

# The liver

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The liver is the largest organ in the human body and is situated in the upper right-hand side of the abdomen (tummy), protected by the ribs. Although a healthy liver is important to everybody, it is especially important to people with HIV, not least because the liver plays an important part in metabolising anti-HIV medication and other drugs. Viral infections of the liver, such as hepatitis A, B and C can not only make you very ill, but can impair the ability of the liver to process medicines, as can liver damage caused by drug and alcohol use.

## Functions of the liver

The liver serves three functions: it stores and filters blood, removing toxic substances from drugs, food and body waste; it makes bile, which is released into the gut to help digest fat; and it metabolises nutrients from food, releasing energy into the bloodstream and storing vitamins and minerals.

## Potential problems

Many people with HIV experience no problems with their liver. However, as with anybody else, heavy and sustained alcohol consumption can cause liver damage. Unchecked, this may lead to a condition called cirrhosis, a permanently scarred and damaged liver which can have serious health implications. Recreational drugs, such as ecstasy, heroin and cocaine, can also damage the liver if taken to excess.

Hepatitis means inflammation of the liver and is relatively common in people with HIV. Common causes are the viruses hepatitis A, B and C, which can not only cause severe ill health but can also limit HIV treatment options

Hepatitis A is spread by food or drink contaminated by human excrement containing the hepatitis A virus; and sexually from oral-anal contact (rimming).

Hepatitis B is passed on from mother to child; by contact with contaminated blood; or through unprotected anal, oral or vaginal sex.

Hepatitis C is a blood-borne virus which is spread via contaminated blood products; the sharing of needles and syringes for injecting drug use; from mother to child; and there have been outbreaks of sexually transmitted hepatitis C in HIV-positive gay men. Risk factors seem to include fisting, group sex, drug use and unprotected sex. In the UK, all blood products are now routinely screened for hepatitis C.

Untreated HIV can increase the risk of liver problems. Some anti-HIV drugs, particularly nevirapine (*Viramune*), and other prescription medication can cause the liver to become inflamed. Extremely large doses of vitamin A can also cause liver damage. Severe liver damage can increase the chances of developing liver cancer, which can prove fatal.

## Symptoms of liver disease

Typical symptoms of liver problems include extreme tiredness, a feeling of general poor health, weight loss, loss of appetite, nausea and vomiting, fever, abdominal pain, itchy skin, and an enlarged or tender liver. Jaundice may also develop. This is easily noticeable as the skin and whites of the eyes turn yellow, urine becomes dark and stools pale.

## Tests

Liver function should be monitored as part of your routine HIV care. Everyone with HIV should be tested for hepatitis A, B and C. Samples of blood may be taken to check on your liver when you attend for your routine clinic appointment. Your doctor may also perform a physical examination to see if your liver is enlarged or tender.

A kind of scan called a *FibroScan* can be used to check the health of the liver. It is painless. Sometimes it might be necessary to conduct a liver

biopsy. This involves taking a small sample of the liver in a simple surgical procedure which is usually performed under local anaesthetic.

## Treatments

Treatments for liver disease vary depending on the cause, but can include rest, avoidance of tea, coffee, alcohol and recreational drugs, and a change of prescription medication.

Treatment for hepatitis B involves some of the drugs used to treat HIV. Treatment for hepatitis C involves pegylated interferon and ribavirin. Surgery or liver transplant may be an option for advanced liver disease.

## Maintaining a healthy liver

There are some simple steps you can take to protect your liver. If travelling overseas, particularly to a country with poor sanitation, you should be aware that hepatitis A can be spread in shellfish, salads, raw vegetables, water and ice cubes.

Everybody who is HIV-positive should receive vaccines for hepatitis A and B.

You can reduce your risk of hepatitis C by using condoms for penetrative sex and latex gloves for fisting. Do not share lubricants or sex toys at sex parties.

If you inject drugs, ensure that you do not share any injecting equipment.

Do not drink excessive amounts of alcohol, and give your body time to recover after an episode of heavy drinking. Similarly, be aware that recreational drug use can damage your liver.