



# Living with hepatitis B



Your treatment and lifestyle decisions

**Hepatitis**  
SCOTLAND

**NHS**  
SCOTLAND

## About this booklet

If you have just been diagnosed with hepatitis B, this booklet can help to provide answers to some of the questions you have.

For further information, you may also wish to visit the Hepatitis Scotland website at: **[www.hepatitisscotland.org.uk](http://www.hepatitisscotland.org.uk)**

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# All about hepatitis B

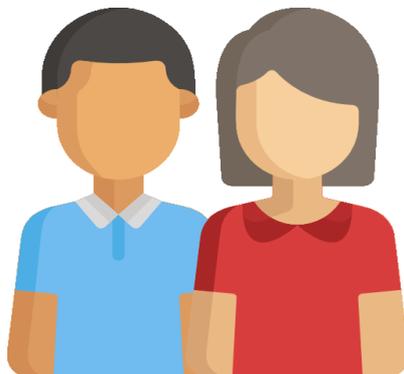
## What is Hepatitis B?

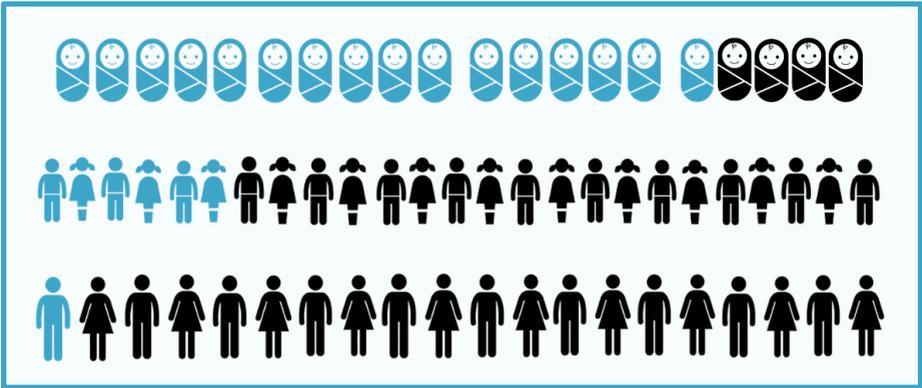
Hepatitis B is an infection of the liver caused by the hepatitis B virus (HBV). Transmission of hepatitis B occurs through contact with infected blood or other bodily fluids which contain the virus such as saliva, semen and vaginal fluids.

Transmission can also occur from an infected mother to her baby during the time of birth (vertical transmission) or during childhood (horizontal transmission). This is the most common route of transmission worldwide. However, sexual transmission and injecting drug use are also common modes of transmission.

A chronic hepatitis B infection is an infection which lasts for more than 6 months (usually this is a lifelong infection). This means the immune system was unable to clear the virus. A blood test will determine if you have a chronic hepatitis B infection.

The likelihood that an infection becomes chronic (lifelong) depends on the age a person becomes infected. Babies and children less than 6 years of age are the most likely to develop chronic infections.





- 80-90% of infants infected during the first year of their life develop chronic infections
- 30-50% of children infected before the age of 6 years develop chronic infections
- Less than 5% of otherwise healthy persons who are infected as adults will develop chronic infection

If not properly monitored, up to 30% of adults who are chronically infected can develop serious illnesses like cirrhosis (scarring of the liver) or liver cancer. The majority of death and liver illness only happens to those who have been undiagnosed for several decades and also have lifestyle factors such as drinking alcohol, obesity or taking long term medications.

The hepatitis B virus can survive outside the body for at least 7 days. During this time, the virus can still cause infection if it enters the body of a person who is not protected by the vaccine. It is important that your close contacts, including household members, are vaccinated to reduce the risk of onward transmission. Targeted vaccination and blood hygiene makes further transmission very unlikely.

## Can I infect others?

Hepatitis B is a blood borne virus and can be spread by blood-to-blood contact. Hepatitis B is also present in other body fluids including saliva and sexual fluids (semen and vaginal fluids). Therefore hepatitis B is also a sexually transmitted infection (STI). Using a condom reduces the chance of HBV being passed on during sex. Syringes and other injecting drug equipment should never be shared.

**There is a vaccine for hepatitis B that can prevent people from becoming infected with the virus.**

Transmitting hepatitis B can be prevented and vaccination of family members is one of the most effective ways of preventing passing on hepatitis B. Vaccination is the best way we have to prevent the spread of infectious diseases like hepatitis B.

Hepatitis B is not transmitted through normal social contact such as sharing crockery or cutlery, or touching someone with hepatitis B. Blood spills from someone with hepatitis B should be cleaned up following sensible infection control procedures (e.g. wearing gloves and using appropriate cleaning products, i.e. a bleach-based product). Scratches, cuts and wounds should be cleaned with soap and water and covered with a waterproof dressing or plaster.

It is also possible to acquire hepatitis B through personal care items such as razors, toothbrushes and manicure tools that come into contact with blood or bodily fluids. These items should not be shared. New, sterile needles should be used for piercings, tattooing and acupuncture.

## Interpreting hepatitis B results

Diagnosing hepatitis B can be complicated. Tests for hepatitis B will look for parts of the virus (antigens) or parts of your immune response (antibodies). Tests will determine if you have a current infection, if you are immune, and if you are infectious to other people.

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 doctor or other health professional to explain what tests were ordered and when you will get the results. Below are some of the common tests and their meanings.



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**Hepatitis B Surface Antigen (HBsAg)** is a protein on the surface of the hepatitis B virus. It can be detected in the blood during acute or chronic hepatitis B virus infection. The body normally produces antibodies to HBsAg as part of the normal immune response to infection.

A positive test means: A person has an acute or chronic hepatitis B virus infection and can pass the virus to others

A negative test means: A person does not have the hepatitis B virus in their blood.

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**Hepatitis B Surface Antibody (anti-HBs)** is an antibody that is produced by the body in response to the hepatitis B surface antigen.

A positive test means: A person is protected or immune from getting the hepatitis B virus for one of two reasons:

1. They were successfully vaccinated against hepatitis B
2. They have cleared the virus and recovered from an acute infection (and can't get hepatitis B again)

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**IgM Antibody to Hepatitis B Core Antigen (IgM anti-HBc)** is used to detect an acute infection.

A positive test means: A person was infected with hepatitis B virus within the last 6 months.

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**Total Hepatitis B Core Antibody (anti-HBc)** is an antibody that is produced by the body in response to a part of the hepatitis B virus called the "core antigen". The meaning of this test often depends on the results of the two other tests, HBsAg and anti-HBs.

A positive test means: A person is either currently infected with the hepatitis B virus or was infected in the past but has cleared the infection.

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**Hepatitis B “e” Antigen (HBeAg)** is a protein found in the blood when the hepatitis B virus is present during an active hepatitis B virus infection.

A positive test means: A person has high levels of virus in their blood and can easily spread the virus to others.

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**Hepatitis B e Antibody (HBeAb or anti-HBe)** is an antibody that is produced by the body in response to the hepatitis B “e” antigen.

A positive test means: A person has chronic hepatitis B virus infection but is usually at lower risk of liver problems due to low levels of hepatitis B virus in their blood.

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**Hepatitis B Viral DNA** refers to a common test to detect the presence and levels of hepatitis B virus in a person’s blood. HBV DNA level, or ‘viral load’, is an indicator of viral replication. HBV DNA level typically is lower when the infection is not active or falls in response to effective antiviral treatment.

Higher levels means:

- The virus is multiplying in a person’s body and they are highly contagious and can pass the virus to others
- If a person has a chronic hepatitis B virus infection, the presence of viral DNA means that a person is possibly at increased risk for liver damage

## What does hepatitis B do to my body?

There are four stages of chronic hepatitis B infection but it is often difficult to classify people precisely into just one.

### 1 **Immune tolerance**

During this stage, HBV reproduces freely in the body and viral load is high, but the immune system does not respond strongly to the infection.

### 2 **Active immune response**

During this stage, the immune system attacks HBV-infected cells in the liver. For many people, the immune system is able to take control over the virus, the amount of viral replication reduces, and they move to the next stage.

### 3 **Inactive carriage**

In this now inactive stage, the immune system controls HBV so it no longer reproduces freely. HBV viral load is low or undetectable and liver enzyme levels are usually low. About 10 to 25% of people who get hepatitis B as adults will become 'chronic inactive carriers,' which means they can still pass HBV on to others and although less likely may develop long-term liver damage. Some people can go through cycles of active immune response and inactive carriage.

# 4

## 'e'-antigen-negative chronic active hepatitis

Some people move from stage 3 to stage 4 when their hepatitis B virus mutates to escape antibody control. People in this stage lack 'e'-antigen but have moderate levels of viral replication with inflammation of the liver. Because they have been through the previous stage of active inflammation and may already have pre-existing liver damage, they are at most risk of having complications like cirrhosis and liver cancer.

Over time, chronic hepatitis B can cause serious health problems, including liver damage, cirrhosis, liver cancer, and even death. The liver goes through several stages as the inflammation, caused by the virus, damages it:

**Fibrosis:** After becoming inflamed, the liver tries to repair itself by forming tiny scars. This scarring, called "fibrosis," makes it difficult for the liver to do its job.

**Compensated Cirrhosis:** Large areas of the liver eventually become permanently scarred. Blood cannot flow freely and the liver begins to shrink and become hard.

**Decompensated Cirrhosis:** means the liver is unable to filter wastes, toxins, and drugs from the blood. It can no longer produce the clotting factors necessary to stop bleeding and causes a variety of visible health outcomes such as ascites (swelling of the abdomen with fluid), jaundice and also oesophageal varisces (abnormal and/ or enlarged veins in the oesophagus (or "food pipe")).

People living with chronic hepatitis B infections are at higher risk for developing liver cancer (even without cirrhosis) and must be tested once or twice a year for early detection. Early detection saves lives!





# Treatment for hepatitis B

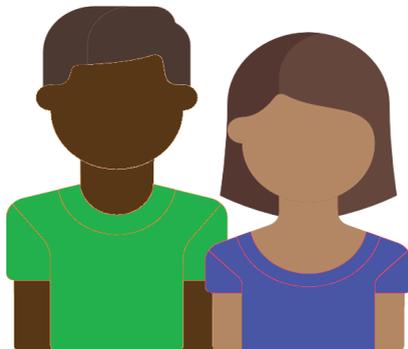
## What are the treatment options?

Chronic hepatitis B (CHB) infection cannot be cured by treatment. People with hepatitis B are often classified into those that are HBeAg-positive and those that are HBeAg- negative. Within these two groups, people either have active inflammation and liver damage or have no liver damage.

This, together with the amount of HBV DNA in blood, is used for making treatment decisions. The aim of treatment is to control the virus and to stop it replicating and damaging the liver by reducing the amount of virus in your blood to low levels. This is because no drug is currently effective at fully removing the virus.

If you have a large amount of virus (a high viral load), or it is increasing and there are any signs of inflammation, then you may be put onto antiviral treatment. This will help to stop the virus from multiplying and causing further damage to your liver.

Viral load tests are very important in helping clinical staff check on how well treatment is working so they are repeated regularly to help monitor progress.



## Treating chronic hepatitis B

Two types of treatment are used for CHB; nucleoside/nucleotide analogues (NA) or pegylated interferon (PEG-INF).

### **Nucleos(t)ide analogues (NA)**

These are the main type of drugs used. There is a variety of this type of drug used, dependent on patient need. NA drugs work by preventing the hepatitis B virus from replicating in your body. One of the main advantages of these drugs is that serious side effects are rare. A high level of adherence to NA therapy is critical to reduce the viral load, maintain a low viral load maintain and to prevent resistance.

### **Pegylated interferon alpha (PEG-INF)**

For those who have high levels of virus in their blood, a different drug may be prescribed. Pegylated interferon alpha acts as a boost to the body's own immune system by attacking the virus. PEG-INF is usually given by injection once a week over four to six months. This treatment is used infrequently in the UK, due partly to significant side effects when compared to NA.

## Being assessed for treatment

The assessment process provides an opportunity for you to speak to a trained support professional about any questions or concerns you have about hepatitis B. It is also a chance for you to get more information about what is actually involved in treatment and how it may affect you and your family.

The initial assessment will also help determine how the hepatitis B virus has affected your body so far. Medical staff will run some

tests to determine how much virus you have in your blood and how the virus has affected your liver. This will include blood tests and a fibroscan; a non-invasive scan specifically for your liver. They will explain this to you and answer any questions.

## Deciding on Treatment

Most people with hepatitis B chronic infection do not require medical treatments. Treatment is usually offered if:

- your immune system is unable to control the hepatitis B by itself
- there's evidence of ongoing liver damage

The choice of first line therapy is influenced by patient characteristics and informed patient choice.

Factors to consider would be;

- route of administration
- side effects
- likely treatment duration
- family planning
- ALT (an enzyme in the liver used to monitor liver damage)
- HBV DNA
- liver histology or Fibroscan results
- genotype
- family history

Ultimately, there are advantages and disadvantages to the types of treatments offered and your specialist can advise you what the best course of treatment might be.

## Does treatment have any side effects?

Treatment may interfere with other medical conditions. Other symptoms often experienced during treatment can affect relationships, finances, libido or lifestyle (such as diet).

Understanding the side effects are caused by the treatment and the virus can help lessen frustration when going through difficult times.

### **Side effects of nucleos(t)ide analogues (NA) type drugs**

While NA type drugs are very powerful, serious side effects are rare. Some common side effects for both drugs are listed below:

- Feeling or being sick (nausea), especially if tablets not taken with food
- Skin rash
- Feeling weak
- Dizziness
- Bone thinning if taken over long term
- Insomnia
- In rare cases, kidney problems

Your treatment team would monitor side effects on a long-term basis.

## Side effects of pegylated interferon alpha (PEG-INF)

- Flu-like symptoms
- Fatigue
- Fever
- Muscle pain
- Joint pain
- Stiffness
- Headaches
- Depression
- Anxiety
- Stress

For some people, the side effects of PEG-INF can be persistent and difficult to cope with so they are taken off PEG-INF and use an alternative treatment. However, others find that after the first month of treatment the side effects become less severe and more manageable.





# Common questions around treatment

## What if treatment doesn't work?

**A common reason for treatment not working is people failing to take medications as recommended by their treatment provider.**

Regular monitoring will show how well you are responding to treatment. If you are not responding to a specific drug then your doctor may consider trying a different one.

If your body is not responding to pegylated interferon alpha, antiviral drugs may be used.

If you are not responding to any treatment and your liver is severely damaged and cirrhotic, you may be considered for a liver transplant.

**It is important to remember that even if treatment does not work new drugs are being developed that may completely change how we deliver hepatitis B treatment and the outcomes from it.**

## What is cirrhosis?

The hepatitis B virus attacks liver cells, which damages them and results in scar tissue building up in their place (fibrosis). The liver then starts to get hard in texture and this is what we refer to as cirrhosis, or a cirrhotic liver. Cirrhosis of the liver can be mild, moderate, or severe.

### **Compensated cirrhosis**

'Compensated cirrhosis' means that the liver is still able to cope with, or 'compensate' for, the damage being done by the virus. The liver can carry out most (sometimes all) of its functions.

### **Decompensated cirrhosis**

Over time, as more and more healthy liver cells are damaged and replaced by hardened scar tissue, the liver becomes so damaged that it cannot carry out its functions any longer. This is called decompensated cirrhosis.

## If I have HIV can I still get treatment?

Between 5-10% of people living with HIV also have hepatitis B virus, known as co-infection. People living with HIV are less likely to clear hepatitis B without treatment. People living with HIV and HBV co- infection can have faster liver disease progression. However, having hepatitis B does not seem to make HIV disease worse.

## I have hepatitis B and hepatitis C (HCV)

Patients should still receive HCV treatment as required; however, treatment of hepatitis C with new direct acting antivirals has sometimes been associated with reactivation of hepatitis B in case reports. During HCV therapy, a medical professional will monitor HBV DNA levels and liver ALT levels (an enzyme in the liver used to monitor liver damage) in co-infected patients.

## I have hepatitis B and hepatitis D

Hepatitis D only occurs in people who have hepatitis B. This is because hepatitis D virus is a defective (incomplete) virus and requires hepatitis B virus to survive and multiply. Effective treatment for hepatitis D is not available. In the acute phase self-management of symptoms by using over-the-counter drugs is recommended. Interferon may be tried for those who develop chronic hepatitis D infection to slow the disease progression, but in some circumstances a liver transplant may be needed.



# Living with hepatitis B

Living with hepatitis B will affect people in very different ways but there are things that everyone can do to help improve and look after their body and well-being before, during and after treatment. This can significantly affect the progression of the illness.

## Eating a healthy, balanced diet

It is important to maintain a healthy weight for your gender, age and height, and also to ensure that you eat a healthy, balanced diet. A healthy, balanced diet can help improve liver health and lower your risk of developing liver cirrhosis. This includes:

- Drinking plenty of water, which among other things helps the liver flush out toxins.
- Eating plenty of fruit and vegetables, good carbohydrates and proteins, foods which are high in fibre (e.g. wholegrain breads and cereals), and foods which are low in saturated fat (e.g. rice and pasta). These foods are much easier for the liver to process than fried, salty, and sugary foods.
- There is well documented evidence that regularly drinking coffee can lessen the long term damage viral hepatitis causes to your liver.

You can arrange an appointment with a dietician to support you to make positive changes to your diet.

## Staying active

There are many benefits to taking regular exercise. Being active can:

- Improve your mood if you are feeling down
- Help relieve stress
- Help you sleep better
- Help you maintain a healthy weight
- Improve your body's ability to fight infections

All of these make a big difference to living with hepatitis B. Keep in mind, however, that if you are receiving treatment you may find your capacity for exercise to be less.

## Reducing or stopping alcohol and drug consumption

To keep any damage to your liver to an absolute minimum, it is essential to minimise alcohol intake, or cut out alcohol completely. Research has shown that even moderate drinking can accelerate the progress of liver disease in people with hepatitis B.

Smoking tobacco impacts the body's regenerative powers and therefore can have an impact on day to day health.

Drug use can also speed up damage to your liver. It can also put other people at risk of getting the virus, if you have hepatitis B and share equipment when you prepare, inject, inhale or snort drugs. To protect your liver and to reduce the risk of passing on the virus, consider stopping drug use, or use new equipment every time and never share.

Support is available if you need help to change your drinking or drug use habits (see page 28).

## Sexual health

Hepatitis B is also a sexually transmitted infection and can be passed on to sexual partners. There are implications of both telling or not telling your sexual partner(s). Depending on a number of factors, including the nature of relationship you have with your partner(s) and your respective histories, this may either be a supportive or a challenging experience.

Talk to your doctor or other workers for support. To protect yourself and others from sexually transmitted infections, always use a condom and get regular sexual health check-ups. For more information on sexual health, wellbeing and sexual health services, visit [www.sexualhealthscotland.co.uk](http://www.sexualhealthscotland.co.uk)

## Sleep

There is growing evidence about the importance of sleep and its impact on health and well-being. The Sleep Council provides information and advice on the importance of sleep, how you can improve your sleep and where to get help. For more information, visit [www.sleepcouncil.org.uk](http://www.sleepcouncil.org.uk)





# Common concerns

## Who to tell?

While you may hope that friends and family will be positive and supportive, you may be worried that telling others could harm your relationship with them.

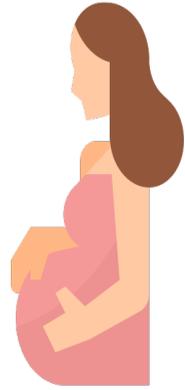
When you are deciding who to tell, be sure you understand how to best prevent infecting others and how easy it is for them to protect themselves. You may find it helpful to think about:

- The person's likely reaction
- Whether it will help you to cope if you tell someone
- The people you would really like support from, e.g., your employer
- The people who are likely to be affected by your hepatitis B e.g. the people you live with
- If anyone is, or has been, at risk of getting the infection from you

You may also feel it is responsible to tell people who could be or have been exposed to your blood or bodily fluids, for example, your sexual partner(s), the people you live with, your GP, dentist, or other healthcare workers.

## Hepatitis B and pregnancy

It is important that family planning is discussed with your doctor/specialist nurse prior to starting hepatitis B treatment. Hepatitis B infection can be transmitted from infected mothers to their babies at or around the time of birth (vertical transmission). Babies acquiring the infection at this time have a high risk of becoming chronically infected with the virus. Transmission can be prevented in nearly all cases by appropriate vaccination, starting at birth, of all infants born to infected mothers.



Treatment of hepatitis B with tenofovir in the last trimester of pregnancy is a common indication for treatment and also reduces the likelihood of transmission from mother to baby. Women on treatment for HBV with tenofovir are not routinely advised against attempting to get pregnant.

If you are taking interferon, it is important that you use effective contraception as there is a risk to the foetus. If you become pregnant whilst taking interferon, you must discuss this with your doctor/specialist nurse immediately.

## Stigma and discrimination

Stigma is when a negative label is attached to an aspect of a person which is wrongly seen as disgraceful or unacceptable. Hepatitis B can often be stigmatised, people may lack information about it or they may make moral judgements about how someone has contracted the virus. This is partly because hepatitis B can be transmitted through sex and can be linked to activities such as injecting drugs.

People can experience stigma in any area of their life, like relationships, family, at work or social groups. Remember you cannot legally be discriminated against by any health professional. If you feel you have been treated differently because of your hepatitis B status you should complain to your local NHS board.

You might find you stigmatise yourself for having hepatitis B. This can take the form of thinking you are 'dirty' or 'shameful' and maybe do not deserve to have a partner, children, family or work. This self stigma is a common reaction for many long term conditions and you may need help to overcome it and move forward with your life. Talk to your doctor or other workers for support.

## What are my rights?

If you feel you have been discriminated against, or just need time off work, you do have some legal protection.

Discrimination against anyone with hepatitis B is unlawful under the Equality Act 2010.

## Can I get benefits?

If you are finding it difficult or impossible to stay in work due to having hepatitis B, then you may be eligible to claim benefits.

The Employment and Support Allowance (ESA) offers financial support and/or personalised help so that you can work if you are able to. If you are making a claim for this benefit, you may need to have a Work Capability Assessment to find out what work you will be able to do.

If you intend to make a new claim, you will be asked to complete the Work Capability Assessment to check if you can claim the Employment and Support Allowance. This assessment will work out what work you will be able to do. You will then be given support and advice to help you get back to work if you are able.

Services are available to assist people to make a claim. Ask your nursing team for information on local benefits support for people with hepatitis B.

For more information on Employment and Support Allowance, visit **[www.gov.uk/employment-support-allowance](http://www.gov.uk/employment-support-allowance)**



# Where can I get more help?

## Hepatitis

### **Hepatitis Scotland**

Provides education, information, and support on viral hepatitis. Find your nearest hepatitis B testing, treatment, or support service using the online service finder.

t: 0141 225 0419 (Mon-Fri, 9am-5pm)

e: [enquiries@hepatitisscotland.org.uk](mailto:enquiries@hepatitisscotland.org.uk)

w: [www.hepatitisscotland.org.uk](http://www.hepatitisscotland.org.uk)

### **NHS Inform Hepatitis Helpline**

A free and confidential helpline providing information about viral hepatitis.

t: 0800 22 44 88 (Mon-Fri 8am-10pm, Sat-Sun 9am-5pm)

## Sexual Health

### **Sexual Health Scotland**

An online resource from the Scottish Government with information about sexual health, with links to local and national sources of help. Find your nearest sexual health service using the online service finder.

w: [www.sexualhealthscotland.co.uk](http://www.sexualhealthscotland.co.uk)

## Healthy Living

### **Actify - Active Scotland**

An online platform providing resources to help people become more active.

w: [www.actify.org.uk](http://www.actify.org.uk)

### **Take life on, one step at a time**

Resources on healthy living from Scottish Government.

w: [www.takelifeon.co.uk](http://www.takelifeon.co.uk)

### **The Sleep Council**

An online resource providing advice and tips on how to improve sleep quality.

w: [www.sleepcouncil.org.uk](http://www.sleepcouncil.org.uk)

## Mental health and wellbeing

### **Samaritans**

A free and confidential 24-hour listening service for anyone who is struggling to cope or experiencing feelings of distress.

t: 116 123

w: [www.samaritans.org](http://www.samaritans.org)

## **Breathing Space**

A free, confidential phone service for anyone experiencing low mood, depression, or who is unusually worried and in need of someone to talk to.

t: 0800 83 85 87 (Weekdays: Mon-Thur 6pm-2am,  
Weekends: Fri 6pm-Mon 6am)  
w: [www.breathingspace.scot](http://www.breathingspace.scot)

## **Living Life to the Full**

Free online courses covering low mood and stress and all of the common linked problems this causes.

w: [www.llttf.com](http://www.llttf.com)

## **Alcohol and other drug use**

### **Scottish Drugs Forum**

A drugs policy and information organisation which offers a national resource of expertise on drug issues.

t: 0141 221 1175 (Mon-Fri, 9am-5pm)  
w: [www.sdf.org.uk](http://www.sdf.org.uk)

### **Drinkline Scotland**

A free and confidential helpline providing support and advice on any alcohol-related concerns.

t: 0800 731 4314 (Weekdays: 9am – 9pm,  
Weekends: 10am – 4pm)

## **Know the Score**

A free and confidential helpline providing information, advice and support on drugs and drugs-related issues.

t: 0333 230 9468 (Weekdays: 9am – 9pm,  
Weekends: 10am - 4pm)

w: [www.knowthescore.info](http://www.knowthescore.info)

## **We Are With You (formerly Addaction)**

A UK-wide treatment agency that helps individuals, families and communities manage the effects of drug and alcohol misuse. To find the nearest WAWY service, use the service finder on their website.

w: [www.wearewithyou.org.uk](http://www.wearewithyou.org.uk)

## **NHS Inform - Stopping Smoking**

A NHS resource providing information and support on stopping smoking as well as Quit Your Way Scotland, a free and confidential advice and support line for anyone trying to stop smoking in Scotland.

t: 0800 84 84 84 (Mon-Fri 9am-5pm)

w: [www.nhsinform.scot/healthy-living/stopping-smoking](http://www.nhsinform.scot/healthy-living/stopping-smoking)

## Equality, employment and welfare rights

### **Equality Advisory and Support Service Helpline**

A free to call helpline which advises and assists individuals on issues relating to equality and human rights.

t: 0808 800 0082 (Mon-Fri 9am-7pm, Sat 10am-2pm)

w: [www.equalityadvisoryservice.com](http://www.equalityadvisoryservice.com)

### **Acas Helpline**

The Acas Helpline provides free, confidential and impartial advice about any kind of employment dispute, as well as employment rights and rules.

t: 0300 123 1100 (Mon-Fri, 8am-6pm)

w: [www.acas.org.uk](http://www.acas.org.uk)

### **Advice Direct Scotland**

Advice Direct Scotland provides advice on any issue including, but not limited to, benefits, employment, housing, relationships, and debt.

t: 0808 800 9060 (Mon-Fri, 9am-6pm)

w: [www.advice.scot](http://www.advice.scot)

### **GOV.UK**

Provides information on government services and information for citizens and businesses, including guidance regarding benefits and employment.

w: [www.gov.uk](http://www.gov.uk)



# Glossary

**acute infection** - A recently developed condition. For viral hepatitis, the first six months of infection.

**ALT test** - During blood tests, your doctor will assess the level of a liver enzyme called alanine aminotransferase (ALT) in the blood to determine the amount of damage done to the liver. ALT levels are high whenever the liver is injured or damaged.

**antibody** - Antibodies are proteins produced by the immune system to help fight against infections.

**antigens** - Antigens are proteins on the surface of the hepatitis B virus which cause the immune system to create antibodies. To diagnose hepatitis B, a blood test will look for hepatitis B surface antigen (HBsAg) and hepatitis B 'e' antigen (HBeAg).

**blood-to-blood contact** - When someone's blood gets into the bloodstream of another person, such as through an open wound, or through items which have come into contact with infected blood.

**chronic infection** - A condition which persists for a long time. For hepatitis, it is when the infection lasts longer than six months.

**cirrhosis** - Advanced liver fibrosis, or advanced scarring of the liver caused by long-term liver damage. Healthy liver tissue is replaced by scar tissue and prevents the liver functioning properly. See also compensated cirrhosis and decompensated cirrhosis.

**combination therapy** - When more than one medication or therapy is used to fight the same condition. This often means that a combination of two or more drugs are used.

**compensated cirrhosis** - When the liver is heavily scarred but can still perform many important bodily functions. Many people with compensated cirrhosis experience few or no symptoms and can live with the condition for many years without serious complications. Compensated cirrhosis eventually progresses to decompensated cirrhosis.

**decompensated cirrhosis** - When the liver is extensively scarred and cannot function properly. People with decompensated cirrhosis eventually develop many symptoms and complications that can be life-threatening.

**detectable** - This means that the virus is at a level in your blood which can be measured by tests.

**fibroscan** - A non-invasive device, which is similar to an ultrasound but specifically for the liver, and which determines if liver damage (fibrosis or cirrhosis) is present.

**fibrosis** - Damage to the liver which occurs when healthy liver tissue is replaced by scar tissue and prevents the liver functioning properly.

**HBV DNA** - This refers to your viral load, or the amount of virus in your body.

**horizontal transmission** - Transmission of the virus through exposure to infected blood or bodily fluid, such as household contact with an infected person.

**immunity** - This means that someone has been infected with hepatitis B previously and cleared the virus during the acute phase. They cannot be infected again with hepatitis B.

**lactic acidosis** - A buildup of lactic acid in your blood which, left untreated, can be potentially very serious. This is a rare but serious side effect of treatment with antiviral drugs.

**reactivation** - This refers to an increase of the HBV DNA (viral load) in patients who have cleared a past infection.

**remission** - This means that the levels of the virus in the blood drop to very low levels and no further treatment to keep the virus under control may be needed.

**seroconversion** - This refers to the process where the body has converted hepatitis B antigens to antibodies. When the antigens have been cleared, the patient is said to have entered the 'inactive hepatitis B virus carriage' stage.

**undetectable** - This means that the virus is at a level in your blood which is too low to be measured by tests.

**vertical transmission** - Transmission of the virus from mother to child at birth.

**viral load** The amount of virus in your body











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