

About hepatitis

Hepatitis, which means 'liver inflammation' is often caused by a virus. Of the five completely different viruses that cause hepatitis (A, B, C, D & E) B and C are the only two that can become chronic, causing long-term illness. Hepatitis is acute when it lasts less than six months and chronic when it persists longer.

Together hepatitis B and C represent one of the biggest threats to global health, killing approximately 1 million people a year. It is estimated that more than 500 million people around the world are currently infected with hepatitis B or C¹ and one in three people have been exposed to one or both viruses.

Mode of transmission

The hepatitis B virus is spread through direct contact with infected blood as well as most major body fluids, including blood, semen, sweat, tears and breast milk. The hepatitis C virus is spread through direct contact with infected blood. Very rarely it can also be passed on through other body fluids. Many people do not have any symptoms if they contract hepatitis B or C, although they can still transmit the virus to others.

The most common routes of infection are:

- blood transfusions and receiving blood products where there is no screening for blood-borne viruses
- medical or dental interventions in countries where equipment is not adequately sterilised
- mother to infant during childbirth
- sexual transmission (in the case of hepatitis B)
- sharing equipment for injecting drugs
- sharing straws, notes etc. for snorting cocaine (cocaine is particularly alkaline and corrosive)
- sharing razors, toothbrushes or other household articles
- tattooing and body piercing if done using unsterile equipment.

Hepatitis B

Hepatitis B is the most serious type of viral hepatitis infection¹ and is caused by the hepatitis B virus (HBV). An estimated 2 billion people have been infected at some point and 350 million people across the world continue to carry chronic (long-term) infection¹. It is most commonly found in South East Asia, the Middle and Far East, Southern Europe and Africa. It is highly infectious, 50-100 times more so than HIV. Between 500,000 and 700,000 people die each year¹ and it is the 10th leading cause of death worldwide².

Acute and chronic

Hepatitis B is initially acute, but can go on to develop into a chronic condition.

- **Acute** (short-term) hepatitis B may resolve itself quickly without causing long-term liver damage or it may fail to resolve itself and become chronic. The younger a person is when they contract hepatitis B, the more likely that the disease will become chronic.

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- **Chronic** (long-term) hepatitis B is a persistent infection of the liver that develops if the acute infection does not resolve itself in the first six months and can lead to serious liver disease, including cirrhosis and liver cancer. Chronic hepatitis B infection leads to serious liver disease and early death in up to 25% of individuals³.

Hepatitis B symptoms

Once the virus enters the body there are no symptoms for between one and six months; this is known as the incubation period. Some people develop severe symptoms at this stage; others have only mild symptoms; while some will never have any symptoms even when the disease progresses to the chronic phase. Symptoms for those with acute and chronic hepatitis B may include aches and pains, tiredness, fever, diarrhoea and jaundice⁴. Those with no symptoms can still pass on the virus to others.

Diagnosis

Hepatitis B is diagnosed by a simple blood test that can detect a protein of the virus known as the surface antigen. Further tests confirm the state of infection, as well as the amount of liver inflammation and damage to the liver.

Treatment of hepatitis B

Most people with acute hepatitis B do not need treatment, as they do not develop long-term disease and liver damage. If the virus becomes chronic and treatment is needed, an antiviral medication is used to prevent the virus from proliferating and causing more liver damage. In a small number of cases the infection resolves itself completely.

Hepatitis B vaccination

Getting immunised is the best way to prevent hepatitis B infection. More than one billion people worldwide have been vaccinated since the vaccine was developed in 1982, and it is approximately 95% effective⁴. Despite its excellent record, however, the hepatitis B vaccine is unfortunately not available in all parts of the world. As at March 2006, 164 countries had included the vaccine on their national immunisation schedules, including most countries in East and South-East Asia, the Pacific Islands, Australia, North and South America, Western Europe and the Middle East⁴. However, many low income countries in sub-Saharan Africa and the Indian subcontinent do not use the vaccine.

Hepatitis C

Hepatitis C is a serious viral liver infection that is caused by the hepatitis C virus (HCV). It is one of the most significant health problems affecting the liver, with 130-170 million people estimated to be chronically infected and three to four million persons newly infected each year⁵. The disease is present throughout the world, but seems to have a higher prevalence in some countries in Africa, the Eastern Mediterranean, South-East Asia and the Western Pacific, although prevalence data is often limited⁵. Like hepatitis B, the hepatitis C virus is known as a 'silent killer' and people can live with the virus for many years without even knowing they are infected, but can still spread the virus to other people.

Acute and chronic

Hepatitis C is initially acute, but can go on to develop into a chronic condition.

- **Acute** hepatitis C resolves itself quickly without long-term liver damage or it fails to do so and becomes chronic. Somewhere between 15 to 30% of people clear the virus completely during the acute phase
- **Chronic** hepatitis C is a long-term infection of the liver that develops in 70 to 85% of patients that have acute hepatitis C and can lead to more serious liver disease, including cirrhosis and liver cancer⁵. It is the leading cause of liver transplantation in the US.

Hepatitis C symptoms

Most people do not seem to experience symptoms during the acute phase. For the 25 to 35% of people who do, they are normally vague and non-specific. For those who develop chronic disease the symptoms can include fatigue, depression, short-term memory problems, mood swings, headaches, abdominal pain and flu-like symptoms. However, people can live with the virus for many years without even knowing they are infected.

Treatment of hepatitis C

Treatment for chronic hepatitis C continues to improve in effectiveness and can currently clear the virus in more than half those treated⁶. Treatment usually lasts for six to twelve months.

Vaccination

Unlike hepatitis B, there is no vaccine against hepatitis C.

For more information

For further information please contact worldhepday@fleishman.com

¹ World Health Organization. Viral hepatitis: Report by the Secretariat. http://apps.who.int/gb/ebwha/pdf_files/A62/A62_22-en.pdf (accessed May 11, 2009)

² Lavanchy, D. Hepatitis B virus epidemiology, disease burden, treatment, and current and emerging prevention and control measures. *J Viral Hepat* 2004; 11(2):97-107

³ Centers for Disease Control and Prevention. Medical Management of Chronic Hepatitis B and Chronic Hepatitis C. *IDU HIV Prevention*. Available at http://www.cdc.gov/idu/hepatitis/manage_chronic_hep_b-c.pdf. Accessed May 11 2009.

⁴ World Health Organization. Hepatitis B Fact Sheet: <http://www.who.int/mediacentre/factsheets/fs204/en/index.html> (accessed May 11, 2009)

⁵ Initiative for Vaccine Research, Viral Cancers, Hepatitis C. World Health Organization, 2006. http://www.who.int/vaccine_research/diseases/viral_cancers/en/index2.html (accessed May 11, 2009)

⁶ NHS Choices Hepatitis C Awareness: Treatment for hepatitis C: <http://www.nhs.uk/Livewell/hepatitisc/Pages/Treatmentforhepatitisc.aspx> (accessed May 11, 2009)