

Hepatitis B:

What you need to know

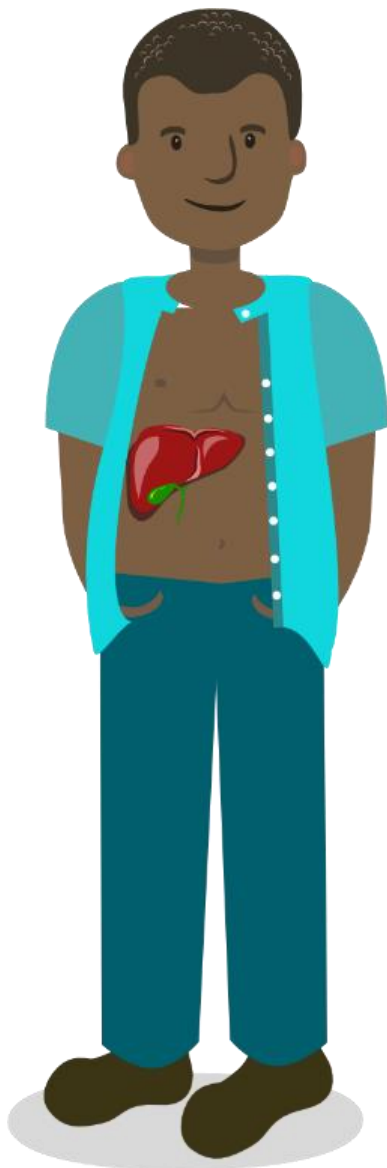


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The Liver

The liver is the largest organ in the body. It is shaped like a triangle and sits at the top right corner of the abdomen. The liver helps to break down food, remove wastes and toxins from the blood, fight infection, and produces and stores protein, vitamins, fats and sugars.



Hepatitis B is an infection of the liver caused by the hepatitis B virus

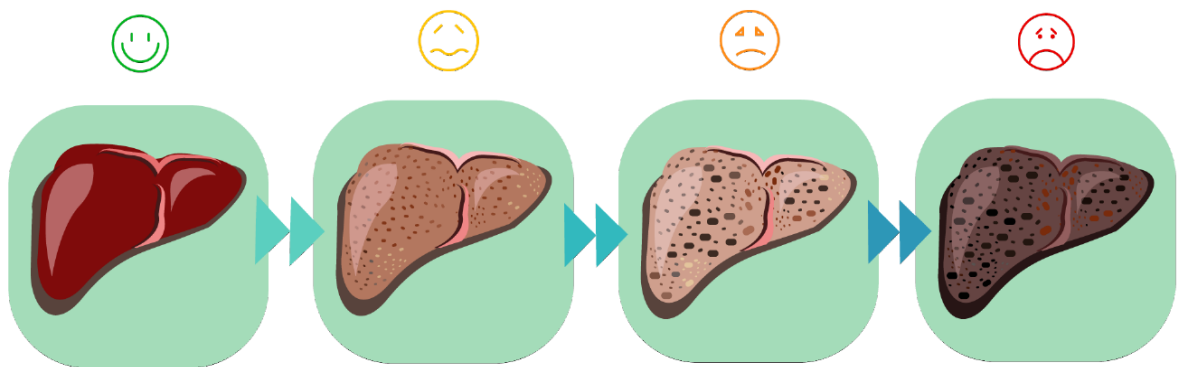
This is a virus spread in blood and bodily fluids.

“Hepatitis B can be prevented by a vaccine”

Chronic hepatitis B

Chronic hepatitis B occurs when the infection has been present for over six months. New exposure (acute infection) can resolve without long term chronic infection. The rates of progress to chronic infection is dependent on age and immune status. Vaccination can prevent infection. Many people with chronic hepatitis B do not have any symptoms and may feel well, so that they do not know they have the infection. This is why it is important to test for hepatitis B, even in people who feel well. If you are from a moderate or high prevalence area or have risk factors, please know your hepatitis B status.

If untreated for many years, chronic hepatitis B can damage the liver, causing liver scarring, liver failure and liver cancer. People with severe liver scarring (cirrhosis) and cancer become very unwell.



A healthy liver works normally, helps digestion, breaks down harmful drugs and poisons, and stores sugars.

Continuous damage to the liver caused by hepatitis B can lead to scar tissue forming in the liver, a process called fibrosis.

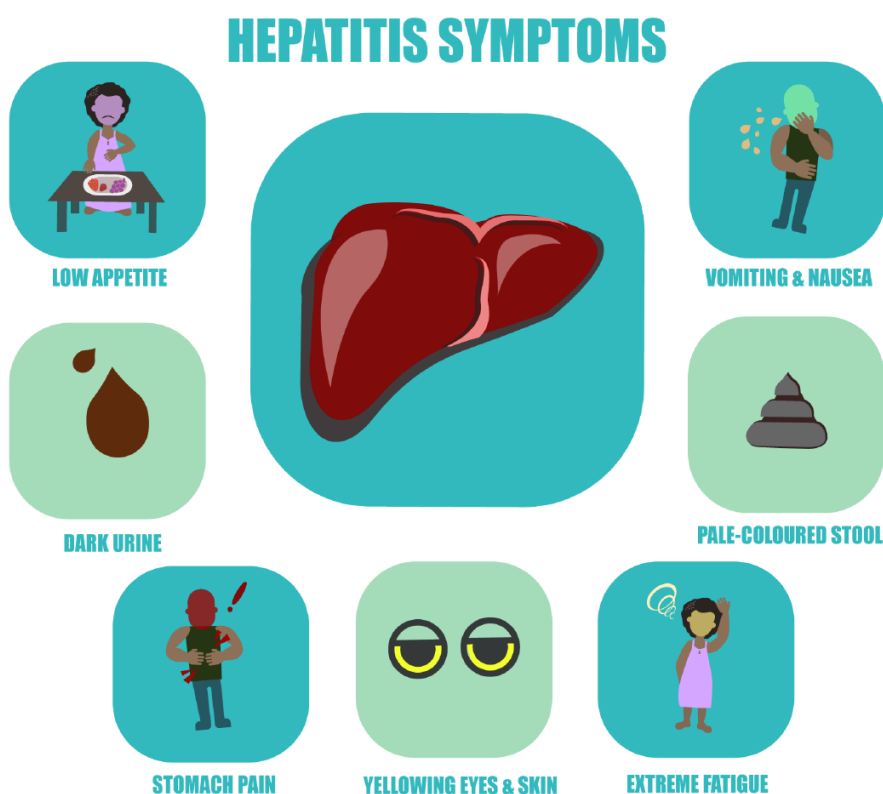
As more fibrosis develops, blood flow through the liver is blocked. Eventually, the liver stops functioning well; this is called cirrhosis.

Hepatitis B is a leading cause of liver cancer. A malignant tumor forms in the liver and is very difficult to cure.

What are the symptoms?

Oftentimes, there are no symptoms with chronic hepatitis B and a person may not know that he or she has the disease. However, it is not uncommon for patients with hepatitis B to experience disease “flares”. When this happens, an infected patient may have some or all of the following symptoms which can last from days to weeks.

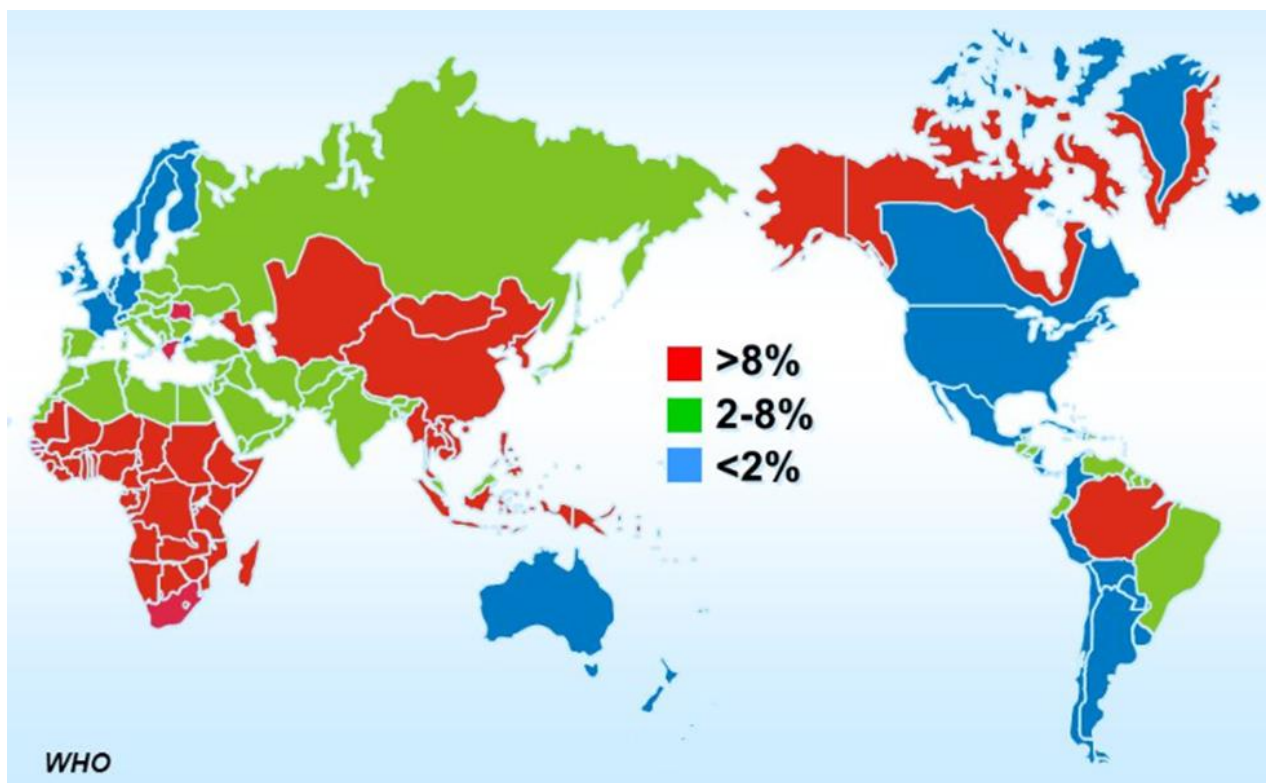
- Dark urine
- Light coloured stools
- Nausea and vomiting
- Abdominal pain, especially in the upper right part of the abdomen
- Yellowing of the eyes and skin
- Loss of appetite
- Extreme fatigue



If you have these symptoms, you should see your doctor immediately.

Who has hepatitis B?

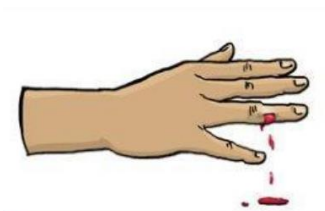
Over 250 million people around the world have chronic hepatitis B. The rates of hepatitis B varies in different parts of the world. Low prevalence of < 2% (■) of the population is seen in places like Australia (less than 1 in a 100), USA, parts of South America and Europe. Highest prevalence rates >8% (■) of the population (and in some areas over 1 in 10 persons) seen in South East Asia, Africa and some of the Pacific islands. There are also high-risk groups within these countries and includes family and partners of positive cases, people with HIV or HCV, persons who inject drugs or have multiple sexual partners.



Prevalence of chronic hepatitis B among adults worldwide

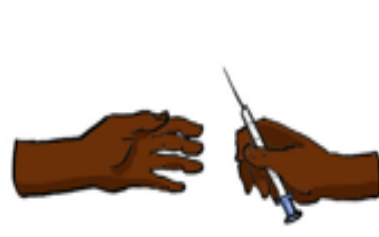
Schweitzer. Lancet 2015;386:1546-55

Hepatitis B can be spread by



Hepatitis B virus is spread in blood or body fluids by contact from a person with the infection to a person without the infection.

Main routes of transmission are unprotected sex, blood transfusion (if not screened), sharing needles and equipment for piercing, tattoos or injecting drugs or sharing razor blades and toothbrushes.

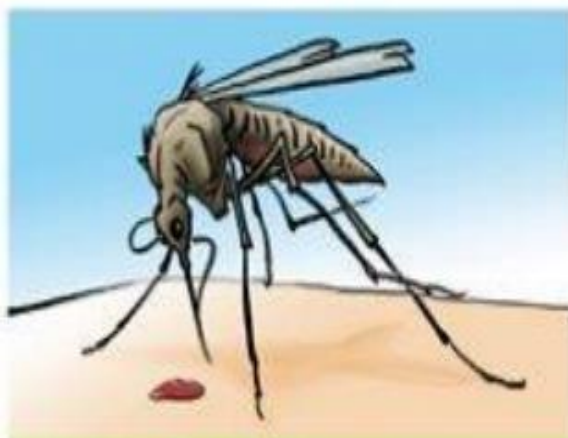


Babies born to mothers with hepatitis B may become infected as the virus passes from their mother's blood during childbirth. This can be prevented by giving medicines to treat hepatitis B in pregnant women, and by giving babies a vaccination immediately after birth and completing during early childhood.



Hepatitis B cannot be spread

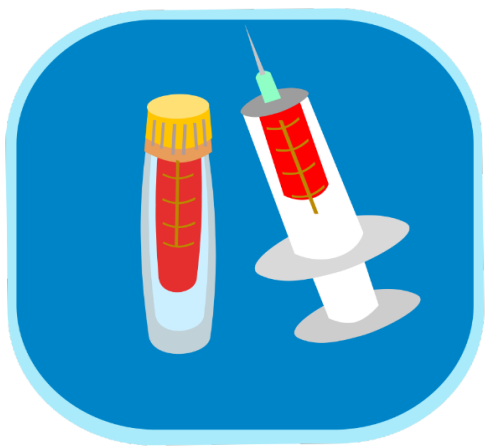
Hepatitis B CANNOT be spread by sharing food, hugging, kissing, coughing, sneezing or having sex with a condom. You do not catch hepatitis B by sharing the toilet with other individuals, whether they have hepatitis B or not. Mosquitos do not spread hepatitis B, and mothers will not give hepatitis B to their children by breastfeeding. The disease is not transmitted by sharing food or drinks.



These activities are safe and will not cause someone to catch hepatitis B

Testing for Hepatitis B

A simple blood test can show whether you have hepatitis B or whether you have been vaccinated for hepatitis B.



If you have hepatitis B on the blood test, other tests can check how well the liver is working and help decide whether you need to have treatment.

Not all people will need to have treatment but everyone should have ongoing regular monitoring as your condition can change.

If you have hepatitis B, your doctor will ask you some medical questions and examine you to assess your disease status.



Imaging tests: ultrasound



There are many different ways to image the liver. Ultrasound is a simple, safe and noninvasive test helps assess your liver condition. It is also routinely used to screen for liver cancer. Liver cancer screening is important and your doctor will advise you as to whether you need to have this done regularly. Further tests including CT and MRI may be needed if there are abnormal findings on the ultrasound.

Transient elastography

Transient Elastography is (Fibroscan) is a non-invasive way of looking at the liver to see if there is scarring including cirrhosis. It can be used to help decide if a person needs treatment or check-ups for people who are taking hepatitis B treatment.

There are many factors that contribute to these results such as fasting state, liver inflammation and other health conditions. It can be repeated to see if there is progression or regression of your liver condition.

It is used in addition to your blood tests, physical examination and ultrasound findings to assess your liver condition.



Treatment



Hepatitis B can be treated with medications (tablets) that stops the virus from replicating. Damage to the liver the immune system reacts to the virus causing liver inflammation and over time causing damage. The medication does not cure hepatitis B, but it can reduce the chance of liver scarring and liver cancer by reducing the amount of virus in the body. The medications are called “antivirals” (tenofovir or entecavir). They are tablets that are taken every day. They should be taken at the same time each day. Tenofovir can be taken with or without food). Entecavir is best taken away from food. These medicines work very well by reducing the amount of virus in the blood.

- Medicines must be taken long term.
- Medicines must not be stopped without your doctor’s advice.

Treatment

Your doctor will advise you on how often you need to be monitored. Six monthly review with blood tests (which includes your liver tests, kidney function and virus level) and ultrasound in those who need liver cancer screening is suggested. A progress fibroscan is also done after a few years of treatment.

More frequent check-ups may be needed if you have more serious disease or there are other concerns.

Treatment is very safe to take and side effects are not common. In a small number of people, kidney function can decline and your bones can become a little thinner. Other minor side effects can occur and should be discussed with your doctor.

After many years of treatment, some people are able to stop their medications. This will require that you have been very well and that your virus has been suppressed for a long time. If this occurs, you may be able to stop your treatment but close monitoring is essential. You **SHOULD NOT** stop treatment without the supervision of your doctor.



Monitoring hepatitis B

Most people with hepatitis B do not need to have treatment.

Young people with normal liver tests, who do not have a family history of hepatitis B related complications including liver cancer and cirrhosis, have no scarring in the liver and have low amount of virus can generally be followed up. Changes to your liver tests and viral levels can occur and as it is mostly asymptomatic, regular checkups are essential.

Monitoring includes blood tests, ultrasound, fibroscan and clinical review. You should continue to ensure that you protect your liver and stay healthy (see section below).

You may need treatment at the next review.



Pregnancy and hepatitis B

Chronic hepatitis B infection occurs in women of childbearing age and should be assessed for treatment and monitored as usual.

Treatment may be needed and should be considered with view for family planning. It is safe to have treatment if you need. Treatment does not affect your ability to have children and it is safe for you to remain on treatment during pregnancy BUT you should discuss this with your doctor.



Universal antenatal screening of hepatitis B during pregnancy is recommended.

Babies born to positive mothers are at risk of acquiring the infection at birth. All babies are given birth dose hepatitis B vaccine. Where available babies born to positive mothers are also given HBIG (immunoglobulin) as close to birth as possible.

In some cases where the mother has high levels of virus in the blood during pregnancy (viral load), treatment with tenofovir from about 28 weeks of pregnancy till after delivery has shown to reduce risk of infection to the baby and is recommended. It is safe to take and safe to breast feed.

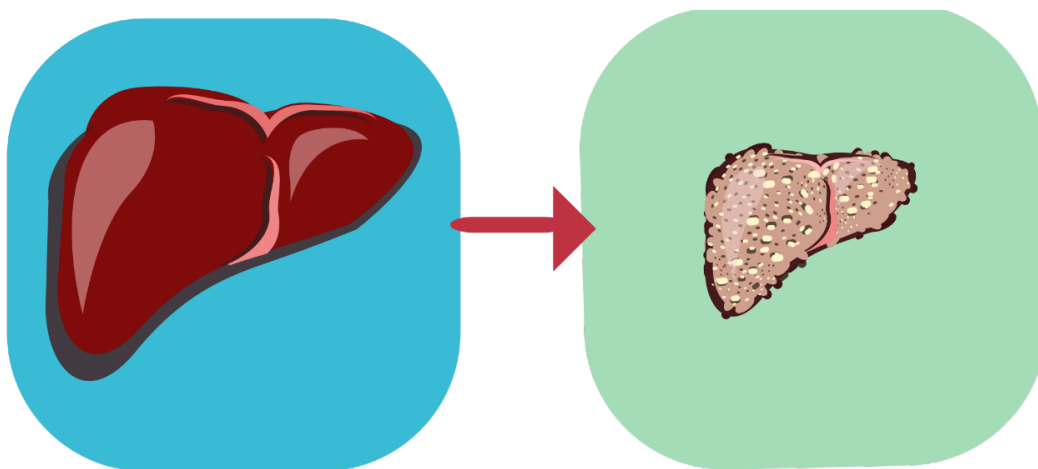
Cirrhosis of the liver

Cirrhosis of the liver is advanced scarring of the liver. Liver scarring is generally staged in a scoring system from 1 to 4 depending on the extent of scarring. Cirrhosis is stage 4. Even within this stage, there are degrees of severity. Advanced cirrhosis leads to yellowing of your eyes and skin (jaundice), fluid overload with abdominal swelling or 'big belly' (ascites) and leg oedema, poor nutrition, kidney injury, confusion as well as bleeding from your digestive system with dark coloured motions or vomiting blood. These can be very serious and at times life threatening.

There are many causes of cirrhosis in addition to hepatitis B and include alcohol and fatty liver disease. These require close attention. Healthy diet is essential.

Earlier stages of cirrhosis can be asymptomatic require close monitoring and intervention to prevent complications outlined above. All patients with cirrhosis should be on hepatitis B treatment. Your doctor will advise you on any additional treatments and monitoring required.

Cirrhosis increases risk of liver cancer. Liver cancer screening with 6 monthly ultrasounds is recommended.

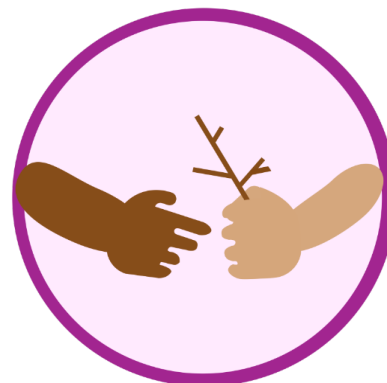


Hepatitis D (delta hepatitis)

Hepatitis D or delta hepatitis is a virus that infects people with hepatitis B infection. It cannot occur on its own. Those with hepatitis D have a much more aggressive disease with rapid progression to cirrhosis and higher risk of liver cancer. There is no effective treatment for delta hepatitis.

Hepatitis B and D infection can occur at the same time or hepatitis D can be a superinfection, occurring at a later time to hepatitis B infection. The rates of hepatitis B/D infection vary throughout the world. Some of the highest rates of coinfection is seen parts of the Pacific Islands including Kiribati where up to 60% have infection with both viruses.

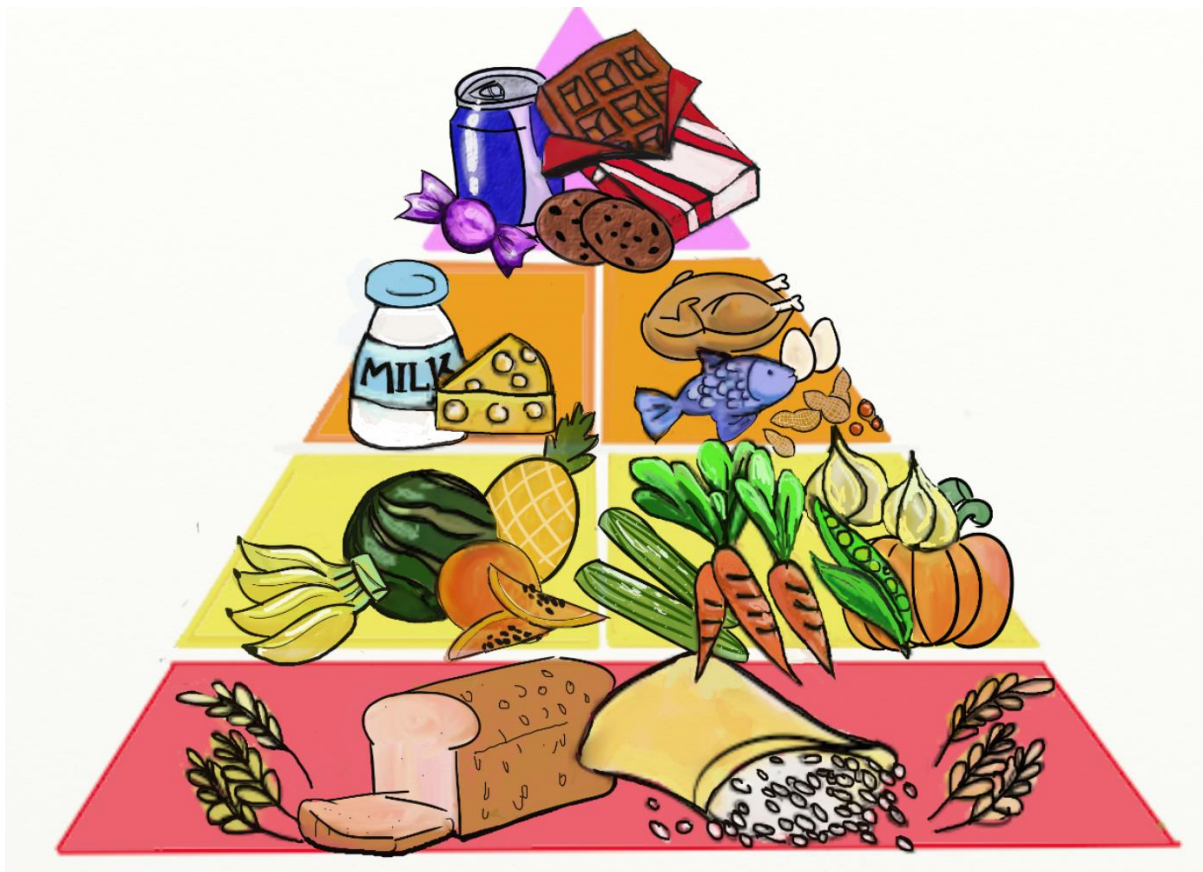
It remains unclear how this infection is spread but a possible method is through scarification (tattooing of the skin). Other potential routes of transmission is through mother to child (at birth). This can be prevented by birth dose vaccination of the baby as well as treatment in the late stages of pregnancy for those mothers who have high virus levels. Avoiding sharing tools for scarification remains critical in breaking the cycle of new infections.



Staying healthy and well

If you have chronic hepatitis B, it is important to take good care of yourself, whether you are on treatment or not. Here are some helpful tips:

- Eat a variety of healthy food such as fruits, vegetables, rice, grains, fish, nuts
- If you have severe disease, your doctor will advise about further specific dietary needs



Get the facts about nutrition to look and feel better



10 nutrition tips for persons with chronic liver disease



1 Liver disease makes you feel unwell and you may lose your appetite. It is important to try to eat enough to get adequate calories even if you are not hungry.

2 Keep a food diary of everything that you eat and drink during the day. This will help you and your doctor make a good nutrition plan.



3 Weigh yourself every day and keep a record. This will help you know whether you are getting enough calories or if you are gaining weight because you are holding on to fluid because of your liver disease.



4 It is best to eat a number of small meals throughout the day. Your liver does not store energy well so you should try to eat something every 4 hours. Eat a healthy snack before going to bed.

5 It is very important to get plenty of protein in your diet. The type of protein is also important for your liver. The best sorts of food that contain “good” protein are poultry, pumpkin seeds, brown rice, soy, nuts, fish and eggs.



6 About 15% of your calories should come from fats. The best type of fats are called “unsaturated” and should also be easy to digest. Fats such as this can be found in soybean oil, seeds, nuts, and fish.

7 The liver is responsible for processing and storing a number of nutrients like vitamins A, D, E, K, calcium iron, zinc and the B vitamins. The medicines that you take can also cause you to lose important vitamins. It is a good idea to take a multivitamin pill each day that contains these important micronutrients.



8 Sodium in your food can cause the body to retain lots of water. If the liver is not working properly, you may be at risk for swelling due to fluid retention. Limit the amount of salt (sodium) in your diet. Fast food and processed products contain large amounts of salt. Try not to add additional salt to your food.

9 Sweat is not bad! Be active whenever you can. Exercise will make you feel better and can improve your appetite. It is good for your overall health and can help you keep excess fluid off. Try to exercise daily with friends or family.



10 See your doctor regularly, at least every 6 months. Take the food diary and your daily weights with you when go for your visit. Do not take any medications that are not prescribed by your doctor as they may damage your liver.



Staying healthy and well



- Keep a healthy weight
- Exercise and be active
- Avoid take away food, processed meats, sugary drinks, sweets and chips
- Avoid alcohol, drugs, and smoking cigarettes
- See a doctor every six months
- Talk to your doctor before taking any herbal medicines as these may be harmful to the liver



Looking after your family: prevention

If you have chronic hepatitis B, it is very important that your family members and sexual partners are all tested for hepatitis B. If they are not infected, they should all be vaccinated to protect them from hepatitis B.

Ways to prevent spreading hepatitis B:

- Cover up any open wounds
- Practice safe sex by using a condom (if status not known or unvaccinated)
- Avoid sharing needles, razors, toothbrushes or injecting equipment
- If you are pregnant, it is especially important to vaccinate your newborn baby, whether you have chronic hepatitis or not



