

PATIENT EDUCATION



The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Protecting Yourself Against Hepatitis B and Hepatitis C

Hepatitis B and hepatitis C are serious infections that affect the liver. Both diseases are contagious and are caused by viruses. Both can lead to serious, long-term illness. There is no cure for hepatitis B infection, but it can be managed. A vaccine also is available to prevent hepatitis B infection. New treatments have the potential to cure hepatitis C infection in most people and prevent long-term complications.

This pamphlet explains

- *how the viruses affect the body*
- *how the viruses are spread*
- *risk factors and tests*
- *treatment and prevention*

How Hepatitis Affects the Body

The liver performs many functions in the body. All of the nutrients in the food you eat first pass through the liver, which filters out harmful substances you may consume. The liver helps fight infection. It makes many proteins that are used by the body, such as factors that help blood clot after an injury. The liver stores a form of **glucose** and makes it available when the body needs energy. The liver also makes bile, which helps digest food.

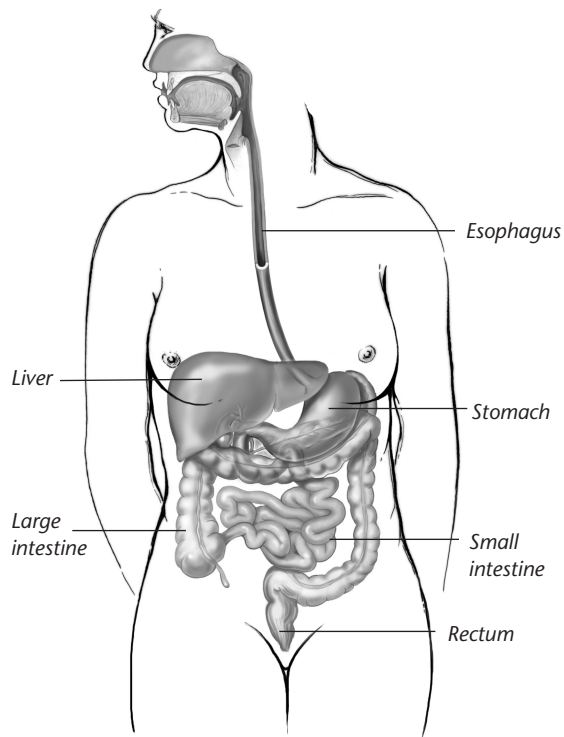
Infection with the hepatitis B virus or the hepatitis C virus can be acute or chronic. Acute infection is a short-term illness that happens in the first 6 months after a person is infected. Acute infection can cause only mild symptoms or no symptoms at all. When

symptoms of both infections do occur, they may include the following:

- Tiredness
- Loss of appetite
- Nausea and vomiting
- Jaundice (yellowing of the skin and eyes)
- Stomach pain
- Pain in the muscles and joints

Chronic infection can occur if the virus stays in the body. Chronic infection with both viruses can cause serious, long-term liver disease, such as **cirrhosis**. In this condition, **cells** of the liver die and are replaced by scar tissue. Over time, the liver stops working. In

The Digestive System



The hepatitis B and hepatitis C viruses damage the liver.

some cases, chronic hepatitis infection can lead to liver cancer.

Hepatitis B

It is estimated that 1–2 million people in the United States are infected with the hepatitis B virus. Many do not even know they are infected. The virus is spread by direct contact with the body fluids (blood, semen, or vaginal fluids) of an infected person. This can happen during unprotected sex or while sharing needles used to inject (“shoot”) drugs. A baby can be infected during birth if the mother has the hepatitis B virus. The hepatitis B virus also can be spread if you live with an infected person and share household items that may come in contact with body fluids, such as toothbrushes or razors. The hepatitis B virus is not spread by casual contact with people and objects. Casual contact includes shaking hands, sharing food or drink, or coughing and sneezing. Also, the hepatitis B virus is not spread by breastfeeding.

The infection can clear up completely in a few weeks without treatment. Those who do get rid of the hepatitis B virus become immune to it. They cannot get the virus again. However, a small number of adults and many children younger than 5 years never get rid of the hepatitis B virus. This is called chronic infection. These people keep the virus for the rest of their lives. They are known as **carriers**.

Most carriers do not have any symptoms. In a small number of carriers, chronic infection can lead to serious liver disease and early death. As many as 2 million

people in the United States are chronic carriers of the hepatitis B virus.

Tests for Hepatitis B

There are different blood tests for the hepatitis B virus. Tests for the hepatitis B virus can tell whether you have been recently infected or whether you are a carrier. They also can show whether you have had the hepatitis B virus in the past and are now immune to it or whether you have had the hepatitis B vaccine. It is recommended that the following people be tested for the hepatitis B virus:

- Pregnant women
- Infants born to infected mothers
- Sex partners of and those who live with an infected person
- People with **human immunodeficiency virus (HIV)** infection or hepatitis C virus infection
- Users of injected illegal drugs
- Men who have sex with men
- People who are the source of blood or other body fluid exposures (for example, when a health care worker has been stuck by a needle)
- People born in countries with a high rate of hepatitis B virus infection or people with parents born in these countries
- People receiving dialysis, cancer treatment, or treatment with drugs that suppress the immune system

Treatment and Prevention of Hepatitis B

There is no cure for hepatitis B virus infection, but symptoms can be managed. Treatment can be given for some of the liver diseases caused by the infection.

The best protection against the hepatitis B virus is a vaccine. The vaccine triggers your body's immune system to fight off the virus when you are exposed to it. It usually is given in three doses over a 6-month period. All infants are vaccinated beginning at birth and should receive all of their hepatitis B vaccine shots by the time they are aged 6–18 months. Children should receive the vaccine if they have not been vaccinated during infancy. The vaccine also is recommended for adults at risk of hepatitis B virus infection. Even if you do not have any risk factors, you still can be vaccinated if you have not previously had the vaccine (see box). Pregnant women with risk factors for hepatitis B infection also can get the vaccine.

People who have been recently exposed to the hepatitis B virus and are not vaccinated are usually given the vaccine along with a shot of **hepatitis B immune globulin (HBIG)**. HBIG contains **antibodies** to the virus. It can give additional protection against infection in certain situations.

Although getting the vaccine is the best way to prevent hepatitis B virus infection, avoiding risky behavior also can prevent hepatitis B virus infection and other diseases like HIV:

- Use a latex condom during sex.
- Know your partner's sexual history and have only one sexual partner.

Who Should Get the Hepatitis B Vaccine

- All infants
- All children younger than 19 years who have not been vaccinated previously
- Sex partners of people infected with the hepatitis B virus
- Men who have sex with men
- People who inject illegal drugs
- People with more than one sex partner
- People seeking treatment for a sexually transmitted infection
- People with jobs that expose them to human blood (such as health care workers)
- People who live with someone infected with the hepatitis B virus
- Residents and staff in institutions for the developmentally disabled
- Dialysis patients
- People with chronic (long-term) liver disease, diabetes, kidney disease, or HIV infection
- People who travel to countries where the hepatitis B virus is common
- Anyone else who wants to be protected from hepatitis B virus infection

- If you are injecting drugs, get help and try to stop—if you cannot stop, do not share needles.

Hepatitis C

The hepatitis C virus is spread by direct contact with infected blood. This can happen while sharing needles or sharing household items that come into contact with blood. A baby can be infected during birth if the mother has the hepatitis C virus. It also can be spread during unprotected sex, but it is harder to spread the virus this way. It is not spread by casual contact.

Most adults—about 75–85%—infected with the hepatitis C virus become chronic carriers. Almost 3 million people in the United States are believed to be carriers of the hepatitis C virus. About two out of three hepatitis C carriers eventually develop chronic liver disease.

Being infected once with the hepatitis C virus does not mean that a person cannot get it again. There is more than one type of hepatitis C virus. These different types are called strains. It is possible to be reinfected later with a different strain or be infected at the same time with more than one strain.

Tests for Hepatitis C

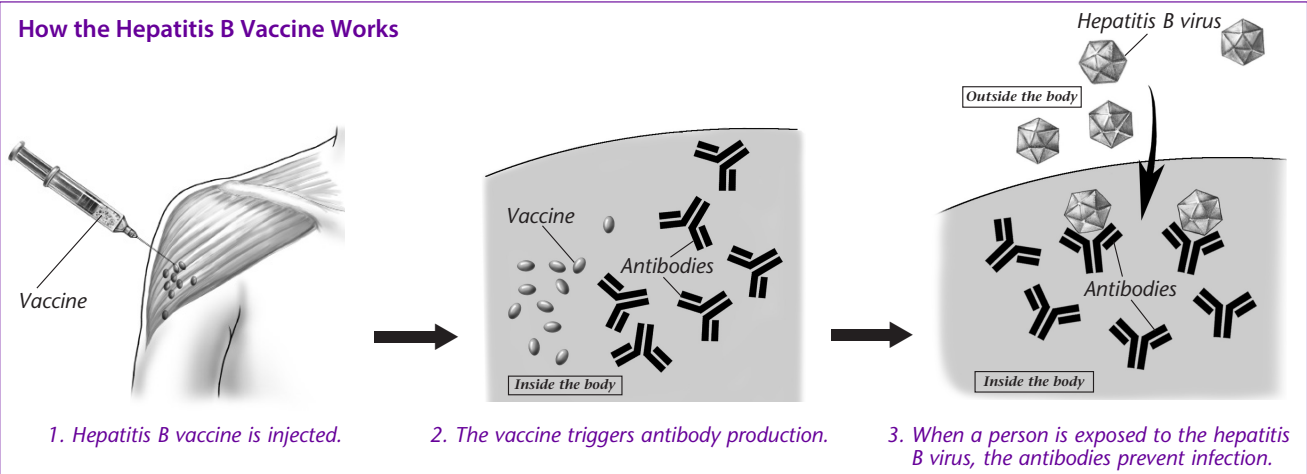
The tests for hepatitis C show whether you are infected with the hepatitis C virus. If the test result is positive, another kind of test can tell whether you still have the virus in your blood and if so, how much virus is present. Those at high risk of infection should be tested for the hepatitis C virus. People at high risk of hepatitis C virus infection include the following:

- All adults born from 1945 through 1965
- Users or past users of injected illegal drugs
- People who received clotting factors before 1987
- Current or past dialysis patients
- People with HIV infection
- People who have abnormal liver enzyme test results
- People who received blood or who had an organ transplant before 1992
- People who received blood from someone who later tested positive for the hepatitis C virus
- Health care workers who may have been exposed to hepatitis C-positive blood (for example, who have been stuck with a needle used on a person with hepatitis C)
- Children born to women infected with hepatitis C

Treatment and Prevention of Hepatitis C

A combination of antiviral drugs is used to treat hepatitis C virus infection. With recent advances in treatment approaches, most people with chronic hepatitis C

How the Hepatitis B Vaccine Works



infection can be cured. Treatment also decreases the risk of long-term complications of the disease.

There is no vaccine to prevent hepatitis C virus infection. You can help prevent infection with the hepatitis C virus by avoiding risky behavior that can pass on the virus:

- Use a latex condom during sex.
- Know your partner's sexual history and have only one sexual partner.
- If you are injecting drugs, get help and try to stop—if you cannot stop, do not share needles.

Concerns for Pregnant Women

The hepatitis B and hepatitis C viruses can pose serious health risks for pregnant women. There is also a chance that a pregnant woman infected with either virus can pass it to her baby during labor and delivery.

In newborns, hepatitis B virus infection can be a serious illness. Infected newborns have a 90% chance of becoming carriers, with a 25% chance of developing serious liver disease later in life. All pregnant women are tested for the hepatitis B virus. If you are pregnant and do not have the hepatitis B virus, your baby should get the first dose of hepatitis B vaccine before you leave the hospital. If it cannot be given by then, it should be given within 2 months of birth. The remaining doses are given within the next 6–18 months.

If you do have the hepatitis B virus, steps can be taken to prevent your baby from becoming a carrier. Within the first few hours of birth, your baby will receive the first dose of the hepatitis B vaccine. A shot of HBIG is given as well. Two more doses of the vaccine will be given later over the next 6 months.

If you were not tested for the hepatitis B virus, your baby should get the first dose of the vaccine and then you should be tested. The rest of your baby's treatment depends on your test results.

Only about 6 out of 100 women (6%) who are infected with the hepatitis C virus will pass it to their babies. The risk is related to how much virus a woman has and whether she also is infected with HIV. If you

have risk factors for infection, you should be tested for this virus during pregnancy. If you have the virus, you will need special care during pregnancy to make sure you stay healthy. Currently there is no treatment that can be given during pregnancy that prevents passing the virus to the fetus.

Finally...

Hepatitis B and hepatitis C are serious infections. See your health care professional to discuss the hepatitis B vaccine if you have not yet been vaccinated. If you are pregnant, you should be tested for the hepatitis B virus. You also may be tested for the hepatitis C virus if you have risk factors.

Glossary

Antibodies: Proteins in the blood produced in reaction to foreign substances, such as bacteria and viruses that cause infection.

Carriers: Persons who are infected with the organism of a disease without showing symptoms and who can transmit the disease to another person.

Cells: The smallest units of a structure in the body; the building blocks for all parts of the body.

Cirrhosis: A disease caused by loss of liver cells, which are replaced by scar tissue that impairs liver function.

Glucose: A sugar that is present in the blood and is the body's main source of fuel.

Hepatitis B Immune Globulin (HBIG): A substance given to provide temporary protection against infection with hepatitis B virus.

Human Immunodeficiency Virus (HIV): A virus that attacks certain cells of the body's immune system and causes acquired immunodeficiency syndrome (AIDS).

This information was designed as an educational aid to patients and sets forth current information and opinions related to women's health. It is not intended as a statement of the standard of care, nor does it comprise all proper treatments or methods of care. It is not a substitute for a treating clinician's independent professional judgment. Please check for updates at www.acog.org to ensure accuracy.

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