



Hepatitis B

In 1994, 3078 cases of hepatitis B were reported in Canada.¹ At least 1137 of these were acute and likely newly acquired;² however, given the considerable under-reporting associated with public health surveillance, the actual number of acute cases may be several times higher. The incidence rate of acute hepatitis B appears to be decreasing, although the reasons for this are not clear.² In Canada, transmission is primarily sexual, although parenteral and perinatal transmission also occur. Progression to chronic (carrier) infection is inversely related to age; 5% of people infected as adults but 90% of those infected in the first year of life progress. Chronic infection can have long-term sequelae, such as cirrhosis and hepatocellular carcinoma. It is likely that considerably more than 100 000 Canadians have chronic hepatitis B.

Chronic infection is highly endemic in all of Africa, Southeast Asia, the Middle East (except Israel), the southern and western Pacific islands, the interior Amazon Basin, Haiti and the Dominican Republic. Immigrants from these areas are more likely to have chronic infection than people born in Canada. Chronic infection among such immigrants can result in the transmission of hepatitis B to other family members (not just sexual partners) and from child to child between households.³

Two hepatitis B vaccines are licensed in Canada: Recombivax HB (Merck Sharp & Dohme) and Engerix-B (SmithKline Beecham Pharma). All provinces and territories except Manitoba now have universal school-based immunization programs. New Brunswick, PEI and the Northwest Territories also have universal infant immunization programs. These programs are expected to reduce the incidence of hepatitis B substantially in the next decade. Nevertheless, vaccination for people in high-risk groups, including certain children in immigrant households, is still recommended (see Appendix).

It is recommended that pregnant women be screened for hepatitis B and that the infants of infected women be given hepatitis B immune globulin (HBIG) immediately after birth, followed by vaccine within 7 days and at 1 and 6 months after the first dose.^{4,5} These measures can prevent 90% of chronic infections among these infants. Unfortunately, screening and vaccination rates may be less than optimal in some areas of Canada.^{6,7}

In the health care setting, hepatitis B poses a risk to both patients and workers. In a recent Ontario outbreak, 75 cases were linked to the reuse of subdermal EEG electrodes by a technician who carried the hepatitis B e antigen.⁸ The development of national guidelines for prevent-

ing the transmission of blood-borne pathogens in the health care setting and for dealing with health care workers infected with these pathogens is being coordinated by the Laboratory Centre for Disease Control (for information call 613 952-5221). Guidelines have just been published on hepatitis B (and C and HIV) postexposure prophylaxis for health care workers.⁹ Hepatitis B immunization of health care workers at occupational risk remains an important means of reducing transmission in the health care setting.

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Appendix: Groups for whom hepatitis B vaccination* is recommended⁴

- Workers (including students) at occupational risk of exposure to blood and blood products
- Residents and staff of institutions for people with developmental disabilities
- Sexually active homosexual or bisexual men
- Heterosexual men and women with multiple sexual partners or a recent history of a sexually transmitted disease
- Users of injection drugs
- People with hemophilia and others who receive repeated infusions of blood or blood products
- Patients on hemodialysis
- Residents of long-term correctional facilities
- Household and sexual contacts of hepatitis B carriers
- Members of populations or communities with a high prevalence of hepatitis B
- Children less than 7 years of age whose families have immigrated from areas with a high prevalence of hepatitis B and who may be exposed to hepatitis B carriers through their extended family
- Travellers to areas where hepatitis B is endemic who are staying for longer than 6 months or will likely have sexual contact with or come into contact with blood from local residents

*For vaccine doses and schedules see the *Canadian Immunization Guide*.⁴