

# Hepatitis C

## Essential facts about Hepatitis C (Hep C)

Hep C is a virus that infects the liver.

Hep C is common but under diagnosed, approximately 300,000-400,000 people are infected, but the vast majority are unaware of their infection.

Hep C can cause few symptoms, most people may complain of mild tiredness only, and may be unaware of any illness.

Hep C is transmitted by blood to blood contact: most infected people will have a history of intravenous drug use or have received blood transfusions/blood products before 1991.

Hep C is not transmitted by day to day contact, such as sharing cutlery, with infected individuals.

Anyone with Hep C should not share razors, toothbrushes, hair clippers and should clear up their own blood spills.

Only 20% of people exposed to Hep C clear the virus so 80% are at risk of long term liver damage.

Progression of liver disease occurs over 10-30 years and may be accelerated/ determined by length of infection, male sex and alcohol excess.

Liver biopsy is the 'gold standard' in assessing liver disease. It is safe.

Hep C is a common cause of end-stage liver disease.

Hep C is a treatable disease, over 50% of people can be 'cured' by antiviral treatment, consisting of pegylated interferon and Ribavarin.

Treatment is either for 6 or 12 months, depending on the genotype of Hep C. In genotype 2 and 3 'cure' rates of 70-80% occur with 6 months of treatment.

Side effects related to treatment require monitoring and assessment but are only troublesome in the minority of individuals (5-10%).

Compensation is available to people infected through exposure to blood products, via the Skipton Fund.

What is hepatitis?

Hepatitis means inflammation of the liver. Viruses are the commonest cause but there are other causes which are non-viral, such as alcohol excess, the side effects of some drugs and chemicals and a disease called autoimmune hepatitis in which the body's immune system malfunctions and attacks the liver. There are several different hepatitis viruses - hepatitis A, B, C, D, E and G. The main difference between the viruses are how they are spread and the effects they have on your health. Hepatitis C virus, also known as Hep C virus or HCV, is one of the more recently discovered hepatitis viruses. (discovered 1989).

Vaccines are available to prevent infection from hepatitis A and B but not C. Doctors are learning more about the viruses all the time and some of the information about HCV, particularly about how infection occurs and treatment, may change with further research. Hepatitis is commonly described as either acute or chronic. An acute illness is a short sharp illness, usually associated with jaundice and a chronic illness is one that lasts a long time, sometimes coming and going, with little evidence of jaundice.

What is chronic HCV?

Chronic hepatitis C lasts longer than six months. The liver remains inflamed and the inflammation causes damage to the liver cells. It may be serious for some people but for others it causes no problems. Unfortunately doctors cannot predict who will go on to develop serious liver disease. Only a few infected people develop an acute illness such as jaundice shortly after being infected. However it is thought that around three-quarters of infected people, whether they develop acute hepatitis or not, develop chronic hepatitis C. Most people will have a mild disease, either stable or only very slowly progressive. Others will eventually develop cirrhosis - sometimes 20, 30 or even 40 years after contracting the virus. Men who are older at the time of acquisition, and who drink alcohol to excess (greater than 28 units/weeks) are at greater risk of disease progression.

What are the symptoms?

Hep C can affect people quite differently. The majority of people have no symptoms and are often unaware they have been infected, while others experience extreme tiredness and often feel unwell. Symptoms, when present, may be vague and include: mild to severe fatigue, anxiety, weight loss, anorexia, alcohol intolerance, joint pains, pain in the area of the liver, concentration problems, nausea, 'flu like symptoms such as fever, chills, night sweats and headaches.

The liver is a very uncomplaining organ and most people do not know that it is not working properly until more advanced liver disease has developed. In Hep C infection there is usually a long phase in which people feel quite well and before more serious liver disease may become apparent, anything between 15-30 years.

How common is hepatitis C?

The prevalence of Hep C worldwide is largely unknown because most people have no symptoms. The World Health Organisation estimates that 3% of the world's population has

Hep C and that 200 million people worldwide are chronically infected. The overall prevalence within the UK has been (conservatively) quoted as 0.4%, at least 200,000 individuals have chronic HCV. The rates of infection in injecting drug users in the UK are estimated to be from approximately 60% to 90%. Rates within a prison environment may be between 15-25%.

How is Hep C spread?

The virus is mainly transmitted through blood to blood contact. Injecting drug users and people who have had blood transfusions prior to September 1991 are most at risk. Blood donations in the UK have been screened for Hep C since this time. Some people who have previously received blood products, for example haemophiliacs, or blood transfusion abroad where blood is not screened, may be at risk of infection. Infection is not acquired through normal social contact. For example, you cannot catch it from sharing a toilet seat or cup or just touching an infected person. Washing cutlery and crockery in hot water and washing up liquid is thought to be safe. There are varying estimates from 10 to 45% of people with chronic Hep C infection who do not know how they caught it. However, many doctors believe that in most cases, careful questioning will reveal a transmission risk such as a past blood transfusion, Illicit drug use, Sexual risk, medical treatment abroad etc.

In the UK, presently most Hep C is related to previous or current intravenous drug use. Hep C has spread rapidly through the injecting drug using community and users are thought to be the main source of new infections. They become infected by sharing contaminated injecting equipment. Only one occasion of sharing is needed to be potentially exposed to the virus.

Can it be transmitted sexually?

Hep C can be transmitted sexually but it is thought that the risk is low unless you indulge in high risk sexual activities. The virus is present in blood and semen, so any type of sexual activity poses a potential risk. There are a few cases of the virus being spread through other body fluids such as saliva but the risk is also thought to be low. Experts are unsure whether some infections occur between partners because of sexual exposure or because of sharing a personal items such as a razors, toothbrushes, scissors etc. The risks are thought to be around 5 to 7% but may be higher depending on the sexual activity being performed.

From mother to baby

Mothers with Hep C may possibly pass the virus to their baby but the risk is thought to be low 5 to 7%. It is not known whether this happens during pregnancy or during or immediately after the birth. Doctors do not yet know if the disease that occurs when a baby is infected by a mother, will go on to become serious. Initial evidence suggests that the child's disease will be mild.

General advice is that the mother may breast feed the baby. If the mothers nipples are cracked and or bleeding then the baby should not be breast fed.

To help prevent transmission, Hep C positive people should:

- Clean up blood spills with undiluted household bleach
- Carefully clean cuts and wounds and cover with a dressing
- Not share personal items such as a toothbrush, razor or scissors
- Practise safer sex, use condoms
- Not register as an organ donor or donate blood
- Make sure sterile needles are used for ear and body piercing, tattooing and acupuncture.
- Not share any injecting equipment including syringes, filters and water or straws etc used for snorting.

What is cirrhosis?

Cirrhosis is the result of long term continuous liver damage. Normally, when the liver is damaged the cells die and the liver regenerates without scarring. When the damage is severe and continuous, the re-growth results in cirrhosis. Cirrhosis is irreversible. If cirrhosis is advanced people may develop complications such as ascites, bleeding oesophageal varices and encephalopathy.

Ascites is a large build up of fluid in the abdomen and oesophageal varices are varicose veins in the gullet caused by increased blood pressure in these veins. Encephalopathy is impaired mental function and is thought to be caused by waste products, which are normally broken down by the liver, entering the circulation and affecting the brain. A further complication can be liver cancer.

Tests

1. Your first Hep C blood test will probably be an antibody test. A positive test only shows that you have been exposed to the Hep C virus. It does not show if you currently have the Hep C Virus.

2. A further blood test is needed to confirm if you have the virus. This is called a PCR test. Approximately 80% of people with a positive Hep C antibody test will also have a positive PCR test.

Around 20% will have a positive antibody test but a negative PCR test. If you are currently injecting or indulging in any other high risk behaviour the you should take steps to prevent Hep C. Such as practising safe sex, ensure that you use your own toothbrushes, razors etc and do not share any injecting equipment. Only go to reputable businesses for tattoos or piercings.

(A PCR test is a more sensitive and specific test. It detects the viral genetic material and indicates an active infection) It takes time for antibodies generated by the bodies immune response to appear in your blood after being infected. This is called the window period and is followed by seroconversion, usually eight to twelve weeks after exposure to the virus, but

can be up to six months. This means that a test taken too early may not detect whether you have Hep C.

3. At the Hospital or your specialist clinic, further blood will be needed if the PCR test is positive, to find out which type of the virus you have and the amount of virus in you system. Liver function tests are also taken which give an indication of any liver disease.

4. Further tests are needed such as a ultrasound scan of your Liver and most times a liver biopsy may be needed which helps the Doctor to assess the overall picture of your Hep C and if there is any damage to your Liver. The Liver Biopsy is not performed in the Out patients Clinic. You will need to sign a consent form and then a bed is booked for you on either the day ward or on ward 12 for an overnight stay. The Doctor will explain this to you. Make sure you understand the doctors explanations.

Remember only approximately 20% of people infected will develop serious Liver problems due to Hep C.

#### Liver function tests

Liver function tests (LFTs) are blood tests, which measure enzymes and other substances, released into the bloodstream from your liver cells when they are damaged. They give doctors an indication of liver disease but do not detect the virus. The levels of the enzymes can fluctuate throughout the course of the disease. Sometimes they are normal but this does not mean that liver damage is absent. The tests are performed regularly throughout the course of the disease. The absolute levels of the LFTs do not suggest progression of Hep C.

#### Liver biopsy

The best indicator of damage to liver from Hep C is by a liver biopsy. A liver biopsy is the removal of a small sample of liver tissue for examination under a microscope. It is performed after an ultrasound of the liver, to determine the extent of any damage. This a safe, helpful procedure with a bleeding risk (complication rate) of 3 in a 1000.

As cirrhosis can take years to develop and it is difficult for doctors to predict who will develop it, a biopsy is necessary for doctors to accurately assess the health of your liver and to determine whether treatment is likely to be effective.

#### Genotypes or strains of hepatitis

There are now six recognized strains of Hep C, known as genotypes, with numerous subtypes. The commonest strains in the UK, Europe and USA are 1, 2, and 3. There are other three other types: 4, 5 and 6. Subtypes are labelled a, b and c. It is possible to be reinfected with a different strain of hepatitis C or be infected with two strains at the same time. The genotype is important in treatment discussions to determine the length of antiviral treatment needed.

Is there a treatment for hepatitis C?

If you have Hep C you will need to be referred to a specialist who has expert knowledge of hepatitis. This could be a hepatologist (liver specialist), a gastroenterologist or a specialist in infectious disease. Not everyone with Hep C needs or is considered suitable for treatment. Some people only need regular assessment to detect if liver damage is occurring. Treatment for Hep C is much more successful these days with more than 50% of all patients achieving a cure, also termed sustained viral response (SVR), which can only be assessed 6 months after antiviral therapy has been completed.

Patients with genotype 2 and 3 have a 70-80% SVR (cure) rate with 6 months of antiviral therapy. Patients with genotype 1, 4, 5 and 6 need 12 months of combination therapy, after 3 months the Hep C-PCR and viral load is checked, if there is no substantial drop in the amount of virus (viral load) then it is unlikely the patient is going to have a beneficial response to therapy.

### Interferon and Ribavirin

The current treatment is recommended by N.I.C.E for people over 18 years old with moderate to severe Hepatitis C using antiviral drugs called pegylated alpha interferon and Ribavirin. Interferon mimics naturally occurring interferon in your body, which is produced as part of the body's immune response to infection. Ribavirin is a tablet which improves response rates. The aim of treatment is to prevent the virus replicating and causing further liver damage. Interferon is given by injection once a week for a period of six or twelve months and generally you are taught to inject yourself. The technique is similar to that used to treat diabetes and you are shown how to administer the injections by a doctor or nurse. They are not painful and injections soon become routine. Some people do not respond to treatment and some relapse as soon as treatment stops. Doctors are learning more about who is likely to respond and several factors may be taken into consideration before treatment is advised. Some of the factors are age, Hep C genotype, how long a person has been infected and whether cirrhosis has developed.

Females must not get pregnant whilst they are on treatment. Female partners must not get pregnant when the male partner is on treatment and for up to one year after treatment. The Ribavirin causes serious birth defects in the unborn baby.

### Alcohol

Treatment is not appropriate if you are a heavy drinker. Research so far suggests a less favourable prognosis. Although the mechanism of liver damage is not clear, alcohol is an aggravating factor. Doctors will advise people with Hepatitis C to reduce their alcohol intake to less than 7 units in a week that is 7 small shorts or glasses of wine or 3½ pints of beer. For people who have liver cirrhosis they should not drink any alcohol.

### Side effects

Interferon usually produces side effects, which in some people can be quite unpleasant. In the early stages of treatment you may experience flu like symptoms general aches and pains,

headaches, sweats. Other side effects include nausea, skin rashes, weight loss, lethargy and mental health problems such as anxiety, anger outbursts, short term memory loss and depression. These side effects will disappear once the treatment is complete. The severity of side effects varies from person to person and can often be helped by taking paracetamol. Ribavirin can cause people to become anaemic, and this is why individuals require monthly blood checks. People who experience particularly bad side effects may be unable to tolerate a full course, but the side effects usually lessen as treatment progresses.

#### Living with someone who is Hep C positive

- Make sure you do not share any personal equipment that may have blood on i.e. toothbrushes, razors, hair clippers, scissors etc.
- Practice safe sex and use a condom.
- Do not share any injecting equipment.
- You cannot catch Hep C from cups cutlery etc. Washing cups etc in hot soapy water is all that is needed.

#### Glossary

N.I.C.E	National Institute for Clinical Excellence
PCR	polymerase chain reaction
SVR-	sustained viral response

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## Contacts

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British Liver Trust

[www.britishlivertrust.org.uk](http://www.britishlivertrust.org.uk)

Haemophilia Society

[www.haemophilia.org.uk](http://www.haemophilia.org.uk)

The Hepatitis C Trust

[www.hepcuk.info](http://www.hepcuk.info)

+VE magazine

[www.howsthat.org](http://www.howsthat.org)

Mainliners

[www.mainliners.org.uk](http://www.mainliners.org.uk)

National Hepatitis C resource centre

020 7735 7705

## useful websites

[www.hivandhepatitis.com](http://www.hivandhepatitis.com)

[www.gastrohep.com](http://www.gastrohep.com)

[www.doh.gov.uk/drugs](http://www.doh.gov.uk/drugs)

[www.hepc.nhs.uk](http://www.hepc.nhs.uk)

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