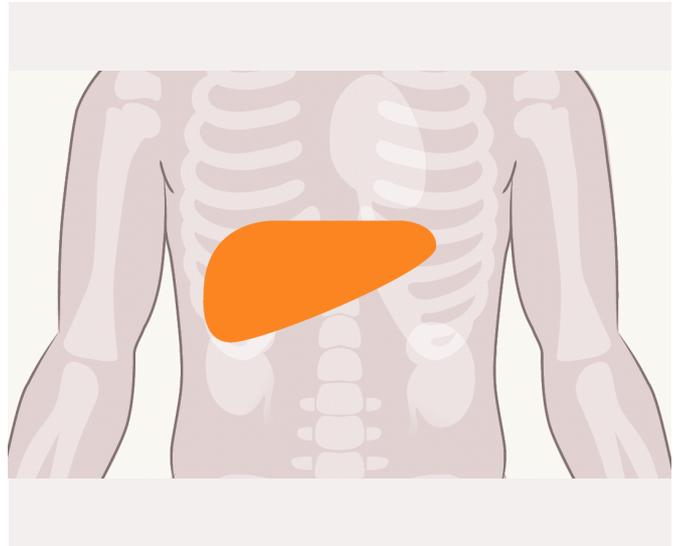


Factsheet Liver function tests

Key points

- People living with HIV should have regular blood tests to monitor liver function.
- The liver plays an important role in processing drugs used to treat HIV and other conditions.
- Liver problems can be a side-effect of some anti-HIV drugs.



You'll have a number of routine tests to monitor your health as part of your HIV care. If you're taking HIV treatment, you'll also have regular tests to see how well this treatment is working and to make sure you are not developing any unwanted side-effects.

The health of your liver should be regularly checked by your doctor. Having a healthy liver is important to everybody, but it is particularly important for people with HIV. The liver plays a key role in breaking down and processing medicines used to treat HIV and other infections. Liver disease is a significant cause of illness and death in people with HIV.

Some anti-HIV drugs can cause side-effects that affect the liver and if you are taking them your doctor will want to check to see if your liver is suffering any ill-effects because of them.

The health of your liver can also be damaged by a number of things, for example, drinking too much alcohol, using recreational drugs, an unhealthy diet, taking large doses of vitamin A, and some herbal and alternative remedies. Regular liver function tests can help identify problems early.

Progressive damage to the liver can lead to scarring of the liver, which is also known as cirrhosis. If cirrhosis progresses too far, the liver will no longer be able to work properly, possibly leading to problems such as internal bleeding and brain impairment.

Hepatitis

Some people living with HIV also have the viruses that cause hepatitis A, hepatitis B and hepatitis C. Blood tests are available to see if you have these infections, and you should be tested soon after your diagnosis with HIV, and then at regular intervals if you are at risk of acquiring them.

Monitoring the health of the liver can also help detect the presence of these viruses. In some cases, hepatitis B or hepatitis C infection is only detected because of abnormal liver function tests.

Hepatitis A can cause a short illness, while infection with hepatitis B or hepatitis C (or both) can cause long-term, serious liver disease. If you have either or both of them the health of your liver will need to be carefully monitored.

You can find out more about hepatitis in our [HIV & hepatitis](#) booklet.

Blood tests

The British HIV Association (BHIVA) recommends that people living with HIV should have regular assessments of their liver function.

The range of tests you'll have will check levels of enzymes in your liver. These include:

- Alanine aminotransferase (ALT)
- Aspartate aminotransferase (AST)
- Alkaline phosphatase (ALP)
- Gamma glutamyl transferase (GGT)
- Bilirubin
- Albumin.

You should have your liver function checked when you are first diagnosed with HIV, at regular intervals in your first six months of treatment and then at least once a year after that.

Liver problems can be a side-effect of a number of anti-HIV drugs. These include the non-nucleoside reverse transcriptase inhibitor (NNRTI) nevirapine (*Viramune* and *Viramune prolonged-release*), some protease inhibitors and, more rarely, efavirenz (*Sustiva*, also in the combination pill *Atripla*).

Atazanavir (*Reyataz*) can increase the amount of bilirubin in your blood. This is not because of liver damage but as a result of interference with the liver handling of bilirubin. In some people, this can cause a yellowing of the skin and the whites of the eyes, but this is not harmful. Although this side-effect is not dangerous, it can be distressing for some people.

A number of medicines used to treat other infections that people with HIV are vulnerable to can also cause liver problems, as can statins, which are used to treat high cholesterol, and drugs used to treat tuberculosis (TB).

You will have more regular liver function tests if you have recently started HIV treatment (after one month and three months), and will be monitored every two weeks for the first two months if you have started treatment with the anti-HIV drug nevirapine (*Viramune*).

Physical tests of liver function

Your liver is in the upper right-hand side of your abdomen, and your doctor might perform a physical examination to check on its health. This will involve pressing on the liver to see if it is enlarged or painful. These symptoms can indicate that the liver is inflamed, scarred or swollen. Yellowing of the skin and eyes, often called jaundice, may indicate that the liver isn't working as it should.

"Regular liver function tests can help identify problems early."

The liver infections [hepatitis A](#), [hepatitis B](#) and [hepatitis C](#) as well as other liver diseases can cause your urine to become very dark and your stools to become pale. You may be asked to provide samples for testing in a lab.

Imaging

If your doctor suspects that your liver has been damaged, then they may request imaging tests such as an ultrasound. A sensor is placed on the belly and uses sound-waves to create an image of the liver. This will show up any abnormalities of the liver and can sometimes show evidence of scarring (cirrhosis).

Another method is transient elastography, often using a machine called *FibroScan*. This uses echo vibration waves, similar to an ultrasound, to detect hardening or stiffening of the liver.

These procedures are painless and non-invasive.

Liver biopsies

Sometimes, the only reliable way to determine the health of the liver is to test a small sample of liver tissue. This is called a liver biopsy. It is usually performed using local anaesthetic and may involve an overnight stay in hospital, although most people can go home the same day. It can be uncomfortable and cause soreness.

Find out more

The liver Simple factsheet