

Hepatitis B Training for Patient Navigators/Health Educators



Overview

What is the liver?

The liver is the largest and one of the most important organs in the body. The liver stores fats, sugars, vitamins and other nutrients that your body needs to keep going. It also helps the body get rid of toxins and infections from the blood.

What is hepatitis B?

Hepatitis B is one of the most common infectious diseases in the world, infecting approximately 2 billion people worldwide. It is a virus that infects the liver. "Hepatitis" means inflammation of the liver. Toxins, certain drugs, some diseases, heavy alcohol use, and bacterial and viral infections can all cause hepatitis.

What is the difference between Hepatitis A, Hepatitis B, and Hepatitis C?

Hepatitis A, Hepatitis B, and Hepatitis C are three different viruses that affect the liver. Although each can cause similar symptoms, they have different modes of transmission and can affect the liver differently. Hepatitis A appears only as an acute or newly occurring infection and does not become chronic. People with Hepatitis A usually improve without treatment. Hepatitis B and Hepatitis C can also begin as acute infections, but in some people, the virus remains in the body, resulting in chronic disease and long-term liver problems. There are vaccines to prevent Hepatitis A and B; however, there is not one for Hepatitis C. If a person has had one type of viral hepatitis in the past, it is still possible to get the other types.

What is Hepatitis B?

Hepatitis B is a contagious liver disease that ranges in severity from a mild illness lasting a few weeks to a serious, lifelong illness. It results from infection with the Hepatitis B virus. Hepatitis B can be either "acute" or "chronic."

Acute Hepatitis B virus infection is a short-term illness that occurs within the first 6 months after someone is exposed to the Hepatitis B virus. Acute infection can — but does not always — lead to chronic infection. Most adults with a healthy immune system with acute infection will fully recover and not have any lasting health problems.

Chronic hepatitis B is more serious. Chronic Hepatitis B virus infection is a long-term illness that occurs when the Hepatitis B virus remains in a person's body. A person with chronic hepatitis B may have the disease for life. Chronic hepatitis B can lead to serious liver disease, including liver cancer. Worldwide, approximately 400 million people are infected with chronic hepatitis B. Some 15-25% of people who are chronically infected will eventually develop serious liver conditions such as cirrhosis or liver cancer.

What causes hepatitis B?

Hepatitis B is caused by a virus. The virus is passed from one person to another by blood and sexual fluids.

Testing

It is imperative that people with, or those who are at risk, of chronic hepatitis B get a hepatitis B blood test

While chronic hepatitis B cannot be cured after infection, a medical professional can prescribe certain medications that can help manage the disease.

More information on being tested:

Since only about 30% of people with hepatitis B have any symptoms, the only way to know for sure if you have the virus is to get tested.

To get tested for hepatitis B, you should visit a medical professional at the facility you usually visit or a hepatitis B testing center. The hepatitis B blood test will determine if you have the virus and will give your medical professional important information about how the virus is affecting your health.

If you are infected with the virus, the diagnostic hepatitis B blood test can also help your medical professional determine if you have acute hepatitis B or chronic hepatitis B.

In addition to telling you whether you have the virus and whether it is acute or chronic, hepatitis B testing helps your medical professional tell you how much of the virus is in your blood. In medical terms, this is called viral load. While there is no cure for hepatitis B, certain medications can help manage the disease by reducing the amount of virus in your blood. A lower viral load means that you are less likely to suffer serious liver damage.

There are other hepatitis B tests that can tell your medical professional if liver damage has occurred.

Transmission / Exposure

Is hepatitis B contagious?

Hepatitis B is 100 times more contagious than HIV. In addition, the hepatitis B virus can survive outside the body for at least seven days and still cause infection.

Can a person spread Hepatitis B and not know it?

Yes. Many people with chronic Hepatitis B virus infection do not know they are infected since they do not feel or look sick. However, they still can spread the virus to others and are at risk of serious health problems themselves.

How is hepatitis B spread?

Hepatitis B is transmitted from one person to another through blood and sexual fluids. Here are ways hepatitis B can be transmitted:

- Being born to a mother who has hepatitis B. Hepatitis B also can be passed from an infected woman to her newborn baby during childbirth. Of these newborns, 80-90% of them will be born with hepatitis B and will go on to develop chronic hepatitis B.
- Unprotected sex
- Sharing injection drug use equipment with infected persons
- Used equipment when getting tattoos or body piercings
- Barbers can spread the virus when using unclean razors
- Share personal items such as toothbrushes with people who have the virus
- Blood transfusions
- Surgery, in areas where there is not sufficient care given to sterilization of equipment
- People who live with an infected person are also at risk and should not share personal items such as razors, toothbrushes or nail clippers.
- Medical professionals also are at increased risk for becoming infected and should follow proper procedures for using and disposing of needles and blood products.

Can Hepatitis B be spread through sex?

Hepatitis B is 50–100 times more infectious than HIV and can be passed through the exchange of sexual fluids, such as semen, vaginal fluids, and blood.

Can Hepatitis B be spread through food?

Unlike Hepatitis A, it is not spread routinely through food or water. However, there have been instances in which Hepatitis B has been spread to babies when they have received food pre-chewed by an infected person.

What are ways Hepatitis B is not spread?

Hepatitis B virus is not spread by sharing eating utensils, breastfeeding, hugging, kissing, holding hands, coughing, or sneezing.

How long does the Hepatitis B virus survive outside the body?

Hepatitis B virus can survive outside the body at least 7 days. During that time, the virus can still cause infection if it enters the body of a person who is not infected

Who is at risk for Hepatitis B?

Although anyone can get Hepatitis B, some people are at greater risk, such as those who:

- Are infants born to infected mothers
- Are exposed to blood on the job
- Are hemodialysis patients
- Have sex with an infected person
- Have multiple sex partners
- Have a sexually transmitted disease
- Are men who have sexual contact with other men
- Inject drugs/share needles, syringes, or other drug equipment
- Live with a person who has chronic Hepatitis B
- Travel to countries with moderate to high rates of Hepatitis B

If I think I have been exposed to the Hepatitis B virus, what should I do?

If you are concerned that you might have been exposed to the Hepatitis B virus, call your health professional or your health department. If a person who has been exposed to Hepatitis B virus gets the Hepatitis B vaccine and/or a shot called "HBIG" (Hepatitis B immune globulin) within 24 hours, Hepatitis B infection may be prevented.

If you've been exposed to Hepatitis B, how do you prevent infecting others?

Since hepatitis B is transmitted through blood and body fluids, there are ways to help the prevention of the hepatitis B infection. These include:

- Avoid sharing personal items with people, such as razors, toothbrushes, earrings and nail clippers
- Make sure that clean equipment is used for tattoos and body piercings
- If you visit a barber, make sure that he uses clean razors
- Use condoms when you have sex, particularly if you have multiple sex partners
- Avoid illegal drugs. If you do continue to inject illegal drugs, never share needles or syringes
- If you are a medical professional, follow good practices for using and disposing of needles

If you think that you have been exposed to the hepatitis B virus, it is important to visit your medical professional and get a hepatitis B blood test. This is the only way to know for sure if you have been infected with hepatitis B, and remember to always follow the hepatitis B prevention tips.

How should blood spills be cleaned from surfaces to make sure that Hepatitis B virus is gone?

All blood spills — including those that have already dried — should be cleaned and disinfected with a mixture of bleach and water (one part household bleach to 10 parts water). Gloves should always be used when cleaning up any blood spills. Even dried blood can present a risk to others.

If I had Hepatitis B in the past, can I get it again?

No, once you recover from Hepatitis B, you develop antibodies that protect you from the virus for life. An antibody is a substance found in the blood that the body produces in response to a virus. Antibodies protect the body from disease by attaching to the virus and destroying it. However, some people, especially those infected during early childhood, remain infected for life because they never clear the virus from their bodies.

Can I donate blood, organs, or semen if I have Hepatitis B?

No, if you have ever tested positive for the Hepatitis B virus, experts recommend that you not donate blood, organs, or semen because this can put the recipient at great risk for getting hepatitis.

Symptoms

Does acute Hepatitis B cause symptoms?

Sometimes. Although a majority of adults develop symptoms from acute Hepatitis B virus infection, many young children do not. Adults and children over the age of 5 years are more likely to have symptoms. Seventy percent of adults will develop symptoms from the infection.

What are the symptoms of acute Hepatitis B?

Symptoms of acute Hepatitis B, if they appear, can include:

- Fever
- Fatigue
- Loss of appetite
- Nausea
- Vomiting
- Abdominal pain
- Dark urine
- Clay-colored bowel movements
- Joint pain
- Jaundice (yellow color in the skin or the eyes)

How soon after exposure to Hepatitis B will symptoms appear?

On average, symptoms appear 90 days (or 3 months) after exposure, but they can appear any time between 6 weeks and 6 months after exposure.

How long do acute Hepatitis B symptoms last?

Symptoms usually last a few weeks, but some people can be ill for as long as 6 months.

Can a person spread Hepatitis B without having symptoms?

Yes. Many people with Hepatitis B have no symptoms, but these people can still spread the virus.

What are the symptoms of chronic Hepatitis B?

Some people have ongoing symptoms similar to acute Hepatitis B, but most individuals with chronic Hepatitis B remain symptom free for as long as 20 or 30 years. About 15%–25% of people with chronic Hepatitis B develop serious liver conditions, such as cirrhosis (scarring of the liver) or liver cancer. Even as the liver becomes diseased, some people still do not have symptoms, although certain blood tests for liver function might begin to show some abnormalities.

How will I know if I have Hepatitis B?

Talk to your health professional. Since many people with Hepatitis B do not have symptoms, doctors diagnose the disease by one or more blood tests. These tests look for the presence of antibodies or antigens and can help determine whether you:

- have acute or chronic infection
- have recovered from infection
- are immune to Hepatitis B
- could benefit from vaccination

How serious is chronic Hepatitis B?

Chronic Hepatitis B is a serious disease that can result in long-term health problems, including liver damage, liver failure, liver cancer, or even death. Approximately 2,000–4,000 people die every year from Hepatitis B-related liver disease.

Tests

What are antigens and antibodies?

An antigen is a substance on the surface of a virus that causes a person's immune system to recognize and respond to it. When the body is exposed to an antigen, the body views it as foreign material and takes steps to neutralize the antigen by producing antibodies. An antibody is a substance found in the blood that the body produces in response to a virus. Antibodies protect the body from disease by attaching to the virus and destroying it.

What are the common blood tests available to diagnose Hepatitis B?

There are many different blood tests available to diagnose Hepatitis B. They can be ordered as an individual test or as a series of tests. Ask your health professional to explain what he or she hopes to learn from the tests and when you will get the results.

Treatment

How is acute Hepatitis B treated?

There is no medication available to treat acute Hepatitis B. During this short-term infection, doctors usually recommend rest, adequate nutrition, and fluids, although some people may need to be hospitalized.

Treatment for hepatitis B: Acute Infection

Any treatment discussion or plan needs to happen with a professional doctor or nurse. When someone first becomes infected with hepatitis B a doctor may advise that a specific treatment isn't needed.

Many people are infected when they are very young and they or their parents may not even be aware that they have the infection. But it's especially important to identify those who are infected at this early age because they are much more likely to go on to develop chronic infection with all its complications. Young children in at-risk groups should be monitored and screened – ideally they should be vaccinated as early as possible to prevent infection from occurring.

If symptoms do occur in acute hepatitis B, they are often vague and flu-like, such as fever, tiredness, muscle aches, nausea or loss of appetite. Between 30% and 50% of teenagers and adults who get acute hepatitis B develop jaundice, which can last a few days or a few weeks. Infants and young children with acute hepatitis B rarely get jaundiced.

People with acute illness often require only simple treatment, though a discussion with a healthcare professional is needed to establish what is needed, such as rest or medicines for nausea. They will then make a gradual recovery (usually within 6 months) as their immune system clears the infection before they feel back to normal. After acute infection most adults become immune to hepatitis B (i.e. they may never be infected again).

On occasion, acute hepatitis B infection may cause acute liver failure or fulminant hepatitis. People who develop fulminant hepatitis need expert medical support in hospital with intensive specialized treatment, and may ultimately require a liver transplant.

How likely is it that acute Hepatitis B will become chronic?

The likelihood depends upon the age at which someone becomes infected. The younger a person is when infected with Hepatitis B virus, the greater his or her chance of developing chronic Hepatitis B. Approximately 90% of infected infants will develop chronic infection. The risk goes down as a child gets older. Approximately 25%–50% of children infected between the ages of 1 and 5 years will develop chronic hepatitis. The risk drops to 6%–10% when a person is infected over 5 years of age. Worldwide, most people with chronic Hepatitis B were infected at birth or during early childhood.

Can hepatitis B be cured? Is hepatitis B curable?

People with acute hepatitis B could recover completely.

People with chronic hepatitis B will have the infection for life. There is no cure for chronic hepatitis B once infected. However, there are medicines that can help manage the disease. You should ask your medical professional for advice on what medicines would work best for you.

How is chronic Hepatitis B treated?

It depends. Many people with chronic hepatitis B do not need treatment, at least at the time the diagnosis is made, though a doctor must be consulted to establish this. Many get better over time, simply needing occasional medical check-ups. But some will need treatment to limit the activity of the virus and to prevent the progressive damage to the liver.

People with chronic Hepatitis B virus infection should seek the care or consultation of a doctor with experience treating Hepatitis B. This can include some internists or family medicine practitioners, as well as specialists such as infectious disease physicians, gastroenterologists, or hepatologists (liver specialists). People with chronic Hepatitis B should be monitored regularly for signs of liver disease and evaluated for possible treatment. Several medications have been approved for Hepatitis B treatment, and new drugs are in development. However, not every person with chronic Hepatitis B needs to be on medication, and the drugs may cause side effects in some patients.

Treatment for chronic hepatitis B consists of drug therapies to improve quality of life and survival by preventing progression of the disease to unwanted complications such as:

- Cirrhosis
- Decompensated cirrhosis
- End-stage liver disease
- Hepatocellular carcinoma (HCC or liver cancer)
- Death

These complications are directly related to the amount of virus in the body, which is known as the viral load – up to one-third of people with very high viral loads (greater than 1 million viral copies/ml of blood) will develop cirrhosis over a decade, compared to only 4.5% of those with low viral loads (less than 300 viral copies/ml). Medicines can reduce the number of virus particles in the body and should reduce or delay the number of people developing cirrhosis. But there are many issues to consider with these hepatitis B treatments, such as:

- Disease stage at the start of treatment
- Patient characteristics
- When to start treatment
- Which of the treatments to give
- Treatment effectiveness
- The safety in offering treatment to the patient
- How potential adverse effects should be managed
- How long to continue to take the medication

It's necessary to be treated by a hospital consultant with experience with hepatitis B, and your healthcare provider will usually refer you to one once you have been diagnosed. They and their team of specialized nurses and therapists will be able to help you through your treatment for hepatitis B.

What can people with chronic Hepatitis B do to take care of their liver?

People with chronic Hepatitis B should be monitored regularly by a doctor experienced in caring for people with Hepatitis B. They should avoid alcohol because it can cause additional liver damage. They also should

check with a health professional before taking any prescription pills, supplements, or over-the-counter medications, as these can potentially damage the liver.

Prevention / Vaccination

Can Hepatitis B be prevented?

Yes. The best way to prevent Hepatitis B is by getting the Hepatitis B vaccine. The Hepatitis B vaccine is safe and effective and is usually given as 3-4 shots over a 6-month period. However, the hepatitis B vaccine is not available in all parts of the world.

If you have already been exposed to the virus, a vaccination won't prevent you from getting infected.

If you can not get vaccinated, avoid blood contact and practice safer sex by using a condom every time.

What is the Hepatitis B vaccine series?

The Hepatitis B vaccine series is a sequence of shots that stimulate a person's natural immune system to protect against HBV. After the vaccine is given, the body makes antibodies that protect a person against the virus. An antibody is a substance found in the blood that is produced in response to a virus invading the body. These antibodies are then stored in the body and will fight off the infection if a person is exposed to the Hepatitis B virus in the future.

Who should not receive the Hepatitis B vaccine?

The Hepatitis B vaccine is not recommended for people who have had serious allergic reactions to a prior dose of Hepatitis B vaccine or to any part of the vaccine. Also, it is not recommended for anyone who is allergic to yeast because yeast is used when making the vaccine. Tell your doctor if you have any severe allergies.

Is the Hepatitis B vaccine recommended before international travel?

The risk for Hepatitis B virus infection in international travelers is generally low, although people traveling to certain countries are at risk. Travelers to regions with moderate or high rates of Hepatitis B should get the Hepatitis B vaccine.

How is the Hepatitis B vaccine series given?

The Hepatitis B vaccine is usually given as a series of 3 shots over a 6-month period.

Is the Hepatitis B vaccine series effective?

Yes, the Hepatitis B vaccine is very effective at preventing Hepatitis B virus infection. After receiving all three doses, Hepatitis B vaccine provides greater than 90% protection to infants, children, and adults immunized before being exposed to the virus.

Who should get vaccinated against Hepatitis B?

Hepatitis B vaccination is recommended for:

- All infants, starting with the first dose of Hepatitis B vaccine at birth
- All children and adolescents younger than 19 years of age who have not been vaccinated
- People whose sex partners have Hepatitis B
- Sexually active persons who are not in a long-term, mutually monogamous relationship.
- Persons seeking evaluation or treatment for a sexually transmitted disease
- Men who have sexual contact with other men
- People who share needles, syringes, or other drug-injection equipment
- People who have close household contact with someone infected with the Hepatitis B virus
- Health care and public safety workers at risk for exposure to blood or blood-contaminated body fluids on the job
- People with end-stage renal disease, including predialysis, hemodialysis, peritoneal dialysis, and home dialysis patients
- Residents and staff of facilities for developmentally disabled persons
- Travelers to regions with moderate or high rates of Hepatitis B
- People with chronic liver disease
- People with HIV infection
- Anyone who wishes to be protected from Hepatitis B virus infection
- In order to reach individuals at risk for Hepatitis B, vaccination is also recommended for anyone in or seeking treatment from the following:
- Sexually transmitted disease treatment facilities

- HIV testing and treatment facilities
- Facilities providing drug-abuse treatment and prevention services
- Health care settings targeting services to injection drug users
- Health care settings targeting services to men who have sex with men
- Chronic hemodialysis facilities and end-stage renal disease programs
- Correctional facilities
- Institutions and nonresidential day care facilities for developmentally disabled persons

When should a person get the Hepatitis B vaccine series?

Children and Adolescents

- All children should get their first dose of Hepatitis B vaccine at birth and complete the vaccine series by 6–18 months of age.
- All children and adolescents younger than 19 years of age who have not yet gotten the vaccine should also be vaccinated. "Catch-up" vaccination is recommended for children and adolescents who were never vaccinated or who did not get the entire vaccine series.

Adults

- Any adult who is at risk for Hepatitis B virus infection or who wants to be vaccinated should talk to a health professional about getting the vaccine series.

Is the Hepatitis B vaccine safe?

Yes, the Hepatitis B vaccine is safe. Soreness at the injection site is the most common side effect reported. As with any medicine, there are very small risks that a serious problem could occur after getting the vaccine. However, the potential risks associated with Hepatitis B are much greater than the risks the vaccine poses. Since the vaccine became available in 1982, more than 100 million people have received Hepatitis B vaccine in the United States and no serious side effects have been reported.

Is it harmful to have an extra dose of Hepatitis B vaccine or to repeat the entire Hepatitis B vaccine series?

No, getting extra doses of Hepatitis B vaccine is not harmful.

What should be done if Hepatitis B vaccine series was not completed?

Talk to your health professional to resume the vaccine series as soon as possible. The series does not need to be restarted.

Are booster doses of Hepatitis B vaccine necessary?

It depends. A "booster" dose of Hepatitis B vaccine is a dose that increases or extends the effectiveness of the vaccine. Booster doses are recommended only for hemodialysis patients and can be considered for other people with a weakened immune system. Booster doses are not recommended for persons with normal immune status who have been fully vaccinated.

Is there a vaccine that will protect me from both Hepatitis A and Hepatitis B?

Yes, there is a combination vaccine that protects people from both Hepatitis A and Hepatitis B. The combined Hepatitis A and B vaccine is usually given as three separate doses over a 6-month period.

Can I get the Hepatitis B vaccine at the same time as other vaccines?

Yes. Getting two different vaccines at the same time has not been shown to be harmful.

Where can I get the Hepatitis B vaccine?

Talk to your doctor or health professional or call your health department. Some clinics offer free or low-cost vaccines.

What is Hepatitis B immune globulin (HBIG)?

Hepatitis B immune globulin is a substance made from human blood samples that contains antibodies against the Hepatitis B virus. It is given as a shot and can provide short-term protection (approximately 3 months) against Hepatitis B.

Pregnancy and Hepatitis B

Are pregnant women tested for Hepatitis B?

Yes. When a pregnant woman comes in for prenatal care, she will be given a series of routine blood tests, including one that checks for the presence of Hepatitis B virus infection. This test is important because women infected with this virus can pass Hepatitis B to their babies during birth. But this can be prevented by giving the infant HBIG and the first Hepatitis B vaccine at birth, and then completing the series.

What if a pregnant woman has Hepatitis B?

If a pregnant woman has Hepatitis B, she can pass the infection to her baby during birth. But this can be prevented through a series of vaccinations and HBIG for her baby beginning at birth. Without vaccination, babies born to women with Hepatitis B virus infection can develop chronic infection, which can lead to serious health problems.

How does a baby get Hepatitis B?

A baby can get Hepatitis B from an infected mother during childbirth.

Can a baby be protected from getting Hepatitis B from his or her mother during birth?

Yes, almost all cases of Hepatitis B can be prevented if a baby born to an infected woman receives the necessary shots at the recommended times. The infant should receive a shot called Hepatitis B immune globulin (HBIG) and the first dose of Hepatitis B vaccine within 12 hours of birth. Two or 3 additional shots of vaccine are needed over the next 1–15 months to help prevent Hepatitis B. The timing and total number of shots will be influenced by several factors, including the type of vaccine and the baby's age and weight. In addition, experts recommend that the baby be tested after completion of the vaccine series to make sure he or she is protected from the disease. To best protect your baby, follow the advice of his or her doctor.

What happens if a baby gets Hepatitis B?

Most newborns who become infected with Hepatitis B virus do not have symptoms, but they have a 90% chance of developing chronic Hepatitis B. This can eventually lead to serious health problems, including liver damage, liver cancer, and even death.

Do babies need the Hepatitis B vaccine even if a pregnant woman does not have Hepatitis B?

Yes. The Hepatitis B vaccine is recommended for all infants. CDC recommends that the infant get the first shot before leaving the hospital.

Why is the Hepatitis B vaccine recommended for all babies?

Hepatitis B vaccine is recommended for all babies so that they will be protected from a serious but preventable disease. Babies and young children are at much greater risk for developing a chronic infection if infected, but the vaccine can prevent this.