



**Welcome to the Korean Chapter
of the
Hepatitis B Foundation**

Hepatitis B is one of the largest threats for Koreans and other Asian groups. Chronic hepatitis B is a serious liver infection that affects millions of Koreans around the world. It can lead to liver failure and liver cancer. Please share the information in this “Korean Chapter” with your friends, family, and doctor to help stop the dangerous spread of hepatitis B in your community!

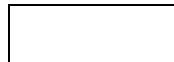
Hepatitis B is an infectious disease that is caused by a virus - it is not inherited

- There is a safe vaccine
- There is a simple blood test
- There are treatment options

To view or print the Korean Chapter as a single document, click here.

PDF version

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The Hepatitis B Foundation is a nationally recognized non-profit organization dedicated to the cause and cure of hepatitis B through research, education, and patient support.

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The information provided in the “Korean Chapter” on this website is for your information and education only. The Hepatitis B Foundation is not a medical organization. We strongly encourage you talk to your doctor or a qualified health care provider for any personal medical care and advice. Thank you.

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of the Hepatitis B Foundation Website**

www.hepb.org

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GENERAL INFORMATION

What is hepatitis B?

Hepatitis B is the world's most common liver infection that can lead to cirrhosis and liver cancer. It is caused by the hepatitis B virus (HBV), which attacks and injures the liver. It is transmitted through blood, unprotected sex, shared or re-used needles, and from an infected mother to her newborn baby during delivery. Most infected adults are able to get rid of the hepatitis B virus without any problems. However, most infected babies and children are unable to get rid of the virus and develop chronic infections.

The good news is that there is a simple test for hepatitis B, a safe vaccine to prevent hepatitis B infections, and new drugs that could benefit chronic carriers of HBV who have active signs of liver disease.

How many people are affected?

Worldwide, 2 billion people (1 out of 3 people) have been infected with HBV and 400 million people have become "chronic carriers" of the virus. This is a huge number in comparison to 47 million people with HIV/AIDS and 170 million people with chronic hepatitis C in the world.

Where is hepatitis B most commonly found in the world?

Hepatitis B is most common in Asia, Southeast Asia, India, parts of Africa and South America, Eastern Europe, and the Middle East. However, even in the United States, 1 out of 20 Americans have been infected with hepatitis B and an estimated 1.25 million have chronic hepatitis B infections.

Why should Koreans be concerned about hepatitis B?

Although hepatitis B can infect anyone, Asians have the highest rate of hepatitis B infection of all ethnic groups. According to the Asian Liver Center at Stanford University, two-thirds of all 400 million chronic carriers of HBV in the world live in Asia. This means that there are 260 million chronic carriers living in Asia. In many Asian countries, including Korea, approximately 10% of the population is chronically infected with hepatitis B. In the United States, more than half of the 1.25 million chronic carriers of HBV are of Asian descent.

Why should Korean-Americans be concerned about hepatitis B?

Although hepatitis B is very common in Korea, it is also a problem among Korean-Americans living in the United States. The virus is spread most commonly among Asians from an infected mother who unknowingly passes it to her newborn baby during delivery and in early childhood through blood contact with another child or adult who has a chronic infection. Most Asians who are chronically infected do not know they are infected. As a result, several generations in a family can be affected by hepatitis B, which can lead to liver cancer later in life.

It is very important for Asians to know that hepatitis B is not an "inherited" disease – it is an infectious disease that is caused by a virus. Korean families can break the cycle of infection by getting tested, vaccinated, and treated for chronic hepatitis B.

Why is hepatitis B so dangerous?

Hepatitis B is dangerous because it is a “silent disease” that can infect people without them knowing it and can result in a chronic infection that leads to liver cancer without any symptoms until it is too late. Most people who have become chronically infected with hepatitis B are unaware of their infection. This means that the virus can quietly and continuously attack the liver over many years without being detected. Even in the early stages of liver cancer, a person may not experience any serious symptoms until the cancer is so far advanced that treatment is no longer helpful.

80% of all liver cancer in the world is caused by chronic hepatitis B, which makes this silent disease even more dangerous. Most people with chronic hepatitis B infections can feel quite healthy, so they do not seek early medical attention for testing or treatment. This means that they can also unknowingly continue to pass the virus on to others, which is why hepatitis B is such a large health threat to the Korean community.

How can I get hepatitis B?

Hepatitis B is an infectious disease caused by a virus that is spread through blood. It is not spread through casual contact. You cannot get hepatitis B from the air, hugging, touching, sneezing, coughing, toilet seats or doorknobs. The most common way hepatitis B is passed to others include the following routes of transmission:

- Direct contact with blood or infected bodily fluids
- Unprotected sex with an infected partner
- Shared or re-used needles (for example, sharing needles for illegal drugs or re-using needles that are not properly sterilized for acupuncture, tattoos, or ear/body piercing)
- From an infected mother to her newborn baby during delivery (this is the most common route of infection among Asians)

Who is most likely to become infected with hepatitis B?

Although hepatitis B can infect any person of any age or race, there are some people who are at higher risk for becoming infected. Your job, your lifestyle choices, or living in a household with an infected person or family member can increase your chances of being exposed to the hepatitis B virus. Here are some of the "high risk" groups for acquiring hepatitis B infection, but please remember that this is not a complete list:

- People of Asian descent, especially those whose parents have emigrated to the U.S.A.
- Infants born to women who are infected with hepatitis B
- People who live in close household contact with someone who has hepatitis B. This includes babies, children and adults
- People who have unprotected sex or have multiple sexual partners
- Health care workers and other people who are exposed to blood in their jobs
- People who use illegal drugs
- People who undergo kidney dialysis or have hemophilia
- People who live in countries where hepatitis B is very common (Asia, Southeast Asia, India, parts of Africa and South America, Eastern Europe, and the Middle East)
- People who travel to or from countries where hepatitis B is very common (see above)

Is there a vaccine to prevent hepatitis B?

Yes, there is a very safe and effective HBV vaccine. In fact, it is actually the first “anti-cancer vaccine” because it can protect you from hepatitis B, which is the cause of 80% of all liver cancer in the world. It only takes 3 shots to protect yourself and those you love against HBV for a lifetime. Make an appointment with your doctor to start the vaccine series today!

Who should be vaccinated?

In the United States, doctors recommend that all newborns and children up to age 18 years be vaccinated. Adults, especially those of Asian descent, should also seriously consider being vaccinated. Babies, children and teens can receive free hepatitis B vaccine from state health departments. Adults can ask their doctor or a local health clinic for the hepatitis B vaccine.

Is the hepatitis B vaccine safe?

With more than one billion doses of HBV vaccine given throughout the world, medical and scientific studies have shown the hepatitis B vaccine to be one of the safest vaccines ever made. The vaccine is made in a laboratory – you cannot get hepatitis B from the vaccine. The most common side effects are redness and soreness in the arm where the shot is given. Talk to your doctor about possible allergic reactions or side effects before starting the vaccine series.

What else can I do to protect myself from hepatitis B?

Since hepatitis B is spread through blood and infected bodily fluids, there are several simple things that you can do to protect yourself from possible infection:

- Avoid sharing sharp objects such as razors, toothbrushes, earrings, and nail clippers
- Make sure that sterile needles are used for acupuncture, tattoos, ear and body piercing
- Avoid touching blood or infected bodily fluids directly
- Wear gloves and use a fresh solution of bleach and water to clean up blood spills
- Wash your hands thoroughly with soap and water after touching or cleaning up blood
- Use condoms with sexual partners
- Avoid illegal drugs
- Most importantly, make sure you receive the hepatitis B vaccine!

Will I become sick if I’m infected with hepatitis B?

Hepatitis B is considered a "silent infection" because it often does not cause any symptoms. Most people feel healthy and do not know they have been infected, which means they can unknowingly pass the virus on to others. Other people may have mild symptoms such as fever, fatigue, joint or muscle pain, or loss of appetite that are mistaken for the flu. Less common but more serious symptoms include severe nausea and vomiting, yellow eyes and skin (this is called “jaundice”), and a swollen stomach; these symptoms require immediate medical attention and a person may need to be hospitalized.

Is there a blood test for hepatitis B?

There is a simple hepatitis B blood test that your doctor or health clinic can order. All you need to do is go to the doctor’s office. Sometimes the doctor may ask to check your blood again six months after your first visit to confirm your test results. For more information, visit our [Blood Tests](#) page.

Will I recover from a hepatitis B infection?

The answer depends on whether you are infected as an adult, a child, or a baby. Most infected adults will recover without any problems, but most infected babies and children will become chronic carriers of HBV.

Asians are most commonly infected as infants or in early childhood, which is why they have such a high risk of developing chronic hepatitis B infections. In comparison, non-Asian Americans are usually infected as adults, thus, are more likely to recover from an infection.

- **Adults** – 90% will get rid of the virus and recover without any problems; 10% will become chronic carriers of HBV; and in rare cases, a person may become very sick and die within a short amount of time from a hepatitis B infection.
- **Young Children** – 40% will get rid of the virus and recover without problems; 60% will become chronic carriers of HBV.
- **Infants** – 90% will definitely become chronic carriers of HBV; only 10% have a chance of getting rid of the virus.

Infants and children are at greatest risk from a hepatitis B infection, therefore, the United States has recommended that all babies and children up to age 18 years receive the hepatitis B vaccine. The Asian community must make sure that all babies and children are vaccinated against HBV. In addition, all adults should seriously consider being tested and vaccinated to help stop the dangerous spread of hepatitis B. Hepatitis B is one the largest health threats that face all Asian groups.

What does it mean to become chronically infected with hepatitis B?

Babies, children and adults who are unable to get rid of the virus after six months are diagnosed as being a "chronic carrier" of the hepatitis B virus. This means that they are chronically infected with HBV. Although chronic carriers may not feel sick, the virus can stay in their blood and liver for a lifetime. As a result, they can pass the virus on to other people and they live with a much greater risk of developing cirrhosis and liver cancer later in life.

Where can I go to be tested and vaccinated?

You can ask your family doctor, the local health department, or community health clinic to order the simple hepatitis B blood test. You can also start the vaccine series at this time.

If you need help finding a doctor or want more information, please call the HBV Information and Assistance HelpLine at **1-888-888-0981**. This is a free telephone call, which is part of a national community program sponsored by GlaxoSmithKline. All information is available in English, Mandarin, Cantonese, Korean, and Vietnamese.

Is there any treatment if I have chronic hepatitis B?

Currently, there are several approved drugs in the United States for people who have chronic hepatitis B infections.

Epivir-HBV or **Zeffix** (lamivudine) is a pill that is taken orally

Hepsera (adefovir dipivoxil) is a pill that is taken orally

Intron A (interferon alpha) is a drug given by injection

It is important to know that not every chronic hepatitis B patient needs to be on medication. Some patients only need to be monitored by their doctor on a regular basis (at least once a year, or more). Other patients with active signs of liver disease may benefit the most from treatment. Be sure to talk to your doctor about whether you could benefit from treatment and discuss the treatment options. In addition, there are promising new drugs in clinical trials and in the research pipeline.

It is vital that all people with chronic hepatitis B visit their doctor on a regular basis, whether they receive treatment or not!

There are additional promising new drugs being tested and developed for chronic hepatitis B. Please visit the Hepatitis B Foundation's [Drug Watch](#) chart to find out more about new potential treatments. This chart is available only in English since the information changes so frequently.

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HEPATITIS B AND THE ASIAN COMMUNITY

Why are Asians at greater risk than Non-Asians?

Asians are at greater risk because there are already more Asian people infected with hepatitis B than non-Asians. Although hepatitis B is not an "Asian disease", it certainly affects hundreds of millions of Asians. Since the Asian community starts with such a large number of infected people, there is a much higher rate of infection. For more information about hepatitis B and the Koreans community, please read "[Dr. Hann Talks About Hepatitis](#)".

How is hepatitis B spread differently among Asians than non-Asians?

Asians and non-Asians can both get hepatitis B through contact with blood, unprotected sex, shared needles, and from an infected mother to her newborn baby during delivery. Jobs and lifestyle choices can also create an equal risk for both groups.

Most Asians, however, are infected with the hepatitis B virus as infants or young children – from infected mothers who unknowingly pass the virus to their newborn babies at birth or exposure to blood from another infected child or adult with whom they live in close contact. Since babies and young children are more likely to develop chronic infections once they are exposed to the hepatitis B virus, this explains why there are so many chronic HBV carriers among Asians. In comparison, non-Asians are most commonly infected as young adults through unprotected sex. As adults, their immune systems can usually get rid of the virus and they usually recover from a hepatitis B infection.

What does it mean to be a "chronic carrier" of hepatitis B?

A person who is unable to get rid of the hepatitis B virus after six months is diagnosed as being a "chronic carrier". The virus can stay in their blood and liver for a lifetime and they can continue to pass the virus on to other people. Although many chronic carriers should expect to lead long healthy lives, they must be sure to see a doctor knowledgeable about hepatitis B (such as a "liver specialist") for regular check-ups at least once a year, or more if needed, since they live with an increased risk of developing cirrhosis or liver cancer later in life. There are simple lifestyle changes a person can make to protect the health of their liver and several new drug treatments that can benefit to those who show signs of active liver disease.

Why should Koreans be worried about chronic hepatitis B infections?

Since 1 out of 4 chronic carriers will die from cirrhosis or liver cancer later in life, it's very important to be tested for hepatitis B. Early detection of chronic hepatitis B can improve the chances of preventing and surviving liver cancer through regular medical check-ups and new drug treatments. In addition, since most chronic carriers don't even know they are infected, they can unknowingly spread the virus to their loved ones. If people are not tested, then hepatitis B will continue to pass through several generations in one family and throughout the community.

According to the Asian Liver Center at Stanford University:

- Liver cancer is the fourth most common cause of cancer among Korean-Americans
- An estimated 550,000 people in the world die of liver cancer each year
- 80% of all liver cancer in the world is caused by chronic HBV infection
- 1 out of 4 chronic HBV carriers will die from liver cancer or cirrhosis

- Liver cancer rates are 8 times higher in Korean-American men than in Caucasian-American men
- Liver cancer usually develops between 35 – 65 years of age, when people are most productive
- Some carriers can develop liver cancer as early as 30 years of age
- An estimated 360,000 deaths from hepatitis B each year are from countries in Eastern Asia alone (Korea, China, Hong Kong, and Japan)
- Approximately one million chronic carriers in the world die each year from liver cancer or liver failure due to cirrhosis (this is equivalent to 2,700 deaths/day, 114 deaths/hour, and 2 deaths/minute due to HBV!)

How can I stop the threat of hepatitis B?

The good news is that you can break the cycle of infection in your family and in the Korean community. Get tested for hepatitis B. Make sure everyone in your family is vaccinated against hepatitis B. Get the vaccine yourself. Find a good doctor who is very knowledgeable about hepatitis B. Discuss treatment options with your doctor or a liver specialist if you have already been diagnosed with chronic hepatitis B.

Is there any treatment if I have chronic hepatitis B?

Currently, there are several approved drugs in the United States for people who have chronic hepatitis B infections.

Epivir-HBV or **Zeffix** (lamivudine) is a pill that is taken orally

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It is important to know that not every chronic hepatitis B patient needs to be on medication. Some patients only need to be monitored by their doctor on a regular basis (at least once a year, or more). Other patients with active signs of liver disease may benefit the most from treatment. Be sure to talk to your doctor about whether you could benefit from treatment and discuss the treatment options. In addition, there are promising new drugs in clinical trials and in the research pipeline.

It is vital that all people with chronic hepatitis B visit their doctor on a regular basis, whether they receive treatment or not!

There are additional promising new drugs being tested and developed for chronic hepatitis B. Please visit the Hepatitis B Foundation's [Drug Watch](#) chart to find out more about new potential treatments. This chart is available only in English since the information changes so frequently.

Where can I get more information about testing, vaccination and treatment?

You can ask your family doctor, the local health department, or community health clinic to order the simple hepatitis B blood test. You can also start the vaccine series at this time.

If you need help finding a doctor or want more information, please call the HBV Information and Assistance HelpLine at **1-888-888-0981**. This is a free telephone call, which is part of a national

community program sponsored by GlaxoSmithKline. All information is available in English, Mandarin, Cantonese, Korean, and Vietnamese.

DR. HANN TALKS ABOUT HEPATITIS

“Hepatitis B & C, Liver Cancer and New Treatments” by Hie-Won Hann, M.D.

(only available in Korean – please visit the website at www.hepb.org)

Hie-Won Hann, M.D., is a Professor of Medicine and Director of the Liver Disease Prevention Center of Jefferson Medical College located in Philadelphia, PA. She is a world-famous hepatitis B expert. This article is reprinted with permission by Dr. Hann and her publisher Alex Shin (Sir Speedy Printing, Philadelphia, PA 19106).

HEPATITIS B INFECTIONS

Will I feel sick if I am infected with hepatitis B?

Hepatitis B is considered a "silent infection" because most people don't have symptoms when they are first infected. When a person is first infected with hepatitis B, their bodies can react in different ways:

- Some people who are infected may have mild flu-like symptoms (fever or fatigue) that are mistaken for the flu or a bad cold.
- Others may go to a doctor because they feel more tired than usual, don't feel like eating, have an upset stomach, or complain about joint pain.
- Less common but more serious symptoms include severe nausea and vomiting, yellow eyes and skin (this is called “jaundice”), and a swollen stomach; these symptoms require immediate medical attention and a person may need to be hospitalized.

It is always a good idea to talk to your doctor if you don't feel well or if you are uncertain about whether you may have been infected with hepatitis B. Most people who are infected with hepatitis B do not even know they are infected. A simple blood test can easily diagnose a hepatitis B infection.

What blood test should I ask my doctor to order?

Make sure that your doctor orders the hepatitis B blood test. There are 3 common tests that make up the hepatitis B blood test panel. This is a very simple blood test that can be taken in the doctor's office. If you think you have been newly infected with hepatitis B, it will take 4 -6 weeks before a blood test will be positive for the virus. A chronic hepatitis B infection will show up positive on a blood test as well.

Make sure your doctor clearly explains your blood test results so that you know whether you have hepatitis B or not. You want to know whether you have recovered from a hepatitis B infection or whether you have become chronically infected. Your doctor may check your blood again in 6 months to confirm your diagnosis. Always ask for a written copy of your blood tests. For more information about the hepatitis B blood tests, visit our [Blood Tests](#) page.

Where can I go to be tested and vaccinated?

You can ask your family doctor, the local health department, or community health clinic to order the simple hepatitis B blood test. You can also start the hepatitis B vaccine series.

If you need help finding a doctor or want more information, please call the HBV Information and Assistance HelpLine at **1-888-888-0981**. This is a free telephone call, which is part of a national community program sponsored by GlaxoSmithKline. All information is available in English, Mandarin, Cantonese, Korean, and Vietnamese.

What will happen if I am infected with hepatitis B?

When an adult is first infected with the hepatitis B virus (HBV), your body usually responds in three different ways:

- **Recovery** - 90% of healthy adults who are infected will "recover" and get rid of the virus within six months. When a blood test shows that the hepatitis B virus has gone and that "surface antibodies" have been made, a person is then considered to have recovered. They are no longer contagious to others. The "surface antibodies" protect them from any future hepatitis B infections. These people do not need the vaccine since they are already protected.
- **Chronic Infections** - 10% of infected adults are unable to get rid of the virus after six months. They are diagnosed as being "chronic carriers" of hepatitis B. This means that the virus can stay in their blood and liver for possibly a lifetime. People who are "chronic carriers" of HBV are able to pass the virus on to others and are at higher risk for developing cirrhosis or liver cancer later in life.
- **Acute Liver Failure** - Less than 1% of infected adults can have a severe reaction and die from liver failure within several weeks after being exposed to the hepatitis B virus. Liver failure is life-threatening and a person must receive immediate medical care. This is a very rare reaction.

What do all these numbers really mean?

Imagine you are sitting in a room. There are 100 people in this room, including yourself. The door opens and the hepatitis B virus walks in and infects everyone. You all go home. Some people may feel sick in a couple of weeks, most of you will not. Six months later, everyone is

asked to return to the room for a hepatitis B blood test. All 100 people who were infected 6 months ago will fall into one of the following groups:

- 90 people will receive the good news that they have recovered and gotten rid of the virus; they can go home.
- 9 or 10 people (maybe including yourself?) will be diagnosed as being “chronic HBV carriers” because they have been unable to get rid of the virus after six months. They are told to make simple lifestyle changes to protect their liver, to test and vaccinate their loved ones, and to find a doctor who can provide good medical care.
- Although rare, 1 person may have a severe reaction to the hepatitis B virus and die almost immediately after first being infected (within 1 or 2 months after infection).

What happens when babies and children are infected with hepatitis B?

Babies and children are at the highest risk for developing chronic hepatitis B infections once they are exposed to the virus. Although most chronically infected children do not suffer from any symptoms, the virus can stay in their blood and liver for possibly a lifetime, which increases their risk for liver cancer later in life.

- **Babies** - 90% of all babies born to infected women will become chronic carriers. They only have a 5-10% chance of getting rid of the virus (whereas adults have a 90% chance of recovering and a 10% chance of becoming chronically infected).
- **Children** - 60% of young children who are exposed to HBV through contact with other infected children or adults will become chronic carriers. They have a 40% chance of getting rid of the virus.

How will I know if I have "recovered" from a hepatitis B infection?

Ask your doctor for the simple hepatitis B blood tests to find out whether you have recovered from hepatitis B. The blood tests will show that your immune system has gotten rid of the virus and produced “hepatitis B surface antibodies” (HbsAb+ or anti-HBs+). These “surface antibodies” will protect you for a lifetime from any future contact with the hepatitis B virus. It can take up to six months to get rid of the virus entirely, so be patient and careful since you may still be able to spread the virus to others. However, once your blood tests confirm that you have recovered, you cannot infect other people because you no longer have the hepatitis B virus in your bloodstream.

Do I still need the hepatitis B vaccine after I recover from an infection?

You do not need the vaccine once your blood tests show that you have recovered. The hepatitis B surface antibody will protect you against any future hepatitis B infection. You have been “naturally vaccinated”. For example, if you have chicken pox and then recover, your body will make antibodies to protect you against a chicken pox infection in the future.

What does it mean if my doctor tells me that I'm a "chronic carrier"?

A person is diagnosed as a “chronic carrier” when blood tests show that they are unable to get rid of the hepatitis B virus after six months. They are still able to pass the virus on to others because it stays in their blood and liver for possibly a lifetime. Although many chronic carriers should expect to lead long healthy lives, they must be sure to see their family doctor or a “liver specialist” for regular check-ups at least once a year, or more if needed, since they live with an

increased risk of developing cirrhosis or liver cancer later in life. There are simple lifestyle changes a person can make to protect the health of their liver and new drug treatments that can benefit those who show signs of active liver disease.

Is there any treatment if I have chronic hepatitis B?

Currently, there are several approved drugs in the United States for people who have chronic hepatitis B infections.

Epivir-HBV or **Zeffix** (lamivudine) is a pill that is taken orally

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It is important to know that not every chronic hepatitis B patient needs to be on medication. Some patients only need to be monitored by their doctor on a regular basis (at least once a year, or more). Other patients with active signs of liver disease may benefit the most from treatment. Be sure to talk to your doctor about whether you could benefit from treatment and discuss the treatment options. In addition, there are promising new drugs in clinical trials and in the research pipeline.

It is vital that all people with chronic hepatitis B visit their doctor on a regular basis, whether they receive treatment or not!

There are additional promising new drugs being tested and developed for chronic hepatitis B. Please visit the Hepatitis B Foundation's [Drug Watch](#) chart to find out more about new potential treatments. This chart is available only in English since the information changes so frequently.

Where can I get more information about testing and vaccination?

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LIVING WITH CHRONIC HEPATITIS B

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A person is diagnosed as a "chronic carrier" when blood tests show that they are unable to get rid of the hepatitis B virus after six months. They are still able to pass the virus on to others because it stays in their blood and liver for possibly a lifetime. Although many chronic carriers should expect to lead long healthy lives, they must be sure to see a doctor knowledgeable about hepatitis B (such as a "liver specialist") for regular check-ups at least once a year, or more if needed, since they live with an increased risk of developing cirrhosis or liver cancer later in life. There are simple lifestyle changes a person can make to protect the health of their liver and new drug treatments that can benefit those who show signs of active liver disease.

If you are a pregnant woman with chronic HBV, you can also pass the virus on to your newborn baby, which is a very serious problem. Fortunately, there is something you can do to protect your newborn baby, so be sure to check [Pregnant Women and Hepatitis B](#) for more information.

If I don't feel sick, can I still be a "chronic carrier"?

Many chronic carriers of hepatitis B feel healthy and strong despite having the virus stay in their bodies. They can be infected for a long time and not even know it. That is why hepatitis B is called a "silent infection" – many people have no symptoms. With a chronic infection, the virus continues to attack and injure your liver for a long period of time, even though you may feel just fine. By the time you feel sick enough to see a doctor, however, you could already have cirrhosis or liver cancer. So, make sure you are tested for hepatitis B sooner rather than later. Early detection can help protect those you love from a hepatitis B infection and decrease your risk of liver cancer through regular medical check-ups and possible drug treatment.

Should I get the vaccine if I am a chronic carrier?

Unfortunately, the hepatitis B vaccine is too late for chronic carriers. It will not help since you already have hepatitis B. However, the vaccine can protect your loved ones. Make sure your partner and children are tested and vaccinated.

What serious liver diseases can result from chronic hepatitis B?

Although chronic hepatitis B doesn't always lead to fatal liver disease, the risk is much greater than normal considering 1 out of 4 chronic carriers will suffer from cirrhosis or liver cancer later in life. These diseases can result due to liver damage that occurs over many years from the hepatitis B virus; these diseases can be life-threatening. With cirrhosis, scar tissue is created as the liver tries to repair itself after constant attacks by the hepatitis B virus. This scar tissue makes the liver hard, which can cause liver failure. A healthy liver is soft and flexible.

Liver cancer is a very large health threat to Asians and can often be fatal since symptoms may not appear until it's too late. Among Korean-Americans, liver cancer is the fourth leading type of cancer. Early detection of chronic hepatitis B can definitely improve the chances of preventing and surviving liver cancer through regular medical check-ups and new drug treatments.

Since 80% of all liver cancer in the world is caused by chronic HBV, it is vitally important that all Asians be tested for hepatitis B. Currently, there are 360,000 deaths each year from hepatitis B among Asians throughout the world. Early diagnosis and early treatment is essential in saving

lives! Both cirrhosis and liver cancer require expert medical attention. Treatment options for these serious liver diseases can include medications and sometimes even a liver transplant to help extend one's life.

Is there a cure for chronic hepatitis B?

The good news is that there are promising new treatments for people living with chronic hepatitis B. Today, there are several approved drugs in the United States that can slow down liver damage caused by the virus.

The new drugs can help slow the progression of liver disease in chronically infected people by slowing down the virus. If there is less hepatitis B virus being produced, then there is less damage being done to the liver. Sometimes these drugs can even get rid of the virus. With all of the new exciting research, there is great hope that a complete cure will be found for chronic hepatitis B in the near future.

Is there any treatment if I have chronic hepatitis B?

Currently, there are several approved drugs in the United States for people who have chronic hepatitis B infections.

Approved Hepatitis B Drugs in the United States

Interferon-alpha (Intron A) is given by injection several times a week for six months to a year, or sometimes longer. The drug can cause side effects such as flu-like symptoms, depression, and headaches. Approved in 1991 and available for both children and adults.

Lamivudine (Epivir-HBV, Zeffix, or Heptodin) is a pill that is taken once a day, with almost no side effects, for at least one year or longer. A primary concern is the possible development of hepatitis B virus mutants during and after treatment. Approved in 1998 and available for both children and adults.

Adefovir dipivoxil (Hepsera) is a pill taken once a day, with few side effects, for at least one year or longer. The primary concern is that kidney problems can occur while taking the drug. Approved September 2002 and available only for adults. Pediatric clinical trials are being planned/scheduled.

It is important to know, not every chronic hepatitis B patient needs to be on medication. Some patients only need to be monitored by their doctor on a regular basis (at least once a year, or more). Other patients with active signs of liver disease may benefit the most from treatment. Be sure to talk to your doctor about whether you could benefit from treatment and discuss the treatment options.

It is vital that all people with chronic hepatitis B visit their doctor on a regular basis, whether they receive treatment or not!

There are additional promising new drugs being tested and developed for chronic hepatitis B. Please visit the Hepatitis B Foundation's [Drug Watch](#) chart to find out more about new potential treatments. This chart is available only in English since the information changes so frequently.

What other things can I do to keep myself healthy?

One of the best things you can do for yourself is to take good care of your liver. Even if you don't feel sick, the virus can still damage your liver. We have included a list of 12 simple things you can do right now to stay healthier! But the most important advice is to find a good doctor get regular check-ups.

1. **Make sure you find a good doctor who is knowledgeable about hepatitis B.** A "liver specialist" is a doctor who specializes in liver disease. They usually have the most current information about hepatitis B testing, management and treatments.
2. **Get regular medical check-ups with your liver specialist or family doctor.** This should be at least once or twice a year, or more if needed. Make sure you see your doctor on a regular schedule whether you decide to start treatment or not. Ask lots of questions and get copies of all of your blood tests.
3. **Avoid alcohol or strictly limit the amount of alcohol you drink.** Medical studies show that alcohol is very damaging to the liver.
4. **Avoid smoking or stop smoking** because this is also very harmful to the liver.
5. **If you are a pregnant woman, tell your doctor that you have chronic hepatitis B.** Make sure your doctor gives the hepatitis B vaccine and hepatitis B immune globulin (HBIG) to your newborn baby immediately after delivery. This is very important because if your newborn is not protected within the first 12 hours of life, there is a 90% chance your baby will become chronically infected with hepatitis B. With proper treatment, there is more than a 95% chance your baby will be protected!
6. **Eat a healthy, balanced diet.** Although there is no specific diet for chronic hepatitis B, it is always good to eat lots of fresh fruits and vegetables, limit fat and junk foods, and drink plenty of water.
7. **Talk to your doctor before trying any herbs, vitamins, or fad diets.** Many herbs and fad diets can hurt your liver. Be very careful and talk to your doctor first before trying alternative treatments. Some herbs can even interfere with the medicines prescribed by your doctor, so you need to be cautious.
8. **Have your partner and other loved ones tested and vaccinated for hepatitis B.**
9. **Avoid spreading your blood to others.** Don't share sharp objects like razors, earrings, toothbrushes, or nail clippers.
10. **Use condoms to protect your sexual partners.**
11. **Avoid illegal street drugs.**
12. **Get the hepatitis A vaccine to protect yourself from another serious liver infection.**

What does my future look like if I have chronic hepatitis B?

Fortunately, disease progression with chronic hepatitis B is usually slower than with other viruses such as the HIV/AIDS virus. If problems arise, it can be later in life. This is good news because with early testing, regular medical attention, and new treatment options, there is so much more to offer to those living with chronic hepatitis B. The future is much brighter for chronic carriers since scientists are discovering new drugs that work against hepatitis B and doctors are managing and treating hepatitis B more effectively.

Where can I get more information about testing, vaccinations, and treatment?

You can ask your family doctor, the local health department, or community health clinic to order the simple hepatitis B blood test. You can also start the vaccine series at this time.

If you need help finding a doctor or want more information, please call the HBV Information and Assistance HelpLine at **1-888-888-0981**. This is a free telephone call, which is part of a national community program sponsored by GlaxoSmithKline. All information is available in English, Mandarin, Cantonese, Korean, and Vietnamese. If you speak English, please contact the Hepatitis B Foundation at 215-489-4900 or email us at info@hepb.org.

HEPATITIS B TREATMENTS

Is there a cure for chronic hepatitis B?

The good news is that there are promising new treatment for people living with chronic hepatitis B. Today, there are several approved drugs in the United States that can slow down liver damage caused by the virus.

The new drugs can help slow the progression of liver disease in chronically infected people by slowing down the virus. If there is less hepatitis B virus being produced, then there is less damage being done to the liver. Sometimes these drugs can even get rid of the virus. With all of the new exciting research, there is great hope that a complete cure will be found for chronic hepatitis B in the near future.

Are there any approved drugs to treat chronic hepatitis B?

Currently, there are several approved drugs in the United States for people who have chronic hepatitis B infections.

Approved Hepatitis B Drugs in the United States

Interferon-alpha (Intron A) is given by injection several times a week for six months to a year, or sometimes longer. The drug can cause side effects such as flu-like symptoms, depression, and headaches. Approved in 1991 and available for both children and adults.

Lamivudine (Epivir-HBV, Zeffix, or Heptodin) is a pill that is taken once a day, with almost no side effects, for at least one year or longer. A primary concern is the possible development of hepatitis B virus mutants during and after treatment. Approved in 1998 and available for both children and adults.

Adefovir dipivoxil (Hepsera) is a pill taken once a day, with few side effects, for at least one year or longer. The primary concern is that kidney problems can occur while taking the drug. Approved September 2002 and available only for adults. Pediatric clinical trials are being planned scheduled.

It is important to know, not every chronic hepatitis B patient needs to be on medication. Some patients only need to be monitored by their doctor on a regular basis (at least once a year, or more). Other patients with active signs of liver disease may benefit the most from treatment. Be sure to talk to your doctor about whether you could benefit from treatment and discuss the treatment options.

It is vital that all people with chronic hepatitis B visit their doctor on a regular basis, whether they receive treatment or not!

There are additional promising new drugs being tested and developed for chronic hepatitis B. Please visit the Hepatitis B Foundation's [Drug Watch](#) chart to find out more about new potential treatments. This chart is available only in English since the information changes so frequently.

Are there any other new drugs for chronic hepatitis B?

There are several promising new drugs for hepatitis B in the experimental stage. Some are still being tested in the laboratory. Other drugs are being tested in small groups of people - these tests are called "clinical trials". People volunteer to participate in clinical trials and doctors carefully select their patients to test new drugs. They keep close track of the patients while they are taking the drug. The goal is to make sure the drug is safe and that it works. Clinical trials can take many years to be completed and they must be done before any new drug can be approved for general use.

Visit the Hepatitis B Foundation's Drug Watch

The Hepatitis B Foundation maintains a list of both approved drugs and promising new treatments for chronic hepatitis B on its website. We keep track of drugs that are in the research phase and also in clinical trials. This chart is written in English only because the information changes so frequently. Please visit our [Drug Watch](#) page often for regular updates.

Where can I get more information about testing and treatment?

You can ask your family doctor, the local health department, or community health clinic to order the simple hepatitis B blood test. You can also start the vaccine series at this time.

If you need help finding a doctor or want more information, please call the HBV Information and Assistance HelpLine at **1-888-888-0981**. This is a free telephone call, which is part of a national community program sponsored by GlaxoSmithKline. All information is available in English, Mandarin, Cantonese, Korean, and Vietnamese.

PREGNANT WOMEN AND HEPATITIS B

Should I be tested for hepatitis B if I am pregnant?

ALL pregnant women should be tested by their doctors. Testing is especially important for Asian women who are at high risk for a hepatitis B infection. Be sure to ask your doctor for this simple blood test early on during your pregnancy.

If I am pregnant, should I be vaccinated?

Talk to your doctor about the hepatitis B vaccine. If your blood tests show that you do not have hepatitis B, then the doctor may recommend waiting until after the baby is born. If your husband or sexual partner has hepatitis B, if you live in close contact with a family member who has hepatitis B, or you have a job that places you at high risk for infection, then the doctor may recommend that you start the vaccine series right away. This is a decision you must discuss with your doctor.

Will a hepatitis B infection affect my pregnancy?

Hepatitis B does not usually affect the health of your unborn baby and most pregnant women with hepatitis B do not have any problems. But, it is important for the doctor to know whether you have a hepatitis B infection so they can watch you closely throughout your pregnancy.

How can I infect my newborn baby if I have hepatitis B?

You can pass the hepatitis B virus on to your newborn baby during delivery. When a woman goes into labor, there is a large exchange of blood between the mother and newborn. The blood exchange occurs as soon as a woman starts to go into labor. Therefore, you cannot prevent infecting your newborn by choosing to have surgery (or a C-section). The hepatitis B virus is passed whether you give birth naturally or through surgery.

Why should I worry about my newborn becoming infected with hepatitis B?

Newborns who are exposed to hepatitis B have more than a 90% chance of becoming chronically infected. This means the virus stays in their blood and liver for possibly a lifetime. They can pass the virus on to others. They will also live with a greater chance of developing liver failure or liver cancer later in life.

If I have hepatitis B, how can I protect my newborn?

The good news is that there is a vaccine to protect your newborn baby. It is most important that your newborn receive the first dose of the hepatitis B vaccine in the delivery room. If possible, ask your doctor to order the hepatitis B immune globulin (HBIG), which is another medication that helps the vaccine to work even more successfully. If the HBIG is not available, don't get upset. The most important medication for your newborn is the hepatitis B vaccine.

1. **Make sure the doctor has the hepatitis B vaccine and one dose of hepatitis B immune globulin (HBIG) available before your baby is born.**
2. **Tell your doctor that you want the first dose of hepatitis B vaccine and HBIG to be given to your baby in the delivery room.** This request is to make certain the doctor or nurse doesn't forget to give your new baby the two drugs immediately after birth. Ask your partner or husband to make sure that these drugs are given since you may be too tired to pay attention to this very important detail.

3. **Be sure your baby completes the hepatitis B vaccine series by receiving the last two doses at 1 and 6 months of age.**

Why should my baby be vaccinated in the delivery room?

TO PROTECT YOUR BABY FROM A CHRONIC INFECTION, THE VACCINE MUST BE GIVEN WITHIN THE FIRST 12 HOURS OF LIFE. This is a very small window of opportunity. Your baby has a greater than 95% chance of being protected from a chronic hepatitis B infection if the vaccine is given within the first 12 hours of life. If the vaccine is not given correctly, then your baby will most likely become chronically infected with hepatitis B for a lifetime. You don't have a second chance to protect your baby!

Where can I get more information about testing and vaccinations?

You can ask your family doctor, the local health department, or community health clinic to order the simple hepatitis B blood test. You can also start the vaccine series at this time.

If you need help finding a doctor or want more information, please call the HBV Information and Assistance HelpLine at **1-888-888-0981**. This is a free telephone call, which is part of a national community program sponsored by GlaxoSmithKline. All information is available in English, Mandarin, Cantonese, Korean, and Vietnamese. If you speak English, please contact the Hepatitis B Foundation at 215-489-4900 or email us at info@hepb.org

UNDERSTANDING HEPATITIS B BLOOD TESTS

Why should I be tested for hepatitis B?

If you are Korean or of Asian descent, then you should be tested because you are at higher risk for having hepatitis B. It is a very simple blood test. The test can be done quickly in the doctor's office. Even if you feel well, there is a risk that you could be infected and could unknowingly pass the virus on to others in close personal contact with you. If you have chronic hepatitis B, then you are also a higher risk for developing liver cancer later in life. Getting tested now can lead to early diagnosis and management, which could help save your life in the future.

Why do I need to know whether I have hepatitis B or not?

Accurate information will help you make good decisions about your health.

- If the blood test shows that you have not been infected with hepatitis B, then you should protect yourself through vaccination.
- If blood tests show that you have recovered from an infection, then you don't need the vaccine because you are already protected.
- If you have a chronic hepatitis B infection, then you should find a doctor for good medical care, avoid spreading the virus to others, and make sure your loved ones are tested and vaccinated.

What kind of blood tests will my doctor order?

The hepatitis B blood test is very simple and requires only a quick visit to the doctor's office. There are 3 tests that are part of the '**hepatitis B blood test panel**':

1. **Hepatitis B surface Antigen (HBsAg)** - this tests directly for the presence of virus. If it is positive, then the hepatitis B virus is present in your blood. This test may have to be repeated in six months to confirm whether you have a chronic infection.
2. **Hepatitis B surface Antibody (HBsAb or anti-HBs)** - this tests for the "surface antibody" that is produced by your immune system to fight off the virus. It will be positive if you have "recovered" from a natural infection, but this can take up to six months. This "surface antibody" will protect you for life against any future hepatitis B infections. The test will also be positive if you have received the hepatitis B vaccine.
3. **Hepatitis B core Antibody (HBcAb or anti-HBc)** - this tests for a part of the virus called the "core antibody". This antibody does not protect you. If the test is positive, then you may have been infected with the hepatitis B virus. However, this test result can only be interpreted in relation to the above two tests.

Hepatitis B Blood Test Chart

Take this chart to your doctor. Ask your doctor to clearly explain what your test results mean. Before you leave the office, make sure you get a copy of all your blood test results.

UNDERSTANDING YOUR HEPATITIS B BLOOD TEST RESULTS

| Tests | Results | Interpretation | Recommendation |
|---|--|---|--|
| HBsAg HBsAb (anti-HBs) HBcAb (anti-HBc) | negative negative negative | Not immune - has not been infected, but is still at risk for possible future infection. Needs protection. | Get the vaccine. |
| HBsAg HBsAb (anti-HBs) HBcAb (anti-HBc) | negative positive negative or positive | Immune - surface antibodies present. You may have been already vaccinated. Or you have recovered from a prior hepatitis B infection. You cannot infect others. | The vaccine is not needed. |
| HBsAg HBsAb (anti-HBs) HBcAb (anti-HBc) | positive negative negative or positive | New infection or a Chronic Carrier - positive surface antigen, which means hepatitis B virus is present. You can spread the virus to others. | Find a knowledgeable doctor for further evaluation. |
| HBsAg HBsAb (anti-HBs) HBcAb (anti-HBc) | negative negative positive | *Unclear. Several different interpretations are possible. You may need to have these tests repeated. See below. | The vaccine may or may not be needed. Find a knowledgeable doctor for further evaluation. |

*An unclear blood test result occurs when the HBcAb (hepatitis B core antibody) is the only positive blood test. There could be several reasons for this positive test result:

1. You may be recovering from a new hepatitis B infection.
2. You may be immune, but the surface antibodies levels in the blood are too low to be detected by this test.
3. This may be a false positive, which means the test has to be repeated.
4. You may be a chronic carrier, but the surface antigens (e.g. virus levels) in the blood are too low to be detected. There are additional blood tests that are more sensitive and can be ordered by your doctor.

What do the hepatitis B blood tests mean?

Make sure your doctor clearly explains the blood test results to you – all 3 blood test results are needed to make a complete diagnosis. Be sure you ask for copies of your blood test results so that you can see what tests were positive or negative. Take a copy of the above chart to your doctor to confirm your test results.

In general, the following blood test results indicate the following situations:

- A positive hepatitis B "surface antigen" (HBsAg+) indicates the virus is present in your blood.
- A positive hepatitis B "surface antibody" (HbsAb+) indicates recovery from an infection or successful vaccination.
- A positive hepatitis B "core antibody" (HbcAb+) indicates that you may have been exposed to the hepatitis B virus. Your doctor should have all 3 test results in order to make a clear diagnosis.

Where can I get more information about testing and vaccination?

You can ask your family doctor, the local health department, or community health clinic to order the simple hepatitis B blood test. You can also start the vaccine series at this time.

If you need help finding a doctor or want more information, please call the HBV Information and Assistance HelpLine at **1-888-888-0981**. This is a free telephone call, which is part of a national community program sponsored by GlaxoSmithKline. All information is available in English, Mandarin, Cantonese, Korean, and Vietnamese. If you speak English, please contact the Hepatitis B Foundation at 215-489-4900 or email us at info@hepb.org

HEPATITIS B VACCINATION

What is the hepatitis B vaccine?

The hepatitis B vaccine is the first anti-cancer vaccine because it prevents hepatitis B, which can lead to liver cancer. The vaccine is made in a chemistry lab. No human blood is used in the vaccine, so you cannot get hepatitis B from the vaccine. There are two brands of vaccine in the United States: Recombivax HB (Merck) and Engerix B (GlaxoSmithKline). Although the vaccines are almost identical, doctors may order different brands. Both vaccines will provide equal protection against the hepatitis B virus.

How is the vaccine given?

In general, the hepatitis B vaccine series includes two or three shots that are given over a six month period. Adults and children receive shots in their arm. Babies receive all shots in their leg. After the first dose of vaccine, you will start developing protection within several weeks. So it's never too late to start. It is very important to complete the entire series of the vaccine to obtain full protection against hepatitis B. The vaccine can be given in your doctor's office or a local health clinic.

Who should be vaccinated?

All newborn babies should be vaccinated, especially if the mother is of Asian descent or if a pregnant woman knows she has hepatitis B. All children up to age 18 years should be vaccinated as well. Most states now require the hepatitis B vaccine for school entry. Many colleges are requiring the vaccine for its students. Although everyone is at some risk, there are some people who are at higher risk. Adults of Asian descent should seriously consider being tested and vaccinated and should make sure their babies and children are properly vaccinated.

Hepatitis B can be prevented through vaccination - it only take three shots to protect yourself and loved ones for a lifetime against hepatitis B, which can lead to liver cancer later in life.

Is the vaccine safe?

Yes, the hepatitis B vaccine is considered one of the safest vaccines ever made. More than one billion doses have been given throughout the world. Medical and scientific studies have shown that it is very safe and effective. The vaccine is made in a laboratory. You cannot get hepatitis B from the vaccine.

What are the vaccine's side effects?

The most common side effects are redness and soreness in the arm where the shot is given. Make sure you discuss with your doctor any potential allergies you may have before getting the vaccine. Ask your doctor for information about other possible side effects of the vaccine.

FREE INFORMATION & REFERRALS

Where can I be tested and receive the hepatitis B vaccine?

You can ask your family doctor, the local health department, or community health clinic to order the simple hepatitis B blood test. You can also start the vaccine series at this time.

If you need help finding a doctor or want more information, please call the HBV Information and Assistance HelpLine at **1-888-888-0981**. This is a free telephone call, which is part of a national community program sponsored by GlaxoSmithKline. All information is available in English, Mandarin, Cantonese, Korean, and Vietnamese. If you speak English, please contact the Hepatitis B Foundation at 215-489-4900 or email us at info@hepb.org

Request a Free copy of “Dr. Hann Talks About Hepatitis”

The Hepatitis B Foundation will send free copies of Dr. Hann’s article, written in Korean, to all who request it. In addition, we have a free newsletter and educational literature and information for those living with chronic hepatitis B. Just telephone us at 215-489-4900 or email us at info@hepb.org with your postal information.

Excellent Resources For Information About Hepatitis B:

- **Hepatitis B Foundation**
www.hepb.org (tele 215-489-4900)
- **The Asian Liver Center at Stanford University**
<http://liver.stanford.edu> (tele 650-498-5687)
- **Centers for Disease Control, Hepatitis Branch**
www.cdc.gov/ncidod/diseases/hepatitis (tele 1-888-443-7232)
- **Immunization Action Coalition**
www.immunize.org

ABOUT THE HEPATITIS B FOUNDATION

The Hepatitis B Foundation is the only national nonprofit organization solely dedicated to the cause and cure of hepatitis B through research, education and patient support.

We sponsor a comprehensive Community Outreach Program with an interactive website, free newsletter and literature, and patient support activities. We fund a Cure Research Program that includes the Hepatitis B Foundation Laboratory at Jefferson Medical College. Each year we sponsor the annual Princeton HBV Workshop where the nation's leading scientists are invited to discuss information about treatment strategies for chronic hepatitis B.

Who started the Hepatitis B Foundation?

The Hepatitis B Foundation was started in 1991 in response to a personal story of a young family affected by hepatitis B. Paul and Jan Witte, and Dr. Timothy Block, a Professor at Jefferson Medical College (Philadelphia, PA) were deeply moved by the plight of this family and decided to establish the Hepatitis B Foundation with the mission of finding a cure and providing information and support to all those affected by this serious liver disease.

Please Help Support Our *Cause for a Cure!*

The Hepatitis B Foundation depends on your generosity to continue its important work! We thank all of the individuals, private foundations, and corporations who have joined our *Cause for a Cure* to help us meet the needs of thousands of people each year and to move forward in the search for a cure for chronic B.

We are a tax-exempt 501(c)(3) non-profit organization.
Your donation is tax-deductible to the fullest extent of the law in your state.

**Credit card donations can be made on our secure website at www.hepb.org
or checks can be mailed to our postal address below.**

Thank you!

**Hepatitis B Foundation
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Doylestown, PA 18901 U.S.A.**

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email: info@hepb.org

www.hepb.org

DISCLAIMER

The information provided in the “Korean Chapter” on this website is for your information and education only. The Hepatitis B Foundation is not a medical organization. We strongly encourage you talk to your doctor or a qualified health care provider for any personal medical care and advice. Thank you.