Hepatitis B

Hepatitis B is an inflammation of the liver caused by infection with the hepatitis B virus (HBV) and can occur as an *acute* (short-lived) or *chronic* (lasting) illness. It is transmitted through blood and body fluids, including semen, vaginal fluids and saliva.

Two common modes of transmission are sexual contact with an infected person and sharing needles with an infected intravenous drug user. However, exposure to infected blood from contaminated tattoo needles, body piercing, a shared razor, a friend’s bloody nose, or saliva from a toothbrush, can be enough to cause infection. Hepatitis B virus is far more contagious than human immunodeficiency virus (HIV). In the United States, the risk of acquiring hepatitis B from a blood transfusion has been virtually eliminated thanks to screening tests required of all donated blood.

Groups considered to be at higher risk for hepatitis B include:

- People receiving *hemodialysis* (a technique that removes waste materials and poisons from the blood by machine)
- Injecting drug users
- Healthcare workers who are in contact with blood and body fluids
- People who live in the same house with someone who has chronic (long-term) HBV infection
- People who have had multiple sex partners or a sexually transmitted disease (STD)
- Homosexual and bisexual men
- Infants or children whose parents were born in Southeast Asia, Africa, the Amazon Basin, the Pacific Islands or the Middle East
- Infants born to infected mothers
- Travelers to areas where hepatitis B is common

Although the symptoms are similar to food-borne hepatitis (hepatitis A), HBV is usually more severe. In addition, it is potentially more dangerous because the infection may become *chronic* (ongoing). Some people with HBV become “carriers” and can transmit the virus to others for an indefinite period, even though they have no symptoms. Higher rates of liver cancer (*hepatocellular carcinoma*) and *cirrhosis* (a chronic liver disease) have also been associated with HBV infection. However, up to 90 percent of people infected with HBV make a full recovery.
Note your symptoms

One-third of all adults and most infants with Hepatitis B have no symptoms. However, it's important to remember that a lack of symptoms does not denote safety; an infected person with no symptoms can still spread the virus.

If symptoms do occur, they may begin suddenly or gradually and are generally mild. Symptoms are often initially "flu-like," with loss of appetite, fatigue, malaise (feeling lousy), body aches or vague abdominal discomfort, possible nausea and vomiting, and a low-grade fever. Sometimes these symptoms are followed by jaundice (yellowish discoloration of the whites of the eyes, skin and mucus membranes) and discoloration of the urine and stool. Symptoms and laboratory values generally improve gradually within several weeks to several months.

Prevention

While vaccination is the best method of preventing HBV infection, a few simple measures can help protect you and those close to you:

- People with multiple sex partners should use latex condoms every time they have sex. While condoms are not fool-proof, they significantly lower the risk of transmission. Note: Even people in monogamous relationships should use condoms until their partners have been tested and immunized against hepatitis B.
- Intravenous drug users should never share needles, syringes or paraphernalia for preparing drugs. Of course, illicit drug use poses severe health risks and users should be urged to enter a treatment program.
- Never share personal items that might have traces of blood or saliva on them; this includes such items as razors, toothbrushes and nail clippers.
- If you intend to get a tattoo or body piercing, make sure the individual who does it follows immaculate health and safety measures; even a trace of infected fluid invisible to the eye can transmit the virus.
- If you already have hepatitis B, never donate blood, organs, semen or other tissues.
- If you work in the healthcare field, get the hepatitis B vaccination series and follow routine barrier precautions, including the use of extreme caution when handling needles and other sharps.

If, despite these precautions, you are exposed to hepatitis B or are at risk of contracting it, your healthcare provider may prescribe an injection of immune globulin or hepatitis B vaccine. If you are diagnosed with hepatitis B, the people with whom you have had sex or shared needles within the past six months need to be informed. If you find this difficult, the health department can help you.

Immunization
Vaccination is the best method for assuring immunity from infection and is recommended for all infants. Even babies born to infected mothers can be protected from HBV through immunization; generally a combination of immune globulin and hepatitis vaccine are given within 12 hours of birth and two more doses of vaccine are administered by the time the baby reaches 6 months of age. Children and adolescents to age 19 who were not immunized as infants should begin the series at any visit to their healthcare provider.

The three-injection series is usually given over six to 18 months. Vaccination is also recommended for those at risk for infection and those who have had a known episode of exposure to hepatitis B. Occupational risks should be evaluated, and groups such as clinical health workers and those who handle blood products should be vaccinated. A combination hepatitis A and B vaccine (Twinrix) is available for adults.

**Self-care**

For people with uncomplicated cases of hepatitis B, no special treatment is required. Isolation is not necessary, but following your health care provider’s recommendations related to hygiene is important to prevent infecting others. Bed rest is not required, but extra rest may be desirable if you experience fatigue, malaise or body aches. You may feel better if you eat most of your day’s food in the morning, rather than in the afternoon or evening. Frequent, small, low-fat, high-carbohydrate meals may be better tolerated than larger, fattier meals. Avoid drugs or chemicals—such as alcohol, sedatives or other nonessential drugs such as aspirin or acetaminophen (Tylenol)—that may put an additional strain on an already inflamed liver. Be sure your healthcare provider is aware of any drugs you are taking, including over-the-counter (OTC) medications, vitamins and herbal supplements.

**What should you expect?**

Ninety percent of adults with acute hepatitis B recover completely. However, about 10 percent of adults infected with HBV develop chronic hepatitis, which is even more common in children. While usually symptomless, chronic hepatitis may eventually cause symptoms in some people.

About 30 percent of people with chronic hepatitis develop progressive liver damage and cirrhosis of the liver. Antiviral agents such as interferon alfa-2b (Intron A), peginterferon alfa-2b (PEG-Intron) or lamivudine (Epivir HBV) may help prevent the development of such complications. These medications reduce liver inflammation and interfere with viral replication. Lamivudine also appears to make hepatitis B go from an "active" state, in which the virus multiplies, to an "inactive" state, in which it stops multiplying. Other antiviral medications are currently undergoing clinical trials and may soon be ready for the general public. Two other antiviral medications, adefovir (Hepsera) and entecavir (Baraclude) are also used to treat hepatitis B.

Another risk of chronic infection is the development of hepatitis D, a co-infection found only in the presence of hepatitis B. Hepatitis D, which can worsen the course of hepatitis B, occurs primarily in IV drug users and people with hemophilia.
Final note

Most people with the acute form of Hepatitis B eventually recover completely from the illness. However, in approximately 10 percent of those exposed to HBV, the infection becomes chronic. Severe, permanent liver damage may result. One of the most dangerous things about hepatitis B is that it so frequently has no symptoms. Infected individuals can easily unknowingly pass the virus to other people.