

# Hepatitis B

## Reporting Obligations

Hepatitis B is designated as a disease of public health significance and is reportable under the *Ontario Health Protection and Promotion Act*. Report all suspect and confirmed cases within **one business day** to the health unit.

### REPORTING FORM

## Epidemiology

### Aetiologic Agent:

Hepatitis B virus (HBV) is the causative agent. It is a DNA virus, composed of a nucleocapsid core (HBcAg), surrounded by an outer lipoprotein coat containing the surface antigen (HBsAg).

### Clinical Presentation:

Acute hepatitis B infection is often not clinically apparent, with 50-70% of adult cases being asymptomatic. The onset of symptoms is usually insidious with anorexia, fatigue, vague abdominal discomfort, joint pain, fever, and jaundice; many cases are asymptomatic.

### Modes of transmission:

Via blood, blood products, saliva, CSF, pleural, peritoneal, semen and vaginal secretions and any other fluid containing blood. Routes of transmission include:

- percutaneous, principally injection drug users: shared razors and toothbrushes have been implicated
- sexual: anal, vaginal, oral – men to women transmission is 3 times more efficient than that from women to men
- horizontal: household contacts
- vertical: mother to neonate

### Incubation Period:

Usually 45-180 days, average 60-90 days. It may be as short as 2 weeks to the appearance of HBsAg and rarely as long as 6-9 months.

### Period of Communicability:

All persons who are HBsAg positive are potentially infectious. Blood is infective many weeks before onset of first symptoms and remains infective through the acute period of disease and chronic period of disease. The younger an individual is when exposed to HBV infection, the more likely they will become a chronic carrier. Cases and carriers positive for HBeAg are known to be highly infectious. Chronic carriers can experience spikes in viremia over time, impacting infectivity.

## Risk Factors/Susceptibility

All non-immune people are susceptible. Disease presentation is usually milder in children and may be asymptomatic in infants. Household transmission primarily occurs from child to child.

Risk factors:

- Injection drug use (IDU)
- Multiple heterosexual sex partners
- Men who have sex with men (MSM)
- Sex with HBV-infected individuals
- Hepatitis B carrier in family
- Blood transfusion; organ transplant
- Co-infection with another STI
- Dialysis recipient
- Invasive surgical/dental/ocular procedures abroad
- Tattoo/acupuncture/piercings
- Blood exposure
- Incarceration

## Diagnosis & Laboratory Testing

Demonstration in sera of specific antigens and/or antibodies confirms diagnosis. For example: Tests that will be performed for "Acute" Hepatitis B are HBsAg, HBcAb Total (IgG + IgM), HBcIgM -- will be performed only if HBcAb (IgG + IgM) Total is reactive. Tests that will be performed for "Chronic" Hepatitis B are HBsAg, HBcAb Total (IgG + IgM).

### TESTING INFORMATION & REQUISITION

## Treatment & Case Management

Treatment is under the direction of the attending Health Care Provider. Acute cases of Hepatitis B should abstain from sexual contact or practice safe sex until partners have been appropriately screened and/or immunized. Cases should not donate blood; occupational exposures should be managed according to the individual occupational protocols.

Hepatitis B immunization should be routinely offered to the risk groups (if not previously immunized) listed in the [Canadian Immunization Guide, Hepatitis B Vaccine, Recommendations for Use](#).

The patient is eligible for free Hepatitis A vaccine. Household and sexual contacts are eligible for free Hepatitis B vaccine. To order, please fill out the [Vaccine Order Form](#).

Public Health staff will be involved in case and contact investigations.

## Patient Information

### PATIENT FACT SHEET

### References

1. Heymann, D.L. Control of Communicable Disease Manual (21st Ed.). Washington, American Public Health Association, 2022.
2. [Ontario. Ministry of Health. Infectious Diseases Protocol, Appendix 1: Hepatitis B](#). Toronto: Queen's Printer for Ontario; 2022 [cited 2024 Mar 12].
3. [PHAC. Primary Care Management of Hepatitis B—Quick Reference \(HBV-QR\)](#)

### Additional Resources

1. [PHAC. Guideline on the Prevention of Transmission of Bloodborne Viruses from Infected Healthcare Workers in Healthcare Settings](#). June 2019. [As accessed March 11, 2024]
2. [MOHLTC. Publicly Funded Immunization Schedules for Ontario; June 2022](#)
3. [PHAC. Canadian Immunization Guide, Hepatitis B Vaccine](#).
4. [SMDHU HealthSTATS: Hepatitis B](#)
5. [PHO. Hepatitis B, Toronto: 2022 Dec.](#)