be admitted to an early childhood education program or school without restrictions. Admission of children with skin problems that bleed or ooze body fluids, bleeding problems, or aggressive behavior, including biting, should be handled on an individualized basis. If a child with known hepatitis B bites or is bitten by a child who is unimmunized or partially immunized against hepatitis B, the unimmunized/partially immunized child should be referred to a health professional or the local health department.
- Hepatitis C is also transmitted through blood and causes a disease similar to hepatitis B. It should be managed the same as hepatitis B.
- Hepatitis D is also transmitted through the blood but only occurs in those previously infected with hepatitis B. Hepatitis D can be a more severe disease. It is also managed just like hepatitis B.
- Currently, there are no hepatitis C or D vaccines available.

