

What is hepatitis B?

Hepatitis B is an infection that attacks the liver. It is caused by the hepatitis B virus (HBV). About 4.9% (one in 20) Americans have been infected with HBV. According to the U.S. Centers for Disease Control and Prevention (CDC), about 20 to 30% of the 1.4 million Americans who have chronic hepatitis B were infected during childhood.

When most healthy adults and older children are infected with HBV, their immune systems are able to fight off the infection. They experience a brief or "acute" hepatitis B infection. Many of those infected feel no symptoms and don't even know they were infected.

When people are infected for six months or longer with HBV, they have a long-term or "chronic" infection. About 5% of adults and 90% of babies exposed to HBV can't get rid of the infection. Their immune systems either aren't strong enough to repel the infection, or, in the case of young children, they fail to recognize HBV as an enemy virus. That is why about 90% of babies born to infected mothers get chronic hepatitis B.

How does hepatitis B spread?

Hepatitis B is found in the blood and body fluids of infected people. HBV is a very sturdy virus; it can even live in dried blood for several days! That is why it's easy to become infected with HBV if you have unprotected sex with an infected partner or if HBV-infected blood or secretions have contact with an open wound or even chapped skin. That is why babies born to infected mothers have a high risk of infection

because they come into contact with their mother's body fluids during birth. HBV is also transmitted easily when medical equipment, such as needles and syringes, is not sterilized properly and is re-used.

If HBV-infected blood or body fluids enter your body through a cut or other opening, you are at high risk for infection.

HBV can also be spread by small amounts of blood in cookers, cottons, and other equipment used to inject drugs. Other items that come into contact with blood and can spread the virus include razors, earrings or toothbrushes and tools for tattooing and body piercing.

Advocate for Yourself

- **Learn as much as possible about your condition**
- **Be prepared for office visits**
- **Prioritize your health issues**
- **Keep copies of health records**
- **Ask questions!**
- **Talk with family and friends about your concerns**
- **Keep an open mind**



HBV ADVOCATE
www.hbvadvocate.org

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The information in this brochure is designed to help you understand and manage hepatitis B and is not intended as medical advice. All persons with hepatitis B should consult a medical practitioner for diagnosis and treatment.

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Contact your local health department or one of the following agencies for more information on Hepatitis B:

The Hepatitis C Support Project
www.hbvadvocate.org

Hepatitis B Foundation
www.hepb.org

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Staying Healthy with Hepatitis B

Making lifestyle changes to enhance your health with good nutrition, exercise and stress management.



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How to prevent hepatitis B

There is a very safe and effective vaccine that can protect people from hepatitis B. It is administered through a series of three injections. Health officials recommend that all babies receive this vaccine at birth, and that all children and teens get immunized. They also recommend that adults, who may be at risk of hepatitis B due to their jobs or possible exposure to infected partners or family members, get immunized. There is also a combination vaccination for hepatitis A and B that is very safe and effective.

As a result of immunizations, new HBV infections have declined by about 82% since 1991.¹ However, HBV infection remains highest among unvaccinated adults. In 2007, an estimated 43,000 persons in the United States were newly infected with HBV. Rates were highest among adults, particularly males aged 25–44 years.

In many Asian, Western Pacific and Sub-Saharan African countries, chronic HBV infections are widespread, ranging from 2.4% to 16%² of the entire population. In these countries, HBV-related liver cancer causes many deaths. Because of this high infection rate, it is important that people who emigrated from these countries, or whose parents or grandparents emigrated, get tested for hepatitis B, and vaccinated if they are not infected.

In addition to immunization, people can prevent HBV infection by doing the following:

- Always use safer sex practices to prevent the exchange of body fluids during oral, vaginal or anal sex.
- Never share toothbrushes, razors, earrings or other equipment that can come into contact with blood or body fluids.
- Immediately bandage cuts or bruises to prevent contact with blood.
- Never touch anyone's blood or body fluids without having a barrier between you and the potentially infectious substance.
- Make sure a baby born to an infected mother is immediately vaccinated, and also treated with hepatitis B immune globulin (HBIG), which contains hepatitis B antibodies to help fight infection.

Treatment for hepatitis B

If you are infected with hepatitis B, your doctor should regularly test a sample of your blood for signs of liver disease. The two things they will look at closely are viral load, the amount of HBV DNA circulating in your blood, and an enzyme called alanine aminotransferase or ALT. When your liver is damaged from HBV infection, your liver cells release ALT. Your doctors want to keep your viral load low, your ALT levels normal, and they want to strengthen your immune system so it will effectively fight infection. Today, there are two types of drugs available to treat hepatitis B: interferons and antivirals.

Interferon

Interferons, natural proteins found in your body, boost the immune system to fight infection. Researchers have developed synthetic interferons that help your immune system fight the infection in your liver and increase the antibodies that fight the virus. Interferon potentially can improve the health of your liver and lower viral load.

Interferon treatment is for a limited period of time, usually up to a year, and it can produce long lasting improvement without causing any viral resistance, which is why interferon may be the best first choice of treatment. Interferon can cause depression, so your doctor may prescribe an antidepressant during treatment to decrease this side effect.

The newest interferon approved by the FDA is called pegylated interferon, which lasts longer in the body. It has been used with great success to treat hepatitis C and requires only one injection each week. To date, the FDA has only approved pegylated interferon for adults with HBV.

Antivirals

Antivirals, which are pill medications taken daily, interfere with the HBV's reproduction process so new HBV can't be created. There are five antivirals approved by the FDA. What makes them different is each antiviral targets a different part of the virus. But over time, HBV can develop mutations that allow them to keep reproducing despite treatment with an antiviral pill. This is called viral "resistance," because the virus can "resist" the antiviral.

Antivirals can work for a while to lower viral load and ALT levels, but when resistance occurs those levels can start to rise again. This is why people have to take antivirals for a longer period of time than interferon. Researchers have not yet developed a perfect antiviral or combination treatment that would eradicate all HBV at once.

Staying healthy

In addition to medical treatments, there are other things you can do to manage hepatitis B and improve the health of your liver. Good nutrition is important to keep the liver functioning properly. A well-balanced diet that is low in fat, salt and sugar is important. High doses of vitamin supplements that contain iron, vitamin A, or vitamin D can harm the liver and should be avoided. Also, try to steer clear of alcohol, certain drugs, chemicals, and smoking. Moderate exercise can help to control stress and fatigue unless you are feeling ill.

Your liver is your largest internal organ, and performs many vital functions. It processes food, filters out drugs and poisons, and stores vitamins, minerals, and sugars. There are other viruses that cause hepatitis or "inflammation of the liver." Hepatitis A is the most common hepatitis virus. Children commonly get this type of hepatitis through hepatitis A-contaminated food or water. There is no treatment for hepatitis A, but the body usually clears the virus, and it does not cause chronic infection. Hepatitis A can be prevented with a vaccine, and anyone with hepatitis B should be vaccinated against hepatitis A. The last thing you want is another virus infecting your liver.

There is another virus that attacks the liver, called hepatitis C. Hepatitis C is spread through blood-to-blood contact, such as from receiving a blood transfusion before 1992, injection drug use and other less common ways. There is no vaccine to prevent hepatitis C. However, there are drug therapies currently available that can slow down the virus or even get rid of it in some people.

Conclusion

Many people chronically infected with HBV lead normal lives and never experience any serious liver damage. However, some do develop serious liver disease. If you are infected with HBV, one of the best strategies you can use is to become actively involved in your medical care. Talk to your doctor and find out if treatment is right for you. Additionally, make lifestyle changes that will enhance your health and slow disease progression, including good nutrition, exercise, and stress management. Each year, researchers are learning more about hepatitis B and discovering new treatments that will one day eradicate this infection in everyone.

Because of high infection rates in many Asian, Western Pacific and Sub-Saharan African countries, it is important that people who emigrate from these countries, or whose parents or grandparents emigrated, get tested for hepatitis B, and vaccinated if they are not infected.

1. Centers for Disease Control and Prevention Web site: <http://www.cdc.gov/hepatitis/HBV/HBVfaq.htm#overview>
2. Centers for Disease Control. Screening for Hepatitis B Among Asian/Pacific Islander Populations – New York City, 2005. Web site: www.cdc.gov/mmwr/preview/mmwrhtml/mm5518a2.htm

Support groups can be very helpful for people living with hepatitis B, especially when dealing with the emotional issues of managing, treating and living with a potentially life-threatening disease.



FOR LIVING POSITIVELY

BEING WELL

