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 infections that affect the liver. These infections are caused by **viruses** that can spread easily. These infections also 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. There is no vaccine for hepatitis C, but 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*
- *effects on pregnancy*

## How Hepatitis Affects the Body

The liver is in the upper right part of the abdomen. It sits on top of the stomach, right kidney, and intestines. The liver has many functions, including

- making bile to help digest food
- clearing the blood of harmful substances
- fighting infection
- making proteins that help blood clot after an injury
- storing and releasing ***glucose*** when the body needs energy

Hepatitis infection 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 mild symptoms or no symptoms at all. When symptoms develop, they may include

- tiredness
- loss of appetite
- nausea and vomiting
- ***jaundice***
- stomach pain
- pain in the muscles and joints

Chronic infection can develop if the virus stays in the body. Chronic infection 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 some cases, chronic hepatitis can lead to liver cancer.

## Hepatitis B

About 850,000 people in the United States are estimated to be living with hepatitis B. Many do not know they are infected.

Hepatitis B is passed through contact with body fluids. This can happen during unprotected sex or while sharing needles used to inject ("shoot") drugs. People who work in the health care field also may be exposed to body fluids. A baby can be infected during birth if the pregnant woman has hepatitis B.

Hepatitis B also can be spread if you live with an infected person and share household items that touch body fluids, such as toothbrushes or razors. But hepatitis B is not spread by casual contact, such as shaking hands, sharing food or drink, coughing, or sneezing. Also, hepatitis B is not spread by breastfeeding.

In most people, the virus goes away by itself. But in some people, the virus does not go away. These people become ***carriers*** of the virus who can infect others. Carriers also may develop chronic hepatitis, which can lead to liver damage, liver cancer, and early death.

### *Tests for Hepatitis B*

There are different blood tests for the hepatitis B virus. Tests for hepatitis B can tell whether you have been recently infected or whether you are a carrier. Tests also can show whether you have had the virus in the past and are now ***immune*** to it or whether you have had the hepatitis B vaccine. People who should be tested for the hepatitis B virus include

- pregnant women
- babies born to infected mothers
- sex partners of infected people
- those who live with an infected person
- people with ***human immunodeficiency virus (HIV)*** or hepatitis C virus
- users of injected illegal drugs
- men who have sex with men
- people exposed to blood or body fluids, such as health care workers
- people born in countries with a high rate of hepatitis B 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, 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. The hepatitis B vaccine is a series of three shots. All babies are vaccinated beginning at birth (see the section "Hepatitis B and Pregnancy"). Children should receive the vaccine if they were not vaccinated as babies. The vaccine also is recommended for adults at risk of hepatitis B.

Even if you do not have any risk factors, you still can be vaccinated if you have not been before (see the box "Who Should Get the Hepatitis B Vaccine"). Pregnant women with risk factors for hepatitis B infection also can get the vaccine.

People who have been recently exposed to hepatitis B and are not vaccinated usually are 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 infection, you can take steps to avoid hepatitis B, including

- using a latex or polyurethane condom every time you have vaginal, oral, or anal sex
- knowing your sex partners, since the more partners you or your partners have, the higher your risk of getting infections
- getting help and trying to stop if you are injecting drugs—if you cannot stop, do not share needles

## Hepatitis B and Pregnancy

If no preventive steps are taken, about 9 in 10 pregnant women infected with hepatitis B will pass the infection to their babies at birth. Hepatitis may be severe

### Who Should Get the Hepatitis B Vaccine

- All babies
- All children younger than 19 who have not been vaccinated before
- Sex partners of people infected with hepatitis B
- 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 (STI)***
- People with jobs that expose them to human blood (such as health care workers)
- People who live with someone infected with hepatitis B
- People receiving dialysis
- People with chronic liver disease, ***diabetes mellitus***, ***kidney disease,*** or HIV infection
- People who travel to countries where hepatitis B is common
- Anyone else who wants to be protected from hepatitis B infection

in babies and can be life-threatening. Even babies who appear well may be at risk of serious health problems. Infected newborns have a high risk of becoming carriers of the virus.

The vaccine is safe for pregnant women, postpartum women, and women who are breastfeeding. All babies should get their first dose of hepatitis B vaccine before leaving the hospital after birth. The second dose is given when the baby is 1 to 2 months old. The third dose is given when the baby is 6 to 18 months old.

All pregnant women are tested for hepatitis B infection as part of early ***prenatal care***. If you test negative for hepatitis B virus but you have risk factors for getting infected, you should be offered the hepatitis B vaccine. If you test positive, you should be tested again during your third ***trimester*** to determine how much virus is in your system. Depending on the results of this test, you may be offered HBIG antiviral therapy.

Babies born to infected mothers will get the first dose of hepatitis B vaccine within 12 hours of birth. They also will get HBIG soon after birth to give extra protection against infection. The rest of the shots then will be given over the next 6 months. With this treatment, the chance of the baby getting the infection is much lower. A woman who has hepatitis B infection can breastfeed safely if the baby has gotten the hepatitis B vaccine and HBIG at birth.

## Hepatitis C

More than 2 million people in the United States are estimated to be living with hepatitis C. Another 3 to 4 million are thought to be carriers. About 2 in 3 hepatitis C carriers eventually develop chronic liver disease.

Hepatitis C is spread through direct contact with infected blood. This can happen while sharing needles or household items that can carry small amounts of blood (razors, nail clippers, toothbrushes). People who work in the health care field also may be exposed to infected blood. A baby can be infected during birth if the mother has hepatitis C. It also can be spread during unprotected sex, but it is harder to spread the virus this way. It is not spread through casual contact.

There is more than one type of hepatitis C virus. Different virus types are called strains. It is possible to be infected with more than one strain at the same time. It's also possible to be infected later with a different strain.

The signs and symptoms of hepatitis C are like hepatitis B signs and symptoms. In some cases, there are no symptoms. Unlike hepatitis B infection, most adults infected with hepatitis C become carriers. Most carriers develop long-term liver disease. A smaller number will develop liver damage and other serious, life-threatening liver problems.

### *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.

All people 18 and older should be tested for hepatitis C at least once. Those at high risk of infection should be tested for hepatitis C, regardless of age. People at high risk of hepatitis C infection include

- all adults born between 1945 and 1965
- users or past users of injected illegal drugs
- people who received clotting factors before 1987
- people who are on or have had dialysis
- people with HIV infection
- people who have abnormal ***liver enzymes***
- people who received blood or who had an organ transplant before 1992
- people who received blood from someone who later tested positive for hepatitis C
- health care workers who may have been exposed to hepatitis C-positive blood
- children born to women who were infected with hepatitis C

### *Treatment and Prevention of Hepatitis C*

Antiviral medications are used to treat hepatitis C infection. With recent advances in treatment, most people with chronic hepatitis C infection can be cured. Treatment also decreases the risk of long-term complications of the disease.

There is no vaccine to prevent hepatitis C infection. You can take steps to avoid hepatitis C, including

- using a latex or polyurethane condom every time you have vaginal, oral, or anal sex
- knowing your sex partners—the more partners you or your partners have, the higher your risk of getting infections
- getting help and trying to stop if you are injecting drugs—if you cannot stop, do not share needles

### *Hepatitis C and Pregnancy*

About 4 in 100 pregnant women who are infected with hepatitis C will pass it to their babies. The risk is related to how much of the virus a woman has in her body and whether she also is infected with HIV.

If you test positive for hepatitis C before pregnancy, you can start treatment with an antiviral medication before getting pregnant.

Currently, there are no hepatitis C treatments approved for use during pregnancy. But hepatitis C testing is recommended for all pregnant women during each pregnancy. If you have the virus, you will need special care during pregnancy to make sure you stay healthy.

There are no preventive measures available that can reduce the risk of passing the virus on to the baby. ***Cesarean birth*** does not lower the risk of transmission to the baby. If you are infected with the hepatitis C virus, your baby should be tested, usually when your baby is at least 18 months old.

There is no newborn vaccine for hepatitis C. Babies who become infected with the hepatitis C virus will need ongoing medical care. You can still breastfeed your baby if you have hepatitis C infection.

You also will need long-term health care. You can start treatment with an antiviral medication after pregnancy. If you breastfeed your baby, treatment should start after finishing breastfeeding.

## Finally…

Hepatitis B and hepatitis C are serious infections. Talk with your health care practitioner about the hepatitis B vaccine if you have not been vaccinated. If you are pregnant, you should be tested for the hepatitis B and hepatitis C virus.

## Glossary

***Antibodies:*** Proteins in the blood that the body makes in reaction to foreign substances, such as bacteria and viruses.

***Carrier:*** A person who is infected with the organism of a disease without showing symptoms. This person can pass the disease to another person.

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

***Cesarean Birth:*** Birth of a fetus from the uterus through an incision (cut) made in the woman's abdomen.

***Cirrhosis:*** A disease caused by loss of liver cells. The lost cells are replaced by scar tissue that impairs liver function.

***Complications:*** Diseases or conditions that happen as a result of another disease or condition. An example is pneumonia that occurs as a result of the flu. A complication also can occur as a result of a condition, such as pregnancy. An example of a pregnancy complication is preterm labor.

***Diabetes Mellitus:*** A condition in which the levels of sugar in the blood are too high.

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

***Hepatitis B:*** An infection caused by a virus that can be spread through blood, semen, or other body fluid infected with the virus.

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

***Hepatitis C:*** An infection caused by a virus that can be spread through infected blood.

***Human Immunodeficiency Virus (HIV):*** A virus that attacks certain cells of the body's immune system. If left untreated, HIV can cause acquired immunodeficiency syndrome (AIDS).

***Immune:*** Protected against infectious disease.

***Immune System:*** The body's natural defense system against viruses and bacteria that cause disease.

***Jaundice:*** A buildup of bilirubin (a brownish yellow substance formed from the breakdown of red cells in the blood) that causes the skin to have a yellowish appearance.

***Kidney Disease:*** A general term for any disease that affects how the kidneys function.

***Liver Enzymes:*** Chemicals made by liver cells. High levels of liver enzymes may suggest liver damage.

***Prenatal Care:*** A program of care for a pregnant woman before the birth of her baby.

***Sexually Transmitted Infection (STI):*** An infection that is spread by sexual contact. Infections include chlamydia, gonorrhea, human papillomavirus (HPV), herpes, syphilis, and human immunodeficiency virus (HIV, the cause of acquired immunodeficiency syndrome [AIDS]).

***Trimester:*** A 3-month time in pregnancy. It can be first, second, or third.

***Vaccine:*** A substance that helps the body fight disease. Vaccines are made from very small amounts of weak or dead agents that cause disease (bacteria, toxins, and viruses).

***Viruses:*** Agents that cause certain types of infections.



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