

# The liver

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- The liver plays an important role in how the body processes anti-HIV drugs.
- Hepatitis means inflammation of the liver and is relatively common in people with HIV.
- Heavy and long-term alcohol use can cause liver damage.

The liver is the largest internal organ and is situated in the upper right-hand side of the abdomen, 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 HIV treatment 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 several functions: it 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 breaks down food, releasing energy and storing vitamins and minerals. So the liver is important in getting rid of waste and in giving you energy. The liver also has a role in fighting infections, particularly in the bowel.

## 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 can also damage the liver.

Liver function should be monitored as part of your routine HIV care.

Hepatitis means inflammation of the liver and is relatively common in people with HIV. Common causes are the hepatitis A, B and C viruses, which can cause severe ill health.

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

Hepatitis B is usually passed on from mother to child during pregnancy; by contact with blood; or through unprotected anal, oral or vaginal sex. There is a vaccine for hepatitis B.

Hepatitis C is a blood-borne virus which is spread via contaminated blood products; the sharing of needles and syringes to inject drugs; and from mother to child. Hepatitis C has also been shown to be sexually transmitted, particularly among 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. There is no vaccine for hepatitis C, but treatment has improved greatly in the last few years.

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

In the early stages of liver disease, there may not be any obvious symptoms. Once there is some damage to the liver, typical symptoms 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.

If your doctor thinks your liver may have been damaged, they may recommend an ultrasound. This is a painless, non-invasive test. You can find out more in our factsheet *Liver function tests*.

## Treatments

Treatments for liver disease vary depending on the cause. For hepatitis A, you can usually manage your own health, with support from your GP. Make sure you get plenty of rest and avoid alcohol.

Treatment for hepatitis B involves some of the drugs used to treat HIV. Treatment for hepatitis C has developed a great deal in the last few years and new research on hepatitis C treatment is being published all the time. It's important that you find a doctor with experience of treating HIV and hepatitis C.

## 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 has HIV is advised to have vaccinations for hepatitis A and B.

You can reduce your risk of hepatitis C during sex 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, only use sterile 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.

- **HIV & hepatitis** Information booklet
- **Alcohol** Simple factsheet
- **Liver function tests** Simple factsheet
- **Hepatitis C** Basic leaflet, with pictures