



Hepatitis B

What is hepatitis B?

Hepatitis B is a liver disease caused by a virus that attacks the liver. The time when you first get infected with hepatitis B is called acute infection. Fewer than 5% of adults who get acute hepatitis B develop chronic hepatitis and about 1% of adults develop liver failure. Most newly-infected adults have no symptoms. Others get a brief, acute illness with fatigue and loss of appetite, and their skin and eyes turn yellow (a condition called “jaundice”). On the other hand, up to 90% of infants and children infected with hepatitis B are unable to clear the infection and become chronically infected. Chronic infection can lead to cirrhosis (severe scarring of the liver) and/or liver cancer later in life.

What is chronic hepatitis B?

Anyone who is unable to clear the virus after six months of initial infection has chronic hepatitis B. The risk is greatest for infants born to mothers who have hepatitis B: infants infected with the virus at birth, who do not receive hepatitis B immune globulin (HBIG) and vaccination, have as much as a 90% chance of developing chronic hepatitis B infection. Although most people with chronic hepatitis B will have inactive disease and will remain healthy and symptom-free, some will have active disease that may lead to cirrhosis or liver cancer years after becoming infected with the hepatitis B virus. Untreated chronic hepatitis B will cause premature death from liver failure and liver cancer in up to 20% of those who have the disease.

How is the hepatitis B virus spread?

A person who has acute or chronic hepatitis B can spread the infection to other people through his/her blood and other body fluids or by sexual contact. Hepatitis B is not spread by water, food, or by casual contacts.

Who is at risk of getting hepatitis B?

Hepatitis B vaccine is available for all age groups to prevent the infection. Without immunization, many people are at risk of infection:

- Sexual partners of those who have hepatitis B.
- People who have multiple sexual partners.
- Babies born to mothers who have hepatitis B.
- Children and other household members of someone with hepatitis B.
- People who use injection drugs.
- Anyone whose occupation involves increased exposure to blood and bodily fluids (e.g. healthcare providers, first responders, emergency personnel).
- People who live or travel to parts of the world where hepatitis B is relatively more common such as Asia, sub-Saharan Africa, southern and eastern Europe, and the Pacific Islands.



How is hepatitis B diagnosed?

Diagnosis is made through three blood tests: the hepatitis B surface antigen (HBsAg), the hepatitis B surface antibody (anti-HBs) and the hepatitis B core antibody test (anti-HBc). The tests may show the following results:

Immunized and protected against infection – In this case, only your anti-HBs is positive. This means that you have been successfully immunized against hepatitis B infection. You are protected against the hepatitis B virus. You will not get hepatitis B infection and you cannot infect anyone. There are several hepatitis B antibodies, but only anti-HBs gives immunity.

Infected with hepatitis B – In this case your HBsAg and anti-HBc are positive. This means you are carrying the hepatitis B virus. Presence of the virus can mean either acute (recent) or chronic (long-lasting) infection. If the virus continues to show up in your blood for longer than six months, then you have a chronic infection.

Exposed in the past but not actively infected – In this case, your HBsAg is negative but your anti-HBc is positive. This means that sometime in the past the virus has entered your body, but you did not become chronically infected. You cannot pass the virus to someone else but the virus can come back within you if you need to take certain medicines, for example, those that suppress your immune system.

Negative for all three tests - A *completely negative result* (anti-HBs, HBsAg, anti-HBc are all negative) means that you have never been exposed to the hepatitis B virus nor been immunized. In that case you can benefit from immunization.

Is hepatitis B a preventable disease?

Yes! Hepatitis B can be prevented by:

- Immunization with a hepatitis B vaccine. Either a two-dose or three-dose vaccine administered within a six month period provides long-lasting protection against hepatitis B in the majority of people.
- Adopting safer sex practices by using condoms.
- Administering HBIG (protective antibodies) to anyone who has had recent (within seven to 14 days) exposure to infected blood or body fluids.
- Screening all pregnant women and administering HBIG and the first of three doses of vaccine at birth to babies born to mothers who have hepatitis B. The second dose is given when the baby is one month old and the third at six months-old: this gives your baby a 90 -100% chance of not being infected with hepatitis B. The vaccine may fail in the baby if the mother's viral load is very high during pregnancy.



Giving the mother antiviral therapy can prevent the baby's infection. This is best discussed with a specialist.

Is there treatment for hepatitis B?

Yes, effective treatments are available for chronic hepatitis B. The objective of treatment is to prevent the development of cirrhosis, liver failure and liver cancer. However, not all hepatitis B patients will develop these complications. The challenge is to identify those patients whose liver disease may progress to cirrhosis and who may benefit from treatment. This is why it is so important to have regular follow-up with your healthcare provider to monitor your liver health. It is recommended that all patients with chronic hepatitis B should be screened for liver cancer with ultrasound every 6 months to allow for early detection, treatment and possibly cure of this otherwise deadly cancer.

There are two types of treatment available: interferon which is a medication administered by a needle, and antiviral medications that are taken as a pill. These treatments do not provide a cure, but they offer control of the virus so that further damage to your liver can be prevented. Please discuss your treatment options with your healthcare provider.

I have hepatitis B. What should I do to prevent passing the virus on to others?

- Practise safer sex: use condoms consistently and correctly! Encourage your sex partner(s) and all people you live with to get hepatitis B testing. If they have not already been infected and are not immune to hepatitis B, they should receive hepatitis B vaccine for protection. In the meantime, use a condom until the vaccine has had a chance to make your partner immune.
- If you are pregnant, or planning to have children, there is a high risk of passing the virus on to your baby around the time of birth. However, the baby can be protected through immunization. At birth, your baby will receive HBIG and the first of three doses of the hepatitis B vaccine. The second dose is given when the baby is one month-old and the third at six months-old: this gives your baby a 90-100% chance of not being infected with hepatitis B. Although hepatitis B screening is part of the prenatal testing in some provinces, be sure to discuss this matter with your healthcare provider.
- Although all healthcare providers in Canada are required to practise universal precautions, tell your doctor, dentist and others involved in your health care so that they can take necessary precautions.
- Never share your toothbrush, razor, nail file or other personal items that might contain traces of blood.
- Never donate blood or semen.
- Get rid of items with your blood (e.g. tampons, dental floss, bandages, needles, broken glass) by placing them in a protective container or plastic bag.



- Cover all cuts and sores with band aids.
- Clean up spills of your blood with freshly diluted household bleach (one part bleach, nine parts water) and let it stand for 10 minutes before wiping it away. The bleach will kill any hepatitis B virus left on the surface.

Do I need a special diet?

There is no special diet for hepatitis B as long as you eat healthy, nutritious food as outlined by Health Canada in *Eating Well with Canada's Food Guide*. Alcohol can also damage your liver so avoid alcohol consumption if you have a liver disease.

This information is current for November 2016.