



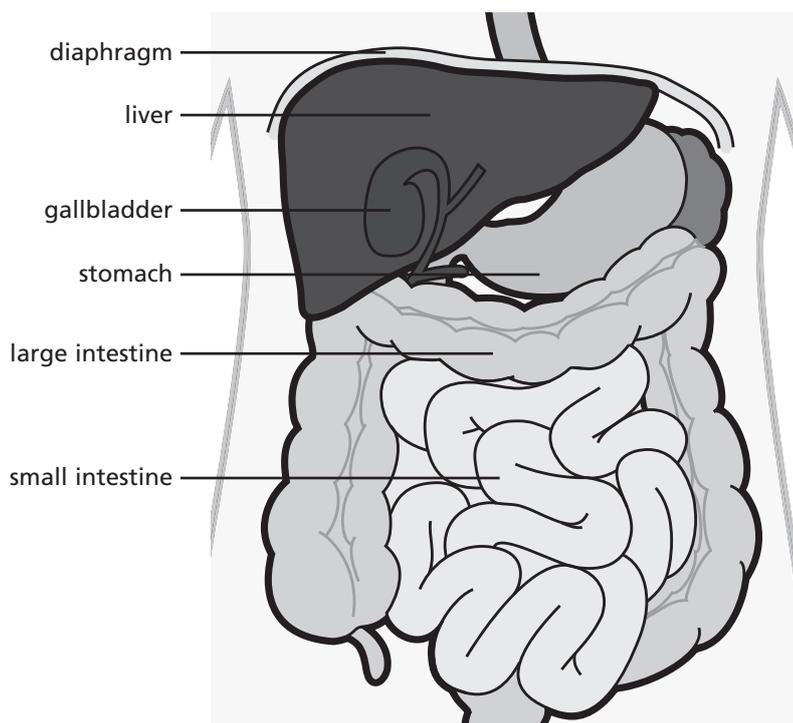
Hepatitis B

'Hepatitis' means inflammation of the liver – this inflammation can occur for many reasons, one of which is viral infection. This information sheet from Great Ormond Street Hospital (GOSH) explains the causes, symptoms and treatment of hepatitis B in children and where to get help.

The liver

The liver is the body's largest organ after the skin. The liver is responsible for producing bile and digesting fat from the food we eat and converting the fat into energy. However, one of the liver's main functions is to clean poisons, such as alcohol, illicit drugs and some prescription medicines, from the blood by neutralising them. It also helps the body to cope with certain viruses.

Liver damage from these poisons or infection with a virus reduces how well the liver works and causes scarring, called fibrosis, commonly known as cirrhosis of the liver.



What is hepatitis B?

Hepatitis B is a viral infection and the leading cause of liver damage world-wide. It is endemic (commonly found) in certain areas of the world such as China, South East Asia and Africa. Over a long period of time, the virus causes scarring in the liver reducing how well it works. It is, however, treatable in most cases, with few long term effects.

How do you get hepatitis B?

Hepatitis B virus is found in the blood and is much more infectious than Human Immunodeficiency Virus (HIV). The virus can live outside the body and is still infectious for at least seven days. The 'incubation period', that is, the time between contracting the virus and showing symptoms ranges from six weeks to six months, so can easily be spread to other people without realising.

In adults, the virus may be spread via contact with the bodily fluids of a person infected with the hepatitis B virus through broken skin or mucous membranes, such as the inside of the mouth or other body cavities to unvaccinated individuals. Risks of transmission include the reuse of needles, syringes or other medical equipment either among individuals or in healthcare settings during medical, surgical and dental procedures. The virus can also be transmitted through tattooing with unsterilized equipment or the shared use of razors, toothbrushes and similar objects that are contaminated with infected blood.



In children, however, in most cases the virus is passed on from mother to child during childbirth (also called perinatal transmission), especially in highly endemic areas. It may also be spread from an infected child to an uninfected child (horizontal transmission) through exposure to infected blood.

What are the signs and symptoms of hepatitis B?

Symptoms are rare in babies infected at birth and only present in a small number of young children with the virus. About half of all teenagers and young adults with the virus will show symptoms but the other half will not. The symptoms of hepatitis B, when present, are similar to many other viral infections and include:

- Loss of appetite
- Nausea and vomiting
- Joint and muscle pain
- Generally feeling unwell

How is hepatitis B diagnosed?

Hepatitis B is diagnosed using a blood test to look for the virus in the blood. Other blood tests to check how well the liver is working (liver function tests or LFTs) are also used both to diagnose the condition and monitor the effect of the virus on the body. Blood tests to measure the amount of virus in the blood (viral load) are also used for monitoring.

If potential liver damage is suspected, doctors may request a liver biopsy – a small sample of liver tissue taken in a procedure under anaesthetic which is examined under a microscope. For more information about the liver biopsy procedure, please see our separate information sheet. A non-invasive test called a fibroscan may also be used to detect liver damage. This is a similar technique to an ultrasound scan, which measures the stiffness of the liver.

How is hepatitis B treated?

The aim of treatment is to reduce the amount of the virus in the blood and reduce the risk of damage to the liver.

Children with hepatitis B may not need treatment immediately after diagnosis – many only start treatment once they reach adolescence. In the meantime, routine monitoring with blood tests and liver function tests may be all that is needed. These tests allow the clinician to predict when liver damage may occur and if detected, there are several medications that will be started. These include tenofavir, interferon and lamivudine. It is important to complete the course even if your child has no symptoms and is feeling generally well.

Can hepatitis B be prevented?

A vaccine against hepatitis B is available – this is routinely offered to anyone who might be at risk of contracting the virus, such as healthcare workers and babies born to hepatitis B positive mothers.

What happens next?

In the majority of children, treatment as described above successfully treats the virus and reduces the risk of long term liver damage. A small number of people will go on to have further liver problems as they grow older so routine monitoring continues throughout adulthood.

Further information and support

The Children's Liver Disease Foundation offers support and advice to anyone affected by liver disease. Call their helpline on 0121 212 3839 or visit their website at www.childliverdisease.org